

School's Out!

*A Quantitative study of Organized Activities,
Social Background, and Academic Achievement
among Oslo Youth*

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Abstract

In this thesis, I explore the associations between participation in organized activities, class, and academic achievement among upper secondary school students in Oslo. Sociological research concludes that social origin is linked to activity participation and this is a source of unequal academic achievement. However, little is known about how participation in organized activities is associated with academic achievement in Norway.

Three research questions are posed: (1) What is the relation between parental economic and cultural resources and activity participation? (2) What is the association between activity participation and academic achievement? (3) How is the association between activity participation and academic achievement affected by socioeconomic background? I use the survey “Young in Oslo 2018” with a subsample of upper secondary students and investigate the research questions using logistic and ordinary least regression techniques.

Throughout the thesis, I argue that we need to consider social inequality when researching youth participation in organized activities. Recent theoretical contributions disagree on whether unequal participation is primarily influenced by financial or cultural resources. I investigate how these different types of parental resources affect the chances of participation in organized activities. I find that the impact of cultural and financial resources differs according to the type of activity, while the impact does not vary when exploring activity participation in general. I argue that we need to understand both the role of economic and cultural factors when facilitating participation in organized activities.

Moreover, I examine the association between activity participation and academic achievement. I find a positive association between activity participation in structured activities such as sports teams and cultural activities and academic achievement. In contrast, I find a negative association between participation in youth clubs and academic achievement. I argue that the role of structure in the activity context is vital for understanding why some activities are associated with positive outcomes.

Finally, I examine interactions between activity participation and social background. I find that students with high socioeconomic backgrounds show a positive significant association between activity participation and academic achievement, while students with low socioeconomic backgrounds do not. I discuss how families prepare youth unequally for

activity participation and how this can explain why some groups seem to benefit more from organized activities than other. Additionally, I discuss methodological issues such as conceptions of activity participation, causality, and selection bias, and point to the need for further research on the topic.

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Table of Contents

1	Introduction	1
1.1	Outline of the Study	3
2	Making Sense of Organized Activities	5
2.1	Organizing Organized Activities	6
2.2	Theoretical Perspectives	9
2.2.1	Financial or Cultural Constraints?	9
2.2.2	Organized Activities, Social Class, and Academic Achievement	15
2.3	Previous Research	20
2.3.1	The Class Gap in Organized Activity Participation	22
2.3.2	The Educational Outcomes of Organized Activities	24
2.4	Summary and Hypotheses	31
3	Data and Methods	34
3.1	Data and Sample	34
3.2	Operationalized Variables and Descriptive Statistics	36
3.2.1	Active Participation in Organized Activities	36
3.2.2	Breadth of Activity Participation	37
3.2.3	Academic Achievement	38
3.2.4	Socioeconomic Background	39
3.2.5	Control Variables	41
3.3	Statistical Methods	44
3.3.1	Logistic Regression	44
3.3.2	Multiple Linear Regression	46
3.3.3	Significance Testing	49
3.4	Limitations	49
3.4.1	Variables Not Included	50
3.4.2	Validity and Reliability	50
4	Results	52
4.1	Patterns of Activity Participation	52
4.2	Barriers to Organized Activity Participation	58
4.2.1	Barriers to Specific Activity Contexts	61
4.3	Organized Activity Participation and Academic Achievement	64

4.3.1	Specific Activity Contexts and Academic Achievement	66
4.3.2	Threshold Effects of Organized Activity Participation and Academic Achievement.....	68
4.4	Organized Activity Participation, Socioeconomic Background, and Academic Achievement.....	70
4.4.1	Active Organized Activity Participation	70
4.4.2	Varying Thresholds?	73
4.5	Summary of Results.....	76
5	Discussion and Conclusion	78
5.1	Class gap or Class gradient?	78
5.2	Unpacking Barriers to Organized Activity Participation	79
5.3	Academic Achievement and Organized Activity Participation.....	83
5.4	Social Reproduction and Organized Activity Participation	87
5.5	Further Research.....	90
5.6	Concluding remarks.....	91
	References	93
	Appendices	103

List of Tables

Table 2.1: Summary of Material and Cultural Barriers to Activity Participation.....	14
Table 2.2: Approaches to Class Differentials in Educational Outcomes of Activity Participation	20
Table 3.1 Descriptive Statistics	43
Table 4.1: Cross Table of Active Activity Participation and Socioeconomic Quintiles. P-value Display Chi-squared Test.	52
Table 4.2: Separate Cross Table of Active Activity Participation in Specific Activity Contexts and Socioeconomic Quintiles. P-value Display Chi-squared Test.	53
Table 4.3: Cross Table of Number of Activity Contexts and Socioeconomic Quintiles. P-value Display Chi-square Test.	57
Table 4.4: Ordinal Logistic Regression, Activity Breadth as Dependent Variable (0-3), (Proportional Odds Ratios).....	60
Table 4.5: Binary Logistic Regression, Active Participation in Specific Activity Contexts as Dependent Variables, (Odds Ratios).....	63
Table 4.6: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	65
Table 4.7: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	67
Table 4.8: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	69
Table 4.9: Predicted Values on Outcome Variable (Academic Achievement) Dependent on Number of Activity Contexts. Based on Model 2 in Table 5.5. All Control Variables at Means.	70
Table 4.10: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	72
Table 4.11: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	74
Table 4.12: Split Sample Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6).....	75

List of Figures

Figure 2.1: Percentage of Oslo Youth Having Been Involved in an Organized Activity During the last Month over Gender and Grade Level (Bakken 2018b)	21
Figure 4.1: Active Participation in Organized Activities Divided by Socioeconomic Quintiles. Based on Table 4.1 and 4.2.....	56

List of Appendices

Table A1: Activity Breadth Divided by Socioeconomic Quintiles among Those Participating in Two or More Activities	103
Table A2: T-test for Active Participation in Specific Activity Contexts. Based on Table 4.2	104
Table B1: T-tests for the Coefficients (Odds Ratios) in all Logistic Regressions	105
Table B2: Average Marginal Effects and Y-standarized Coefficients. Based on Table 4.5	106
Table B3: Linear Probability Models for Separate Activity Models	107
Appendix C: Chapter 4.3.....	108
Table C1: OLS Regressions, Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.....	108
Table C2: T-tests for the Coefficients of Specific Activity Contexts (Prob > F). Based on Table 4.7	109
Table C3: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.....	110
Table C4: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not shown.....	111
Appendix D: Chapter 4.4	112
Table D1: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.....	112
Table D2: OLS Regression, Academic Achievement as Dependent Variable (1-6). Controls for Part of Oslo, Grade and Gender not Shown.	113
Table D3: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.....	114

1 Introduction

In Norway, 90 percent of upper secondary school students have participated in an organized activity after the age of ten (Bakken 2018a). This means that participation in organized leisure time activities is a normative experience for most youth. In 2016, the Norwegian government issued a policy statement¹ declaring that all children and youth in Norway have the right to participate in organized activities, regardless of their parents social and economic resources (Ministry of Children and Families 2016). Organized activities are regarded as important contexts where youth can develop their skills, socialize with peers, and experience a sense of achievement (Bufdir 2019).

However, recent news stories have argued that activity involvement is contributing to an unequal society (Hoper 2019). Norwegian research concludes that there is a class gap in activity participation (Bakken, Frøyland & Sletten 2016, Bakken 2018a). This class gap exists despite widespread *participation for all* policies in most organized activities. Parental resources seem to be of great importance for involvement, yet scholars disagree on whether the class gap is caused by the economic cost of activities or cultural preferences.

Furthermore, social differences in educational achievement are large and pervasive in modern societies. This is also the case in Norway (Andersen & Hansen 2012, Elstad & Bakken 2015). Sociological research in the US has long considered organized activities a source of unequal academic achievement (Holland & Andre 1987, Dumais 2006, Morris 2015). The association between participation in organized activities and academic achievement is not comprehensively explored in Norway. The class gap in activity involvement enhances the urgency to investigate how organized activity participation is associated with academic achievement in Norway.

Moreover, recent contributions have started to explore how activity participation can influence students' academic achievement differently depending on their social background (Covay & Carbonaro 2010, Morris 2015). The main rationale for this approach is that since home environments differ, activity participation can be more beneficial for e.g. students with

¹ Fritidserklæringen

low access to educational resources at home. Differentials in returns of activity participation are mainly investigated in the US, where organized activities often are academically oriented. To explore this in a more egalitarian context with other types of organized activities can provide insights into how activity participation can lead to either social mobility or reinforce already established class differentials in educational outcomes.

I will use Oslo as a case for investigating both participation in and educational outcomes associated with organized activities. Oslo is the capital and biggest city in Norway and has been the center of recent public debates of how organized activities can reinforce already established social differences (Aas & Røed-Johansen 2019). The data used is the “Young in Oslo” survey from 2018. The survey maps the lives of lower and upper secondary students in Oslo and contains information on students’ social background, academic achievement, and involvement in organized activities. I will investigate the following overarching research questions:

RQ1: What is the relation between parental economic and cultural resources and activity participation?

RQ2: What is the association between activity participation and academic achievement?

RQ3: How is the association between activity participation and academic achievement affected by socioeconomic background?

My contribution is twofold. Firstly, the study will provide important empirical results of participation in organized activities and academic outcomes related to activity participation in Oslo. I will explore how participation in different types of activities, active participation, and breadth of activity involvement is associated with parental resources and academic achievement. Secondly, I want to contribute to the international literature on activity participation by exploring the theme in Norway. Insights from this study can potentially help to understand what features of activity participation can influence academic outcomes.

Following Mahoney, Larson & Eccles (2005: 5) and Bakken et al. (2016: 65), I define organized activities as activities having in common that they are supervised or initiated by adults, gathering a group of youth, hold regular meetings, and are governed by a set of rules. The terms organized activities and organized leisure time activities will be used

interchangeably in the thesis. The same is the case for participation in organized activities, activity participation, and activity involvement. There is a wide range of organized activities provided in Norway and particularly in Oslo. The activities included in my study are sports, cultural activities, youth clubs, and religious organizations.

Moreover, the terms social class, socioeconomic status, social origin, and social background will be used quite interchangeably throughout the thesis. In the results chapter, I use the term socioeconomic status or socioeconomic background, as this is the measure used in the analyses. However, in the section on theory and previous research, I review theoretical perspectives based on different conceptions of class².

1.1 Outline of the Study

Chapter 2 starts with a presentation of organized activities in Norway. Further, I review theoretical approaches on how to conceptualize the relation between social class, participation in organized activities, and academic achievement. I present two approaches to understand how social origin influences youth participation in organized activities. Moreover, I present two ways of comprehending how activity involvement can provide beneficial academic outcomes. Finally, I review previous research on participation in organized activities and how activity involvement is associated with academic achievement.

In chapter 3, I present and discuss the survey data, operationalization of variables, and methods utilized in the analyses. I critically assess both advantages and disadvantages to my research design. I justify how I operationalize participation in organized activities and other essential variables, and present descriptive statistics of all variables used in the analyses. Moreover, I argue for the advantages of the methods used and discuss the limitations within the chosen research design.

Chapter 4 reports the results from the analyses based on the research questions. The chapter is divided into two main parts. In the first part, activity participation is the dependent variable, while academic achievement acts as the dependent variable in the second part.

² I will return to how varying conceptions of inequality and class schemes can be used in research on activity participation in the discussion.

Finally, in chapter 5, I discuss the results in light of previous research and theoretical assumptions. Additionally, I suggest further research and discuss the implications of my findings.

2 Making Sense of Organized Activities

Organized activities are a central part of the everyday lives of teenagers in Norway. After the school bell rings, young people often take a short trip home before heading out again to attend their organized activity of choice. The reasons for attending can be countless. Some attend because they want to socialize with peers, others might have given in to parental pressure, while some might simply enjoy the activity or attend purely out of habit. A few teenagers might also have a dream of one day to make a living off what they do in the organized activity. Regardless of the rationale for participating, organized activities are a vital part of young people's lives and youth culture.

This chapter is dedicated to contextualizing organized activities. I have three main objectives. Firstly, to inspect how organized activities are organized and structured in Norway. This means exploring the content of the activities, what they cost, and how they recruit. I focus on the activity contexts included in my study. The reason for presenting them in depth is to realize that even though the activities share some common features, they also differ from each other in content and cost.

Secondly, I review sociological contributions on how activity participation is linked to social class and academic achievement. I argue that grasping how social class influences family life is vital for understanding unequal participation in organized activities. Moreover, a decisive rationale for parents to support their offspring in organized activities is that they perceive it as being beneficial for the children's educational and work trajectories. Consequently, I review sociological theory on how activity involvement can benefit youth in educational settings. Additionally, I conceptualize how outcomes of activity participation can vary depending on social class.

Thirdly, I review previous research on participation patterns in organized activities and the association between activity participation and academic achievement. I also consider recent research finding that activity participation can affect academic achievement differently for students dependent on their social background.

2.1 Organizing Organized Activities

I start by presenting how organized activities operate in Norway. The presentation acts as a point of departure for contextualizing activity participation. Moreover, since most of the previous research on activity participation is carried out in other contexts, primarily in the US, a thorough presentation of the organized activities in my study is necessary to illustrate how organized activities operate in Norway.

Organized leisure time activities in Norway are coordinated by voluntary organizations in the civic sector, commercial enterprises, or through publicly funded programs (Nordbakke 2018: 6). The organized activities typically operate within a school district or greater local area. Unlike the US, organized activities in Norway are not usually hosted by schools³. Most organized activities in Norway explicitly state a *participation for all* policy, meaning that they welcome everyone eligible to participate and want to recruit broadly throughout all segments of the population. The activities included in my study are sports teams, collective music activities, cultural schools, youth clubs, religious organizations, and other activities.

Sports teams in Norway are coordinated by Norges Idrettsforbund. Norges Idrettsforbund (NIF) is the largest organizer of leisure activities in Norway, having approximately 2,100,000⁴ members throughout all age groups (NIF 2009a). There are 652 sports clubs in Oslo alone, where many clubs mainly have children and youth members (Andersen & Bakken 2018). The most popular sports are football, cross-country skiing, and gymnastics (Eikeland 2017).

The sports clubs are part of the civic sector and are financed primarily through NIFs part of the surplus from Norsk Tipping⁵, public funding, and elite team's sponsorships with private businesses (Bryhn 2019). Additionally, there is usually a participation fee. The fee varies in size but can be quite high. For instance, the participation fee in youth football is 500 NOK for a club fee, 1,500 NOK for a facility fee, and 1,000 NOK in a tournament fee per year (NFF

³ Organized activities hosted by schools are called extracurricular activities.

⁴ The number reflects total number of memberships. A person may be registered as a member in several sports.

⁵ Norsk Tipping is a government-owned limited company under the direction of the Ministry of Culture. It is assigned by the government to offer games that create excitement and entertainment within responsible limits, with the profits going to good causes (Norsk Tipping 2019). The surplus from Norsk Tipping is a central source of financing of many organized activities in Norway.

2017). Equipment and sportswear are not included in the fee. The cost of equipment is dependent on sport type, but it can sometimes be quite expensive. Parental involvement is expected and often desired (Seippel 2008, Stefansen, Smette & Strandbu 2016). The degree of parental involvement in Norway is seen as high and is constantly subject to debates⁶.

Similar to many European countries, Norway has implemented *Sports for All* policies throughout the past 30 to 40 years (Andersen & Bakken 2018). The policy directs special attention to reducing drop out among teenagers (NIF 2009b). The goal is to “Keep as many adolescents for as long as possible in sports teams as performers, coaches, leaders, referees, board members, coordinators, and volunteers”⁷ (NIF 2009b). This is done both through *Sports for all* policies that want to offer flexible and diverse opportunities in line with the needs and desires of young people and a *Future athlete* policy that want to give young people who wish to advance to elite level the tools to do so (NIF 2009b).

Collective music activities are activities such as choirs, marching bands, and orchestras. These activities are coordinated by umbrella organizations such as Norges Musikkorps Forbund or Ung i Kor Oslo. Similar to sports teams, these activities attract both youth and adults, but offer specific activities for children and youth. The funding is done through a mix of public funding and member fees. A typical fee ranges between 1,000 and 3,000 NOK per semester. This includes the renting of instruments, individual instruction, and practices. Additional costs can be fees for camps or acquiring your own instrument. Collective music activities want to recruit broadly and practice *participation for all* policies (NMF 2014). Norges Musikkorps Forbund especially targets groups with low-income and minority groups through a specialized “inclusion support team” (NMF 2014).

The cultural school is a municipal leisure activity supplier for children and adolescents. All Norwegian municipalities are obliged by law to offer some cultural school activities (Ministry of Education and Research 2019). The main activities are music, theater, dance or visual arts, but often contain local variations in activity structure (SNL 2014). The Oslo cultural school has around 7,200 students and 245 employees, and is one of the largest in Norway (Oslo Kulturskole 2019a). It is financed through state and municipal funding. There is also a participation fee varying from 1,500 to 3,500 NOK per semester, depending on the activity.

⁶ See e.g. Berge (2019) and Hatlo (2019)

⁷ Own translation

Participation in talent programs cost between 2,000 and 3,600 NOK extra per semester (Oslo Kulturskole 2019b). The vision of the Cultural school nationally is “Cultural school for everyone”. The cultural school also focuses on creating opportunities for talent development for students with specific skills (Oslo Kulturskole 2019a).

The fourth main activity is youth clubs or leisure clubs⁸. Youth clubs aim to provide older children and youth a place to spend their leisure time with peers. These leisure clubs host both junior clubs for children aged 10 to 14 and youth clubs for youth between 14 and 18. Most leisure clubs are publicly funded and hosted by the local authorities (SNL 2016). Every club has at least one employed adult leader. However, the members themselves carry out most of the day-to-day operations, and parental involvement is not common. To get access to the youth club you need a membership that usually costs between 50 and 100 kroner (Oslo Municipality 2019). This makes youth clubs substantially less expensive than e.g. sports teams or cultural schools. An important resolution of the youth club association is to offer culture on the youths’ own premises (Ungdom og fritid 2019). The leisure clubs want to facilitate teenagers to establish their own arena for producing culture and hosting various activities. This makes youth clubs one of the biggest arenas for youth culture in Norway. The activities depend on the specific club but usually includes song, music, dance, arts and craft, sports games, computers, table tennis, pool, and console games. Furthermore, the youth clubs want to offer a space for all youth regardless of social background. They have strict no drug, alcohol, and tobacco policies. Oslo has around 58 youth clubs spread throughout the city (Oslo Municipality 2019).

The religious organizations provide various activities for youth in Oslo. The common denominator is that the activities are grounded in religious values. The activities vary in content from bible study and madrasah, to sports, youth camps, or charity work. Some notable examples are KRIK (Christian sports association), ICC-Youth (Islamic Cultural Centre Norway) and Kristenrussen (Christian organization for upper secondary school seniors). Participation in religious activities usually cost substantially less than some of the other activities, but varies from being free to having a small membership fee.

In my analyses, I also include a category called *other activity contexts*. This category potentially contains many different activities. This surplus category is primarily defined by

⁸ Fritidsklubb

not containing any of the other types of activities. Some examples of organizations falling into this category are the scouts, minority organizations (e.g. Tyrkisk Ungdomsforening or African youth in Norway), 4H or youth sections of non-governmental organizations (e.g. Red Cross). The activities in this category are likely to differ in content, degree of structure, and cost.

In summary, organized activities for youth in Norway are often community-based and financed through a mix of public funding and participation fees. The activities vary in content and degree of professionalization. There are considerable variations in the degree of structure and adult supervision in the activity context. Moreover, the activities have an egalitarian normative foundation with explicit and governing *Participation for all* policies. Despite this, not everyone participates in organized activities. I will in the next section move on to discuss how social class and socioeconomic status is linked to activity participation.

2.2 Theoretical Perspectives

Social origin influences several aspects of one's life. Family background is shown to influence activity involvement and educational outcomes among youth. In this section, I present theoretical frameworks for conceptualizing how class and activity participation intersect.

2.2.1 Financial or Cultural Constraints?

To understand why youth participate in organized activities, we need to acknowledge the role of parents. Parents and families establish their children's activity participation at an early age. This initiation influence trajectories of activity participation throughout childhood and adolescence. Moreover, as children become teens, parents can encourage their offspring's activity participation through financial and moral support. However, recent sociological insights disagree on whether the class gap in activity participation is mainly a consequence of cultural or economic differences. I, therefore, review two approaches on how social origin is affecting activity participation: cultural and material explanations.

Cultural Explanations

Cultural perspectives highlight how child-rearing and parental cultural logic is class dependent. Cultural perspectives on class are primarily associated with Pierre Bourdieu. However, the starting point of my review is based on the works of the American sociologists Annette Lareau. She studies family life and is interested in how the social position of children and parents has an impact on the quality of their life experiences. In her book *Unequal Childhoods* (2011 [2003]), she analyzed class based child-rearing practices in the US through an extensive ethnographic study. Lareau argues that middle-class parents consider organized activities as an essential part of a child's development and childhood. Reversed, working class and poor parents appreciate the facilitation of unorganized free play with nearby friends and relatives as important for a child's wellbeing. Lareau (2011) distinguishes between the process of *concerted cultivation* and *the accomplishment of natural growth*.

Concerted Cultivation

Middle-class parents engage in the process of concerted cultivation of their offspring. The process of concerted cultivation fixates on cultivating a child's talents in a concerted fashion. A central component in this process is the parents' structuring of the spare time of their children. The after-school time is characterized by a high amount of participation in organized activities. The activity involvement is established, controlled, and supported by parents (Lareau 2011: 1-2). Involving their children in organized leisure activities is seen by the parents as an essential aspect of good parenting. The rationale of parents to sign their children up and later support them in organized activity participation is that the parents perceive activity involvement as giving their children certain advantages. The middle-class parents view activity participation as a way of teaching their children crucial life lessons. These are for instance to perform in public, become team players, and learn "when to practice and when to perform" (Lareau 2011: 60). Moreover, the performance-based assessment inherent in most activity contexts gradually becomes routine. This is perceived as helping their children and adolescent perform better in school and later in work-life. In their organizational style, many of the activities in which middle-class children routinely participate replicate key aspects of educational settings (Lareau 2011: 62). This is, nevertheless, not without costs. Lareau (2011) argues that the process of concerted cultivation is conditional on immense invisible labor by parents. Support such as getting ready, driving to and from activities, being present at

practices and performances, and tending to their children's needs throughout the day takes up most of the parents' week-nights and weekends.

Moreover, the middle-class world is a verbal one (Lareau 2011: 132). The child-parent relationship features bargaining through argumentation rather than directives and centers around abstract language use. This resembles Basils Bernstein's theory of language code. Bernstein (1974) argued that language use coincided with social class. Middle-class children tended to use an elaborated code, while working-class children used a restricted code. The elaborated code is characterized by long sentences, the use of abstract concepts, and a rich vocabulary and is valued positively by social institutions such as schools.

Lareau (2011: 4-6) looks to the change and professionalization of child-rearing discourses for an explanation of the differing parental logic. A dominant set of cultural repertoires on child-rearing, including playing an active part in their life, developing educational interest, and talking with the child, are seen as the "correct" way of bringing up a child. Middle-class parents appear to alter behavior to align with professional discourses to a higher degree than working-class parents. Moreover, another cause contributing to the process of concerted cultivation is the increasing concern among the middle class for downward mobility. Increased inequality has led to a focus on "investing" in their children (Doepke & Zilibotti 2019). Lareau (2011: 5) writes: "Worried about how their children will get ahead, middle-class parents are increasingly determined to make sure that their children are not excluded from any opportunity that might eventually contribute to their advancement". Enrolling and encouraging children's participation in organized leisure time activities is one of the strategies implemented by middle-class parents to provide advantages for their children (Lareau 2011: 249).

The accomplishment of Natural Growth

According to Lareau (2011: 3), working-class parents do not engage in the process of concerted cultivation. They believe the best for children is to let them develop at their own pace. The accomplishment of natural growth puts less emphasis on structuring children's time outside school. Lareau (2011) finds that working-class parents do not consider concerted cultivation of children through active involvement in organized leisure time activities an essential aspect of good child-rearing. Children's time is more unstructured, and they are free to play with friends and relatives with less adult supervision. The parents want their offspring

to spend time in the child's world as the hardship and responsibilities of adult life should be avoided as long as possible. In contrast to the middle-class families, there is a clear boundary between children and adults. The child-parent language relationship features primarily directives. This language use leads to a restricted code characterized by short sentences, little use of abstract concepts, and a limited vocabulary (Bernstein 1974).

A central point made by Lareau is that the parental discourse concerning activity involvement is cultural and not only a results from economic constraints. To illustrate the parental logic of the accomplishment of natural growth, Lareau (2011: 77-79) tells the story of Tyrec Taylor. Tyrec, a young working-class boy, wants to join organized football practices because of his passion for football. His mother says no. However, Tyrec, being persistent over time in his yearning to join a football team, his mother finally gives in and signs him up. Tyrec soon wants to quit because of the practices are leaving him less time to play with his friends. His mother tells him to finish what he started. Tyrec quits the activity at the end of the season. Lareau (2011: 79) writes:

Although Ms. Taylor seemed genuinely pleased that her son had participated in the football team, she saw no reason for him to repeat the experience. [...]. For her, as with other working-class and poor mothers, being a good mother did not include an obligation to cultivate her children's various interests, particularly if doing so would require her radically rearranging her own life.

The excerpt shows that a certain value is given to activity involvement among working-class and poor parents. Working-class parents direct less attention to cultivating their children. Development at one's own pace is in a child's best interest. Academic development is left to be attended by schools (Lareau 2011).

Material Explanations

The process of concerted cultivation and the accomplishment of natural growth stress the impact of class-culture and parental logic on activity participation. These cultural explanations point to the value given by middle-class parents to engage their children in organized activities. This approach is criticized for not acknowledging the role of material or economic factors (Bennet, Lutz & Jayaram 2012). Material or structural explanations argue that financial constraint and opportunity structures are the primary explanation for unequal activity participation.

Bennet, Lutz & Jayaram (2012) investigate class differences in youth activity participation with interviews, survey, and archival data. Their approach is to recognize that behavior: “sits at the intersection of beliefs about what should occur (as informed by culture) and the ability to actualize those beliefs (as shaped by structure)” (Bennet, Lutz & Jayaram 2012: 131). They argue that the class gap cannot be explained purely by culture, and find that the cultural logics and parenting strategies are quite similar across classes. Working-class parents are quite encouraging of organized activities.

Independent of class, parents argue that supporting their child’s interest, personal development, the acquisition of academic knowledge, keeping active, and socializing with peers all are justifications of participation in organized activities. However, Bennet, Lutz & Jayaram (2012) find some rationales dependent on class. The variations are related to safety and future opportunities. Safety is predominately a parental reasoning among working-class parents. They look at activity involvement as a safety measure and a way of “keeping the kids off the street” (Bennet, Lutz & Jayaram 2012: 142). Working-class parents also present future opportunities as a reason for getting their children involved in organized activities. They envision participation in organized activities as linked to educational success and as a pathway to expand their opportunity structure. Middle-class parents are more occupied with customizing their offspring’s experiences in organized activities.

Bennet, Lutz & Jayaram (2012) look beyond culture to seek explanations of the class gap. They argue that explanations of the class gap need to consider the role of financial resources and institutions. Looking at participation patterns more closely, they find the participation pattern in in-school activities to be strikingly similar across classes. However, the class gap in activity involvement is substantial in out-of-school and community-based activities. Two explanations for this are given: fewer financial resources in working-class families’ contra middle-class families and poorer institutional capacities in working- versus middle-class neighborhoods (Bennet, Lutz & Jayaram 2012: 148). Out-of-school activities are more expensive. Additionally, they usually involve more parent involvement, such as transport and volunteering, which are harder to accommodate for working-class parents.

They suggest a view on social class as not only culture but also extended to include the structural location of the working-class and middle-class families. Bennet, Lutz & Jayaram (2012: 132) argue: “that because of financial constraints, working-class families rely on social institutions for affordable participation opportunities, but have access to few such institutions

beyond schools and churches”. The implication is that institutions and opportunities play a major role. Where the opportunities are easily available, working-class parents seem willing and committed to involving their children in organized activities. Hence, the given opportunity structure also appears to influence what kinds of activities children are engaged in, where non-school activities are dominated by middle-class youth. A summary of explanations for the class gap in activity involvement is showed in table 2.1 below.

Table 2.1: Summary of Material and Cultural Barriers to Activity Participation

	Material barriers	Cultural barriers
Determining constraining factor	Economic resources	Child-rearing logic
Mechanism	The financial cost and institutional availability of activities	Parental logic regarding the value of activity participation
Consequence	Working class children participate less if organized activities are expensive	Working class children participate less because their parents regard activity participation as unimportant

2.2.2 Organized Activities, Social Class, and Academic Achievement

I will now move to review theory on the impact of organized activities on academic achievement. Trying to comprehend how activity participation affect academic outcomes has been the motive for several scholars in multiple disciplines. Since sociologists started to develop an interest in activity participation and youth culture in the 1960s, other disciplines such as economics and psychology⁹ have joined in.

James Coleman was among the first to develop a framework to apprehend how activity participation was linked to academic outcomes. Coleman (1961) viewed the relationship between participation in organized activities and academic achievement as a zero-sum game. In *The Adolescent Society* (1961), Coleman found that high school students would rather be remembered as the star athlete than the perfect student. He argues that participation in organized activities might draw attention away from schools and academic endeavors. The student role and activity participator role became competing roles in the life of a teenager. More time spent and value added to one of the two drew attention away from the other. This zero-sum role conflict will, according to Coleman, lead to declining academic achievement with increased activity participation. Additionally, youth who spends more time in organized activities will have less time for school work.

However, since Coleman's time, empirical research has established that activity participation is for the most part associated with positive outcomes such as increased academic achievement. (Holland & Andre 1987, Feldman & Matjasko 2005). This has led to new ways of thinking about how activity participation influence academic outcomes. As argued above, activity participation is also constantly linked to social class. This necessitates a focus on how

⁹ In psychologically, Bronfenbrenner's (1979) developmental-ecological model or ecological system theory is often used to explain the relationship between activity participation and adolescent adjustment. Bronfenbrenner's model focuses on how individuals develop and adjust under the influence of settings in which they live. The key point is that the interaction between these different settings is vital for development. Organized activity contexts are therefore a setting in which youth develop. However, other contexts such as schools, families, or peer groups influence how youth experience and develop through organized activities. Simultaneously, the activity context influences development in the other setting. This functions as an outline for understanding the triad of the home environment, activity context, and schools as the point of departure for thinking about outcomes of activity participation.

social background can influence academic outcomes of activity involvement. In the following sections, I will present two ways of conceptualizing how participation in organized activities can affect academic outcomes and how social class can moderate the relationship.

Cultural Capital and Reproduction through Organized Activities

It is only sporadically claimed that participation in organized activities provides students with improved cognitive skills or intellectual abilities (see e.g. Schellenberg 2004, 2011). Cultural capital theory argues that activity participation can increase levels of cultural capital. The concept of cultural capital underlines the relational manner of how symbols and skills are rewarded in schools and is mainly associated with Pierre Bourdieu and his work on inequality in culture and education (Bourdieu 1984, Bourdieu & Passeron 1990).

The concept is widely used in educational research and has enabled researchers to view culture as a resource that provides access to scarce rewards in the educational system (Bourdieu & Passeron 1990, Lareau & Weininger 2003). It has taken on an array of different meanings. I will follow the definition of Lareau & Weininger (2003: 53). Cultural capital is thus defined as “the micro-interactional processes through which individuals comply (or fail to comply) with evaluative standards of dominant institutions such as school”. Lareau’s research on class-based child-rearing styles might be regarded as a furtherance of cultural capital theory insofar as her work is “a reasonably straightforward, if *partial*, empirical application of Bourdieu’s broader theoretical model” (Lareau 2011: 362). She argues that children raised in a concerted cultivation fashion have a comparative advantage in the educational system and institutional navigation more in general. Through the process of concerted cultivation, the middle-class children develop micro-interactional skills that are rewarded in the educational system. This inculcation of aptitudes for a certain kind of reasoning and interacting with institutions are gained from both activity participation and the adult-parent relationship. However, according to Lareau (2011) activity involvement per se is not enough to be beneficial for academic outcomes. How participation in organized activities is linked to school success must be interpreted relational. The other features and outcomes of the process of concerted cultivation must also be taken into account. The point made is that middle-class children are better equipped to harvest the benefits gained through organized activity participation. I call this the reproduction model of activity participation.

Bourdieu & Passeron (1990: 46) argue that: “Symbolic mastery is never its own foundation”. The reproduction model suggests that middle-class students have higher educational payoffs from activity involvement than working-class students do given the same amount of participation. The key element is that family life has prepared youth differently for harvesting the reward sometimes associated with activity participation.

A central variation in the child-rearing styles presented by Lareau (2011), is the temporal structuring of daily life. The hectic pace of concerted cultivation where children and families maintain a tight schedule consisting of organized activities are contrasted to the mellower pace of the accomplishment of natural growth where free time and play are supported. Consequently, the middle-class youth grow accustomed to a more disciplined temporal structuring than the working-class children (Lareau 2011). For the middle-class families, schedules become an important tool in managing the organization of everyday life. Moreover, a cultural logic of time as more structured is prevalent. As time is scarce, the utilization of time becomes important. For instance, two hours of available time becomes dedicated to homework or play. Hence, the (paradoxical) structuring of unstructured time will likely occur in middle-class families. The youth raised through the logic of concerted cultivation will develop skills for structuring time to a higher degree than working-class youth, where unstructured activities are common and time are more free-flowing (Coulangeon 2018).

Moreover, Lareau (2011: 82) argues that a central outcome of the concerted cultivation child-rearing style is an emerging *sense of entitlement*. Lareau demonstrate how this sense of entitlement grants the middle-class children and adolescents an ability to appear comfortable and self-assured in interactions with institutions. Similarly, Khan (2011) argues that elite youth develop specific interactive and corporal skills through upbringing and elite school attendance. The youth develop what Khan (2011: 15-16) calls *ease of privilege* in addition to a sense of entitlement. The ease of privilege can benefit students from higher socioeconomic backgrounds in activity contexts. They could be more accustomed to the cultural logic and symbolic mastery in organized activity contexts. Moreover, the sense of entitlement is facilitating the communication with adults in institutional settings, e.g. in organized activities. Consequently, middle-class children can customize their participation content both by themselves and facilitated by parents, hence enhancing developmental experiences. This could generate increased attention and support from adults in these activities. Moreover, the

sense of entitlement can lead to youth being treated differently by agents in organized activity contexts (Stanton-Salazar 2011).

Furthermore, according to cultural capital theory participation in organized activities can act as a status symbol (Bourdieu 1984). As “status symbols” or “prestigious cultural practices”, cultural capital and activity participation is appreciated as a symbolic representation of a background well suited for school success. DiMaggio (1982: 190) argues, “that teachers communicate more easily with students who participate in elite status cultures, give them more attention and special assistance, and perceive them as more intelligent or gifted than students who lack cultural capital”. The argument here is that activity participation acts as “elite status” symbols. This is most likely not the case considering the range of activities defined as organized activities above. However, some activities are likely to be more associated with elite status culture than others are. In Oslo, youths with high amounts of capital usually participate in organized activities such as cross-country skiing, jazz ballet, alpine skiing, choirs, theatre, and classical piano (Pedersen, Jarness & Flemmen 2018, Jarness, Pedersen & Flemmen 2018). These activities are therefore likely to be of more symbolic value than e.g. youth centers or religious organizations. Consequently, a framework focusing on the symbolic representations of activity participation needs to differentiate activity contexts.

Non-cognitive Skills and Resource Compensation

The concept of cultural capital has been criticized for being deterministic and display a picture of “oversocialized” individuals. Goldthorpe (2007) argues that schools and other educational institutions can function as important agencies of re-socialization. They can complement, compensate, or indeed counter family influences (Goldthorpe 2007: 14). The same argument applies to organized activity contexts. Similarly, Kingston (2001) criticizes the concept of cultural capital for suggesting that scholastic success is closely associated with middle-class standards and argues that “the cultural practices that enhance school success should not be passed off as «conformity to dominant norms»” (Kingston 2001: 97). This draws attention away from the fact that some skills and practices tend to help everyone in schools, and especially those with limited access to these resource at home. These resources are available through activity participation. I will in the next section present how participation

in organized activities can produce positive outcomes and compensate family influences. I call this the resource compensation model.

Noncognitive habitual behaviors or skills are distinct from cognitive skills, but also somewhat different from cultural capital. The main argument portrayed is that activity participation equips students with intuitive skills and experiences transferable to educational settings (Holland & Andre 1987, Farb & Matjasko 2011). These skills are not cultural practices that are understood as conformity to middle-class standards, but universal traits valued in society. Bowles & Gintis (1976) argue that established behavior in schools was the main explanation for differentials in educational outcomes and not cognitive capacities. Farkas (2003) stresses that noncognitive traits, e.g. work habits or other traits such as self-confidence, or emotional stability, are of greater importance to understand stratification than cognitive skills, e.g. mathematics composite or measures of role memory. Covay & Carbonaro (2010: 20-12) argue that organized activities: “improve students’ noncognitive skills: a broad set of skills that include (but are not limited to) task persistence, independence, following instructions, working well within groups, dealing with authority figures and fitting in with peers”. These traits are developed through activity involvement and can benefit everyone.

As a consequence, activity involvement in organized activities can act as a tool to reduce the achievement gap between social classes. At the heart of this framework lies the belief that activity involvement can complement, compensate, or indeed counter family influences. Organized activities are seen as contexts where youth can learn skills important for school success i.e. noncognitive skills, develop their talents, and gain self-confidence. Alexander, Entwisle & Olson (2001) show that the class gap in educational achievement grows larger over the summer. The implication is that influences of other social contexts than the home is especially important for students with low socioeconomic status. Participation in organized activities is essential for developing skills valued in schools. Consequently, it is argued that activity involvement is most beneficial for working-class students as they gain access to resources through organized activities that are not available in the family.

Moreover, organized activities can provide youth with providing institutional support and empowerment social capital (Stanton-Salazar 2011). The role of organized activities as a form of resource compensation is then happening through empowerment provided by the adults in the activity context. Through widening the pipeline, the institutional agents support these youths in their struggle against societal structures (Stanton-Salazar 2011).

A short summary of how activity participation can contribute to either social reproduction or resource compensation is presented in table 2.2.

Table 2.2: Approaches to Class Differentials in Educational Outcomes of Activity Participation

	Resource compensation model	Reproduction model
Key concept	Noncognitive skills	Cultural capital
Mechanisms	Activity participation compensate or counter family influences	Activity participation reinforce already established family influences
Consequences	Activity participation can be a pathway to social mobility for students with low socioeconomic background	Activity participation is most beneficial for students with high socioeconomic background

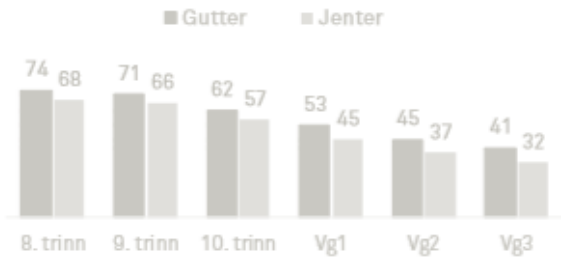
2.3 Previous Research

In this section, I will review previous research on participation in organized activities. I will start by reviewing research on participation patterns with a particular focus on the class gap in activity involvement. Then I move to previous research on how participation is associated with academic achievement. Finally, I review recent research on how social class can affect the outcomes of activity participation.

In Norway, almost 90 % of lower and upper secondary school students have participated in organized activities after the age of ten (Bakken 2018a). Around 60 % of young people between the ages of 13 and 19 participate in at least one organized activity (Bakken 2018a). Participation drops with age through adolescence, and there seems to be a critical point in the transition from lower secondary to upper secondary school where drop out is zenithal (Bakken 2018a).

Participation in organized activities is slightly more common in Oslo than the rest of Norway. Activity involvement in Oslo is also characterized by more participation among boys than girls across all levels of lower and upper secondary schools. This is due to the minority population in Oslo being higher than in the rest of Norway. Among minority youth, boys participate significantly more than girls (Stranbu, Bakken & Sletten 2019). Moreover, girls and boys participate in different activity contexts. Boys are overrepresented in sports, while girls are more present in cultural activities (Bakken 2018b). The percentages of Oslo youth having been involved in an organized activity during the last month are shown in figure 2.2.

Figure 2.1: Percentage of Oslo Youth Having Been Involved in an Organized Activity During the last Month over Gender and Grade Level (Bakken 2018b)



The main source of participation numbers in Norway is the UngData-surveys (Ungdata 2016). UngData usually differentiates activities into six distinct activity contexts: sports team, cultural school, religious organizations, youth clubs, collective music activities, and other activities. In Oslo, sports are the most popular activity with 53 percent of students in lower or upper secondary school having participated during the last month, 10 percent participated in cultural school, 8 percent in collective music activities, 18 percent in religious organizations and 27 percent in other organized activities. (Bakken 2018b).

When exploring how often Oslo youth were involved in an organized activity, Bakken (2018b) found that 57 % participated five times or more during the last month, 9 % participated 3-4 times, 11 % participated 1-2 times while 24 % did not participate in any activity. It is not explored if youth participate in multiple activity contexts.

Taking a historical perspective on activity participation in Norway, Ødegård (2007) shows that during the 1990s and early 2010s, there has been a drop in participation rates. However,

there was a rise in the participation patterns in the period between 2012 and 2016 (Bakken 2018a). The numbers for 2016 are similar to those of 2018 (Bakken 2018a).

In summary, participation patterns have been explored to some extent in Norway. However, I argue that previous research to a certain degree fails to apprehend important aspects of activity involvement. The research lack ways of capturing the different ways youth participate in organized activities. I stress the need to distinguish active participation from any type of involvement and the need to explore activity breadth. The results found in Bakken (2018a, 2018b) are based on youth that participated at least one time in an activity during the last month. I argue that this measure does not capture if an individual is active or not. There is a need for a threshold for determining the number of participants in organized activities more precisely. A proper cut off for active participation could be e.g. once a week. In a similar fashion, previous research does not investigate how youth participate in multiple activity contexts. To grasp who and how many participate in different activity contexts are necessary to fully comprehend patterns of activity participation.

2.3.1 The Class Gap in Organized Activity Participation

Social background matters for participation in organized leisure time activities; there is a class gap in activity involvement. In the US, Lareau, Weininger, & Velez (2015) found that participation in organized activities was closely associated with the mother's level of education. This is also the case in Norway (Bufdir 2019). Bakken, Frøyland & Sletten (2016) investigated unequal participation in organized activities and found a classed pattern of activity involvement. With the use of socioeconomic quintiles, they showed that over 70 percent of the youth in the highest socioeconomic quintile were involved in an activity while barely 50 percent of the boys and 40 percent of the girls in the lowest socioeconomic quintile participated. Remarkably, only 6 percent of the highest socioeconomic quintile had not participated in an activity after the age of ten in contrast to 22 percent of the lowest socioeconomic quintile. Moreover, Bakken et al. (2016) found a socioeconomic gradient in participation patterns, meaning that the percentage of youth involved in one or more organized activity followed a socioeconomic gradient. Bakken et al. (2016: 68) argued that the uneven activity involvement was a consequence of people in the lower status groups having been less involved during childhood and a higher dropout rate during adolescent.

Wollebæk & Sivesind (2010) showed that the inequality in participation in organizations has grown more prominent over time. They found that groups with low income and education, in addition to immigrant groups, to a greater extent fall outside the civil society. Strandbu, Gulløy, Andersen, Seippel, Dalen & Bergensen (2017) investigated class gaps in sports participation in Norway in a historical perspective. They found a U-shaped pattern of the importance of class for recruitment to sports. Their article showed that while a study from the 1950s revealed major class differentials in sports participation, no visible class patterns in participation were found in the 1980s to 2000s. However, when reviewing more recent studies, Strandbu et al. (2017) found a reemergence of class shaped involvement. They pointed to the professionalization of sports, increasing costs and demands for more intensive parental involvement as potential explanations.

The most common approach to investigate participation in organized activities has been to use a composite measure of socioeconomic background. However, some studies have explored how cultural and economic resources separately influenced activity participation. Andersen & Bakken (2018) explored contemporary social class differences in organized sports. They found substantial differences in organized sports participation between youth from the higher and lower social classes. Moreover, they found that indicators of parental economic resources mediated the social class differences, while indicators of cultural resources only had modest effects. Similarly, when exploring participation in voluntary organizations among all age groups, Enjolras et al. (2012) found that boys and men from families with economic capital and a sense local belonging participated in sports teams, while women and those with higher education to a higher degree participated in cultural organizations.

Moreover, Thorød (2012) explored activity involvement among Norwegian adolescents in low-income families and found that financial resources in the family seemed to act as a filter, limiting the opportunity structure of which kinds of organized activities the youth could participate in. The children were aware of their family's financial constraints and adapted their preferences to account for this as sour grapes. However, Thorød (2012) found that a substantial part of the low-income group she studied was involved in an activity. When dividing the low-income group into three groups according to income, she found that the middle group participated less compared to the low and high-income groups (all having an income under 60 percent of the median income in Norway). She argued that the group not

poor enough to gain support but still regarded as a low-income group was particularly vulnerable not to prioritize participation in organized activities.

In summary, there are clear social class differences in activity participation. Recent contributions have also started to explore what kind of resources matter for participation. I argue that this approach is important to develop further. We need to explore how cultural and economic constraints are linked to participation in organized activities. This is the case both for different types of activities, numbers of activities, and activity participation in general.

2.3.2 The Educational Outcomes of Organized Activities

How is academic performance associated with activity involvement? Are different activity contexts associated with different outcomes? How is the number of activities associated with educational outcomes? Research on activity involvement has found mostly positive effects of participation in organized activities. In this section, I will review previous research on the effects of participation in organized leisure time activities on academic achievement.

Youth involvement in organized activities has been shown to be associated with a range of positive outcomes. Holland & Andre (1987) conducted the first comprehensive review of the literature considering participation in organized activities among adolescents. They found that participation correlated with higher levels of self-esteem, improved race relations, involvement in political/social activities in young adulthood, academic ability and grades among boys, educational aspirations and attainment, and lower delinquency rates. Nearly twenty years later, Feldman & Matjasko (2005) reviewed the up-to-date literature on activity participation. They found that the association between activity participation and outcomes such as academic achievement, substance use, delinquency, and young adult outcomes were mostly positive, but that the picture became blurry once moderator variables were included. They suggested that future research should include moderator and mediator variables such as socioeconomic status (Feldman & Matjasko 2005: 195). The last systematic review of the literature on activity involvement was conducted in 2011. Farb & Matjasko (2011) revealed a more mixed relationship between activity participation and the outcomes mentioned above. They called for the further development of participation measurement and continued exploration in the use of moderator and mediator variables (Farb & Matjasko 2011: 43-44).

What Types of Activities Matter?

Traditionally, the inquiries exploring the association between organized activities and academic outcomes have focused on participation in sports teams (Holland & Andre 1987). However, during the last decades, researchers have started to consider other organized activities. Moreover, the US literature on activity participation usually separates in-school and out-of-school activities, where the schools host the former and voluntary organizations host the latter.

When investigating types of activity, Broh (2002) used a US sample and found that in-school sports promoted social ties among students, parents, and schools, and this explained the effect of participation on academic achievement defined as both grades and standardized tests. Participation in music had similar, but less impressive impacts on these outcomes. Community-based sport participation seemed to impair achievement. Interestingly, activities such as participation in student councils and school journalism seemed to affect grades positively but did not have any significant effect on test scores. Broh (2002) argued that in-school activities fostered school attachment and social capital to a higher degree than community-based activities, and this influenced academic achievement.

Moreover, Marsh & Kleitman (2002) found that school-based organized activities were more beneficial than out-of-school activities, and that the most beneficial activities were sports, student government, school publications, performing arts, and academic activities. Chambers & Schreiber (2004) only found partial support for the negative impact of out-of-school activities. However, organized activities in Norway are seldom hosted by schools. Consequently, the mechanisms hypothesized by Broh (2002) is likely to be different in the Norwegian context.

Furthermore, Linver, Roth & Brooks-Gunn (2009) used a cluster analytic approach to explore patterns of participation among a US representative sample of adolescents aged 10 to 18. They separated youth into activity clusters based on participation patterns. The results indicated that the clusters participating only in one type of activity such as sport teams, school activities, or religious activities had higher academic achievement than those who had little or no involvement in organized activities. However, the single-focused clusters had less positive outcomes compared with those who participated in sports plus other activities.

Nordic research on the effects of activity participation is scarce. However, among some notable exception, we find Mahoney & Stattin (2000) and Sletten, Strandbu & Gilje (2015). Mahoney & Stattin's (2000) explored how the structure of activities affected behavioral outcomes in Sweden. Mahoney & Stattin (2000) found that more structured activities such as sports, music activities, and religious activities were linked to positive outcomes, while more unstructured organized activities such as youth recreational centers were related to negative outcomes. In a Norwegian context, Sletten, Strandbu & Gilje (2015) used a national representative sample of Norwegian middle school students and found that participation in sport was associated with better grades in math and English.

Covay & Carbonaro (2010) investigated the mediating role of noncognitive skills between activity involvement and academic achievement. They found that dance, followed by music, sports, clubs, and performing arts all were positively associated with both noncognitive skills and academic achievement operationalized as standardized test scores. Van Boekel et al. (2016) used a US sample and propensity score matching to reduce selection bias and found that school-organized sports were associated with a higher grade point average. Among recent research, both Morris (2015) in the US and Coulangeon (2018) in France found positive effects of all included types of organized activities i.e. they found the same effect sizes regardless of activity context.

In summary, the findings are somewhat discrepant. While some studies find clear differentials in the association between participation in different activity contexts and academic achievement, some being negative, others see all activity contexts as beneficial. This calls for further research. Moreover, no previous Norwegian study has explored how different types of activity contexts are associated with academic achievement.

The Overscheduling Hypothesis and Threshold Effects

Recently, scholars have grown more aware of the many different ways youth participate in organized activities. This has led to an emergence of research on how intensity and breadth of activity involvement influence academic outcomes. This literature has grown parallel with a concern of overscheduling. The overscheduling hypothesis is grounded in a concern that young people's involvement in organized activities is too extensive and produces adverse outcomes. Mahoney, Harris & Eccles (2006: 1) outline the hypothesis:

This “over-scheduling” is thought to result from pressure from adults (parents, coaches, teachers) to achieve and attain long-term educational and career goals. These external pressures, along with the activity-related time commitment, are believed to contribute to poor psychosocial adjustment for youth and to undermine their relationships with parents.

This concern is similar to Coleman’s (1961) apprehension of activity participation as contexts competing with schools for youth attention. Concerns about potential overscheduling have been raised by Norwegian media as well¹⁰. Moreover, the research considering high levels of activity involvement has explored threshold effects and curvilinear relationships between activity participation and academic achievement. Several studies have explored whether there is a threshold at which activity participation no longer benefits educational outcomes (Farb & Matjasko 2011: 6). The common strategy for investigating this is to introduce a squared term of either intensity or breadth of participation and explore its associations with various outcomes (Mahoney, Harris & Eccles, 2006, Bonhert et al. 2010, Farb & Matjasko 2011).

Nevertheless, research on considerable activity involvement rejects the notion of the overscheduling hypothesis (Mahoney, Harris & Eccles 2006, Mahoney & Vest 2012, Fredericks 2012). However, there is support for threshold effects of activity participation (Mahoney, Harris & Eccles 2006, Randall & Bonhert 2011, Mahoney & Vest 2012). The findings indicate that there exists a threshold for optimal activity involvement at e.g. three activities or six hours a week. After this threshold activity participation becomes less beneficial (Randall & Bonhert 2011). In other words, the relationship between participation in organized activities and academic achievement is nonlinear, displaying an inverted U-shape, where activity involvement is providing the greatest returns for individuals that are moderately involved. Fredericks (2012), Randall & Bonhert (2012), Marsh & Kleitman (2002), Neely & Vaquera (2017), Knifsend & Graham (2012) and Morris (2015) all find threshold effects of activity participation using a squared term of activity involvement.

Mahoney, Harris & Eccles (2006: 1) summarize in their review on the overscheduling hypothesis: “Of greater concern than the over-scheduling of youth in organized activities is the fact that many youth do not participate at all”. The point made is that highly involved young people still reap the benefits of participation, insofar as they are more likely to associate with positive outcomes than those who do not participate, even if in a slightly lesser

¹⁰ See e.g. Klem (2013) or Byklum (2015).

fashion than moderately active youth. This is consistent with the findings of Fredericks (2012) and Marsh & Kleitman (2002) who find curvilinear relationships between activity involvement and grades in high school. Knifsend & Graham (2012) explored how activity breadth in four distinct activity contexts was linked to academic achievement. They found that those involved in two activities displayed the most positive outcome, while those involved in four activities displayed lower grades than those not involved at all. Overscheduling or threshold effect of activity participation is not previously explored in Norway. I argue that this is imperative to investigate for understanding how activity involvement is linked to academic achievement.

Class Differentials in Educational Outcomes

Recent studies have started to explore class differentials in educational outcomes associated with activity involvement. To clarify, the studies are doing more than establishing the class gap in activity involvement and then concluding that this is advantageous for middle- and upper-class students. The recent contributions want to investigate if the outcomes vary depending on the student's social background. In the heart of this approach lies the inquiry of whether activity involvement reproduces social inequalities or contributes to social mobility for lower-class students.

Marsh & Kleitman (2002) were among the first to explore what they called the social inequality gap reduction model and tested it on a nationally representative US sample. They tested for outcomes such as educational aspiration, staying out of trouble, standardized test scores, and school grades. Their findings indicated that the benefits of organized activities were for the most part slightly more positive for students coming from low socioeconomic backgrounds. However, when investigating school grades, participation in organized activities appeared to more beneficial for more advantageous students.

Dumais (2006) examined both types of activity and the total number of activities among elementary school students in the US. She found that dance lessons, athletic activities, and art lessons affected academic achievement positively. She found significant interactions of extracurricular activities and socioeconomic status. These showed that youth with low socioeconomic status benefited more from participation than more privileged students did.

Two years later, Dumais (2008) analyzed how students' time use was associated with grade point average and mathematics achievement among a national probability sample of US high school students. Her analyses showed that time spent on extracurricular activities benefited everyone's math scores. However, when exploring socioeconomic quartiles, she found that students in the top two socioeconomic quartiles did not benefit as greatly by participation in organized activities as the students in the bottom quartile (Dumais 2008: 883).

Taking a somewhat different approach, Covay & Carbonaro (2010) explored how much of the socioeconomic advantages in schooling outcomes were related to participation in extracurricular activities with a US sample of elementary school students. They hypothesized that noncognitive skills mediated the influence of socioeconomic status and extracurricular activities on academic skills, defined as test scores in math and reading. The results showed that extracurricular participation explained a modest portion of the impact of socioeconomic status on noncognitive skills. When exploring variable effects of extracurricular participation on achievement by socioeconomic status, Covay & Carbonaro (2010) found that students with a low socioeconomic status that participated in sports had higher math test scores compared with students in the same group who did not participate. Students with a high socioeconomic status that participated in sports did not receive an added math boost by participating. When considering reading scores, Covay & Carbonaro (2010) found that students with low socioeconomic status had a very small benefit of sports participation. Considering those with high socioeconomic status, they found that students from this group who did not participate in sports had a slightly higher reading score than those who did. Nevertheless, Covay & Carbonaro (2010) did not find a significant interaction between socioeconomic and participating clubs, dance, music, performing arts, or music and test scores in reading and math. They argue that math scores tend to be less connected to the home environment compared to reading scores as an explanation for their varying results.

Morris (2015) investigated if math achievement gains from organized activity participation varied according to socioeconomic status among high school students in the US. He found that, regardless of the type of organized activity context, less advantageous youth saw substantial academic improvements from time spent in organized activities, while more advantageous student did not. The effect sizes nearly matched the ones of private school attendance or high academic track placement. Exploring the type and breadth of activity involvement, this did not seem to matter, with one exception: academic activity participation.

The main explanatory factor was the intensity of participation i.e. time spent in activity contexts. Nevertheless, he found support for threshold effects for low-SES students. Too much participation (more than five hours a week) seemed to diminish the returns of activity involvement on academic achievement.

Most recently, Coulangeon (2018) investigated if participation in organized activities mediated the impact of social background on academic achievement among French middle school students. He found that participation in organized activities mediated the impact of parent's education on the academic success of their children. He argued that the participation of children in organized activities might reflect an educational investment of their parents conditioned by their educational resources (Coulangeon 2018: 79). However, he argued that the results observed did not conform to the idea that participation in organized activities primarily acted as a status signal rewarded by the school system. He argued that what was mainly at stake in participation in organized activities was the unequal capacity of families to extend the time of school supervision on their children's free time (Coulangeon 2018).

Validity and Causality in the Research on Activity Participation

Although most previous research found a positive association between organized activities and academic achievement, there are especially two intertwined issues in need of some attention: causality and self-selection. Participants in organized activities are not randomly selected, and there is on ethical grounds none randomized experiments considering the effect of activity participation on educational outcomes. Therefore, the participant group is not easily comparable to the non-participant group. Consequently, a causal relationship is hard to establish, especially with cross-sectional data. Farb & Matajasko (2011) found in their review that relationships that appeared positive in cross-sectional data, disappeared with the use of longitudinal data. Shulruf (2011) conducted a critical review of the relationship between organized activities and educational outcomes and found no established causal relationships. However, recent research (Van Boekel et al. 2016, Coulangeon 2018) found emerging support for a causal relationship, but with significantly smaller effect sizes than previous research. Van Boekel et al (2016) used propensity score matching to reduce selection bias, while Coulangeon (2018) used fixed effects to reduce unobserved time-invariant heterogeneity among individuals. Consequently, the literature on activity participation and academic

achievement needs to be interpreted with these issues of causality in mind. I will discuss this more in depth later in the section on methods.

2.4 Summary and Hypotheses

In this section, I will briefly summarize the review of previous research and theory on organized activities, academic achievement, and class. I will relate this to my research questions and form hypotheses.

I start with my first research questions:

RQ1: What is the relation between parental economic and cultural resources and activity participation?

Close to 90 % in a Norwegian representative sample of youth in lower and upper secondary schools in Norway have participated in an activity after the age of ten. At upper secondary school, around 40 % participate in an organized activity. Youth with high socioeconomic backgrounds participated significantly more than their less advantageous peers.

I reviewed two theoretical contributions to understand how social class can influence activity participation. Lareau (2011) argues that class culture and parental logic influence how involved their offspring are in organized activities. She argues that middle-class parents enroll and support their children in organized activities as a way of cultivating their children and provide them with advantages later in life. Conversely, working-class parents tend to value the accomplishment of natural growth and to a lesser degree involve their children in organized activities. In contrast, Bennet, Lutz & Jayaram. (2012) argues that unequal activity participation is a result of economic constraints among working-class families and less contingent on cultural practices.

From this, I derive two hypotheses:

H1a: Parental cultural resources is associated with increased activity participation

H1b: Parental economic resources associated with increased activity participation

I now move on to the second research question:

RQ2: What is the association between activity participation and academic achievement?

Coleman (1968) argued that activity involvement likely would impair academic achievement. However, previous research, has for the most part, concluded that activity participation is positively related to academic outcomes. Moreover, the rationale for parents to support their children in activity participation is that they learn something valuable for further education and work-life (Lareau 2011). This something is not cognitive abilities, but noncognitive skills or cultural capital.

Most of the previous research was carried out on US samples. Moreover, there is little consistency in deciding which activities are the most beneficial. However, recent studies find no differentials in returns depending on activity type (Morris 2015, Coulangeon 2018). Furthermore, previous research finds support for threshold effects of activity participation. This lead to these three hypotheses:

H2a: Participation in organized activities has a significantly positive association with academic achievement.

H2b: The association between participation in organized activities and academic achievement does not vary according to the nature of the activities in which students participate.

H2c: Up to a certain point, the number of activity contexts participated in has a positive association with academic achievement and a negative association thereafter.

Finally, I direct my attention to the third research question:

RQ3: How is the association between activity participation and academic achievement moderated by socioeconomic background?

I presented two theoretical models for understanding class as a variable influencing the association between activity participation and academic achievement. The compensation or mobility model which argue that youth with low socioeconomic background gain more from activity participation as it compensates or counters family influences. On the other hand, the reproduction model imagines that children are unequally prepared for activity participation; hence reinforcing already established class differences.

Moreover, I reviewed recent research on how socioeconomic background can influence and moderate the impact of activity participation on academic outcomes and argue for further research on the topic. Even though the topic is not well explored, recent studies find partial support for a resource compensation model where students from families with low socioeconomic status gain more from activity participation when considering academic outcomes. This leads to the following hypothesis:

H3: Students with low socioeconomic status have a stronger association between activity participation and academic achievement than student with high socioeconomic background.

3 Data and Methods

In the following chapter, all variables operationalized, and methods utilized in the current study will be presented. I will start by introducing the survey data and discuss how it assesses activity participation. Then, I will review the operationalization of all variables, before moving on to present the statistical methods utilized in the study, as well as the statistical significance testing. Finally, I discuss potential limitations in the research design.

3.1 Data and Sample

The data used is the large-scale Young in Oslo¹¹ survey conducted in 2018. The survey was administered by NOVA¹² in cooperation with Oslo municipality and is part of the UngData surveys carried out all over Norway (Ungdata 2016). The majority of studies on participation in organized activities rely on self-report survey methods. The benefit of using self-reported measures is that it makes it possible to gather information on activity involvement from a large number of youth. Moreover, the results can be coded to assess different aspects of activity participation (Bohnert et al. 2010). However, since research teams use different measures and include different activity types, it becomes difficult to compare results across studies. As previously mentioned, the main source of information on activity participation in Norway is the UngData-surveys. These surveys are standardized questionnaires distributed to students at lower and upper secondary schools all over Norway. The standardization means that results are comparable throughout parts of Norway and across time. This is a great strength because it makes results comparable to other studies on activity participation in Norway. Furthermore, it makes it possible for further research to explore similar research questions.

Conducted previously in 1996, 2006, 2012, and 2015, the survey's goal was to map the lives of teenagers in Oslo. The survey contained questions about participation in organized leisure time activities, academic achievement, and social background (Bakken 2018b). All lower and upper secondary schools in Oslo were invited to participate in the survey. Eventually, 30 out

¹¹ Ung i Oslo (Bakken 2018b)

¹² NOVA is one of the largest social research institutes in Norway and is a part of Oslo Metropolitan University. The survey is administered by the department of Youth Research.

of 33 schools participated, in which the three non-participating schools were private schools. The total response rate was 74 %. In total, the number of participants reached 25,287 for both lower and upper secondary school. My sample is restricted to upper secondary school students. The reason for investigating this age group is to connect to previous research (see e.g. Dumais 2008, Morris 2015). Furthermore, the grade point average received during the third year in upper secondary school provides the sole entry criteria for higher education¹³. The sample covered 65 % of upper secondary aged students in Oslo with a total N = 10,825. Finally, I do not include those with missing values on measures on participation, the composite score of marks in English, math and Norwegian, parental resources, grade, and gender. This leaves my total sample size on 8,719. The questionnaire took place during school hours, and approximately 45 minutes was set aside to answer the survey. Most students spent less than the assigned time (Bakken 2018b). All ethical aspects of the survey were approved by the Norwegian Centre for Research (NSD).

The overall validity of the data is regarded as good. However, it may potentially underrepresent high school seniors (Bakken 2018b). The reason for this is that the survey does not include apprentices and dropouts. Hence, the sample may contain some social bias due to higher dropout rates and the tendency to choose vocational tracks among lower-class students. Moreover, the survey deals well with representing all parts of Oslo, which is essential considering the segregated lives of the Oslo teenagers (Ljungren & Andersen 2017).

The survey contained a battery of questions dealing with activity participation. The survey participants were asked how many times during the last month they participated in a predesigned number of activities. The activities were sports teams, youth club, religious organizations, one category for collective music activities (marching band, choir or orchestra), cultural/musical school and other organizations, teams or unions. The possible answers were: “zero times”, “1-2 times”, “3-4 times”, and “5 times or more”.

As previously mentioned, I argued that measures of participation should take into account that activity participation is multilayered and consists of different aspects. The strength of these questions is the ability to measure the total number of activity contexts (breadth) and to some extent how often one participates (intensity). Breadth of activity participation is defined as the number of different activity contexts participated in (Bonhert et al. 2010: 580). Measuring

¹³ Some exceptions.

breadth can be done as the total number of activities or the number of different activity contexts. Bonhert et al. (2010: 581) argue that the best strategy to assess breadth is to consider the total number of activity contexts. I argue that this data is well suited for exploring the breadth of activity participation and will return to this further down.

Furthermore, intensity or dosage is defined as “how frequently a youth participates in a particular activity or activity context” (Bonhert et al. 2010: 585). Measuring intensity is best done either by studying the number of hours or total times participated per week/month. Bonhert et al. (2010: 589) encourage the use of an intensity score “that reflects the total number of hours per week engaged in either all or specific types of organized activities”.

Unfortunately, to capture a valid measure of intensity was not possible using this survey. Although a possible strategy was to create a composite score of total numbers of days during the last month an individual participated, this would not have captured true intensity levels. As the maximum value is “five times or more”, this possible answer contained a range of different values. Consequently, a youth who answered that she participated five times or more in sports teams may have participated ten times. She would then get a score of five on the intensity variable while another participant that participated 1-2 times at a youth club and 3-4 times at cultural schools would be assigned more or less the same score. Nevertheless, I argue that these data are valuable for assessing an equally important measure of intensity, namely active participation; this will be discussed further down.

3.2 Operationalized Variables and Descriptive Statistics

I will in the next section present all variables used in the analysis and how I chose to operationalize them. I also present descriptive statistics of all variables used. Descriptive statistics is presented in table 3.1 below.

3.2.1 Active Participation in Organized Activities

The types of activities included in the analysis are sports teams, youth center, religious organizations, collective music activities, cultural school, and other activities. I argued above for defining a measure for active participation in organized activities. I stress that a dichotomous measure of activity involvement should move beyond defining everyone who has participated in the activity as active. There is something qualitatively different about

having participated three or four times during the last month, nearly once a week, in an activity than having participated only once during the last month. I argue that a cut-off point for active participation versus non-active participation should be around once a week, as this suggests a certain level of commitment. Accepting the given threshold leads to not considering those who participated 1-2 times in an activity in the last month as active participants. This is done to eliminate those individuals who might have tried, dropped by or quit an activity during the last month. Therefore, active participation in organized activities is operationalized as having participated 3-4 times or more in an activity during the last month. Moreover, this allows for a more objective measure of active participation than self-report methods assessing active participation by asking whether participants participated or not as this may mean different things for different students. First, the different activities are combined to form a dichotomous measure of active participation versus non-active or non-participation. Non-active is coded as zero and active as one. Furthermore, the types of activities are separated and treated individually to investigate participation in each of the activities. Again, non-active is coded as zero and active as one. Youth can be considered active in more than one activity.

3.2.2 Breadth of Activity Participation

I operationalized breadth of activity participation as *the total number of different activity contexts actively participated in during the last month*. This measurement strategy is recommended by Bonhert et al. (2010) and used in similar studies (see e.g. Knifsend & Graham 2012). I used the measure of active participation for assessing involvement. This means that the participant must have been active in the given activity context to gain a score on the breadth variable. The reason for assessing total number activity contexts and not merely the number of activities is that using the total number of activities does not capture the extent to which youth are involved in different types of activities. For instance, youth who participated in two types of sport (e.g. football and ice hockey) are given the same breadth score as youth who were involved in two activities in different domains or contexts (e.g. football and choir). I argue that these are qualitatively different experiences and that activity dispersion is of more interest than simply the total number of activities. However, there is no consensus concerning what distinct categories should be used to group activities. This is problematic as it limits the comparison of how measures such as breadth function. Therefore, I chose to use the predesigned categories in the survey. These are sports team, youth center,

collective musical activities, cultural school, religious organization, and other activity contexts. These sum up to a breadth score ranging from zero to six.

I argue that this is a reasonable measure for breadth for two reasons. Firstly, it assessed unique activity contexts. Although collective musical activities and the cultural school have some similar content, I argue that the collective nature of marching bands, choirs and orchestras differs from the individual nature of cultural schools. Moreover, the category of other activities is somewhat problematic as it both captured activity contexts somewhat similar to those in the other categories as well as several different activity contexts.

Nevertheless, I argue that this is a useful category as the most common contexts are assessed by the other question. The activities gathered in the other category will most likely differ from these. Secondly, I argue that using the preexisting categories is valuable insofar as it allows for further research to explore this thoroughly. Since the UngData surveys are carried out routinely and systematically over time and throughout parts of Norway and use the mentioned categories, it is possible to conduct similar research in the future and in other parts of Norway.

The breadth of activity contexts variable is fairly overdispersed. In some analyses, I merged high levels of activity breadth. I create a variable ranging from zero to three where a level of three indicates that one participated in three or more activities. This will be further discussed later down. Descriptive statistic of the activity breadth variable is presented in table 3.1.

3.2.3 Academic Achievement

As seen in the review on previous research most studies exploring relationships between activity participation and academic achievement operationalize academic achievement as marks in specific subjects (Marsh & Kleitman 2002, Morris 2015), composite measures of marks (Dumais 2008), or standardized tests scores (Covay & Carbonaro 2010, Coulangeon 2018). Previous research used a mix of self-reported measures and information obtained from schools. I rely on self-reported measures. Therefore, I operationalized academic achievement as the mean score of self-reported marks in Norwegian¹⁴, math, and English. The grades range from one to six, where one means that the student flunked and six is the best possible result. I argue that using a composite score of three important subjects reflects an important indicator of academic achievement. However, it is important to keep in mind that it differs from the

¹⁴ First-choice form of Norwegian, written. (Norsk skriftlig hovedmål).

grade point average. In the appendices, I show separate analyses for each subject to explore if the impact varies according to the subject. If participants lacked a score in one of the subjects, the remaining subjects created the composite score. The variable ranges from one to six. Descriptive statistics are presented in table 3.1.

The use of self-reported grades is widespread and is seen as a reasonably good reflection of actual grades. It generally predicts outcomes to a similar extent as actual grades (Kuncel, Crede & Thomas 2005). Moreover, the survey asked for grades in particular subjects. This is considered a strength, as this tends to provide more reliable results than asking for grade point average (Kuncel, Crede & Thomas 2005).

Furthermore, because academic achievement is measured as grades obtained at the last report card and participation is measured as involvement during the previous month, participation has occurred after grades were handed out. This means that causal interpretations is not possible. I will discuss this more in depth further down.

3.2.4 Socioeconomic Background

Socioeconomic background or status (SES) was based on parental and family resources. The variable ranges from zero to three and is meant to reflect how youth has access to economic, social, and cultural resources. The Young in Oslo survey captured socioeconomic background through three dimensions: parental educational level, number of books at home, and family affluence (Bakken et al. 2016). I will present these more in detail further down as I argue that the dimensions captures different aspects of family background. These will be used separately for exploring how cultural and economic resources relate to activity participation.

To create the socioeconomic background variable, the three measures were combined to a composite score. Combination measures tend to provide more robust and valid measures of socioeconomic status than single measures (Ensminger et al. 2000). The different variables were standardized and combined to create a mean score where zero is the lowest and three the highest¹⁵. Participants needed to answer at least two of the questions to get a valid score. As seen in the descriptive statistics, the distribution is somewhat right-skewed. This was especially the case for family affluence.

¹⁵ Participants with a score of three report the highest value on all questions.

In the analyses, I divided the socioeconomic status variable into quintiles. Since socioeconomic status variables tend to be age sensitive (Samdal et al. 2012), the quintiles were created separately for each grade (Bakken et al. 2016). This leaves me with five socioeconomic groups with more or less the same size. The use of quintiles is a common strategy for assessing interactions between activity participation socioeconomic status (see e.g. Dumais 2008, Morris 2015).

Economic Resources

I operationalized economic resources as family affluence scale (Currie et al. 2008). The survey used the revised version from the HEVAS-survey of 2009 (Bakken et al. 2016). The participants were asked to answer four questions about family affluence: (1) Do your family have a car? (2) Do you have your own bedroom? (3) How many computers do your family have? (4) How many times have you gone on holiday with your family during the last year? This approach is argued to provide more objective results than approaches asking for income or directly about family affluence (Wardle, Robb & Johnson 2002). Furthermore, the four questions were summed together to provide a scale ranging from zero to three. Because of anonymity reason, I received a predesigned scale of family affluence. Therefore, see Bakken et al. (2016: 25-27) for a more detailed discussion of how the composite score was created. The family affluence scale is used extensively as a measure in research on inequality among youth (see e.g. Torsheim et al. 2010 & Fismen et al. 2012).

As mentioned above, the family affluence score is quite right-skewed. This is because most of the youth have access to the material goods asked in about the question. The measure is therefore not finely graded over all levels of family affluence and especially crude among the most wealthy. However, the measure is good for capturing more pressing economic constraints. This means that the score is more refined among low-income families. This is also where economic constraints may be most pressing. This suits my research design, as potential economic barriers to activity participation is most likely to occur among the youth from these families.

Cultural Resources

I operationalized cultural resources as parent's educational level and the number of books at home. Educational level was coded zero when none of the parents were reported to have

higher education, one point five if one parent was reported to have higher education, and three if both parents were reported to have higher education.

Compared to the rest of Norway, Oslo has a highly educated population. According to Oslo municipality, 53.3 percent of persons living in Oslo between the age of 30 and 66 had higher education (Oslo Municipality 2019b) However, according to the survey results, 70.6 percent of the mothers and 73.3 percent of the fathers of the participants had higher education. This overestimation of parental education is similar to previous versions of the UngData surveys. Bakken et al. (2016: 22-24) discussed similar previous results and argued that this is likely to be a result of a lack of knowledge. However, they argued that the measure to a certain degree captures the parent's educational level. Nevertheless, this is likely to produce some statistical noise that needs to be taken into consideration when interpreting the results.

The number of books is coded zero for no books, one point five for between 100 and 500 books, and three for more than 1,000 books. This is meant to capture parental academic or cultural capital. The measure is traditionally used in research on the social reproduction of education (Hernes & Knudsen 1976) and is by some regarded as outdated. Engzell (2017) argues against an overreliance of in this measure. He finds that underreporting by low achievers contributes to an upward bias. Nevertheless, Bakken et al. (2016) argue that this is still a useful measure because it is still quite expensive to buy books, and there is significant variation in how many books the youth reports. Moreover, Bakken et al. (2016) tested the variable in previous versions of the UngData surveys, and when the measure is used to predict academic achievement, it nearly aligns with register data surveys.

Finally, the measure of parental education and books at home are combined using the *rowmean* command in Stata to create a composite measure of cultural resources. This constructs a measure ranging from zero to three. I argue that, although the variable contains some weaknesses, the two measures put together adequately captures cultural resources.

3.2.5 Control Variables

Gender

Gender is included as a control variable to account to differences of participation patterns between girls and boys. Gender is coded 0 for male and 1 for female.

Age

I included age as a control variable because of declining activity participation throughout upper secondary school. However, age per se is not included in the questionnaire. I, therefore, operationalize age as grade levels. The variable includes first grade (vg1), second grade (vg2) and third grade (vg3). These are used as a set of dummies.

Part of Oslo

Part of Oslo is included as a control variable. Bakken (2018a) shows that activity participation varies according to where you live in Oslo. This is especially the case for participation in youth clubs. I choose to divide areas of living into three categories: east, west, and outside of Oslo. The differing patterns of activity participation seem to follow this line (Bakken 2018a). In the east category, I include: Sagene, Grünerløkka, Gamle Oslo, Bjerke, Alna, Stovner, Grorud, Søndre Nordstrand, and Østensjø. While in the west category, I include: Vestre Aker, Ullern, Frogner, Nordstrand, Nordre Aker, and St. Hanshaugen. Survey participants who report that they do not live in Oslo are placed in the outside Oslo category. I base the categorization on Ljungren & Andersen (2017).

3.2.6 Descriptive Statistics

Descriptive statistics is presented in table 3.1 below

Table 3.1 Descriptive Statistics

Activity types: active participants (%)	
Sports teams	30.06
Religious organization	6.14
Youth club	5.37
Collective music	4.55
Cultural school	4.93
Other activity contexts	11.99
Activity Breadth (m)	
Mean activity breadth (0-6)	0.63 (0.80)
Mean ordinal activity breadth (0-3)	0.62 (0.76)
Social background (m)	
Mean socioeconomic background (0-3)	2.07 (0.65)
Mean cultural resources (0-3)	1.92 (0.83)
Mean economic resources (0-3)	2.43 (0.54)
Socioeconomic (SES) quintiles (%)	
Low SES	17.53
Low-middle SES	19.41
Middle SES	20.69
Middle-high SES	21.21
High SES	21.16
Grades (m)	
Mean composite grade measure (1-6)	4.15 (0.83)
Mean Norwegian grade (1-6)	4.16 (0.94)
Mean math grade (1-6)	3.89 (1.23)
Mean English grade (1-6)	4.41 (0.99)
Gender (%)	
Boys	46.11
Girls	53.89
Part of Oslo (%)	
East	50.65
West	45.25
Outside Oslo	4.11
Grade level (%)	
Vg1	39.92
Vg2	31.86
Vg3	28.21
N	8,719

3.3 Statistical Methods

I will in the upcoming section, present the statistical methods applied in this study. I used logistic regression to investigate patterns of active participation in organized leisure time activities. Ordinary least square regressions were used to investigate the effect of participation in organized leisure time activities on academic achievement.

3.3.1 Logistic Regression

To investigate how parental cultural and economic resources were associated with activity participation, I deployed logistic regression. First, I used ordinal logistic regression to examine the breadth of activity participation. Then, I used binary logistic regression to examine active participation in different types of organized activities.

Logistic regression is the method of choice when investigating a dichotomous dependent variable (Mehmetoglu & Jakobsen 2017). The estimates in logistic regression are interpreted in relative terms rather than absolute. Estimates are calculated using maximum likelihood. The model “estimates how much the natural logarithm of the odds for $Y = 1$ changes for each one-unit change in X ” (Mehmetoglu & Jakobsen 2017: 163). Moreover, “the change in probability will differ depending on where you are situated on the total predicted logit” (Mehmetoglu & Jakobsen 2017: 163). This was crucial because I could not assume that the probability of participating actively is associated with e.g. economic resources the same independently of how great this was beforehand. Furthermore, the logistic regression model gave the option of calculating odds ratios. This will be shown in all logistics models. Odds ratios are the exponential of the logit. The odds ratios tell us the change in the odds of $Y = 1$ with an increase of one in a given X -variable. (Mehmetoglu & Jakobsen 2017: 166). Odds ratios are more easily interpreted than logits. An odds ratio of more than 1.00 means that an increase in the independent variable gives an increased chance of having one on the dependent variable. Contrary, an odds ratio of less than 1.00 means that an increase in the independent variable gives a decreased chance of having 1 on the dependent variable. For instance, an odds ratio of 1.50 means that an increase of one in the independent variable gives a 50 percent greater risk of $Y = 1$. Contrary, an odds ratio of 0.70 gives a 30 percent decrease of $Y = 1$ with an increase of one in the dependent variable.

Another possible method was the linear probability model. This model is claimed to present more easily interpretable results (Hellevik 2009). However, in addition to the advantage mentioned above of estimating varying probabilities depending on placement on the total predicted logit, there are several reasons why I prefer the logistic regression over the linear probability model. Primarily, the choice falls on the logit model because I was interested in relative risks or odds ratios for active participation and not absolute numbers. Secondly, linear probability models could have predicted values outside the 0-1 interval. This is the case in my analyses. Nevertheless, I used linear probability models as robust checks. These are shown in the appendices, and the results are similar to those of the binary logistic models.

Mood (2010) stresses that the odds ratios cannot straightforwardly be interpreted as effect measures because the effects sizes in logistic regression are affected by omitted variables, even if these were unrelated to the independent variable in the model. This is problematic insofar as the coefficient may not show the true value. Consequently, this makes it hard to compare results across groups, samples or models with the same independent variables. To reduce the problems arising from this issue, I follow Mood (2010) and deploy two techniques. First, to make it possible to more accurately compare estimates across models with different independent variables, I conduct a Y standardization of the odds ratios. The standardized coefficient is estimated by dividing them by the standard deviation of the latent variable for each model (Mood 2010). This leads to a rescaling of the coefficients to express a standard-deviation-unit change in Y for a one-unit change in the independent variable. Second, to make it possible to make comparisons across samples, I estimate the average marginal effects. Average marginal effects express the average effect of x on $P(y=1)$. It does so by taking the logistic probability distribution function at each observation's estimated logits, multiplying this by the coefficient for x, and averaging this product over all observations (Mood 2010: 75). However, average marginal effects do not capture nonlinearity.

Furthermore, ordinal logistic regression is used when the outcome variable has more than one value, and the real distance between categories is unknown (Mehmetoglu & Jakobsen 2017). The outcome follows a natural ordering, but the exact distance between the outcomes are unknown (Klein & Kleinbaum 2010). I argue that activity breadth is an ordinal variable. The threshold for not participating at all to active participation in one activity context is not the same as moving from one to two activity contexts. The models show proportional odds ratios. These are interpreted similarly to odds ratios from a binary logistic regression. In the models,

I will also display cut points. These indicate where the latent variable is cut to make the groups in the data. The number of cut points is given by the outcomes in the dependent variable minus one. However, since the activity breadth variable is somewhat overdispersed, other possible strategies could have been negative binomial regression or Poisson regression. But, these assume the outcome variable to be continuous and as argued above, I stress that activity breadth needs to be understood as an ordinal variable. The overdispersion is dealt with by merging high levels of activity breadth to one category. Exploration of the variable showed that few participated at high levels of breadth and a merging of these deals with the overdispersion, while at the same time making it possible to capture activity breadth. Descriptive statistic of the variable is presented in table 3.1.

I will in all logistic models present log-likelihood. The log-likelihood is primarily used for comparing two models. The smaller the value, the better the prediction of the dependent variable (Mehmetoglu & Jakobson 2017: 166-167). Finally, I will deploy t-tests to test if the coefficient of cultural and economic resources differ significantly from each other. This is done in all logistic models.

3.3.2 Multiple Linear Regression

To investigate the association between participation in organized leisure activities and academic achievement, I used ordinary least squares regression (OLS). OLS is the most common approach when investigating the effects of activity on academic achievement (Bonhert et al. 2010). The ordinary least squares regression model is well suited when the dependent variable is continuous (Gordon 2015). I used both bivariate and multiple regression in addition to exploring interactions and nonlinear relationships.

The bivariate linear regression model attempts to model the relationships between two variables by fitting a linear equation to observed data. In my case, the variables were participation in organized activities and academic achievement. Ordinary least squared regression minimizes the sum of squared errors to create the linear equation (Gordon 2015). Multiple linear regression is used when the outcome variable is likely to be explained by more than one variable (Gordon 2015). This is the case considering academic achievement as variables such as social background and gender have been shown time and time again to have an impact on academic results (see e.g. Andersen & Hansen 2012). The equation for the multiple regression model is shown below:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + \varepsilon_i$$

Y shows the value of the dependent variable. β_0 shows the intercept, which is the conditional mean of Y when all predictor variables equal zero. β_1 shows how much the conditional mean of Y changes for a one-unit increase in X_1 controlling for X_2 . While β_2 shows how much the conditional mean of Y changes for a one-unit increase in X_2 controlling for X_1 and so forth (Gordon 2015: 167).

In the presentation of the results, I will also show adjusted R^2 . Adjusted R-squared measures the proportion of the total variation in Y that is explained by the model (Gordon 2015: 199). Adjusted R-squared, in opposition to R-squared, recognizes the degrees of freedom.

A central problem in regression models is conditional variance across different levels of the predictor variables or heteroscedasticity. This issue can be countered with the use of robust standard errors, which does not assume homoscedasticity. My models were tested using the *hottest* command in Stata and show signs of heteroscedasticity. I, therefore, used robust standard errors in all models.

Squared Term

A potential limitation when using multiple linear regression in the assumption of a linear relationship between variables. The model assumes that an increase in an independent variable has the same impact on the dependent variable across all the range of possible values. Considering the breadth of activity contexts, it is not likely that an increase from 0 to 1 activity contexts will have the same impact as an increase from 3 to 4 activity contexts. I followed Knifsend & Graham (2012) and dealt with this by introducing a squared term for the independent variable breadth. This is the common strategy for investigating nonlinear relationships between activity involvement and academic achievement (Mahoney et al. 2006, Bonhert et al. 2010). I, therefore, used a quadratic form of X. The equation is shown below:

$$Y_i = \beta_0 + \beta_1 X_i + \beta_2 X_i^2 + \varepsilon_i$$

Introducing the squared term of X means that the slope no longer is constant. Consequently, it is not possible to make a general statement of how much a one-unit increase in X is associated with Y. The slope can be positive or negative at different values of the independent variable.

Using a squared term makes an intuitive interpretation of the slope is difficult (Gordon 2015: 368). The results of models using squared terms will be predicted and graphed.

Interaction term

The multiple regression model involves additive relationships. This means that the coefficient for one variable is the same, regardless of the level of another variable (Gordon 2015: 278). Introducing interaction terms in the model will change this assumption allowing for investigations of situations where the relationship between a predictor variable differs depending on the level of another predictor variable (Gordon 2015: 278). I used interaction terms to investigate if the association between activity involvement and academic achievement differed depending on socioeconomic background. Contrary to dividing the sample into the socioeconomic quintiles and perform separate regressions, introducing the interaction provides a t-test for significant differences. Models with interactions, therefore, produces more robust results. The equation for a regression model with an interaction term is shown below:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{1i} X_{2i} + \varepsilon_i$$

Interactions can be between two dummy variables, a dummy and an interval variable, and two interval variables. Although somewhat different interpretation methods, the principle is the same. A significant coefficient estimate on the product term (β_3) indicates statistical evidence for moderation. For instance, if β_1 is interval variable of socioeconomic background ranging from zero to three and β_2 is a dichotomous measure of organized activity participation (0=non-active), a significant β_3 indicates an interaction effect on Y (academic achievement). A general scheme for interpreting interactions is presented below.

Non-Participants (Y X₁, X₂= 0)	$= \beta_0 + \beta_1 * X_1 + \beta_2 * 0 + \beta_3 * X_1 * 0$	$= \beta_0 + \beta_1 * X_1$
Participants (Y X₁, X₂= 1)	$= \beta_0 + \beta_1 * X_1 + \beta_2 * 1 + \beta_3 * X_1 * 1$	$= (\beta_0 + \beta_2) + (\beta_1 + \beta_3) * X_1$

3.3.3 Significance Testing

Throughout the analysis, I conducted t-tests to establish if estimates differed from each other (Skog 2004). I used cross tables to present how activity participation is related to socioeconomic quintiles. In these tables, I deployed t-tests to test if the socioeconomic quintiles differed significantly from each other. In the logistic regression models, I used t-tests to decide if the difference between cultural and economic resources is statistically significant. In the multiple regression models of specific activity participation and academic achievement, I tested if the coefficients for the different activity types differed significantly from each other.

To perform t-tests, it was necessary to calculate the standard error to the difference between the estimates. The test statistic is calculated like this:

$$T | Z = \frac{\hat{\beta}_1}{SE(\hat{\beta}_1)}$$

Finally, I compared the test statistic to the chosen critical value. I chose a critical value of 1.96. If the test statistic was above 1.96, this indicated that the true estimates differed from each other with a probability of 95 percent.

In some cross tables, I had more than two groups and more than two values on the dependent variable. This was the case when exploring activity breadth and socioeconomic quintile. In these cases, I used chi-squared-tests to test if the groups differed significantly from each other. I tested for goodness of fit to compare the sample distribution with the expected probability distribution. The goodness of fit is dependent on degrees of freedom in the table (Skog 2004). I used the software package STATA and report p-values for the chi-square.

3.4 Limitations

Finally, I will discuss the potential limitations and methodological issues with the selected research design. I especially consider two important issues. These are that some variables are not included and problems of self-selection and causality.

3.4.1 Variables Not Included

Because of issues regarding confidentiality, some collected variables are not included in my sample. Originally, the upper secondary sample indirectly contained personal information making it possible to recognize respondents through a combination of responses (Bakken 2018b). The Norwegian Centre for Research Data and The Norwegian Data Protection Authority approved the survey with the requirement that only a few researchers at NOVA could access the raw data. Moreover, these strict demands for keeping anonymity restricted my sample. Consequently, some variables I initially tended to be part of the thesis were not handed out. These are minority status and religion. Minority status affects activity participation (Friberg 2005, Strandbu, Bakken & Sletten 2019) and would have acted as a control variable. Religion is likely to affect participation in religious organizations and would also been used as a control variable. My claim is that this does not harm the overall results of the thesis. However, it is important to bear in mind that the inclusion of these variables could have altered the results slightly.

3.4.2 Validity and Reliability

Does activity participation affect educational outcomes with other things being equal? Self-selection is a major problem in research on activity participation. Selection bias has to do with problems of comparing groups in a sample. To discover the true association or effect between two variables, it is necessary that the groups you compare only differ on the variable you want to investigate (Angrist & Pischke 2015). This is the case in e.g. randomized experiments where the treatment variable is randomly assigned. However, for obvious reasons, there exists no experiment where participation in organized activities are randomly assigned to one group and not to another. Organized activities are by definition voluntary. Consequently, comparing participants to non-participants is like comparing apples with oranges. Nevertheless, regression-based modeling can account for some problems of self-selection by comparing participants to non-participants who have the same observed characteristics, e.g. gender or social background (Angrist & Pischke 2015). Regression is a way of making other things equal, but equality is generated only for the variables included as controls in the model (Angrist & Pischke 2015: 69). This means that there is likely to be generated selection bias by not including controls in the model. In regression, this is called omitted variable bias (Angrist & Pischke 2015). Therefore, even when controlling for variables, the participant group and

the non-participant group are not likely to be exactly the same as is the case in a randomized experiment. For instance, personal traits are not measured or included in the model. Additionally, the measures for family affluence and cultural resources are imperfect measures insofar as they do not capture standards of family living perfectly. This means that interpretations of the regression models need to take this into consideration.

A related issue is that of making causal interpretations using regression-based modeling and cross-sectional data. The point of departure of causal analysis in cross-sectional samples are correlations and associations. Consequently, cross-sectional samples cannot determine which of the variables correlating is causing the other (Skog 2004). Consequently, it might be that academic achievement is causing activity participation. However, a considerable research literature points to the fact that activity participation is influencing academic achievement and not vice versa (Bonhert et al. 2010, Farb & Matjasko 2012).

Finally, the use of survey methods provides opportunities to collect large samples and capture measures of breadth and intensity. However, there is low unity in measures and categorization strategies of activity involvement (Bonhert et al. 2010). This leads to difficulties comparing results across studies. Aforementioned, I use the predesigned activity categories included in the UngData-surveys to allow for further research to easier compare results. Moreover, recent concerns have been raised about the reliability and validity of retrospective reports on activity participation as some research shows that youth may over-report activity involvement (Bonhert et al. 2010).

4 Results

The three interrelated research questions on activity participation will be explored in this chapter. Additionally, I explore patterns of activity participation. Firstly, I describe participation patterns in organized activities. Secondly, the question of parental resources and participation in organized activities will be analyzed. Then, the analysis of how activity participation is associated with academic achievement will be presented. Finally, the analysis of activity participation and academic achievement, with interactions between activity participation and socioeconomic, will be showed.

4.1 Patterns of Activity Participation

In this section, I explore participation patterns in organized activities. The reason for describing this quite thoroughly is that it acts as a point of departure for the analyses. I will present cross tables of participation variables and socioeconomic-quintiles. T-tests for the cross-tabulations are conducted to investigate if the differences between the socioeconomic quintiles are statistically significant. These are shown in the appendices.

Overall, 47.52 percent of the sample participated actively in an organized activity during the last month. Table 4.1 shows the total percentage of youth having participated actively in one or more organized activity during the last month separated into socioeconomic quintiles.

Among the low SES group, 34 percent participated actively during the last month in contrast to the high SES group where 59 percent participated actively. The low-middle, middle, and high-middle groups follow the gradient with respectively 41 percent among the low-middle group, 47 percent among the middle group, and 53 percent among the high-middle group having actively participated in an organized activity during the last month. The table is showed graphically in figure 4.1.

Table 4.1: Cross Table of Active Activity Participation and Socioeconomic Quintiles. P-value Display Chi-squared Test.

	Low SES	Low-middle SES	Middle SES	High-middle SES	High SES	Overall participation
Non-active	65.73 %	58.63 %	53.38 %	46.73 %	40.76 %	52.48 %
Active	34.27 %	41.37 %	46.62 %	53.27 %	59.24 %	47.52 %

P-value = 0.000

Active Participation in Specific Activity Contexts

Separate cross tables for active participation in specific activity contexts and socioeconomic quintiles are shown in table 4.2. Sports teams are the most popular activity context with thirty percent having participated actively during the last month. Sports participation is followed by other activity context with twelve percent, religious organizations with six percent and youth clubs, cultural school and collective music activities with more or less five percent.

Table 4.2: Separate Cross Table of Active Activity Participation in Specific Activity Contexts and Socioeconomic Quintiles. P-value Display Chi-squared Test.

	Low SES	Low-middle SES	Middle SES	High-middle SES	High SES	Overall participation
<u>Sport teams</u>						
P-value = 0.000	18.18 %	23.46 %	29.82 %	37.05 %	39.19 %	30.06 %
<u>Youth Club</u>						
P-value = 0.000	9.16 %	6.56 %	4.77 %	3.52 %	3.58 %	5.37 %
<u>Religious organization</u>						
P-value = 0.000	10.60 %	8.33 %	5.43 %	3.52 %	3.74 %	6.14 %
<u>Collective music activities</u>						
P-value = 0.000	1.70 %	2.90 %	3.55 %	5.35 %	8.62 %	4.55 %
<u>Cultural school</u>						
P-value = 0.000	2.22 %	3.90 %	4.93 %	5.52 %	7.53 %	4.93 %
<u>Other activity context</u>						
P-value = 0.000	9.03 %	11.05 %	10.98 %	12.60 %	15.66 %	11.99 %

Active participation in sports teams displays a socioeconomic gradient with the exception that the high-middle and high socioeconomic groups do not differ significantly from each other. Among the low SES group, 18 percent participated actively in sports teams during the last month, in contrast to 23 percent in the low-middle group. Moreover, approximately 29 percent in the middle group, 37 percent in the high-middle and 39 percent in the high SES group participated in sports during the last month.

Active participation in youth clubs is also shown in table 4.2. The results show that youth in the low SES group are most active. The results show a reversed socioeconomic-gradient with the exception that the high-middle and high SES groups do not differ significantly from each other. This means that youth in the low SES group show the highest rate of active participation in youth clubs and youth in the high-middle and high SES groups show the lowest rate of active participation. In the low SES group, approximately 4 percent participated actively in a youth club during the last month compared to 3 percent among the low-middle group, 2.5 percent among the middle group and 1.5 in the high-middle and high SES groups.

Active participation in religious organizations displays the same reversed socioeconomic gradient pattern as youth clubs. Similarly, there is no significant difference between the high-middle and high socioeconomic groups. Approximately 8 percent among the low SES group participated actively in religious organizations during the last month compared to 6 percent in the low-middle group, 4 percent in the middle group, and 2 percent in the high-middle and high groups.

Active participation in collective music activities during the last month follows a socioeconomic gradient, with the exception of the low-middle group not differing significantly from the middle group. Approximately, 1 percent among the low SES group participated actively in collective music activities during the last month compared to 2 percent in the low-middle and middle groups, 3 percent in the high-middle and 4 percent in the high SES groups.

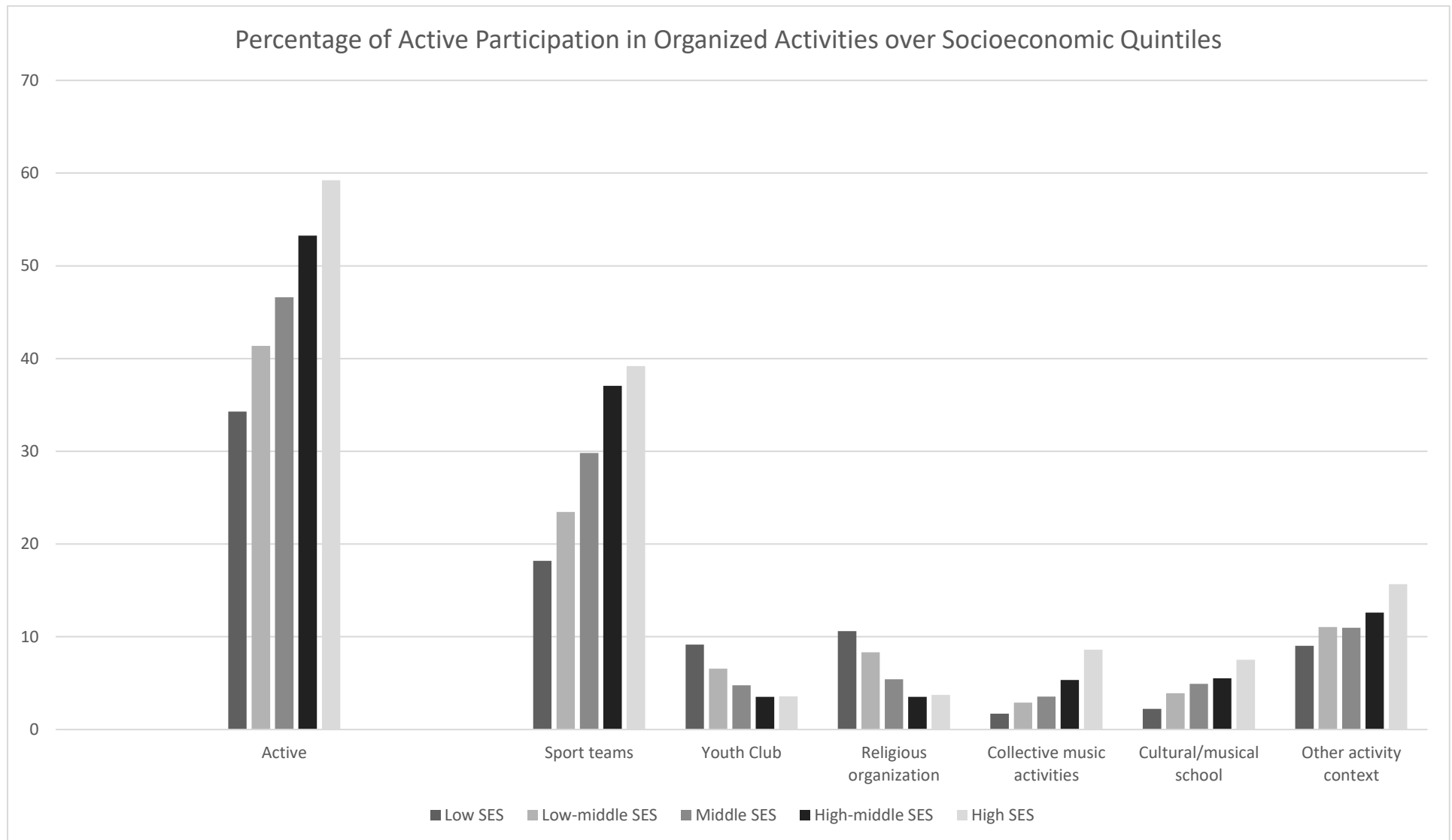
Next, active participation in cultural school activities during the last month also display a socioeconomic gradient. The exceptions are that the low-middle and middle groups and the middle and high-middle groups do not differ significantly from each other. Approximately 1 percent among the low SES quintile participated actively in cultural school activities during

the last month compared to 3 percent in the low-middle quintile, 4 percent middle quintile, 5 percent in the high-middle quintile and 6 percent in the high quintile.

Finally, active participation in other activity contexts during the last month displays a partial socioeconomic-gradient. The low-middle and middle, the low-middle and high-middle and the middle and high-middle groups do not differ significantly from each other. The results in table 4.4 show that approximately 9 percent of the low SES quintile participated actively in other activity contexts during the last month, this compared to 11 percent among the low-middle and middle quintile, 12 percent among the high-middle quintile and 16 percent among the high SES quintile.

The results from table 4.2 are displayed in figure 4.1

Figure 4.1: Active Participation in Organized Activities Divided by Socioeconomic Quintiles. Based on Table 4.1 and 4.2



Breadth of Activity Participation

In table 4.3 I explore how breadth of activity participation is associated with socioeconomic status. I find that 52 percent of the sample is regarded as non-active in any activity context. Furthermore, 36 percent participated actively in one organized activity context; nine percent participated in two activity contexts while two percent participated in three activity contexts. Under one percent participated in four, five or six activity contexts. I conduct chi-tests and found that the socioeconomic quintiles differed significantly from each other in activity participation. However, studying table 4.3 more substantially this seems to be a result of an overrepresentation of youth with low socioeconomic status in the non-active group.

Especially among those participating in three activity contexts or more, there is hard to find a general pattern. To test this I created a cross table of activity breadth and socioeconomic quintiles with those having participated in two or more activities. This table does not reach desired significance levels using a chi-squared test, indicating that the relationship between those who participate much and socioeconomic status are likely to be due to chance.

Table 4.3: Cross Table of Number of Activity Contexts and Socioeconomic Quintiles. P-value Display Chi-square Test.

	Low SES	Low-middle SES	Middle SES	High-middle SES	High SES	Total
Number of activity contexts: 0	65.73 %	58.63 %	53.38 %	46.73 %	40.76 %	52.48 %
Number of activity contexts: 1	22.83 %	30.67 %	36.59 %	41.81 %	44.72 %	35.85 %
Number of activity contexts: 2	7.65 %	7.98 %	7.87 %	9.19 %	11.06 %	8.81 %
Number of activity contexts: 3	3.01 %	1.77 %	1.72 %	1.89 %	2.66 %	2.19 %
Number of activity contexts: 4	0.46 %	0.65 %	0.28 %	0.22 %	0.60 %	0.44 %
Number of activity contexts: 5	0.07 %	0.12 %	0.11 %	0.16 %	0.16 %	0.13 %
Number of activity contexts: 6	0.26 %	0.18 %	0.06 %	0.00 %	0.05 %	0.10 %

P-value = 0.000

4.2 Barriers to Organized Activity Participation

I now move to investigate the research questions. The first research question addressed the relationship between the specific type of family resources and activity participation. Although the previous section provided information on activity participation and socioeconomic background, I now explore more in-depth how cultural and economic resources, independently, is associated with activity participation. I hypothesized that activity participation was associated with both cultural resources (H1a) and economic resources (H1b). I have used logistic regression models with participation in organized activities as the dependent variable¹⁶.

In the previous section, we saw that activity participation breadth followed a socioeconomic gradient. In table 4.4, I explore how cultural and economic resources are associated with activity breadth. I deployed ordinal logistic regression and display models with and without control variables. The independent variables of interest are cultural resources and economic resources. These are coded 0-3. The proportional odds ratio, therefore, show the increase in the relative risk for active participation with an increase in cultural or economic resources. All the control variables are coded as dummies.

As seen in in table 4.4 both cultural and economic resources are associated positively with activity breadth. This supports both H1a and H1b. Model 2 shows that with one unit increase in cultural resources we expect a 1.30 increase in the log odds of being in a higher level of breadth given all of the other variables in the model are held constant. The coefficient for economic resources is 1.40. However, a t-test of the coefficients reveals that they do not differ significantly from each other.

¹⁶ The correlation between cultural and economic resources is 0.43. Problems can arise if the correlation between two variables are over 0.8 (Mehmetoglu & Jakobsen 2017). This means that it is meaningful to study the types of resources as separate social phenomena. However, the variance inflation factor of cultural and economic resources is 1.23 in the models without controls and 1.38 (cultural resources) and 1.25 (economic resources) in the models with controls. The variance inflation factor estimates how much the variance of a coefficient is “inflated” because of linear dependence with other predictors. A variance inflation factor of 1.23 tells us the variance of particular coefficient is 23 % larger than it would be if that predictor were completely uncorrelated with all other predictors. This should be taken into account when interpreting the models.

Moreover, as seen in the previous section the socioeconomic differences in activity participation breadth was mainly due to an overrepresentation of youth with low socioeconomic status in the non-participating group. From this, we can suppose that the results in table 4.4 are mainly due to an overrepresentation of those with low levels of cultural and/or economic resources in the non-participating group.

Nevertheless, we can conclude that both cultural and economic resources are positively associated with activity participation breadth and that they do not differ significantly from each other.

Table 4.4: Ordinal Logistic Regression, Activity Breadth as Dependent Variable (0-3), (Proportional Odds Ratios)

	Model 1	Model 2
<i>Parental resources:</i>		
Cultural Resources (0-3)	1.268*** (0.036)	1.307*** (0.039)
Economic resources (0-3)	1.379*** (0.061)	1.402*** (0.063)
<i>Part of Oslo (ref: east)</i>		
West		0.905** (0.042)
Not living in Oslo		1.011 (0.109)
Grade (ref vg1)		
Vg2		0.702*** (0.034)
Vg3		0.558*** (0.029)
Gender (ref male)		
		0.701*** (0.029)
Intercept 1	1.351 (0.104)	0.938 (0.109)
Intercept 2	3.308 (0.109)	2.928 (0.114)
Intercept 3	4.812 (0.122)	4.439 (0.126)
N	8,719	8,719
Log likelihood	-8,802.14	-8,696.15

*p<0.05, **p<0.01, ***p<0.001

4.2.1 Barriers to Specific Activity Contexts

In the previous section, I showed that activity types differed in their relation with socioeconomic status. This addresses the need for analyzing activity contexts separately.

In table 4.5, I have conducted separate binary logistics regressions models for six different activity contexts: sports teams, religious organizations, collective music activities, cultural school, youth club, and other activity contexts. In these models, the dependent variables are dichotomous. All models show odds ratios for active participation in the given activity context. I conducted models with and without control variables. The independent variables of interest are again cultural resources and economic resources. These are coded 0-3. The odds ratio, therefore, show the increase in the relative odds ratio for active participation with an increase in cultural resources or economic resources. All the control variables are coded as dummies. The same issues relating to correlation between two variables and variance inflation must be issued in these models. Moreover, when excluding either economic or cultural resources, the variable still included increase in significance and size. Average marginal effects and Y-standardized coefficients based on the binary logistics models are included in the appendices. Finally, linear probability models were used and show similar results. These are included in the appendices.

In model 2, I investigate active sports team participation. Both cultural and economic resources have a positive significant relationship with active participation in sports teams, hence supporting both H1a and H1b. This means that a higher amount of these types of resources are associated with a higher probability of being actively involved in sports teams. The coefficient for cultural resources is 1.22, meaning that an increase of one of the cultural resources in the family increases the relative risk of active participation in sports team by 22 percent. In the same fashion, an increase of economic resources in the family by one increases the relative risk of participation by 93 percent. The t-test of the coefficients shows that they differ significantly from each other.

Model 4 shows that active participation in religious organizations is significantly negatively associated with both cultural and economic resources. This means that more family resources reduce the risk of active participation in this activity. An increase of one of cultural resources reduces the risk of participating by 26 percent, while an increase of one of economic resources reduces the risk by 15 percent. However, the t-test of the coefficients shows that

they do not significantly differ from each other. This result does neither support H1a or H1b, as it displays a reversed relationship where cultural and economic resources are negatively associated with active participation.

Model 6 finds that active participation in collective music activities is positively significantly associated with cultural resources while not significantly associated with economic resources. A coefficient of 2.269 means that an increase of one in cultural resources increases the relative risk of active participation in collective music activities by 127 percent. The same pattern is found in model 8. Model 8 shows that active participation in the cultural school is associated positively with cultural resources but not associated with economic resources. The coefficient of 1.854 tells us that an increase of one in the cultural resources increases the relative risk of active participation in the cultural school by 85 percent. Model 6 and 8 show support for H1a, but not for H1b. Collective music activities and cultural school participation are positively associated with cultural resources while not with economic resources.

Model 10, shows that active involvement in youth clubs is negatively associated with cultural resources but not significantly associated with economic resources. An increase of one in cultural resources reduces the relative risk of having actively attended youth clubs during the last month by 30 percent. This does not support H1a or H1b.

In model 12, I find that active participation in the other category is positively associated with cultural resources but not significantly associated with economic resources. This does support H1a. The relative risk of active participation in other organized activities increases with 36 percent with an increase in cultural resources.

Table 4.5: Binary Logistic Regression, Active Participation in Specific Activity Contexts as Dependent Variables, (Odds Ratios)

	Active participation in sport teams		Active participation in religious organization		Active participation in collective music activities		Active participation in cultural schools		Active participation in youth club		Active participation in other activities	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Cultural Resources (0-3)	1.246*** (0.040)	1.221*** (0.043)	0.645*** (0.036)	0.744*** (0.044)	2.196*** (0.191)	2.269*** (0.205)	1.754*** (0.135)	1.854*** (0.150)	0.646*** (0.038)	0.702*** (0.045)	1.288*** (0.060)	1.355*** (0.066)
Economic Resources (0-3)	1.955*** (0.109)	1.929*** (0.109)	0.787*** (0.063)	0.850** (0.068)	0.892 (0.104)	0.906 (0.107)	0.868 (0.093)	0.879 (0.096)	0.885 (0.077)	0.937 (0.083)	0.982 (0.068)	1.016 (0.072)
<i>Part of Oslo</i>		<i>(ref: east)</i>		<i>(ref: east)</i>		<i>(ref: east)</i>		<i>(ref: east)</i>		<i>(ref: east)</i>		<i>(ref: east)</i>
West		1.20*** (0.065)		0.456*** (0.051)		0.871 (0.099)		0.810 (0.091)		0.656*** (0.074)		0.783*** (0.058)
Not living in Oslo		0.973 (0.124)		0.539** (0.146)		1.03 (0.266)		2.064*** (0.400)		0.430** (0.148)		1.082 (0.174)
Grade		(ref: vg1)		(ref: vg1)		(ref: vg1)		(ref: vg1)		(ref: vg1)		(ref: vg1)
Vg2		0.698*** (0.039)		0.695*** (0.075)		1.00 (0.121)		0.811 (0.094)		0.686*** (0.075)		0.878 (0.070)
Vg3		0.477*** (0.029)		0.769** (0.085)		0.855 (0.111)		0.669*** (0.084)		0.454*** (0.060)		1.025 (0.082)
Gender (ref: male)		0.607*** (0.029)		0.970 (0.087)		1.20 (0.126)		1.292** (0.131)		0.589*** (0.057)		0.779*** (0.051)
Constant	0.052*** (0.007)	0.091*** (0.012)	0.247*** (0.042)	0.262*** (0.048)	0.011*** (0.003)	0.010*** (0.003)	0.023*** (0.005)	0.021*** (0.005)	0.163*** (0.030)	0.256*** (0.051)	0.086*** (0.013)	0.093*** (0.016)
N	8,719	8,719	8,719	8,719	8,719	8,719	8,719	8,719	8,719	8,719	8,719	8,719
Log likelihood	-5,166.3	-5,030.97	-1,957.97	-1,924.33	-1,560.1	-1,556.69	-1,681.44	-1,662.51	-1,785.73	-1,738.90	-3,178.64	-3,163.86

*p<0.05, **p<0.01, ***p<0.001

4.3 Organized Activity Participation and Academic Achievement

In this section, I move from investigating patterns of activity involvement to explore the association between activity participation and academic achievement. The second research question addressed the association between activity participation and academic achievement. I test if organized activities have a significantly positive association with academic achievement (H2a), if the association between participation in organized activities and academic achievement does not vary according to the nature of the activities in which students participate (H2b), and if up to a certain point, the number of activity contexts participated in has a positive association with academic achievement and a negative association thereafter (H2c).

These hypotheses are tested using ordinary least squares regression models with academic achievement as the dependent variable. In most models, I show analyses with and without controls. In all models, the composite measure of marks in Norwegian, math, and English are treated as the dependent variable.

All models shown in this section are run separately with Norwegian, math, and English as the independent variable. These models are shown in the appendices.

I start by addressing hypothesis H2a. I conducted ordinary least squares regression with a dichotomous measure of active participation in any organized activity as the independent variable. The results are shown in table 4.6. Model 1 is without control, while model 2 includes controls for socioeconomic status, gender, grade and part of Oslo.

I find that participation in organized activities has a significantly positive association with academic achievement. The results show support for H2a. Participation in organized activities is significantly positively associated with academic achievement. With controls, active participants in organized activities are on average receiving approximately a 0.1 higher composite score of marks in Norwegian, math, and English. Separate models for marks in Norwegian, math, and English are included in the appendix and show that active participation is significantly associated positively with marks in Norwegian and math, while not being significantly associated with marks in English.

Table 4.6: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Model 1	Model 2
Active participation in any activity (0/1)	0.161*** (0.018)	0.096*** (0.017)
Socioeconomic quintiles (Ref: Low SES)		
Low-middle SES		0.208*** (0.030)
Middle SES		0.421*** (0.030)
High-middle SES		0.578*** (0.030)
High SES		0.768*** (0.030)
Part of Oslo (ref: east)		
West		0.117*** (0.018)
Not living in Oslo		-0.005 (0.046)
Grade (ref: vg1)		
Vg2		0.139*** (0.020)
Vg3		0.159*** (0.021)
Gender (ref male)		
		0.188*** (0.017)
Constant	4.078*** (0.012)	3.454*** (0.028)
N	8,719	8,719
R2	0.009	0.147

*p<0.05, **p<0.01, ***p<0.001

4.3.1 Specific Activity Contexts and Academic Achievement

In this section, I test hypothesis H2b: The association between participation in organized activities and academic achievement does not vary according to the nature of the activities in which students participate.

In table 4.7, I show results from an ordinary least squares regression with academic achievement as the dependent variable. I include six different activity contexts as independent variables: sports teams, religious organizations, collective music activities, cultural school, youth club, and other activity contexts. These are treated separately as dummy variables and coded one for active participation. It is possible to be considered active in more than one activity. Model 1 shows results without control, while model 2 includes controls for socioeconomic status, gender, grade, and part of Oslo.

Model 1 in table 4.7 shows significant relationships between academic achievement and all types of activity contexts. A positive significant relationship of 0.15 is found for active participation in sports, 0.27 for collective music activities, 0.18 for cultural school activities, and 0.15 for other activity contexts. Negative significant relationships are found for active participation in youth clubs (-0.38) and religious organizations (-0.19).

With the introduction of controls in model 2, the sizes of the coefficients for the different activity contexts drop. The direction and significance level of the coefficients stay the same, except for active participation in religious organizations, which is no longer significant. The coefficient for active sports participation is 0.07, while for youth club it is -0.22, for collective music activities 0.12, for cultural school activities it is 0.11, and for other activity contexts, it is 0.11.

To explore if the coefficients differ significantly from each other, I conduct a t-test of the coefficients for the different activity contexts. This reveals that sports teams, collective music activities, cultural schools, and other activity contexts do not differ significantly from each other. Active participation in youth clubs and religious organizations differ significantly from each other. They also differ from the activity contexts displaying a positive association with academic achievement. The results show that the association between participation in organized activities and academic achievement does vary according to the nature of the activity. This does not support H2b.

Table 4.7: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Model 1	Model 2
Sports teams (0/1)	0.152*** (0.019)	0.074*** (0.018)
Youth club (0/1)	-0.378*** (0.049)	-0.215*** (0.045)
Religious organization (0/1)	-0.192*** (0.042)	-0.048 (0.039)
Collective music activities (0/1)	0.270*** (0.048)	0.119** (0.047)
Cultural schools (0/1)	0.181*** (0.043)	0.113** (0.040)
Other activity contexts (0/1)	0.155*** (0.029)	0.110*** (0.027)
Socioeconomic quintiles (ref: low SES)		
Low-middle SES		0.200*** (0.030)
Middle SES		0.406*** (0.030)
High-middle SES		0.557*** (0.030)
High SES		0.742*** (0.030)
Part of Oslo (ref: east)		
West		0.112*** (0.019)
Not living in Oslo		-0.020 (0.046)
Grade (ref: vg1)		
Vg2		0.132*** (0.019)
Vg3		0.149*** (0.021)
Gender (ref male)		
		0.182*** (0.017)
Constant	4.102*** (0.012)	3.493*** (0.028)
N	8,719	8,719
Adjusted R ²	0.029	0.152

*p<0.05, **p<0.01, ***p<0.001

4.3.2 Threshold Effects of Organized Activity Participation and Academic Achievement

Furthermore, I address the hypothesis that up to a certain point, the number of activity contexts participated in has a positive association with academic achievement and a negative association thereafter (H2c).

In table 4.8, I introduce the total number of activity contexts (activity breadth) as the dependent variable and a squared term of this variable. The models depict a significant non-linear association between participation in organized activities and academic achievement. Since $\beta_2 < 0$, this indicates an inverted U-shape of the regression line. This supports H2c, meaning that up to a certain point, the number of activity contexts participated in has a positive association with academic achievement and a negative association thereafter.

Estimated effects for each level of breadth with confidence intervals are listed in table 4.9¹⁷. The turning point of the quadratic relationship is at 2.0 activities, meaning that the association between types of activity contexts display a positive relationship before this and a negative relationship after. Active participation in four or more activities predicts a slightly poorer academic achievement than not participating. Regression models treating activity breadth as a dummy variable show similar results. These results support H2c¹⁸.

Separate models for marks in Norwegian, math, and English are included in the appendix. These models show that breadth significantly displays an inverted u-shaped relationship with marks in Norwegian and math, while not displaying a significant relationship with marks in English.

¹⁷ Standard errors are large on high levels on activity breadth because of few observations. This leads to big confidence intervals.

¹⁸ To investigate if the non-linear relationship is dependent on the type of activities included the breadth variable, I test for different operationalizations of breadth. First, I only include the activities associated with low positive, non-significant, or negative association with academic achievement: sports teams, religious activities, and youth club participation. The results also find a significantly non-linear relationship and support for H2c. Second, I only include the activities associated with positive relationships with academic achievement: sports teams, collective music activities, cultural school, and other activity contexts. This operationalization also finds a significant non-linear relationship and supports H2c.

Table 4.8: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Model 1	Model 2
Activity breadth (0-6)	.209*** (0.024)	0.127*** (0.023)
Activity breadth² (0-6)	-.060*** (0.009)	-.035*** (0.008)
Socioeconomic quintiles (ref: Low SES)		
Low-middle SES		0.208*** (0.030)
Middle SES		0.420*** (0.030)
High-middle SES		0.577*** (0.030)
High SES		0.746*** (0.030)
Part of Oslo (ref: east)		
West		0.116*** (0.019)
Not living in Oslo		-0.007 (0.046)
Grade (ref: vg1)		
Vg2		0.137*** (0.020)
Vg3		0.158*** (0.021)
Gender (ref: male)		
		0.188*** (0.017)
Constant	4.086*** (0.012)	3.459*** (0.028)
N	8,719	8,719
Adjusted R ²	0.010	0.148

*p<0.05, **p<0.01, ***p<0.001

Table 4.9: Predicted Values on Outcome Variable (Academic Achievement) Dependent on Number of Activity Contexts. Based on Model 2 in Table 5.5. All Control Variables at Means.

Number of Activity Contexts	Margin	Standard Error	95 % Confidence Interval
0	4.11	.011	[4.089 - 4.135]
1	4.20	.011	[4.180 - 4.227]
2	4.22	.018	[4.188 - 4.260]
3	4.17	.035	[4.100 - 4.246]
4	4.05	.072	[3.910 - 4.200]
5	3.86	.127	[3.609 - 4.119]
6	3.60	.200	[3.203 - 4.000]

4.4 Organized Activity Participation, Socioeconomic Background, and Academic Achievement

In this final section of the results chapter, I explore my third research question: How is the association between activity participation and academic achievement moderated by socioeconomic background? I examine how the association between activity participation and academic achievement is affected by the student’s socioeconomic background. I hypothesized that students with low socioeconomic status have a stronger association between activity participation and academic achievement than students with high socioeconomic status (H3). To investigate class differentials if the association between participation in organized activities and academic achievement varies depending on socioeconomic status, I introduce an interaction term between participation in organized activities and the socioeconomic quintiles.

4.4.1 Active Organized Activity Participation

Table 4.11 displays interactions between socioeconomic quintiles and a dichotomous measure of active participation in any organized activity. The reference category is the low SES-group. This means that the results must be interpreted as relative to this group. Table 4.10 shows positive and significant interactions for the middle SES, high-middle SES, and high SES groups. The coefficients for the low SES (the reference category) and the low-middle SES group are not significant. The three higher SES groups display a positive association between

activity participation and academic achievement. The middle SES group gets on average a 0.13 better score in the composite score of Norwegian, English, and Math than the low SES group when participating actively in an organized activity. For the high-middle SES group the effect size is 0.12 and for the high SES group the effect size is 0.14. These results reject H3a as the hypothesized associations are reversed¹⁹.

Separate models for Norwegian, math, and English are included in the appendices. These models show that only the high SES group display a positive significant interaction in the model with Norwegian as the dependent variable. None significant interactions are found in the model with math as the independent variable. The high-middle and the high SES group have a positive significant interaction with English as the dependent variable.

In the appendices, I add interaction terms between specific activity contexts and socioeconomic quintiles. I do this to explore if any of the specific activity contexts provide additional effects for low or high socioeconomic groups. The results show that most of the interactions do not reach the desired significance levels.

¹⁹ I earlier established that there are socioeconomic differences in what kind of organized activities youth participate in, and these have varying associations with academic achievement. Because of this, I further test if the interaction effect is, in fact, due to the socioeconomic differentials in participation patterns. This is done by using the already mentioned operationalization of participation consisting of sports, religious organizations and youth clubs and operationalizations consisting of sports, collective music activities, cultural school, and other activity contexts. These results also reject H3a and find that the higher SES groups get an additional interaction effect of activity participation.

Table 4.10: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Model 1
Active participation in any activity (0/1)	
	.003 (0.038)
Socioeconomic quintiles (ref: Low SES)	
Low-middle SES	.190*** (0.038)
Middle SES	.373*** (0.038)
High-middle SES	.534*** (0.038)
High SES	.708*** (0.039)
Socioeconomic quintiles X Active participation in any activity (ref: Low SES)	
Low-middle SES X Active participation in any activity (0/1)	0.0579 (0.063)
Middle SES X Active participation in any activity (0/1)	0.126* (0.060)
High-middle SES X Active participation in any activity (0/1)	0.115* (0.059)
High SES X Active participation in any activity (0/1)	0.138* (0.059)
Part of Oslo (ref: east)	
West	0.116*** (0.018)
Not living in Oslo	-0.006 (0.046)
Grade (ref: vg1)	
Vg2	0.140*** (0.020)
Vg3	0.161*** (0.021)
Gender (ref male)	0.186*** (0.017)
Constant	3.486*** (0.032)
N	8,719
Adjusted R ²	0.148

*p<0.05, **p<0.01, ***p<0.001

4.4.2 Varying Thresholds?

Finally, I explore interactions between activity breadth and the socioeconomic quintiles. This is shown in table 4.11. Since I found a significant inverted U-shaped pattern of breadth in earlier models, I include a squared term of breadth in the model. These models do not reach the desired significance levels. However, when excluding the squared term and assume a linear relationship between activity breadth and academic achievement the models which include interaction terms reach the desired significance levels. The reference category is again the low SES group.

The results in table 4.11 show that the high-middle and high SES group have positive significant interaction terms. The high-middle SES group have, on average, a 0.08 better score than the low SES group in the composite measure of Norwegian, math, and English grades for each activity context they participated. The high SES group have, on average, a 0.14 better score in the composite grade measure. The low, low-middle, and middle SES groups do not have any significant effect of activity participation²⁰.

Furthermore, separate models for Norwegian, math, and English are included in the appendices. These models show that only the high SES group display a positive significant interaction in the models with Norwegian and English as the dependent variable. No significant interactions are found in the model with math as the independent variable.

Moreover, I conduct a regression analysis where I split my sample into the socioeconomic quintiles, an approach done by e.g. Morris (2015). This is shown in table 4.12. When splitting the model, however, we cannot compare the coefficient and draw conclusions about their difference, since we need a p-value for the difference. Nevertheless, this analysis shows interesting trends not captured by the interaction model. It shows that the low SES group does not have a positive association between activity breadth and academic achievement. The low-middle, middle, and high-middle SES groups all show a significant quadratic relationship similar to that found in table 4.8. However, the high SES group displays a significant positive linear relationship.

²⁰ The middle SES group nearly reaches 90 % significance with a critical value of 1.86.

Table 4.11: Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Model 1
Activity breadth (0-6)	
	-0.029 (0.030)
Socioeconomic quintiles Low SES (Ref.)	
Low-middle SES	0.204*** (0.036)
Middle SES	0.388*** (0.036)
High-middle SES	0.546*** (0.036)
High SES	0.689*** (0.037)
Interactions (ref: Low SES)	
Low-middle SES X Activity breadth (0-6)	0.022 (0.041)
Middle SES X Activity breadth (0-6)	0.077 (0.041)
High-middle SES X Activity breadth (0-6)	0.079* (0.039)
High SES X Activity breadth (0-6)	0.140*** (0.037)
 <i>Part of Oslo (ref: east)</i>	
West	0.119*** (0.018)
Not living in Oslo	-0.005 (0.046)
Grade (ref: Vg1)	
Vg2	0.136*** (0.020)
Vg3	0.155*** (0.021)
Gender (ref: male)	0.181*** (0.017)
Constant	3.507*** (0.031)
N	8,719
Adjusted R ²	0.148

*p<0.05, **p<0.01, ***p<0.001

Table 4.12: Split Sample Ordinary Least Square Regression, Academic Achievement as Dependent Variable (1-6)

	Low SES	Low-middle SES	Middle SES	High-middle SES	High SES
Activity breadth (0-6)	-0.030 (0.031)	0.112* (0.049)	0.192*** (0.044)	0.147*** (0.044)	0.110*** (0.021)
Activity breadth² (0-6)		-0.041* (0.016)	-0.063*** (0.014)	-0.043** (0.016)	
<i>Part of Oslo (ref: east)</i>					
West	0.0023 (0.064)	0.182*** (0.045)	0.137*** (0.037)	0.101** (0.036)	0.111** (0.038)
Not living in Oslo	-0.125 (0.179)	0.113 (0.092)	-0.061 (0.086)	-0.090 (0.092)	0.133 (0.089)
Grade (ref: Vg1)					
Vg2	0.175** (0.054)	0.160*** (0.048)	0.141** (0.044)	0.0793* (0.039)	0.135*** (0.038)
Vg3	0.159** (0.056)	0.213*** (0.050)	0.091* (0.045)	0.141** (0.043)	0.181*** (0.042)
Gender (ref: male)	0.177*** (0.046)	0.200*** (0.041)	0.188*** (0.036)	0.227*** (0.034)	0.118*** (0.033)
Constant	3.517*** (0.051)	3.629*** (0.046)	3.876*** (0.046)	4.046*** (0.047)	4.228*** (0.048)
N	1,529	1,692	1,804	1,849	1,845
Adjusted R ²	0.020	0.042	0.036	0.039	0.035

*p<0.05, **p<0.01, ***p<0.001

4.5 Summary of Results

The descriptive results showed socioeconomic differences in activity participation. Overall participation numbers display a socioeconomic gradient. The same is the case for participation in sports, collective music activities, cultural schools, and other activity contexts. However, the results showed a reversed socioeconomic gradient for participation in youth clubs and religious activities. The breadth of activity contexts showed a socioeconomic gradient, but this is likely the result for an overrepresentation of youth with low socioeconomic status in the non-active group.

The results in section 4.2 revealed how activity participation was associated with cultural and economic resources in the family. Both cultural and economic resources were associated with activity participation and activity breadth. Consequently, when considering activity participation in general, these results showed support for both H1a and H1b. However, when exploring separate activities, the picture became blurry. Economic resources seemed to matter primarily for sports team participation. Cultural resources were associated especially with collective music activities and cultural schools, but also to some extent, other activity contexts. Moreover, cultural resources were negatively associated with youth club and religious organization participation, meaning that the more cultural resources you have, the less you on average participate in these activities.

The results in section 4.3 showed that the undifferentiated measure of activity participation was positively associated with academic achievement with and without controls. This showed support for H2a. Moreover, when exploring if the association differed according to the type of activity context I found that sports teams, collective music activities, cultural schools, and other activity contexts all displayed a positive association with academic achievement. However, religious organizations did not show a significant relationship with academic achievement, and youth clubs revealed a negative association with academic achievement. This did not support H2b. Moreover, I found a curvilinear association between activity breadth and academic achievement. This result supported H2c.

Finally, I explored the interactions between socioeconomic status and activity participation. I found that the groups with high socioeconomic status had a significant association between activity participation and academic achievement while the groups with low socioeconomic status did not. This was especially the case for the group with the most socioeconomic

resources and became especially the case when exploring activity breadth. The results in section 4.4 did not support H3.

5 Discussion and Conclusion

I have argued that research on activity participation needs to consider how social inequality interacts with different aspects of participation in organized activities. Throughout the results chapter, I find clear evidence that socioeconomic background matters. This is true both for participation in organized activities and educational outcomes associated with activity participation.

In this final chapter, I first discuss unequal participation in organized activities. Then, I move to discuss the relation between activity participation and academic achievement. Finally, I assess directions for future research and provide some concluding remarks.

5.1 Class gap or Class gradient?

In chapter four, I found that despite widespread *participation for all policies*, activity participation is strikingly dependent on socioeconomic background. Among youth who participated actively in any activity during the last month, youth from the highest socioeconomic quintile participated nearly twice as much as the first and lowest socioeconomic quintile. My results are in this aspect in line with previous research (Bakken et al. 2016). However, the exploration of specific activity contexts shows that socioeconomic background is associated differently with various activities.

Sports teams and other activity contexts follow the overall pattern and display a socioeconomic gradient where active participation doubles from the lowest socioeconomic to the highest quintile. In collective music activities and cultural/musical schools, the highest socioeconomic quintile participated four times as much as the lowest socioeconomic quintile. While in youth clubs and religious organizations, the lowest socioeconomic quintile participated approximately three times as much as the highest quintile. It follows that socioeconomic status not only affects active participation in general but is also decisive for the type of activity context. These results underscore the necessity for exploring more differentiated activity participation patterns.

The exploration of activity breadth contributes to new insights on activity participation among youth in Norway. Few students participated actively in more than two activity

contexts. However, activity breadth can potentially provide an uncertain indication of the total number of activities. The youth may participate in several activities in the same domain e.g. sports activities. Nevertheless, considering involvement in different activity contexts is important for breadth as different contexts provide distinctive experiences for youth. The exploration of activity context breadth displayed that the socioeconomic gradient in activity participation is mainly due to an overrepresentation of youth with low socioeconomic background in the non-participant group. When investigating those who participated in more than two activity contexts, I find no systematic socioeconomic differences.

Throughout the explorations of participation patterns, I find that participation follows a gradient. Consequently, there does not seem to be a specific threshold of resources one needs to surmount to become active. The issue at hand seems to be that a stepwise increase in participation follows a stepwise increase in parental resources.

5.2 Unpacking Barriers to Organized Activity Participation

I continue by discussing my first research question: What is the relation between parental economic and cultural resources and activity participation? The point of departure was to figure out if the class gap in activity participation was a consequence of financial or cultural barriers. Based on Lareau (2011) and Bennet, Lutz & Jayaram. (2012), I expected to find that both cultural and economic resources were associated with activity participation (H2a and H2b). To develop further knowledge on how the class gap in activity participation emerges, it is necessary to decide which actions can be used to provide equal opportunities for participation. Moreover, since recent research disagree on whether cultural or material aspects of class is determining for youth chances of activity participation, my research can contribute to unpacking how class affects the lives of youth during after-school hours.

The results must be interpreted with some caution as the variables indication parental economic and cultural resources are proxies and show some multicollinearity. Nevertheless, I discovered some patterns worth discussing.

The results from the analysis of activity breadth showed that increased activity breadth is positively associated with both cultural and economic resources. However, the two types of resources do not differ significantly from each other with regard to effect size. One might

have expected that active participation in multiple activity contexts was specifically related to economic resources, as additional activity contexts yield an extra cost for the families. This materialist suggestion is in line with the argument of Bennet, Lutz & Jayaram (2012) who views activity participation primarily determined by the family economy. This is also the case. However, cultural resources seem to matter as much. As Lareau (2011) argues, this can be explained by the value given to activity involvement by middle-class parents. The middle-class parental logic or concerted cultivation encourage their children to participate in different activity contexts at a young age, hence affecting recruitment into activities. Moreover, they are likely to encourage their children to continue to participate in activities throughout adolescent. Increased support might lead to lower dropout rates. However, the results demonstrate that the activity breadth of Oslo youth does not seem to be a question of access to only cultural or economic resources, but both.

Furthermore, I explored how cultural and economic resources were associated with active participation in specific activity contexts. The results revealed a more mixed picture of how activity participation is related to different family resources. Since the various activity types were associated with different types of resources, it is hard to argue that the same mechanisms leading to participation are credible for across different activity context.

The Hidden Cost of Sport?

The only activity context positively and strongly associated with economic resources is sports. These results are similar to those of Enjolras et al. (2012) and Andersen & Bakken (2018) who found that economic capital was closely associated with sports participation, while cultural resources were not. The fact that the participation fee for sports teams is roughly the same as that of cultural school participation does not support that sports team participation should be specifically associated with economic resources. However, several recent media coverages in Norway and Oslo point to the “hidden cost of sports” and the pursuit of acquiring the best sports equipment. The hidden costs involve e.g. training camps abroad or participation in tournaments²¹. The chase for the best equipment has been discussed quite extensively in the media during recent years (Ass & Røed-Johansen 2019). The effects of equipment and technology on sports performance have become imperative in many sports. For instance, having the right waxing on skies, or shoes in football can make a difference for

²¹ See e.g. Ullern IF (2018)

performance, but also provide satisfaction or self-esteem among participants. This becomes especially important during upper secondary years as the seriousness of sports escalates. The same claim has not been made for e.g. marching bands or cultural school activities²².

Consequently, sports participation may be especially exposed to economic inequality and financial constraints as pointed out by Bennet, Lutz & Jayaram (2012). Youth from families with few economic resources leave because they cannot keep up with the equipment race or afford the hidden cost of sports participation.

Furthermore, the only other activity context associated with economic resources is religious organizations, but in contrast, the association is negative. Unlike sports teams, religious activities are more or less free. They are also likely to be institutionally available for immigrants or children of immigrants with few economic resources. The question of minority youth participation in religious activities is not touched in this thesis. Nevertheless, these results are compatible with the materialistic argument made by Bennet, Lutz & Jayaram (2012). Financial constraints and the materialist base seem to matter for activity participation in some activities and especially sports teams.

Cultural Preferences?

The results show that cultural resources matters for active participation in all activities. These results provide new insights on participation patterns. What I operationalized as cultural resources might to some degree pick up variance in child-rearing styles as conceptualized by Lareau (2011) as child-rearing styles in Norway also are somewhat class dependent (Stenfansen & Blaasvær 2010, Aarseth 2014). Although parental education is likely to correlate strongly with economic resources, what I operationalized as cultural resources (parental education and books at home) seem to have independent and strong associations with activity participation. Supposing that cultural resources, to some extent, represent different child-rearing strategies conceptualized by Lareau (2011), the value given to activity participation seems to be of importance for chances of activity participation.

Moreover, the lack of significant associations with economic resources in several activities supports that the activity participation gap could be a consequence of the value given by parents and later by youth to organized activities. Activity participation is then something money cannot buy. The results show that this is especially the case of organized activities in

²² Nevertheless, they likely also come with both drives for equipment and hidden costs as seriousness increases.

the collective music domain, cultural schools, and other activity contexts. However, both active youth clubs and religious organization participation is negatively associated with cultural resources. As seen in the cross tables, youth with low socioeconomic status participate more in these activities. The participation pattern may be a consequence of the low economic cost and institutional availability of these activities. However, another reason may be that they are adversely valued by parents with more cultural resources and that these values are transferred to their offspring. Youth club participation is also less likely to be initiated by parents as these contexts first become available for youth in a more independent age. This is, therefore, more compatible with the accomplishment of natural growth because youth club participation is seldom initiated by parents. Additionally, these contexts are more on the youth own premises than other activities.

Multidimensional Approaches

The results go to show that it is necessary to consider the type of activity when trying to disentangle how the socioeconomic differences in activity participation are linked to cultural and economic barriers. To build on this, I will in the next sections, propose two somewhat different strategies for thinking about family resources and activity participation derived from sociological theory.

The first relates to the notion of the social space and the importance of types of capital and relative weighting of these for an agents dispositions. According to Bourdieu (1986), an agent's placement in the social space is dependent on the total volume of cultural and economic capital and the relative weight between those. Placement in the social space is moreover decisive for an agent's habitus or dispositions. Consequently, the capital composition of parents will influence the youth's preferences for activity participation. For instance, research on adolescent elites in Oslo argues that the relative weight of cultural or economic capital is pivotal for how the youth behave, draw boundaries and what interests they have (Pedersen, Jarness & Flemmen 2018, Jarness, Pedersen & Flemmen 2018). Those with a high amount of cultural capital tend to value e.g. choirs, orchestras, and classical pianos while those with high an amount of economic capital value e.g. skiing, working out, and jazz ballet. The argument is, therefore, that the amount and relative weight of capital embedded in the habitus is imperative for organized activity preference.

These results nuance the picture painted by Lareau (2011). Instead of only creating a vertical distinction between working and middle classes, it additionally accentuates horizontal distinctions. The point made is that depending on not just the vertical dimensions, but also the horizontal dimension of the social space painted by Bourdieu, youth will prefer different activities. Concerted cultivation practices, and especially the choice of organized activities is dependent on the relative weight of cultural and economic capital. This can explain why economic resources are associated with sports and cultural resources with cultural activities.

However, it may also be fruitful to take a more Weberian approach to inequality when discussing unequal activity participation. Weber's multidimensional concept of inequality features the concepts of class, status group, and party (Weber 1978). The multidimensional approach allows us to envision how the class structure determined by the material base of a society in addition to status group aspects such as lifestyle and group solidarity can influence activity participation. Chan & Goldthorpe (2007) argue that this approach lets sociologists understand how employment relations have a prevailing influence on economic life-chances while at the same time recognizing how status group affiliation is of key importance in aspects of lifestyle and cultural consumption. My measures are too crude and multifaceted to conclude how class and status group belonging can influence participation in organized activities separately. However, I argue that the Weberian approach should be recognized when studying activity participation. In the theoretical debate on if activity participation is primarily affected by cultural or economic constraints, it seems essential that, to advance the debate, that inequality in activity involvement should be investigated in connection to both class and status, rather than just one or the other. A multidimensional approach leaves room for acknowledging the constraining effect of market situations and economy per se and not only through shaping preferences.

5.3 Academic Achievement and Organized Activity Participation

In the following section, I move to discuss results related to my second research question: What is the association between activity participation and academic achievement? Based on previous research, I expected to find that participation in organized activities had a significantly positive association with academic achievement (H2a). That the association between participation and organized activities on academic achievement did not vary

according to the nature of the activities in which students participate (H2b). And that up to a certain point, participation in organized activities has an association with academic achievement and a negative association thereafter (H3c).

The reason for exploring this was twofold. Firstly, since parental logic regarding supporting their children in organized activities is based on a belief that their offspring gain something through activity participation, I wanted to explore if this was the case. Secondly, US research finds that participation in organized activities is positively associated with academic achievement. I wanted to explore this in the Norwegian context.

The results showed that active participation in organized activities was associated with better academic achievement. These findings are in line with most previous research. However, when I explored specific activity contexts, I found more various associations. Moreover, in line with previous research, I found support for threshold effects of activity participation.

The Role of Structure in Organized Activities

Sports teams, cultural schools, collective music activities, and other activity contexts were positively associated with academic achievement. Active participation in religious organizations did not have an impact, while participation in youth clubs was negatively associated with academic achievement. These results underscored the need for examining different types of activity contexts separately as an aggregation of qualitatively different forms of leisure time activities masks true associations of specific contexts.

With closer examination, the effect sizes for sports teams, cultural schools, collective music activities, and other activity contexts did not differ significantly from each other. In conclusion, these were positively associated with academic achievement, while active participation in youth clubs was negatively associated. My results are therefore not completely compatible with those of e.g. Morris (2015) and Coulangeon (2018), who found no differences when separating activity types. However, when only considering those activities which were associated with positive outcomes, my results are consistent with those finding the same effects regardless of activity context. Moreover, since all the activity contexts were out-of-school activities and some did vary in effect size, there is no evidence pointing to negative effects of all out-of-school activities as found by Broh (2002), Marsh & Kleitman (2002) and Chambers & Schreiber (2004).

Mahoney & Stattin (2000) can act as a point of departure for discussing how different activities can lead to varying educational outcomes. They examined how activity participation was linked to anti-social behavior in Sweden. Similarly to my results, they found that activities such as sport, music, and arts were linked to positive outcomes while participation in the Swedish equivalent to youth clubs was linked to negative outcomes. Mahoney & Stattin (2000) argued that the role of structure in the activity context i.e. if the activity was highly structured or not were vital for the outcome. Youth clubs are less structured than other activities. They often involve activities chosen by the youth as game consoles, movies, unstructured dancing, or music. Youth clubs also involve more time simply hanging out than e.g. sports or musical activities. Mahoney & Stattin (2000) also reported that those engaged in youth clubs reported a higher number of deviant peers. I did not have the possibility to report this but found a remarkable higher participation rate among youth with low socioeconomic status in this activity than others. This is, of course, not synonymous with high numbers of deviant peers. However, Andersen & Seland (2019) find that youth who participated in youth clubs, in a Norwegian context, reported more deviant behavior than youth who did not participate. Their findings indicate that the results of Mahoney & Stattin (2000) are somewhat similar in Norway. I, therefore, follow Mahoney & Stattin (2000: 123) as they point out: “The issue is not whether an individual is engaged in an activity – the issue appears to be what the individual is engaged in, and with whom”.

To apprehend this, I first return Coleman’s (1961) notion of role conflict and the zero-sum game between activity contexts and educational endeavors. The youth clubs more than the other contexts exhibit youth culture. The content of the youth clubs are designed to accommodate the young people’s own culture, and many of the day-to-day operations are carried out by the members themselves. Conflictingly, activities such as sport teams, marching bands, and cultural schools resemble adult culture customized for youth. In this aspect, the more structured activities parallel school. Youth clubs, on the other, side can display features if not directly hostile against schools, at least less compatible with school culture. This means that the roles taken in the more structured activities are less conflicting towards schools while the youth club role is more in direct competition with the student role.

The structuring is valuable. This could be because structuring leads to acquiring noncognitive skills or cultural capital. The skills such as teamwork or conscientiousness are easier accessible with the increase of the organization. Moreover, structuring per se is potentially valuable. Temporal and corporal discipline such as learning to sit quietly, work hard, follow

instructions from authorities is central in the subjectivation of the modern individual (Foucault 1979). Developing a sense of structure through organized activities is directly transferable to educational settings. Structure is discipline. Schools are disciplinary institutions. A well-disciplined individual used to following rules and regulations is always, to some degree, a sought after student. The disciplining of the mind and body through the temporal and corporal structuring of organized activities is much of the same skills valued in education (Foucault 1979).

Furthermore, as discussed in the last section, different activities were associated with different socioeconomic backgrounds and types of family resources. Some activities are therefore likely to be recognized by teachers as closer to high culture and thus act as status symbols (Bourdieu 1989). This can facilitate a symbolic aspect of cultural capital and lead to teachers' impressions of the student improving (DiMaggio 1982). The results are in line with this insofar as the activities associated with positive outcomes are the activity context inhabited by students from well of families. However, both methodological and theoretical issues about causality spawn uncertainty about this interpretation. Theoretically, an inherent feature in Bourdieu's theory is that symbolic aspects of class are expressed by the habitus of students (Bourdieu 1989). The habitus is forged early and includes dispositions, language use, and body handling (Esmark 2006). The underlying assumption is that teachers will recognize these students regardless of knowing how they spend their free time. It is also hard to argue that organized activity participation displays some sort of high culture in Norway, especially with my undifferentiated activity context measures.

Finally, the various associations with the different types of activities do not imply that activity participation causes changes in academic achievement. Another possible interpretation could be that youth clubs attract students with lower academic achievement and the more structured activities attract students with higher academic achievement. Therefore, it is hard to determine if activity participation leads to better academic achievement or if those with better academic achievement participate more often. A causal relationship is hard to establish with the use of cross-sectional data. Moreover, confounding factors, such as personal traits or school interest, can potentially explain the association between activity participation and academic achievement.

The Inconsequential Threshold

Moreover, I examined threshold effects of activity participation. The total number of activity contexts were positively associated with academic achievement until reaching a turning point of two activity contexts. This result is congruent with previous research (Marsh & Kleitman 2002, Mahoney, Harris & Eccles 2006, Randall & Bonhert 2011, Knifsend & Graham 2012). The implications are that it is possible for youth to be overscheduled. However, as previously noted, very few participated in more than three activity context. This means that the results must be taken with a pinch of salt, as confidence intervals are quite big, and the total number of overscheduled youth is marginal. Consequently, the real risk for overscheduling is negligible. Moreover, the differing outcomes associated with the activity types also lead to questioning this hypothesis. It seems pivotal to acknowledge the type of activity when relating activity participation too academic outcomes. Thresholds will likely differ according to the type of activity context.

5.4 Social Reproduction and Organized Activity Participation

In this section, I discuss my third research question: How is the association between activity participation and academic achievement moderated by socioeconomic background? Based on previous research (Mars & Kleitman 2002, Dumais 2008, Covay & Carbonaro 2010 & Morris 2015), I expected that students with low socioeconomic status would have a stronger association between activity participation and academic achievement than students with high socioeconomic background. However, I found this not to be the case.

For the lower socioeconomic groups, activity participation did not seem to matter for academic achievement. But, among the youth from the higher socioeconomic groups, those who participated in organized activities did have better grades than those not participating. Moreover, increased activity breadth is also more beneficial for students with higher socioeconomic status. With increased involvement, the additional effect size for youth with high socioeconomic backgrounds increases. This is contrary to the results of Morris (2015) who find increasing returns for low socioeconomic youth with increased activity participation.

So how can we conceptualize the differentials in return? I stress that it is important to consider the role of national context. As results are contrary to previous findings in the US, there might be some cultural or structural factors surrounding the nature of organized activities that affect the outcome. In the US context, organized activities in the form of extracurricular activities differ from organized activities in Norway in several ways. The extracurricular activities are more often than not hosted by schools, and a consequence is that activity participation can lead to school attachment and belonging (Broh 2002). This might be especially important for students with low socioeconomic backgrounds, as school familiarity and attachment are lower among these students in the first place. Second, the extracurricular activities in the US also tend to be focused around academic activities. These academic activities are especially associated with the resource compensation framework (Morris 2015). This more academic or instrumental approach to activity participation might be distinctively widespread in contexts with high inequality as more authoritarian parenting is more common in high inequality contexts (Doepke & Zilibotti 2019).

In Norway, organized activities are seldom hosted by schools. Resource compensation through school attachment is, therefore, not likely to occur. Moreover, organized activities tend to be less instrumental in regards to improving educational outcomes than in the US. At a more discursive level, this might be underscored by the high amount of research, exploring academic outcomes related to activity participation in the US, while Norwegian research has often focused on the democratizing effect of activity participation (Bufdir 2019). The less instrumental approach of organized activities, emphasizing directly transferable educational skills, might decrease the chance of low socioeconomic youth gaining academic skills through activity participation. This might decrease the likelihood of resource compensation through activity involvement. It follows that activity contexts are less likely to compensate or counter family influences with regards to academic outcomes. However, the lack of resource compensation does not explain why youth with high socioeconomic background gets additional effects of activity participation.

The point of departure for discussing how class can moderate the association between activity participation and academic achievement is to acknowledge that aspects of family life may create different activity experiences for youth. Lareau (2011) shows how family life differs according to class through the concepts of concerted cultivation and the accomplishment of natural growth. She argues that this contributes to inculcating a sense of entitlement in the middle-class children. This sense of entitlement may contribute to middle-class children

getting more out of organized activities through customization of participation to better suit their needs. Moreover, Lareau (2011) argues that the temporal structuring of daily life is a central feature of the middle-class childhood. This might lead to the middle-class youth growing more accustomed to coordinate and structure their time to encompass both time for activity participation and academic endeavors.

Furthermore, support from parents to structure everyday life may continue from childhood into adolescence. As argued by Lareau (2011), the parents facilitate their children's activity participation through a high amount of labor. This is, of course, likely to drop while children grow older, but class differences in parental involvement will likely pursue the life of children into their teens (Stenfansen, Smette & Strandbu 2018). In this way, parental work in the middle-class such as driving, organizing, and moral support makes it easier for youth to balance their efforts in both organized activities.

Moreover, it is possible that organized activities are experienced qualitatively distinct depending on class. Similar to Lareau (2011), Vincent & Ball (2007) argue that enrichment activities are a central reproduction strategy among middle-class parents as they focus on making organized activities arenas for having *fun with purpose*. Stefansen & Aarseth (2011) use the term *enriching intimacy* to describe a strategy deployed by middle-class parents to resource their offspring. They argue that through enriching intimacy middle-class parents seem to transmit a generalized desire for self-resourcing practices among their children. In this sense, middle-class children gain the ability to enjoy that is good for them (Stenfansen & Aarseth 2011). This may lead to middle-class youth having qualitatively different experiences in organized activities than working-class children. The self-resourcing and ability to have fun with purpose may lead to middle-class youth enhancing experiences transferable to school settings. Moreover, the middle-class children's elaborated code makes it easier for them to acquire the skills taught in organized activities. In this way, the cultural capital acquired in organized activities is contingent on the cultural capital brought from home. Activity participation is reinforcing already established class differences in the same ways as schools (Bourdieu & Passeron 1990).

Similarly, Khan (2011) argues that high class and elite youth often acquire what he calls an *ease of privilege*. This means feeling comfortable and entitled in just about any social situation (Khan 2011: 15). Students with a high socioeconomic status may feel more at ease in the activities and easier achieve a sense of mastery. This ease allows them to put less effort

into the activity, thus not feeling conflicted by responsibilities by both organized activities and schools. Furthermore, the suggested change in highbrow taste from snob to omnivore (Pettersen & Kern 1996) can shed light on the results. Increased breadth of activity participation was particularly beneficial for students from high socioeconomic backgrounds. These students can already be more familiar with several types of cultural expressions. It follows that when these students enter into different activity contexts, they can more easily reap the rewards in multiple types of activities. The argument is that they already have a certain sense of cultural omnivorousness, and this further aids their acquiring of cultural capital from organized activities.

Finally, some methodological issues need to be taken into account also here. Again, notions of self-selection are essential to consider. It could be that the students with high socioeconomic status and good grades are more attracted to activity participation than those with low socioeconomic and low grades. This needs to be explored in further research.

5.5 Further Research

I have discovered associations worth exploring more in future research. One implication is that activity participation should be analyzed longitudinally in Norway. Cross-sectional data only provides snapshots of participation in and outcomes of organized activities. Longitudinal studies with fixed effects can assist the reduction of selection bias by reducing unobserved time-invariant heterogeneity among individuals. This can also facilitate controls for previous measures of academic achievement and is done in other contexts (Coulangeon 2018). The findings indicate that results from longitudinal data show a decrease in the effect sizes of activity participation. Moreover, longitudinal studies can explore the consistency or duration of activity participation to create a more holistic measure of how youth participate in organized activities. Future Norwegian surveys also should try to measure the intensity of participation through total time participated. The most optimal approach would be to capture hours spent on organized activities during a specific time-frame. Another important area of future research should be to explore the mechanism that allows youth to see positive gains in academic achievement through some activities and negative gains from others.

Furthermore, there is a need for more qualitative research on activity participation. This is the case both for exploring barriers to activity participation and outcomes of activity participation. Qualitative studies such as Lareau (2011) and Bennet, Lutz & Jayaram (2012)

need to explore further how class is contributing to unequal participation in organized activities. But perhaps even more important is to explore how youth participate in activity contexts and what they get out of it. This can help to solve why it seems that some youth get more educational benefits from activity involvement than others. To investigate engagement is imperative in this regard.

Moreover, activity participation is not something exclusive for students in upper secondary schools. Further research should explore activity participation among other age groups. It is especially important to explore unequal participation among younger children, both at lower secondary and primary schools. Moreover, to explore how activity participation is associated with academic achievement in higher education would be of interest. The reason for this both to explore what types of activities are related to academic achievement in universities and colleges and to explore if this is linked to class differentials in returns at this level.

Finally, class analysis needs to be more present in the study of participation in organized activities. As shown in this study, social background is intertwined with different aspects of activity participation. To unpack how different measures of class is linked to activity participation is critical for understanding unequal participation among young people.

5.6 Concluding remarks

The results show that social class is something to take seriously when doing researching activity participation. Youth from families with more resources are to a greater extent involved in organized activities than those with fewer resources. Moreover, it seems that the educational benefits imagined being harvested through activity participation by middle-class parents are taking place. This to an even stronger degree than working-class children in the same activities. Youth with fewer resources participate less, and those who do participate do not have any better grades than those who do not. According to Doepke & Zilibotti (2019), the degree of parental investment and authoritative ways of child-rearing are related to how unequal a society is. A family's investment in their offspring is more intense and pervasive in more unequal societies. The reason for this is that as inequality increases, the rewards of education and labor gets more vital for securing a good quality of life. This means that in increasingly unequal societies, the seriousness and instrumentalization of organized activity participation are likely to increase. The consequence can be that organized activities are becoming synonymous with the logic in the shadow education system. This increasing

rationalization and school-likeness of activity participation take away the *Humboldtian Bildung* traditionally inherent in many organized activities. Moreover, the intrinsic values of organized activities can be replaced by an extrinsic rationale. This draws attention away from the fact that organized activities should be activities for all youth to prosper and achieve a sense of mastery.

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All references in this thesis are reported.

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Appendices

Appendix A: Chapter 4.1

Table A1: Activity Breadth Divided by Socioeconomic Quintiles among Those Participating in Two or More Activities

	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile	Total
Number of activity contexts: 2	7.65 %	7.98 %	7.87 %	9.19 %	11.06 %	8.81 %
Number of activity contexts: 3	3.01 %	1.77 %	1.72 %	1.89 %	2.66 %	2.19 %
Number of activity contexts: 4	0.46 %	0.65 %	0.28 %	0.22 %	0.60 %	0.44 %
Number of activity contexts: 5	0.07 %	0.12 %	0.11 %	0.16 %	0.16 %	0.13 %
Number of activity contexts: 6	0.26 %	0.18 %	0.06 %	0.00 %	0.05 %	0.10 %

P-value = 0.113

Table A2: T-test for Active Participation in Specific Activity Contexts. Based on Table 4.2

Sports team					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	-0.053***	0			
Third SES-quintile	-0.116***	-0.064***	0		
Fourth SES-quintile	-0.189***	-0.136***	-0.072***	0	
Fifth SES-quintile	-0.210***	-0.157***	-0.094***	-0.021	0
Religious organizations					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	0.023**	0			
Third SES-quintile	0.052***	0.029***	0		
Fourth SES-quintile	0.071***	0.048***	0.019***	0	
Fifth SES-quintile	0.069***	0.046***	0.017**	-0.002	0
Youth club					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	0.026***	0			
Third SES-quintile	0.044***	0.018**	0		
Fourth SES-quintile	0.056***	0.030***	0.013*	0	
Fifth SES-quintile	0.056***	0.030**	0.012*	-0.001	0
Collective music activities					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	-0.012**	0			
Third SES-quintile	-0.018***	-0.007	0		
Fourth SES-quintile	-0.037***	-0.025***	-0.018***	0	
Fifth SES-quintile	-0.069***	-0.057***	-0.051***	-0.033***	0
Cultural school					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	-0.017***	0			
Third SES-quintile	-0.027***	-0.010	0		
Fourth SES-quintile	-0.033***	-0.016**	-0.006	0	
Fifth SES-quintile	-0.053***	-0.036***	-0.026***	-0.020**	0
Other activity context					
	First SES- quintile	Second SES- quintile	Third SES- quintile	Fourth SES- quintile	Fifth SES- quintile
First SES-quintile	0				
Second SES-quintile	-0.020*	0			
Third SES-quintile	-0.020*	0.001	0		
Fourth SES-quintile	-0.036***	-0.015	-0.016	0	
Fifth SES-quintile	-0.066***	-0.046***	-0.047***	-0.031***	0

Appendix B: Chapter 4.2

Table B₁: T-tests for the Coefficients (Odds Ratios) in all Logistic Regressions

	Prob > chi2	Based on:
Activity breadth	0.266	Model 2 (table 4.4)
Active participation in sport teams	0.000	Model 2 (table 4.5)
Active participation in religious organization	0.255	Model 4 (table 4.5)
Active participation in collective music activities	0.000	Model 6 (table 4.5)
Active participation in cultural/musical school	0.000	Model 8 (table 4.5)
Active participation in youth club	0.023	Model 10 (table 4.5)
Active participation in other activities	0.004	Model 12 (table 4.5)

Table B2: Average Marginal Effects and Y-standardized Coefficients. Based on Table 4.5

	<i>Sports teams</i>	<i>Religious organizations</i>	<i>Collective music activities</i>	<i>Cultural schools</i>	<i>Youth clubs</i>	<i>Other activity contexts</i>
<i>Average marginal effects</i>						
<i>Cultural Resources (0-3)</i>	0.0392***	-0.0166***	0.0352***	0.0286***	-0.0175***	0.0319***
<i>Economic resources (0-3)</i>	0.129***	-0.00915*	-0.00422	-0.00597	-0.00320	0.00169
<i>Y-Standardized coefficients</i>						
<i>Cultural Resources (0-3)</i>	0.104	-0.155	0.426	0.327	-0.184	0.166
<i>Economic resources (0-3)</i>	0.342	-0.085	-0.051	-0.068	-0.034	0.009

Table B3: Linear Probability Models for Separate Activity Models

	Active participation in sport teams	Active participation in religious organization	Active participation in collective music activities	Active participation in cultural/musical school	Active participation in youth club	Active participation in other activities
Parental resources :						
Cultural Resources (0-3)	0.037*** (0.006)	-0.018*** (0.003)	0.028*** (0.002)	0.025*** (0.003)	-0.019*** (0.003)	0.030*** (0.004)
Economic resources (0-3)	0.112*** (0.009)	-0.0122 (0.006)	-0.003 (0.003)	-0.005 (0.004)	-0.00496 (0.00547)	0.001 (0.006)
Part of Oslo (ref: east)						
West	0.040*** (0.010)	-0.038*** (0.005)	-0.005 (0.005)	-0.010 (0.005)	-0.019*** (0.005)	-0.025** (0.007)
Not living in Oslo	-0.006 (0.024)	-0.035** (0.011)	0.001 (0.011)	0.048** (0.016)	-0.032*** (0.009)	0.009 (0.019)
Grade (ref vg1)						
Vg2	-0.074*** (0.011)	-0.020*** (0.006)	0.0005 (0.005)	-0.010 (0.005)	-0.021*** (0.005)	-0.013 (0.008)
Vg3	-0.144*** (0.011)	-0.015* (0.006)	-0.006 (0.005)	-0.018** (0.005)	-0.036*** (0.005)	0.002 (0.008)
Gender (ref male)	-0.098*** (0.009)	-0.001 (0.005)	0.008 (0.004)	0.011** (0.004)	-0.026*** (0.004)	-0.026*** (0.007)
Constant	0.055* (0.022)	0.158*** (0.015)	-0.000 (0.009)	0.018 (0.010)	0.144*** (0.014)	0.086*** (0.016)
N	8719	8719	8719	8719	8719	8719
R²	0.064	0.020	0.012	0.011	0.020	0.007

*p<0.05, **p<0.01, ***p<0.00

Appendix C: Chapter 4.3

Table C1: OLS Regressions, Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.

	Norwegian	Math	English
Active participation in any activity (0/1)	0.0973*** (0.0194)	0.174*** (0.0263)	0.0171 (0.0210)
Socioeconomic quintiles (Ref: Low SES)			
Low-middle SES	0.241*** (0.0337)	0.154*** (0.0444)	0.243*** (0.0382)
Middle SES	0.422*** (0.0332)	0.373*** (0.0450)	0.484*** (0.0368)
High-middle SES	0.580*** (0.0329)	0.561*** (0.0451)	0.601*** (0.0371)
High SES	0.755*** (0.0339)	0.802*** (0.0459)	0.747*** (0.0377)
Constant	3.416*** (0.0317)	3.236*** (0.0411)	3.715*** (0.0349)
N	8671	8602	8549
R2	0.137	0.078	0.108

*p<0.05, **p<0.01, ***p<0.001

Table C₂: T-tests for the Coefficients of Specific Activity Contexts (Prob > F). Based on Table 4.7

	Sports teams	Youth club	Religious organization	Collective music activities	Cultural schools	Other activity contexts
Sports teams	0					
Youth club	0.0000	0				
Religious organization	0.0097	0.0147	0			
Collective music activities	0.2400	0.0000	0.0042	0		
Cultural/musikal schools	0.3240	0.0000	0.0051	0.8496	0	
Other activity contexts	0.2055	0.0000	0.0015	0.7768	0.9628	0

Table C3: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.

	Norwegian	Math	English
Sport teams (0/1)	0.0782*** (0.0207)	0.167*** (0.0283)	-0.0248 (0.0222)
Youth club (0/1)	-0.209*** (0.0495)	-0.183** (0.0625)	-0.235*** (0.0560)
Religious organization (0/1)	-0.0528 (0.0442)	-0.0409 (0.0582)	-0.0508 (0.0479)
Collective music activities (0/1)	0.131** (0.0491)	0.124 (0.0687)	0.0921 (0.0508)
Cultural/musikal schools (0/1)	0.112** (0.0436)	0.0825 (0.0636)	0.134** (0.0477)
Other activity contexts (0/1)	0.0876** (0.0303)	0.126** (0.0401)	0.114*** (0.0316)
Socioeconomic quintiles (Ref: Low SES)			
Low-middle SES	0.233*** (0.0337)	0.147*** (0.0444)	0.234*** (0.0381)
Middle SES	0.408*** (0.0332)	0.360*** (0.0452)	0.469*** (0.0368)
High-middle SES	0.559*** (0.0333)	0.541*** (0.0456)	0.580*** (0.0372)
High SES	0.730*** (0.0343)	0.780*** (0.0464)	0.720*** (0.0378)
Constant	3.456*** (0.0318)	3.279*** (0.0412)	3.749*** (0.0349)
N	8671	8602	8549
R2	0.140	0.080	0.113

*p<0.05, **p<0.01, ***p<0.001

Table C4: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not shown.

	Norwegian	Math	English
Activity breadth	0.116*** (0.0256)	0.223*** (0.0345)	0.0425 (0.0271)
Activity breadth²	-0.0318*** (0.00955)	-0.0585*** (0.0127)	-0.0161 (0.00989)
Socioeconomic quintiles (Ref: Low SES)			
Low-middle SES	0.242*** (0.0337)	0.154*** (0.0444)	0.242*** (0.0381)
Middle SES	0.423*** (0.0332)	0.372*** (0.0450)	0.481*** (0.0368)
High-middle SES	0.581*** (0.0329)	0.560*** (0.0451)	0.599*** (0.0370)
High SES	0.757*** (0.0339)	0.802*** (0.0459)	0.746*** (0.0376)
Constant	3.424*** (0.0316)	3.242*** (0.0410)	3.715*** (0.0349)
N	8671	8602	8549
R2	0.137	0.079	0.108

*p<0.05, **p<0.01, ***p<0.001

Appendix D: Chapter 4.4

Table D1: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.

	Norwegian	Math	English
Active participation in any activity (0/1)	0.0150 (0.0529)	0.0996 (0.0700)	-0.0830 (0.0606)
Socioeconomic quintiles (ref: Low SES)			
Low-middle SES	0.238*** (0.0421)	0.126* (0.0553)	0.230*** (0.0478)
Middle SES	0.374*** (0.0422)	0.329*** (0.0575)	0.448*** (0.0465)
High-middle SES	0.568*** (0.0424)	0.515*** (0.0593)	0.538*** (0.0465)
High SES	0.664*** (0.0445)	0.793*** (0.0607)	0.675*** (0.0483)
Socioeconomic quintiles X Active participation in any activity (ref: Low SES)			
Low-middle SES X Active participation in any activity (0/1)	0.0229 (0.0698)	0.0797 (0.0922)	0.0503 (0.0792)
Middle SES X Active participation in any activity (0/1)	0.125 (0.0667)	0.113 (0.0907)	0.102 (0.0742)
High-middle SES X Active participation in any activity (0/1)	0.0519 (0.0649)	0.113 (0.0879)	0.154* (0.0728)
High SES X Active participation in any activity (0/1)	0.189** (0.0654)	0.0452 (0.0882)	0.164* (0.0724)
Constant	3.444*** (0.0356)	3.262*** (0.0463)	3.749*** (0.0396)
N	8671	8602	8549
R2	0.138	0.079	0.108

*p<0.05, **p<0.01, ***p<0.001

Table D₂: OLS Regression, Academic Achievement as Dependent Variable (1-6). Controls for Part of Oslo, Grade and Gender not Shown.

Sport teams	-0.039 (0.0748)
Sport teams*Socioeconomic status	0.0516 (0.0320)
Youth club	-0.291* (0.130)
Youth club*Socioeconomic status	0.0541 (0.0640)
Religious organization	0.0190 (0.112)
Religious organization*Socioeconomic status	-0.0284 (0.0572)
Collective music activities	-0.414 (0.259)
Collective music activities*Socioeconomic status	0.229* (0.103)
Cultural/musical schools	0.286 (0.220)
Cultural/musical schools*Socioeconomic status	-0.0731 (0.0912)
Other activity contexts	-0.00874 (0.105)
Other activity contexts* Socioeconomic status	0.0559 (0.0452)
Socioeconomic status (0-3)	0.381*** (0.018)
Constant	3.109*** (0.0400)
N	8719
R ²	0.159

*p<0.05, **p<0.01, ***p<0.001

Table D3: OLS Regression, Separate Models with Mark in Norwegian, Math and English as Dependent Variables (1-6). Controls for Part of Oslo, Grade and Gender not Shown.

	Norwegian	Math	English
Activity breadth (0-6)	-0.0283 (0.0322)	0.00706 (0.0399)	-0.0589 (0.0381)
Socioeconomic quintiles			
Low SES (Ref.)			
Low-middle SES	0.240*** (0.0400)	0.139** (0.0528)	0.253*** (0.0453)
Middle SES	0.388*** (0.0399)	0.345*** (0.0546)	0.458*** (0.0442)
High-middle SES	0.565*** (0.0398)	0.526*** (0.0558)	0.561*** (0.0442)
High SES	0.668*** (0.0412)	0.762*** (0.0560)	0.640*** (0.0450)
Interactions (ref: Low SES)			
Low-middle SES X Activity breadth (0-6)	0.0170 (0.0449)	0.0464 (0.0580)	-0.00798 (0.0494)
Middle SES X Activity breadth (0-6)	0.0812 (0.0434)	0.0783 (0.0582)	0.0553 (0.0487)
High-middle SES X Activity breadth (0-6)	0.0542 (0.0416)	0.0951 (0.0554)	0.0780 (0.0481)
High SES X Activity breadth (0-6)	0.151*** (0.0399)	0.100 (0.0520)	0.163*** (0.0448)
Constant	3.469*** (0.0343)	3.300*** (0.0444)	3.754*** (0.0382)
N	8671	8602	8549
R2	0.137	0.076	0.110

*p<0.05, **p<0.01, ***p<0.001

