

The Connection of Cultural Capital with Success in Master's Degree Programmes in Finnish Higher Education

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This article deals with the effects of cultural capital on attainment in higher education using Bourdieu's theory of cultural capital as a frame of reference. Attainment and success in higher education is perceived as a combination of multiple variables being the grade point average of the student's higher education studies, the age at graduation, the time of graduation and the amount of credits studied. Participants of this survey study were 499 university graduates from six different disciplines from the University of Turku, Finland. Results indicate that cultural capital, as well as the variables comprising it, has an effect on educational attainment even though this effect is not a straightforward one.

Keywords: Attainment, cultural capital, duration of studies, age of graduation, higher education, Master's degree

Introduction

The university environment can be construed as a field and as a game, with multiple rules and regulations enforced by issues such as financing and the ideal of efficiency. In this field students are one group of players. It can further be construed that in order for a student to succeed in this field, the student needs certain skills and economic, social and cultural capital, as well as the ability to play by the set of rules inherent in the university field. (Bourdieu, 1986b; Bourdieu & Passeron, 1979). This study focused on cultural capital and examined the effect this has on educational attainment on the part of the student. Attainment in this study comprised of four attainment variables, which were the grades received in the university (university GPA), the amount of credits gained, the age at graduation and the duration of the completion of a Master's degree.

The academic field and cultural capital

The main idea in Bourdieu's theory of social reproduction and cultural capital is the idea that people function in a social world and in its different fields enhancing those properties, or types of capital, within themselves that are most valued in that field (Bourdieu & Wacquant, 1992). The term field

refers to the network of objective relations between social positions that appear as relations of domination and resignation (Bourdieu & Wacquant, 1992; Olkinuora & Mäkinen, 1999). If a target area can be defined as a field, identifying the rules of the field, finding those who make these rules and identifying the capitals which are valued in that field, are crucial (Roos, 1985). Each field can be construed as forming an open playing field, which has not been designed and which is by far more changeable and complex than any game designed (Bourdieu & Wacquant, 1992). The limits of a field are drawn where the influence of the field ends (Olkinuora & Mäkinen, 1999; Roos, 1985).

In the field of academic education the competition is of power and position and the focus is on augmenting academic capital. This is done, for example, by receiving high grades, completing degrees and producing scientific results (Bourdieu, 1986a; Roos, 1985). The term capital in Bourdieu's theory refers to a quality and a resource. Hence the different types of capital a person possesses, such as cultural, social and economic, are their different qualities. These types of capital are partially obtained through the family and partially obtained in the field, in a struggle with others in that field (Bourdieu & Wacquant, 1992; Roos, 1985).

Cultural capital is mostly referred to when examining success in education (Sullivan, 2001; De Graaf et al., 2000). The term was created in order to explain why children from different social backgrounds achieved such different results in the educational system. Cultural capital refers to a certain linguistic and verbal knowledge, capability and savoir-faire that have been the characteristics of the upper classes. This includes, for example, degrees, prestige and information (Bourdieu, 1986a; Dumais, 2002). It exists in three forms: in the embodied state; in the forms of cultural goods; and in the institutionalized state. The embodied state refers to the form of long-lasting dispositions of the individual's mind and body. This form is called culture and cultivation and presup-

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poses embodiment, incorporation and assimilation, which take time and cannot be done second hand, but do require personal cost. The objectified state refers to the form of cultural products, paintings, writings and monuments, and it is transmissible. However, what can be transferred is the legal ownership and not the embodied capital needed to appreciate the product in the proper manner. The institutionalized state refers to objectified cultural capital such as educational degrees and formal qualifications, which gives an exchange rate to different individuals. By conferring institutional recognition on the educational degrees, in other words cultural capital possessed by any given agent, the academic qualification makes it possible to compare qualification holders. Two people with similar educational degrees can in this way be exchanged, as they no longer have to prove their worth in relation to cultural capital, as it is institutionally legitimized. It also establishes conversion rates between cultural and economic capital by stating a price for a given academic capital. (Bourdieu, 1986a)

Cultural capital is by nature exclusive. It is not a public resource that is equally available to all. Kingston (2001) refers to it as being the property of the elite. If a person does not have it, there are many obstacles in his or her way in obtaining it. Cultural capital, which is obtained from home, is then crucially important in determining how productive or cost-effective education is. Finishing an academic degree is, according to this theory, proof of high cultural knowledge (Bourdieu, 1986a; Dumais, 2002; Kivinen & Rinne, 1995). Cultural capital is, however, a term which does not have an established exact way of operationalizing it, nor are there uniform results as to its connection with educational attainment (Dumais, 2002, 49).

De Graaf et al (2000) found in the Netherlands that parental cultural resources affect educational attainment, but that it was parental reading behavior, not 'beaux arts' participation, which affected children's educational attainment. However, the importance and appreciation of cultural activities such as the theatre, opera, literature, museums, classical music and art exhibitions have been used as indicators of cultural capital (Bourdieu, 1984; De Graaf et al., 2000, 92). Parental educational status and qualifications have also been found to have an effect on the amount of cultural capital of their children (De Graaf et al., 2000, 93; Sullivan, 2001, 909).

Social class affects cultural capital as well as cultural capital giving rise to social class (Bourdieu, 1985; Kingston et al., 2003; Mullen et al., 2003). Social class also affects a student's perception of graduating with a reasonable duration of studies. Liljander (1991) found that students from upper classes of society did not perceive any hurry to finish their degrees but rather thought of the study time as an era to enjoy life and the freedom of student life. But these background variables, such as parental educational qualifications, affect cultural capital through mediating variables such as previous school success and perceptions of the ability to affect one's study environment (Nurmi, 1998; Ross & Broh, 2000). Indeed, education, previous school success and cognitive abilities affect cultural capital as strongly as class and

social background do (Kingston et al., 2003; Mullen et al., 2003; Ross & Broh, 2000; Rumberger & Larson, 1998).

The applicability of Bourdieu's theory of fields and cultural capital in Finland is an issue to be addressed, as Finnish society differs in many ways from the French society in which the theory originated. In Finland, the differences between social classes has always been smaller, the cultural taste more similar across the society, and the appreciation of education more profound and widely felt. But, as the process of reproduction and selective processes in education can still clearly be found, it is feasible to use the theory as one way of researching the educational system (Alasutari, 1997, 3; Liljander, 1991; Olkinuora & Mäkinen, 1999).

The graduation process in Finnish Universities

The competition for university places is fierce in Finland and applying to a university is therefore a process in itself (OPM, 2000). Boezeroy and Vossensteyn (1999) describe the Finnish university system as being very selective. Those applying must pass complicated entrance selection procedures. However, once a student is admitted to the university, the student has the right to study up to a Master's degree without any further selection on the part of the university (Tauch, 2002). And, as it is a priority in the Finnish higher education policy that there are no study fees at any level of education in Finland, the studies are without charge (OPM, 2000).

A Master's degree includes the bachelor's degree, as once accepted into the university, the student has the right to study to a Master's degree without any further selection procedures. With the Bologna process, the bachelor's degree became compulsory, but it is still mostly considered to be a part of the Master's degree. It is quite rare for a student to finish their studies at that stage. The Master's degree, including the bachelor's degree, is planned to take five years on average. In spite of that, the average time-to-degree in Finland is about 6 to 6,5 years with great differences between faculties. Recently, in 2005, a time limit for the duration of studies was introduced, which limits the duration of studies to seven years plus the option of being absent for two years. In total, the right to study at university was limited to nine years ("Opintoaikojen rajoittaminen ja lainanvähennys hyväksyntiin", 2005; OPM, 2003a; Tauch, 2002).

Some of the goals of the higher education policy in Finland are higher study completion rates and shorter study times (OPM, 2003a), as dropout and long duration of studies are a problem in many scientific fields (OPM, 2004). Also the age at graduation is seen as a problem in Finland because graduates are older than in other European countries and because a large percentage of the work force is nearing their retirement age. If Finland could succeed in shortening the duration of studies and lowering the age of graduation, this would reduce the fiscal pressures involved in the future changes in the age structure of the work force, as tax revenues would not be affected as much (OPM, 2003b)

The situation of long study times and the older age of

graduates have also been noted in OECD's reports *Education at a Glance* (OECD, 2002, 2003), where Finland is listed among the group of countries in which the expected duration of education for 15-year-olds is the longest. Whereas the average time of expected years in education in OECD countries is six and a half years, the time expectancy in Finland is over eight years (OECD, 2003). Also the average time spent in higher education per citizen is the highest of all OECD-countries. The calculated estimate for Finnish citizens is 3.6, whilst it is 1.4 for Great Britain, 1.6 for Sweden and New Zealand and 1.7 for the USA and Germany. Of these countries, the percentage of participation in higher education is similar to Finland in Sweden and New Zealand and considerably less in the other example countries. As for the age of graduation, when finishing a five-year education program in Finland the graduates are on average 25-29 years old, whilst the Germans and Swedes are about 25-26 years old and the Americans and the British are 23-years old (OECD, 2002).

This study focused on the following questions: First, is cultural capital connected with educational attainment and how is it connected? Second, how are the individual sources of cultural capital connected with educational attainment?

Method

This article is part of a research that focused on the duration to the completion of a Master's degree as well as the age of graduation at the University of Turku in Finland and the issues related to them. In the study an *ex post facto* criterion group design was used, which in general is very useful in cases where the researcher cannot control the stimuli that determine the study, as is the case of graduation from the university (Cohen et al., 2001). A quantitative approach was chosen in this study because it enabled the sampling of a large number of students quite economically and also enabled the generalization of findings beyond the boundaries of the sample size used.

Participants

The sample of this study consisted of graduates, as the final duration of studies is hard if not impossible to predict reliably, because even a student's studies that have progressed effectively can grind to a halt during the process of writing a Master's thesis. The criterion and control groups were chosen from those students who graduated with a Master's degree between the years of 1999 and 2001. Before choosing the control and criterion groups a limitation was made concerning previously gained credits included in the Master's degree in question. The limitation was necessary, as these previously studied credits are common in Finland and they affect the time to the completion of a Master's degree. The limit was chosen to be approximately 30 ECTS as the impact of this could still be calculated and the amount is still quite reasonable considering that the Master's degree includes the bachelor's degree. If the decision had been to exclude all those with previously gained credits, this would have excluded almost all graduates in the fields of Health and Nursing sciences as well as teacher's education.

Those graduates (N=524) whose duration of studies was among the fastest 18% within their respective faculties were selected to form the criterion group; the prompt graduates. A control group (N=524) was created by using a stratified sampling method, choosing every fifth person from among all graduates, while making sure that no one randomly chosen for this control group was also a member of the criterion group. This ensured that each faculty was equally represented in the control group and in the criterion group. The control group consisted of those who had completed a Master's degree in an average or higher than average duration of studies. As both the criterion group and the control group consisted of 524 graduates, the sample consisted of 1048 graduates in all.

The participants' duration of studies varied from 2.3 years to 18 years (Mean 5.55; SD 2.01). The ages of the graduates varied from 21 years old to 46 years old (Mean 26.74; SD 3.32). The percentage of women in the sample was 66.5% (N=679) and of men 33.5% (N=351). All six faculties of the University of Turku were included in this study. Of the sample 27.7% of the graduates graduated from the faculty of Humanities (N=138), 15.0% from the faculty of Education (N=75), 10.4% from the faculty of Medicine (N=52), 23.6% from the faculty of Mathematics and Natural sciences (N=118), 11.0% from the faculty of Law (N=55) and 12.2% from faculty of Social sciences (N=61).

The sample was representative of the university graduates in terms of distribution across faculties as well as in terms of gender, both being very close to the distribution in the University of Turku in general. Also the distribution of non-respondents was examined and was found to be evenly distributed between the criterion and control groups, ages, gender, faculties and credits studied. The outcomes can thus be generalized to the population to some degree (Cohen et al., 2001).

A postal survey was administered in 2002 to all the graduates, whose address it was possible to attain (N= 920; consisting of the criterion group N=477 and of the control group N=443). The response rate for the criterion group was 70% (N=336) and for the control group it was 53% (N=236). The number of survey answers accepted for the study was 499 (criterion N=283; 54.0% and control N=216; 41.2%) as 73 participants had to be excluded due to the excess of previous studies accepted in the degree in question (criterion: N= 53; control: N=20). The survey consisted of questions about the background of the students, how their studies had progressed, what was important to them during their studies, problems faced during studies and the degree to which they participated in all facets of academic life offered by the faculty. Statistics were also gathered on the time it took them to complete the Master's degree and the amount of credits gained during their Master's studies. These statistics were received from the Student services in the University of Turku.

Measurements

Cultural capital was measured in the survey with the following variables, which in this study were used as explana-

tory variables: father's education level, mother's education level, previous school success and the importance placed on cultural activities. These variables were used as independent variables to study whether they affect educational attainment, and if so, how. Parents' education was used because it was perceived that educational degrees are a more direct indication of cultural capital when the place of work or occupation can also indicate social capital or even economic capital. The parents' educational background was also seen to indicate the extent to which the cultural surroundings of the school were familiar to the child, who, when answering to the survey of this present survey, had graduated from the university. For these items the respondent was asked to mark the highest educational degree their mother and father have. The scale was as follows: folk school degree, secondary school degree, vocational school degree, upper secondary school/college degree, Master's degree, post-graduate degree, which in Finland refer to a licentiate or a doctor's degree.

The graduate's own previous school success (grade point average) indicated to cultural capital obtained by the respondent. The data requested was for the comprehensive school, secondary school and upper secondary school. The Finnish school system measures success in school with a scale from 4 to 10, 4 meaning failed and 10 being the best grade possible to obtain. In the study the information of these three grade point averages were combined to a sum variable (Cronbach's alpha 0.793) indicating previous school success (Table 1).

The importance of cultural activities was measured by a set of items including, for example, theatre, opera, classical music, expositions, popular music, literature etc. These variables were used on the basis of previous studies on cultural capital. These items were five-point Likert-like scale items. Item values varied from 1, indicating that the cultural activity was not at all important, to 5, indicating that the cultural activity was very important. The importance was measured twice, once indicating the importance of the cultural variable in the childhood home of the respondent and once indicating the importance of the cultural variable during the time spent studying for a Master's degree. The childhood cultural variable indicated inherited cultural capital as it suggested how important the respondent felt cultural activities were in his or her childhood home as well as attitudes toward high culture and participation in different cultural activities. The cultural variables concerning the importance placed on cultural activities during studying indicated personally obtained cultural capital. This indicated interest and activities, which accumulate cultural capital. Three sum variables were created describing these topics, one describing the childhood home and two describing the present day: Childhood home: High culture, Present day: Literature and exposition and Present day: Music and theatre (Table 1).

Success and attainment variables in higher education, the dependent variables in this study, were measured with four variables: duration of the completion of the Master's degree; age at graduation; grade point average (GPA) in the student's major subject; and credits gained.

The duration of a Master's degree for the participants of this study was not limited and there were, before the law

changed, no limits as to how long, or how short, a time it can take to graduate with a Master's degree. The statistical system used in Finland also does not take into account those academic terms when the student has been absent. This does create a statistical illusion in some cases, where the duration seems to be much longer than the actual amount of time spent studying. Due to the system of gathering the information on the duration of studies, this cannot be avoided. However, it should be taken into account when viewing the results on the time to the completion of a Master's degree as this information is based on these statistics.

The age at graduation can be seen to have some limits, as there is compulsory education and also upper secondary school before entering the university. Because of this, students enter the university approximately at the age of 18 to 19 at the youngest, even though there are no age limits set in starting university studies. However, combining the wide variation in the starting age and the duration of studies, the accurate range on the age at graduation was not possible to pinpoint in general terms outside of a research setting. In this study the age at graduation was a separately calculated variable, which was created by subtracting the date of birth from the date of graduation.

The GPA (university GPA) received in the student's major subject was measured as a mean of their success in the courses in their major subject when they graduate and the information was received from the graduates, as this was asked in the survey. The range of values in this variable is from 1, which is the minimum possible grade when graduating, to 3, which is the highest possible grade. The amount of credits studied has a lower limit, which for most disciplines are 300 credits in the system using ECTS (European Credit Transfer System). There is no upper limit in how much a student can study or how many courses they can take.

These four attainment variables were chosen for the following reasons: The grades received in a course or a Master's program (university GPA) is a variable often used as a way of assessing the student's competence in the subject in question and was therefore used also in this study. The amount of credits was chosen as an attainment variable in order to study the capability of the student to succeed in many different subjects and also because it is seen to be a factor affecting the duration of studies; The student's age at graduation and the duration of studies were chosen because they are indicators used in Finland as a means of assessing the effectiveness of a specific higher education institution and higher education institutions as a whole. In some cases, future employers may consider these as indicators of the motivation, ambition and effectiveness of the graduate as well. This does not mean that the students do not place goals about their duration of studies or age at graduation and view their success on the basis of these two variables.

Statistical methods

The parametric statistical methods used in this study were based on the test of normality. When using a parametric test, the normality of the outcome variable was tested. If the nor-

Table 1

Sum variables used to describe the students' previous school success and cultural interests in their childhood home and during their studies.

Sum variable	Individual variables	Cronbach α	Correlation between variables
Previous school success	Comprehensive school; secondary school; upper secondary school	.798	.758-.522
Childhood high culture	Opera, classical music, classical literature, reading, theatre, museums, art exhibitions	.872	.731-.558
Present day: Literature and exposition	Classical literature, reading, art exhibitions	.772	.612 - .507
Present day: Music and theatre	Opera, classical music, theatre	.670	.575-.367

mality of the variable was on the border of acceptance, the result was affirmed using a corresponding non-parametric test.

Correlation, principal component analysis and reliability analysis were used to form the sum variables and ascertain their reliability. The used sum variables were chosen from different principal component analysis on the basis of the theoretical background. When creating the cultural capital profiling, the variables for the sum variables were first standardized and then combined and four profiles were made using K-Means Cluster analysis.

The Chi-square test was used to examine the distribution of the four profiles according to gender distribution as well as distribution into the faculties. Analysis of variance was used to assess the effect of the differences between the four cultural capital profiles as well as to examine more closely the connection of each of the individual independent variables to each of the dependent variables.

Results

Profiles based on cultural capital and educational attainment

A profiling by cultural capital was made using K-Means Cluster analysis. This grouping consisted of the standardized variables of the sources of cultural capital: the respondent's father's and mother's education; the childhood home's cultural sum variable; the sum variable of the previous school success; and the present day high culture sum variables (Figure 1). The respondents were divided into four groups: *Inheritors*, *Independents*, *Disinterested* and *Interested*. These names given to the groups refer to the values each group received in the independent variables used as well as in connection with the theoretical background and not as such to their actions or attitudes in their university studies.

The group called *Inheritors* (N=91) consisted of graduates, whose parents' education was highest and who also had an appreciation for high culture and felt an importance for cultural activities in the childhood home as well as during their studies. The *Disinterested* (N=98) had parents whose educational level was also high, but there was a lower appreciation of cultural activities in this group and the lowest previous school success of all the four groups. *Independents* (N=123) comprised a group in which the parents' education

Table 2

The division of male and female students into the four profiles based on cultural capital.

		Profiles based on cultural capital				Total
		<i>Inheritors</i>	<i>Independents</i>	<i>Disinterested</i>	<i>Interested</i>	
Male	N	22	40	48	24	134
	%	16.4%	29.9%	35.8%	17.9%	100%
Female	N	69	83	50	71	273
	%	25.3%	30.4%	18.3%	26.0%	100%
Total	N	91	123	98	95	407
	%	22.4%	30.2%	24.1%	23.3%	100%

was low as was their interest in cultural activities. However, their previous school success was high. The *Interested* (N=95) had parents whose education was low, but experienced cultural activities as important and this attitude was also present in the graduates during their studies. However, their previous school success was not among the highest.

There was a significant difference in the way these groups were distributed between the genders ($\chi^2 = 17.127$; $p = .001$; Table 1). Men were most often found in the disinterested and least often found in the *inheritors*. They were more often grouped in disinterested and independents, whose commonality was a lower interest in cultural activities. Women, on the other hand, were most often found in *independents* and least often in *disinterested* and they were, on the whole, more evenly divided between the four groups. This difference between the genders may have been due to the finding of Lempinen (1997), who noticed that cultural activities were more important for women than men while men preferred sport and television. However, the differences between genders were something that should be studied further but is beyond the scope of this article.

There was also a significant difference in the way these groups were distributed between the disciplines ($\chi^2 = 33.950$; $p = .003$; Table 2). Most graduates from the faculty of humanities were in the group *interested*, while most graduates from the faculty of education were in the group *independents*. Most graduates from the faculty of medicine

Figure 1. Four differing groups based on their cultural capital and their differences in the variables describing cultural capital.

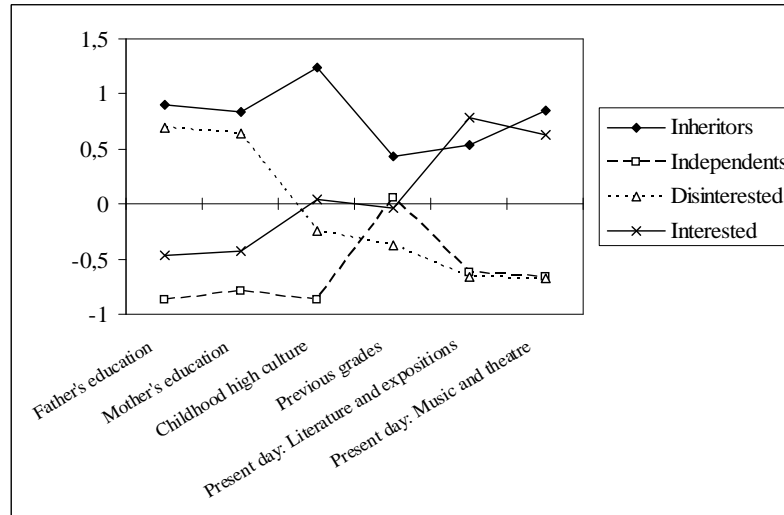


Table 3

The distribution of the four profiles based on cultural capital within the six disciplines of the University of Turku.

Discipline	Profiling based on cultural capital				Total	
	<i>Inheritors</i>	<i>Independents</i>	<i>Disinterested</i>	<i>Interested</i>		
Humanities	N	27	25	17	40	109
	%	24.8%	22.9%	15.6%	36.7%	100%
Education	N	11	26	15	15	67
	%	16.4%	38.8%	22.4%	22.4%	100%
Medicine	N	14	10	6	6	36
	%	38.9%	27.8%	16.7%	16.7%	100%
Mathematics and Natural sciences	N	18	33	30	16	97
	%	18.6%	34.0%	30.9%	16.5%	100%
Law	N	13	10	14	9	46
	%	28.3%	21.7%	30.4%	19.6%	100%
Social sciences	N	8	19	16	9	52
	%	15.4%	36.5%	30.8%	17.3%	100%
Total	N	91	123	98	95	407
		22.4%	30.2%	24.1%	23.3%	100%

were *inheritors* while most from graduates the faculty of natural science were either *independents* or *disinterested*. Most graduates from the faculty of law were either *inheritors* or *disinterested* while most social science students were *independents*. These results indicated cultural differences in two ways. First, different types of cultural knowledge or different amounts of cultural capital may be needed in different faculties. Secondly, faculty cultures may have an effect in the desire of the student to stay in their major subject or to change it to another. However, faculties are comprised of many different and differing disciplines. Social sciences include, for instance, philosophy, social policy and economics among other disciplines. Humanities include history, linguistics and translation sciences and so forth. The distribution of the groups between the faculties is a topic to be studied further but is beyond the scope of this article. However, these

groups distributed evenly between the control and criterion groups.

The connection of the four groups based on cultural capital with educational attainment

This grouping into four groups based on cultural capital variables was connected with clear differences in the age of graduation ($F(3, 403)=5.311; p=.001$). *Disinterested* were highly significantly younger than the other groups while the *interested* were clearly oldest at the time of graduation (Table 3). The graduates of the group *interested* also had significantly longer times to the completion of a degree than had the other groups ($F(3, 403)=5.195; P=.002$), while the group *disinterested* had the shortest times to the completion of a degree (Table 3).

Table 4
The age, duration of studies and the amount of credits gained within the four profiles based on cultural capital.

	Age at graduation		Duration of the completion of a Master's degree		The amount of credits gained ¹	
	Mean	SD	Mean	SD	Mean	SD
Inheritors	26.05	2.62	5.83	2.15	196.88	35.41
Independents	26.85	3.06	5.38	1.80	186.29	28.25
Disinterested	25.69	2.00	5.05	1.36	185.75	29.52
Interested	27.11	3.50	6.11	2.71	189.16	32.07
Total	26.45	2.90	5.57	2.07	189.20	31.35
Range	21 - 42		2.3 - 18.0		140.0 - 312.0	

¹Credits gained: This credit system was used before the European Credit Transfer System (ECTS) was used. One credit in this now old system correlates to 40 hours of work. The exchange system between the old to new is approximately: credit in the old system \times 2 = credits in the ECTS system

However, this grouping was not connected with any differences in grades in higher education or in the amount of credits studied. So it seems that cultural capital, at least when profiled into these groups, was not connected with the grades a student received in higher education or to the amount of credits studied, while it was clearly connected with time and age at graduation. It appeared that those whose parents had high education but who themselves were not so interested in cultural activities were fastest and youngest of graduates while those whose parents had low education, but who were interested in cultural activities, were slowest and oldest of the graduates. As the profiles, *disinterested* and *inheritors* were the youngest, this suggests that parental qualifications affect the effectiveness of a student in navigating in the educational field. This gives those students whose parents have high educational qualifications, an advantage when viewed from the viewpoint of age at graduation. When viewed from the viewpoint of the duration of studies, the two fastest were the *disinterested* and *independents*. The commonality between these groups, as stated previously, is the lesser importance placed on cultural activities indicating that the more culturally minded students might want to stay in the university longer to enjoy the cultural possibilities there. To view the connection between cultural capital variables and attainment variables more clearly, a study of the effect of individual sources of cultural capital is needed.

Sources of cultural capital and attainment variables

Cultural capital has in other studies been connected with the grade point average, GPA for short (De Graaf et al., 2000; Sullivan, 2001). However, when viewing the four cultural capital profiles, there was no connection, bearing in mind that the connection studied is between the profiles and university GPA. The situation changed, though, when viewing the in-

dividual variables that constitute the grouping; the variables used to indicate cultural capital. There was a clear connection between the graduates' university GPA with their appreciation of literature and art expositions ($F(3, 419)=3.990$; $p=.008$). Indeed it seems that the more importance placed on literature and expositions during their time in higher education, the higher the grades of the graduate were. High previous school success was also connected with better grades at the university ($F(3, 358)=3.226$; $p=.023$), even though the connection was not as strong as with the type of cultural appreciation mentioned above. As these were the only two variables of those used that had a connection with university GPA, it would seem that both the parental educational qualifications and childhood surroundings do not affect the university GPA, or that they are mediated through these variables that do have a connection.

The three cultural capital variables to have an effect in the amount of credits gained in higher education were: previous school success; the importance placed during studying on cultural activities such as music and theatre; and the importance placed on cultural activities in the childhood environment. The better the previous school success ($F(3, 416)=12.050$; $p<.001$), the higher importance placed on music and theatre ($F(3, 343)=5.709$; $p=.001$), and the greater presence of high culture in the childhood home ($F(3, 431)=2.979$; $p=.031$), the more credits the graduate had studied in higher education. These three variables indicated a greater interest in the subjects and possibilities the university has to offer.

The third attainment variable was age at graduation. It is connected with both of the graduates' parents' education (Father: $F(5, 483)=4.428$; $p=.001$; Mother: $F(5, 486)=7.861$; $p<.001$). In both cases the higher the parents' educational level, the lower the age of graduation was. Age of graduation also significantly lessened as the previous school success increased ($F(3, 416)=4.019$; $p=.008$). Apart from the parents' education and previous school success, importance placed on reading, classical literature and art exhibitions also had a connection with the age of graduation ($F(3, 486)=3.168$; $p=.024$). It, however, had an opposite effect. It seems, that the more importance the graduate has placed on these aforementioned cultural activities, the older the student was when graduating, even though the connection is not very strong.

Both variables describing appreciation of high culture during studies were found to have a connection with the duration of studies (Literature $F(3, 487)=5.038$; $p=.002$; Music $F(3, 343)=5.222$; $p=.002$). This indicated that the more culturally minded the student was, the slower the graduate managed, or desired, to navigate their way across higher education to completing their Master's degree. A summary of the connection of the sources of cultural capital to attainment in higher education can be found in table 5.

Conclusions

In this study four groups were discovered amongst the graduates from the University of Turku: *inheritors*, *independents*, *disinterested* and *interested*. This grouping, based on

Table 5
Sources of cultural capital, their connection with educational attainment and the direction of the connection.

<i>Profiling variables (independent variables)</i>	<i>Individual profiling variables connection with attainment variables (dependent variables)</i>
Father's education	Age at graduation (<i>decreased</i>)
Mother's education	Age at graduation (<i>decreased</i>)
Childhood high culture	Amount of credits studied (<i>increased</i>)
Previous school success	a) Age at graduation (<i>decreased</i>) b) Grade point average in higher education - university GPA (<i>increased</i>) c) Amount of credits studied (<i>increased</i>)
Present day: Literature and exposition	a) Age at graduation (<i>increased</i>) b) Duration of completion of a Master's degree (<i>increased</i>) c) Grade point average in higher education - university GPA (<i>increased</i>)
Present day: Music and theatre	a) Amount of credits studied (<i>increased</i>) b) Duration of completion of a Master's degree (<i>increased</i>)

cultural capital, was connected with differences in the time to the completion of a Master's degree as well as in the age at graduation. It did not, however, have a connection with the amount of credits gained or the grades earned, which implies that, according to this research, even though cultural capital in other studies (f. ex. Sullivan, 2001; De Graaf et al., 2000) has had an effect on grades received, the connection in higher education in Finland is not so clear.

The graduates' parents' education had an impact on the age at graduation with the direction being that the higher the parents' education level was, the younger the student was when graduating from higher education. This implies that those graduates whose parents' education level was highest, managed to navigate their way around the Finnish educational system the fastest in the total time consumption, even if they were not among the fastest in their time to a Master's degree. Apart from the parents' education, also the cultural climate of the childhood home had an effect on one of the attainment variables. As the childhood home's appreciation of high culture increased, the amount of credits studied increased.

Previous school success also seemed to help the student to graduate at a younger age. It was also connected with higher grades in higher education as well as an increase in the amount of credits studied. It was not, however, connected with the time to the completion of a Master's degree.

The cultural appreciation of the graduate during their time in the university seemed in this research to be the most vital point when viewing educational attainment. Appreciation of literature and art expositions was connected with longer duration of graduation with a Master's degree as well as increased age at graduation and also with higher grades. From the viewpoint of this article, where short duration and lower

age are viewed as two indicators of success, the effect on attainment as a whole is contradictory. It may help a student to achieve higher grades, but at the same time the student, with an interest in the activities mentioned above, may want to stay in the university longer. Appreciation of music and theatre was also connected with longer duration to a Master's degree completion and with an increased amount of credits studied. So, if educational attainment can be defined in terms of graduating at a young age and with a short duration of studies, it would seem then that the importance of cultural activities is possible to be seen as a disadvantage.

However, there are issues that are important to bear in mind when viewing these results. First, there is a correlation between the dependent variables indicating educational attainment. Second, the research setting was, by its design, based on memories, which may not be completely accurate and there may have been recall bias as to their activities and priorities during their time in the university. Third, the participants were graduates and chosen because of their duration of studies and excluded those with too much previously gained credits included in the degree in question in this research. The focus on duration of studies may also have created a bias related to the connection between cultural capital and educational attainment. The possibility is that the influence of cultural capital on duration of studies was strengthened due to the design, when in fact the connection between the two may not have been so strong. Fourth, the study was at the faculty level and the low number of participants did not allow for more than tentative results as to the different cultures of faculties presented in this research. Finally, the response rate was rather low. After careful study into those missing participants with the information available, it was discovered that they were evenly distributed across the different ways

in which to classify the respondents, such as gender, faculty or age. This allows tentative generalization, but its impact on the results is difficult to ascertain. These five issues are important to bear in mind even though their exact impact is not possible to say. This research then creates hypotheses to be studied more closely by further research.

In summary, from the viewpoint of the research on cultural capital, cultural capital is a multifaceted issue and the results of its effects on educational attainment can be in contradiction with each other depending on the way cultural capital is measured and on the way the connection is tested. When the variables chosen in this research were combined and four profiles created, cultural capital was in this study shown to be connected with some types of educational attainment, but not with others. However, when studying the same variables individually, the picture changed and became more complex, as the connection between the variables indicating cultural capital and the variables indicating educational attainment connected with each other in different and sometimes opposing ways. For instance, parental educational qualifications can help a student graduate younger while interest in classical literature and art affect it in an opposite way. One possible interpretation for the results is precisely the way in which the different variables indicating the amount of cultural capital connect with each other and also have an effect on each other. None of the cultural capital variables used can be said to work in isolation as they all are mutually connected forming a complex phenomenon named cultural capital. Also, as cultural capital can be, and has been, operationalized in so many ways, it is quite possible that some other variables could change or clarify the findings of this study.

The political implications of these results are that more is not necessarily better. Or to be more precise, more cultural capital can affect students' behavior in ways that are not desired in the political field. Aspects of cultural capital may lead a student to decide to stay in higher education for a longer time period enjoying the possibilities offered. While, for the student, these issues may not be important, for higher education institutions trying to lower the age at graduation and the duration of Master's degrees, these results may present a problem. It has been demonstrated that cultural capital has an effect on both the duration of studies and the age at graduation. But this is something that is beyond the institutions' ability to affect. At the same time, policy decisions such as limiting the duration of studies or possibly introducing fees can make university studies difficult, for example for those whose parents' educational level is low. More research is needed to clarify these issues in order to avoid decisions that lead to unwanted results, such as increased educational inequality.

In this study it has been demonstrated, how vital it is to define exactly what is referred to with the term cultural capital, when studying educational attainment, as the impact of differing sources of cultural capital vary so greatly. And clearly it is vital to define, what is referred to with educational attainment.

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