



**Difference between effects of norms
on academic achievement in the Hjalli
movement compared with others
coeducational schools**

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Foreword

Submitted in partial fulfillment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.

Abstract - English

Effects of single sex schooling on students academic achievement has been studied in previous years and prior studies have shown positive relationships between single sex schools and good student academic achievement. The Hjalli movement is the first and only single sex school in Iceland and therefore it was interesting to see what effect of norms in the schools had on academic achievement. The aim of this study was to compare norms in form of social capital, time spent with family, social support and school norms and see what effects they had on Icelandic and mathematic academic achievement among students in the Hjalli movement and compare those effects with others coeducational schools. It was hypothesized that because of shared norms, students in the Hjalli movement show better academic achievement compared to others coeducational schools. Data from the Icelandic Centre for Social Research and Analysis were used in present study and the sample includes students in fifth, sixth and seventh grade, aged 10-12 years in Icelandic secondary school (n = 2213). Results were that there were rather small difference between norms in the Hjalli – movement and others coeducational schools and their effect on academic achievement was small. Girls had better academic achievement compared to boys.

Keywords: the Hjalli - movement, single-sex schools, coeducational schools, norms, academic achievement

Abstract - Icelandic

Áhrif kynjaskiptra skóla á námsárangur hafa verið skoðuð undanfarin á og hafa fyrri rannsóknir sýnt fram á jákvætt samband á milli kynjaskiptra skóla og góðan námsárangur. Hjallastefnan eru fyrstu og einu kynjaskiptu skólarnir á Íslandi og því var áhugavert að skoða hver áhrif gilda Hjallastefnunnar voru á námsárangur. Markmið þessarar rannsóknar var að bera saman gildi í formi félagsauðs, tíma sem eytt er með fjölskyldu, félagslegum stuðningi og skólagilda og skoða hvort þessi norm höfðu áhrif á námsárangur í íslensku og stærðfræði á meðal nemenda í Hjallastefnunni og bera áhrifin saman við blandaða skóla. Sett var fram tilgáta um að vegna sameiginlegra gilda þá sýna nemendur Hjallastefnunnar betri námsárangur samanborið við nemendur úr blönduðum skólum. Gögn frá Rannsóknum og greiningu voru fengin og notuð í þessari rannsókn og samanstóð úrtakið af nemendum úr fimmta, sjötta og sjöunda bekk (n = 2213). Niðurstöður rannsóknar voru þær að lítill munur var á normum á milli skóla og áhrif þeirra á námsárangur var lítill. Stúlkur sýndu fram á betri námsárangur í íslensku og stærfræði samanborið við drengi.

Lykilorð: Hjallastefnan, kynjaskiptir skólar, blandaðir skólar, gildi, námsárangur

The effects of single sex schooling on students' academic achievement has been studied over the years (Lee & Bryk, 1986; Lee & Lockheed, 1990). Prior studies indicate that students in single sex schools academically outperform their counterparts in coeducational schools (Gibb, Fergusson, & Horwood, 2008; Lee & Lockheed, 1990).

The Hjalli movement is the first single sex school in Iceland, founded in 1989 (Ólafsdóttir, 1992). The educational policy that the movement follows is mainly about separating the genders. By that, they wanted to promote gender equality both at school and in the community as a whole. Their goal was to meet different needs of the genders. The founder of the Hjalli movement, Margrét Pála, wanted to prevent children from being exposed to specific gender roles, and stereotypical behavior. By separating the genders, the children at Hjalli would have all the possibilities in the world to be who they wanted to be and to do what they wanted to do regardless of their gender. Early on the Hjalli movement was criticized for its arrangement, specifically for asking students to wear school uniforms, separating the genders and for not having regular toys like dolls, puzzles, toy cars and more. The reason for having neutral toys such as blocks of wood and cardboard boxes is so the children can use their imagination with these toys. . The Hjalli movement was and is at some point still is being criticized for separating the genders. Some have argued that the Hjalli movement exaggerates the gender differences even more. That by separating the genders, girls would become even more stereotypical and vice versa for boys. This criticism has diminished much from when the Hjalli movement was founded, and nowadays it is a rather popular school and kindergarten in Iceland. It started only with one school, in 1989 in Hafnarfjörður (Ólafsdóttir, 2012) and in 2012 there were 17 schools and kindergartens, with 2000 students and 400 employees. In the Hjalli movement the children are separated 75% of the time where the children are practicing the characteristic that are supposed to be neglected in other schools, such as self-esteem and independency among the girls and tolerance to others among boys. The other 25% of the time the children are together and practice communication. Each teacher in the kindergarten of the Hjalli movement has about five to six children to look after and is

supposed to foster that each and every child gets enough attention and is not being neglected in the form of lack of attention from the teacher.

The Hjalli norms

There are seven main rules in the Hjalli movement (Ólafsdóttir, 2012) that each and every employee has to be aware of. Those rules are following and in the right order: children, employees, environment, material, nature and society. The rules emphasize that children shall be taken as they are and their different needs, age, sex and themselves as individuals shall be respected. Employees shall be positive and always present themselves with joy and love towards everyone, including children, parents and other employees. The environment as noted above shall be neutral, simple, and have rules that are visible and tangible to the children (e.g. in every kindergarten the children have their special space where they are supposed to sit in when they are for example singing together). Materials shall be simple so that the children can use their imagination and creativity when playing. The children are taught to respect nature by being taught how to recycle, to enjoy nature as it is and use it with moderation. The last rule, society is about how to teach the children discipline and how to behave in a positive and warm way. By teaching the children discipline it is supposed to give them a safe environment and secure every child's right. To promote gender equality the movement has so called gender curriculum (Ólafsdóttir, 2012) which is supposed to manage the genders weaknesses and therefore try to reduce weaknesses that boys and girls have. The Hjalli movement points out that boys' weaknesses are violence, violation of rules and bullying and girls' weaknesses are controlled crying, self-pity and bullying. The gender curriculum is divided into six phases; discipline, independence, communication, positivity, friendship and boldness. Those phases are supposed to train the children's social skills and teach them how to become better individuals. These norms are clear and specifically aimed at creating better students and citizens and do not necessarily focus on gender equality. The Hjalli norms are related to

catholic schools and their norms about performing great at school and to respect the environment and everyone around them.

Effects of single sex schooling on academic achievement

Findings of prior studies on single sex schooling and its effect on students academic achievement have demonstrated that it is beneficial to separate the genders when it comes to school performance (Lee & Lockheed, 1990; Pahlke, Hyde, & Allison, 2014). Pahlke, Hyde and Allison (2014) meta-analyzed 184 studies about the effects of single sex schooling on academic achievement compared to coeducational schools. Findings showed that single sex schooling has not much or no benefits for students. Results from controlled studies showed that single sex schooling had only trivial beneficial effects when compared to coeducational schooling. Therefore it can be said that positive effects of single sex schooling are not as large as prior studies have shown (Gibb et al., 2008; Lee & Bryk, 1986)

Difference between the genders in academic achievement is more in coeducational schools compared to single sex schools, both at high school and in tertiary education (Gibb et al., 2008). Girls are performing better in school compared to boys in coeducational schools, the gender difference is though much smaller when it comes to single sex schools and is not significant. Cornelius Riordan (1985) wanted to see the difference in academic achievement between catholic single sex schools, catholic mixed schools and public mixed schools. As academic achievement researchers were looking at five variables in total, they were, vocabulary, mathematics, reading, SAT verbal and SAT mathematics test scores. To execute the study Cornelius used the same data as Lee and Bryk (1986) did in their study, the 1972 NLS data. Study results showed that students in catholic single sex school had higher test scores than catholic mixed schools and public mixed schools. Students in catholic mixed school had higher test scores compared to public mixed schools but the difference was not as much compared to the difference between catholic single-sex schools and public mixed schools. In terms of the SAT test scores, public mixed schools were rather equal to catholic

single sex schools and they performed better on SAT mathematic test compared to catholic single sex schools. As for the difference of academic achievement among the genders, Jimenez and Lockheed (1988) did a research paper where they were studying mathematic achievement in single sex schooling in Thailand. They found out that boys seem to achieve better on mathematic tests in coeducational school but girls do better on mathematic tests in single sex schooling and single sex schooling is more effective for girls compared to boys. The main limitation for Jimenez and Lockheed's study is that they only examined students in Thailand, so it is hard to generalize those findings over larger sample in Europe or America. Same findings were not found in a study done in 2013 (Pahlke, Hyde, & Mertz), there was no difference between mathematics and science performance between students in eighth grade in single sex schools or coeducational schools.

Social capital and its effect on school performance

Coleman (1988) argued that good academic achievement could be explained by factors outside the schools rather than inside schools. Those factors Coleman called social capital in the school community. Coleman talked about intergenerational closure as one aspect of social capital, that is, when children's parents are connected to parents of their child's friends and their child's friends. Social capital is about relationships between the parents on one hand and between the parents and the children on the other hand (Sigfúsdóttir, 2004). Parents are more able to set standards and values for their children when this intergenerational closure is high in their community. Those standards and values can be about performing better in school, show great social support and the importance to spend time with family and it is important to follow those values. Many studies have been carried out about social capital to examine how different factors outside the school explain academic achievement among children and adolescents. Many studies discuss the catholic school effect on school performance where social capital in the school community is high and therefore intergenerational closure as well. Students from catholic schools in America show better academic achievement than their

fellow students in regular schools. Students in catholic schools have lower school dropout and behave better. In catholic schools (Coleman, 1988), the dropout was the lowest or 3,4% compared to 14,4% in public schools and 11,9% in other private schools.

The aim of the current study is to explore the effects of shared norms in form of social capital, time spent with family, social support and school norms on Icelandic and mathematic academic achievement among students in the Hjalli movement and compare those effects with others coeducational schools. It is curious to see if there are different norms in single sex schools compared to coeducational school and if these norms effects students academic achivement.

Based on previous reasearch findings, it is hypothesized that students from the Hjalli movement show better academic achievement because of the effects of norms in the school compared to others coeducational schools.

Method

Sample and Procedure

The most recent population based survey on Icelandic youth that was conducted for Icelandic Centre for Social Research and Analysis (Pálsdóttir, Sigfúsdóttir, Sigfússon, & Kristjánsson, 2013) was used as the data for this study. The sample includes students in fifth, sixth and seventh grade, aged 10-12 years in Icelandic secondary school who all participated in the survey in February 2013. Survey questionnaires were sent to all Icelandic secondary schools and teachers in each class supervised that every student attending school that day participated in the study. Students were told that this was a nameless survey and therefore it was made sure they did not put their name, social security number or anything personal on the questionnaire. After the students had completed the questionnaire they were told to put the questionnaire in sealed envelope and hand in the envelope to the supervising teacher. The gender ratio were similar in each grade, 1779 boys and 1794 girls in fifth grade, the response rate were 91%, 1858 boys and 1790 girls in sixth grade, the response rate were 90% and 1948 and 1925 girls in seventh grade, the response rate were 89%. Random sampling was made for current study which consisted of 2213 participants, 1135 boys and 1078 girls.

Measures

Social Support

To gather information about social support, four questions were used to measure parental social support. Respondents were asked about their relationship between them and their parents. First question was “How often do you receive help with you homework from your father, mother or siblings?”. Response options were: 1 = “I do not need to do homework”, 2 = “never”, 3 = “almost never”, 4 = “seldom”, 5 = “sometimes”, 6 = “often”. Second question was “How often do all family members talk together?”. Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”. Third question was “How easy or difficult is it for you to get caring and warmth from you parents?”. Response options were: 1 = “very difficult”, 2 = “rather difficult”, 3 = “rather easy”, 4 = very

easy. Last question was “How often are you alone at home after school?”. Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”.

Time spent with family

To measure time spent with family, four questions were used. First question was “How often do you watch the television or DVD with you father or mother?”. Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”.

Second question was “How often do you spend time with your parents after school?”.

Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”. Last question was “How often do you spend time with your parents on weekends?”.

Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”.

Social Capital

Social capital was measured with two questions; first question was “How well do the following statements apply to you?” (1) “my parents know my friends”, (2) “my parents know my friends parents”. The response options were: 1 = “very applicable to me”, 2 = “rather applicable to me”, 3 = “rather badly applicable to me”, 4 = “very badly applicable to me”.

School norms

To measure school norms six questions were used. First question was “How do you usually feel during lesson?”. The response options were: 1 = “very good”, 2 = “rather good”, 3 = “rather bad”, 4 = “very bad”. Second question used was “How do you usually feel during break at school?”. Response options were: 1 = “very good”, 2 = “rather good”, 3 = “rather bad”, 4 = “very bad”. Third question was “How often do teachers compliment you at school?”. Response options were: 1 = “never”, 2 = “almost never”, 3 = “seldom”, 4 = “sometimes”, 5 = “often”. Fourth question was “How often does someone adult outside school compliment you (e.g. at home or during leisure time). Response options were: 1 = in mathematic, 2 = in Icelandic. Response options number eight and nine in questions 54a and 54b were identified as missing because they were not necessary for current study.

Data Analysis

To explore the difference between norms in the Hjalli – movement and coeducational schools and its effects on students academic achievement a multiple linear regression was used. Two separate models were made, one with Icelandic academic achievement and the norms and another model with mathematic academic achievement and the norms. One-way between groups ANOVA was used to explore the difference of mean scores of all the study variables between the Hjalli-movement and others coeducational schools. Response options number eight and nine in questions 54a and 54b were identified as missing because they were not necessary for the current study.

Results

There was small mean difference between the Hjalli movement and other coeducational schools regarding norms in form of social support, time spent with family, social capital and school norms and academic achievement (see Table 1).

Table 1

Descriptive statistics for all study variables

Variables	Range	Hjalli movement		Others schools	
		<i>M</i>	SD	<i>M</i>	SD
Social support	1-20				
How often help is gotten from family members with homework	1-6	5.38	0.83	5.03	1.31
How often family members communicate	1-5	4.44	0.85	4.21	0.98
How easy or hard it is to get warmth and caring from parents	1-4	3.61	0.61	3.61	0.61
How often alone at home after school	1-5	3.24	1.14	3.26	1.21
Time spent with family	1-15				
How often television or DVD is watched with parents	1-5	4.03	0.88	4.02	0.88
How often time spent with parents after school	1-5	4.10	0.99	4.00	1.01
How often time spent with parents on weekends	1-5	4.79	0.45	4.66	0.64

Social Capital	1-8				
Parents know my friends	1-4	3.43	0.58	3.51	0.60
Parents know my friends parents	1-4	3.13	0.76	3.19	0.76
School norms	1-58				
Well-being during class	1-4	3.36	0.57	3.32	0.64
Well-being during school break	1-4	3.63	0.59	3.51	0.64
How often teachers compliment during school	1-5	3.63	1.06	3.86	0.95
How often compliments is gotten from other adults (at home or during spare time)	1-5	4.37	0.79	4.19	0.93
How often during winter:					
You were with several kids teasing one kid	1-5	1.05	0.25	1.15	0.46
You were with several kids hurting one kid	1-5	1.05	0.32	1.05	0.28
You were with several kids who attacked another group of kids	1-5	1.14	0.49	1.16	0.55
You were with many kids who excluded one kid	1-5	1.04	0.23	1.12	0.46
How often during winter:					
Several kids teased you alone	1-5	1.21	0.67	1.32	0.81
Several kids attacked you alone and hurt you	1-5	1.05	0.29	1.14	0.54
Several kids attacked a group you were with	1-5	1.10	0.36	1.21	0.63
Many kids excluded you	1-5	1.14	0.56	1.29	0.78
Academic achievement	1-14				
Mathematic	1-7	5.57	1.57	5.55	1.49
Icelandic	1-7	5.77	1.30	5.62	1.33

Note. N (the Hjalli – movement) = 111, N (others schools) = 2124

When difference between boys and girls were examined (see Appendix B for accuracy of the means between boys and girls), girls got higher mean score on most of the variables and showed better academic achievement compared to boys. Boys got higher mean score when it came to bullying and hurting other kids.

A one-way between groups analysis was conducted to compare the norms which was social support, time spent with family, social capital and school norms between the Hjalli

movement and other coeducational schools. Of 22 independent variables (see Table 1) only seven variables were statistically significant, these variables are following; Well-being during school break, $F(1, 2195) = 3.875, p < .05$, how often help with homework was gotten from parents or siblings, $F(1, 2212) = 7.659, p < .01$, how often family members communicate, $F(1, 2212) = 5.822, p < .05$, how often time spent with parents during weekends, $F(1, 2213) = 4.129, p < .05$, how often teachers compliment during school, $F(1, 2210) = 5.698, p < .05$, how often compliment was gotten from adults outside school, $F(1, 2207) = 3.969, p < .05$, how often during winter: You were with several kids teasing one kid, $F(1, 2202) = 5.306, p < .05$.

A multiple regression analyses was conducted to test if the independent variables which was, social support, time spent with family, social capital and school norms predicted academic achievement in both Icelandic and mathematic among participants. The regression results for Icelandic achievement indicated that the independent variables explained 9% of the variance, $R^2 = .09, F(22, 1351) = 6.211, p < .001$ and for mathematic achievement the regression results indicated that the independent variables explained 7% of the variance, $R^2 = .07, F(22, 1474) = 4.625, p < .001$. There was a significant main effect between Icelandic achievement and the independent variables, $F(22, 1351) = 6.211, p < .001$, as well between mathematic achievement and the independent variables, $F(22, 1474) = 4.625, p < .001$. The multivariate analyses predicting academic achievement in Icelandic and mathematic are shown in Table 2. Model 1 includes predictions for Icelandic academic achievement and Model 2 includes predictions for mathematic academic achievement.

Table 2

Standardized and unstandardized beta coefficients from multivariate analyses predicting academic achievement in Icelandic and mathematic

	Model 1		Model 2	
	B (SE)	β	B (SE)	β
How often help is gotten from family members with homework	.02 (.03)	.02	-.08 (.03)	-.06*
How often television or	-.00 (.04)	-.00	.05 (.05)	.03

DVD is watched with parents				
How often family members communicate	.03 (.04)	.02	.09 (.05)	.06*
How often time spent with parents after school	.04 (.04)	.03	.03 (.04)	.02
How often time spent with parents on weekends	.18 (.07)	.08**	.09 (.07)	.04
How easy or hard it is to get warmth and caring from parents	.02 (.07)	.00	-.04 (.08)	-.02
How often alone at home after school	-.01 (.03)	-.01	-.06 (.03)	-.05
Parents know friends	-.04 (.07)	-.02	.11 (.08)	.05
Parents know friends parents	.18 (.05)	.10**	.19 (.06)	.1**
Well-being during class	.27 (.07)	.13***	.12 (.08)	.05
Well-being during school break	-.14 (.07)	-.07*	.03 (.08)	.01
How often teachers compliment during school	.04 (.04)	.03	.10 (.05)	.07*
How often compliment is gotten from adults outside school	.17 (.05)	.11***	-.01 (.05)	-.00
How often during winter: You were with other kids teasing one kid	-.11 (.10)	-.04	-.06 (.11)	-.02
How often during winter: You were with other kids hurting one kid	-.15 (.15)	-.03	-.25 (.15)	-.05
How often during winter: You were with several kids who attacked another group of kids	-.03 (.09)	-.01)	.06 (.1)	.02
How often during winter: You were with many kids who excluded on kid	-.09 (.09)	-.03	-.02 (.10)	-.01
How often during winter: Several kids teased you alone	.11 (.06)	.06	.03 (.07)	-.02
How often during winter: Many kids attacked you alone and hurt you	-.20 (.09)	-.07*	-.19 (.1)	-.06
How often during winter: Several kid attacked a group you were with	.03 (.08)	.02	-.00 (.08)	-.00
How often during winter: Many kids excluded you	-.04 (.06)	-.02	-.00 (.07)	-.00

* $p < .05$ (2-tailed). ** $p < .01$ (2-tailed). *** $p < .001$ (2-tailed).

For Icelandic achievement only six variables were statistically significant, time spent with parents during weekend's, $\beta = .08$, $t(22) = 2.690$, $p < .05$, parents know friends parents, $\beta = .10$, $t(22) = 3.301$, $p < .01$, well-being during class, $\beta = .13$, $t(22) = 3.750$, $p < .001$, well-being during school break, $\beta = -.07$, $t(22) = -2.060$, $p < .05$, how often compliments is gotten from adults outside school, $\beta = .11$, $t(22) = 3.507$, $p < .001$ and how often during winter: Several kids attacked you alone and hurt you, $\beta = -.07$, $t(22) = -2.143$, $p < .05$. These results show that the relationships between Icelandic academic achievement and these six variables are rather weak. Other variables were not statistically significant. As for the relationship between mathematic and the independent variables, only four were statistically significant. The variables that were statistically significant were, help with homework gotten from parents or siblings, $\beta = -.06$, $t(22) = -2.297$, $p < .05$, how often family members communicate, $\beta = .06$, $t(22) = 2.036$, $p < .04$, parents know friends parents, $\beta = .1$, $t(22) = 3.145$, $p < .01$, how often teachers compliment during school, $\beta = .07$, $t(22) = 2.263$, $p < .05$, Other variables were not statistically significant.

Discussion

The objective of current study was to examine what effects social support, time spent with family, social capital and school norms had on academic achievement in Icelandic and mathematic among students in the Hjalli movement and then compare those effects with others coeducational schools. Descriptive statistics of all study variables indicated that students from the Hjalli movement received more social support and spent more time with the family but the difference was very small. Students from the Hjalli movement receive more help from family members with their homework, their family members communicate more often compared to coeducational schools but students from both types of schools seems to get warmth and caring from their parents equally. Students from others coeducational schools had higher mean score regarding social capital which is rather surprising and is not in line what was expected. It was expected that social capital would be more common among students

from the Hjalli movement compared to others schools. Teasing and attacking other kids was more common in coeducational schools compared to the Hjalli movement but the difference very small. These result are therefore in line of what was expected because the norms in the Hjalli movement (Ólafsdóttir, 1992) are meant to prevent bullying and to help individuals to have better self image and respect every individuals as they are. Reason for the small difference between those two types of school might be because of the Hjalli movement points out that boys and girls have different weaknesses and therefore they try to decrease those weaknesses with school norms but how can the Hjalli movement be sure that boys and girls differ on those weaknesses? Therefore it might be that the work that the Hjalli movement focuses on is not working as well as expected, or only has these positive results when the genders are separated in the Hjalli movement.

Up to a certain point the results support the study hypothesis, that the norms in form of social support, time spent with family, social capital and school norms have more effects on academic achievement with the students in the Hjalli movement compared to other coeducational school. When looking at the results by each category only few variables are statistically significant, so therefore the results can be questioned. Those results are in line with resent meta-analysis made by Pahlke, Hyde and Allison (2014) where the results indicated that single sex schools are not as beneficial as was expected. How often compliment from adults outside school was gotten had stronger relationship with academic achievement in Icelandic than in mathematic but vice versa for how often compliment was gotten from teachers during school. Well-being during class was connected to academic achievement in Icelandic but not mathematic. Of all variables containing how often during winter individuals were teasing or attacking other kids or someone teased or attacked them, only how often during winter many kids attacked the individuals and hurt them was related to academic achievement in mathematic but not Icelandic. Findings of current study showed that there was relationship between social capital in form of where parents know their child's friends parents and academic achievement in Icelandic and mathematic. Those results are in line of what

Coleman (1988) argued that factors outside school like social capital where parents know their child's friends parents rather than factors inside school have positive effects on academic achievement. Social capital in form of where parents know their child's friend was not connected to academic achievement in Icelandic and mathematic. Girls showed better academic achievement in both Icelandic and mathematic which is in line with previous study (Jimenez & Lockheed, 1988) were the results were that girls show better academic achievement in single-sex school compared to boys.

The study limitations were several. First it can be point out that only one school from the Hjalli movement did match age requirements of the study versus several others coeducational schools. Another limitation to the study is that a questionnaire were used to collect data and therefore the participants were answering by them selves which could have biased their answer. Using questionnaire can also be strength because it is easy to reach a big group of participants. The main strength of the study are that the random sample used for this study was made from a large population sample and therefore results can be generalized to the population. Another strength to the study is that because effects of the Hjalli movement have been questioned in the previous years it is useful to know if and what effects norms in the schools has on academic achievement and therefore others coeducational schools could follow these norms to improve academic achievement.

Future studies should examine further what benefits the Hjalli movement has on students academic achievement. They should try to find out if the main reason for better academic achievement among students from the Hjalli movement compared to coeducational schools is mainly because of the separation of the genders, the norms or separations of the genders and norms combined.

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Appendix A

1. Ert þú strákur eða stelpa?

- Strákur Stelpa

4. Hversu oft færð þú hjálþ frá pabba þínum, mömmu eða systkinum með námið þitt? (Merktu aðeins í einn reit)

- Ég þarf ekki að læra heima
 Aldrei
 Næstum aldrei
 Sjaldan
 Stundum
 Oft

6. Hversu oft horfir þú á sjónvarp eða DVD með pabba þínum eða mömmu? (Merktu aðeins í einn reit)

- Aldrei
 Næstum aldrei
 Sjaldan
 Stundum
 Oft

8. Hversu oft tala allir í fjölskyldunni þinni saman? (Merktu aðeins í einn reit)

- Aldrei
 Næstum aldrei
 Sjaldan
 Stundum
 Oft

9. Hversu oft ert þú með foreldrum þínum eftir skóla? (Merktu aðeins í einn reit)

- Aldrei
 Næstum aldrei
 Sjaldan
 Stundum
 Oft

10. Hversu oft ert þú með foreldrum þínum um helgar? (Merktu aðeins í einn reit)

- Aldrei
 Næstum aldrei
 Sjaldan
 Stundum
 Oft

11. Hversu auðvelt eða erfitt væri fyrir þig að fá umhyggju og hlýju hjá foreldrum þínum? (Merktu í einn reit)

Mjög erfitt	Frekar erfitt	Frekar auðvelt	Mjög auðvelt
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Hversu vel eiga eftirfarandi fullyrðingar við um þig? (Merktu í einn reit í hverjum lið)

	Á mjög vel við um mig	Á frekar vel við um mig	Á frekar illa við um mig	Á mjög illa við um mig
a) Foreldrar mínir þekkja vini/vinkonur mína(r)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Foreldrar mínir þekkja foreldra vina/vinkvenna minna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Hversu oft ert þú ein(n) heima eftir skóla? (Merktu aðeins í einn reit)

- Aldrei
- Næstum aldrei
- Sjaldan
- Stundum
- Oft

24. Hvernig líður þér oftast í kennslustundum? (Merktu aðeins í einn reit)

- Mjög vel
- Frekar vel
- Frekar illa
- Mjög illa

25. Hvernig líður þér oftast í frímínútum? (Merktu aðeins í einn reit)

- Mjög vel
- Frekar vel
- Frekar illa
- Mjög illa

31. Hversu oft hrósa kennararnir þér í skólanum? (Merktu aðeins í einn reit)

- Aldrei
- Næstum aldrei
- Sjaldan
- Stundum
- Oft

32. Hversu oft er þér hrósað af öðrum fullorðnum (t.d. heima hjá þér eða í frístundastarfi)? (Merktu aðeins í einn reit)

- Aldrei
- Næstum aldrei
- Sjaldan
- Stundum
- Oft

33. Hversu oft hefur þetta gerst hjá þér í vetur?(Merktu við einn reit í hverjum lið).

	Næstum				
	Aldrei	aldrei	Sjaldan	Stundum	Oft
a) Þú varst með nokkrum krökkum að stríða einum krakka	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Þú varst með nokkrum krökkum að meiða einn krakka	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Þú varst með nokkrum krökkum sem réðust á annan hóp.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Þú varst með mörgum krökkum sem skildu einn krakka útundan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Hversu oft hefur þetta gerst hjá þér í vetur? (Merktu í einn reit í hverjum lið).

	Næstum				
	Aldrei	aldrei	Sjaldan	Stundum	Oft
a) Nokkrir krakkar stríddu þér einni/einum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Nokkrir krakkar réðust á þig eina/einn og meiddu þig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Nokkrir krakkar réðust á hóp sem þú varst með	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Margir krakkar skildu þig eftir útundan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54. Hvaða einkunn fékkst þú á síðustu prófum í stærðfræði og íslensku?

Ef þú manst ekki nákvæmlega hvaða einkunn þú fékkst, merktu þá við einkunn sem er um það bil sú rétta. (Merktu við einkunn bæði í stærðfræði og íslensku)

	í stærðfræði	í íslensku
4 eða lægra	<input type="checkbox"/>	<input type="checkbox"/>
4,5-5,0	<input type="checkbox"/>	<input type="checkbox"/>
5,5-6,0	<input type="checkbox"/>	<input type="checkbox"/>
6,5-7,0	<input type="checkbox"/>	<input type="checkbox"/>
7,5-8,0	<input type="checkbox"/>	<input type="checkbox"/>
8,5-9,0	<input type="checkbox"/>	<input type="checkbox"/>
9,5-10,0	<input type="checkbox"/>	<input type="checkbox"/>
ég man það ekki	<input type="checkbox"/>	<input type="checkbox"/>
ég tók ekki prófið	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B

Variables	Range	Girls		Boys	
		<i>M</i>	SD	<i>M</i>	SD
Social support	1-20				
How often help is gotten from family members with homework	1-6	5.11	1.3	4.99	1.27
How often family members communicate	1-5	4.32	0.91	4.12	1.01
How easy or hard it is to get warmth and caring from parents	1-4	3.68	0.57	3.53	0.62
How often alone at home after school	1-5	3.14	1.20	3.37	1.19
Time spent with family	1-15				
How often television or DVD is watched with parents	1-5	4.04	0.8	4.00	0.95
How often time spent with parents after school	1-5	4.02	0.98	4.01	1.02
How often time spent with parents on weekends	1-5	4.72	0.57	4.63	0.68
Social Capital	1-8				
Parents know my friends	1-4	3.58	0.56	3.43	0.63
Parents know my friends parents	1-4	3.21	0.74	3.16	0.77
School norms	1-58				
Well-being during class	1-4	3.38	0.61	3.27	0.65
Well-being during school break	1-4	3.48	0.64	3.55	0.62
How often teachers compliment during school	1-5	3.95	0.91	3.75	0.98
How often compliments is gotten from other adults (at home or during spare time)	1-5	4.27	0.87	4.09	0.96
How often during winter: You were with several kids					
teasing one kid	1-5	1.09	0.37	1.19	0.51
You were with several kids hurting one kid	1-5	1.02	0.20	1.07	0.34
You were with several kids who attacked another group of kids	1-5	1.07	0.33	1.25	0.66
You were with many kids who excluded one kid	1-5	1.1	0.43	1.12	0.47
How often during winter: Several kids teased you alone	1-5	1.27	0.73	1.36	0.86
Several kids attacked you alone and hurt you	1-5	1.07	0.36	1.20	0.64

Several kids attacked a group you were with	1-5	1.12	0.47	1.28	0.71
Many kids excluded you	1-5	1.30	0.80	1.26	0.73
Academic achievement	1-14				
Mathematic	1-7	5.57	1.52	5.53	1.47
Icelandic	1-7	5.86	1.24	5.39	1.37
