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Class size and its influence on examination results in higher education

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Abstract
In this article, we analyze the relationship between class sizes and examination results in higher education. Data from the University of Stavanger, collected in the Common Student System (FS) in the period from 2011 to 2021, shows that there is a negative correlation between the number of students enrolled on courses and examination results. An increase in the number of students taking a course reduces the average scores. We also show that the difference in examination results for different class sizes decreases when the course level increases.

Keywords Higher education · Class size · Grades

1 Introduction

Over the past 20 years, we have seen a stronger focus on standardization and the implementation of new governance methods in higher education in Norway, as in the world more generally. For example, a special focus has been placed on student active learning and constructive feedback and the impact of these measures on student motivation [1, 2]. Kjeldstadli [3] argues that this development coincides with the fact that higher education worldwide has undergone extensive reforms and changes and is today increasingly managed as knowledge-based companies. A natural consequence of these changes has been that the number of students applying for and admitted to higher education has increased extensively. In the status report for higher education in 2024 it is for example noted that there has been a significant increase in the Norwegian student population, from 186,000 in 2000 to 299,000 students in 2023 [4]. The increase in students has also led to changes in university teachers' roles and their work situation, which in many ways have been more challenging. We see similar changes in higher education all over the world [3], in some cases facilitated by international agreements like the Bologna convention [5].

The new governance systems model makes it important to investigate the possible relationship between different organizational factors such as the number of students in a class and the quality of the teaching they receive. On the one hand, it is desirable to have many students on a course, as this leads to higher production, increasing funding and reducing the cost per student. On the other hand, many experts highlight that having more students attending a course makes it more challenging for teachers to ensure a good learning environment, and, therefore, that student performance is reduced [5, 6].

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Table 1 The number of courses on which the data is based, for UiS and for the different faculties at UiS

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
UiS	822	861	874	909	931	911	903	945	955	921	492
ST	302	283	288	276	298	296	296	298	309	273	136
AE	190	214	247	278	267	268	278	302	304	300	170
PA	39	40	24	27	28	32	34	34	28	7	14
SS	136	134	125	130	126	122	127	139	145	150	70
HS	43	46	46	53	53	51	48	54	53	65	34
BS	59	64	65	70	73	78	83	85	82	78	39
DFU	53	80	79	75	86	64	37	33	34	48	29

Time period: 2011–2021

In this article, we investigate the relationship between class sizes and examination results in higher education at the University of Stavanger in Norway. Studies have shown a relationship between student active teaching and student motivation [1, 7]; furthermore, a clear and positive relationship between students' motivation and their perception of the academic staff's ability to give constructive feedback on student work has also been documented [1, 8]. Other studies show a negative correlation between class size and grades in higher education [9]. We may then hypothesize that having many students attending a course may provide poor conditions for a good learning environment. Some evidence in this direction is provided by Kokkelenberg and colleagues, who found that class size negatively affected grades for a variety of specifications and subsets of the data analyzed [9].

This discussion indicates that, while there are some arguments for having many students on a course, there are also strong arguments against it. It is on this basis that we, in this study, will investigate the relationship between the number of students taking a course and the examination results. Our hypothesis is that an increased number of students attending a class will negatively affect the examination results, but also that it may depend on how advanced the course is. Against this background, we have investigated the following research question: What is the relationship between class size and examination results?

2 Data collection

We have collected information on examination results and the number of students enrolled on courses, for all courses at the University of Stavanger (UiS) in the period from 2011 until the autumn semester of 2021. Attention is only given to ordinary exams, excluding oral exams, thesis evaluations, etc.

The data comes from more than 9000 courses. How these courses are distributed over the years and for the various faculties at the UiS is shown in Table 1. At the UiS, there are six faculties, namely, the Faculty of Science and Technology (ST), the Faculty of Arts and Education (AE), the Faculty of Performing Arts (PA), the Faculty of Social Sciences (SS), the Faculty of Health Sciences (HS), and the UiS Business School (BS), as well as one Division for Further Education (DFU).

The data was collected from FS (the Common Student System), which is a study administration system developed for universities and colleges in Norway. For each course, the dataset contains the course number, name, program, level, the number of students who completed the course and their grade.[1] Access to data is only available for the university to which one belongs. We therefore focus only on the data from the University of Stavanger and not on that from all the universities in Norway.

[1] Norway is a signatory to the Bologna convention, and the grade distribution should therefore be normal. We conduct tests assuming the distribution to include F to account for the students who fail, although the guidelines often are provided for, and the normal distribution taken for passing grades. This does not impact the conclusion for any of the tests.

Table 2 The number of courses on which this study is based, within each category of class size

	Categories of class sizes					Number of courses
	1–25 stud.	26–50 stud.	51–75 stud.	76–100 stud.	> 100 stud.	
UiS	5076	2197	936	420	895	9524
ST	1560	747	332	125	291	3055
AE	1715	606	296	125	76	2818
PA	302	5	0	0	0	307
SS	523	314	172	133	262	1404
HS	336	86	13	3	108	546
BS	176	286	122	34	158	776
DFU	464	153	1	0	0	618

Time period: 2011–2021

3 Empirical approach

To study the relationship between class size and examination results, we first establish the distribution of grades for different class sizes, based on all the data. The class sizes are divided into the following five categories (number of students): 1–25, 26–50, 51–75, 76–100 and > 100. The number of courses within each class size category, on which the distribution of grades is based, is given in Table 2. All the data is given for the UiS and for the various faculties at UiS.

To avoid a course with many students, within the same class size category, being given more weight than another course with fewer students, we establish the distribution of grades by focusing on the examination results at a course level. This means that a course with 110 exams with 10.0% of A grades and a course with 500 exams with 12.0% of A grades will in total give 11.0% A.

We also present the data at different course levels. In FS (Common System System), five different levels (100, 200, 300, 400, 500) are given. Courses at level 100 are typically taken by students in their first year of university study, while courses at levels 200, 300 and 400 are taken in their second, third and fourth years, respectively. Courses at level 500 are at the master's level.

Differentiation according to levels means that we better take into consideration the fact that large courses mainly come early in the study program. To a large extent, courses with fewer students come later in the study program, even though we see differences between faculties and departments. At the Faculty of Art and Education, and especially in pedagogy, the teaching is organized in big groups, even at the master level. It is common to think (everything else being equal) that courses late in the study program have better results than courses early in the study program. This is simply because many of the weakest students and unmotivated students who have chosen the wrong program have dropped out, so that, on average, the remaining students are more motivated. For these analyses to make sense, one accordingly needs to differentiate by course level.

The distribution of grades for different course levels and for different class sizes is shown in a table and visualized by line charts. Chi-square tests are used for mapping the correlation between class size and examination results. Tests with $p < 0.05$ are considered statistically significant. The statistical analyses were performed in IBM SPSS 25.

4 Results

The distribution of grades (A-F) for the different categories of class sizes and for different course levels are shown in Table 3 and visualized in Fig. 1. At the top, we see the grade distribution for the lowest level courses, with courses with fewer than 26 students at the top of each section of the table. The calculated average grades for different class sizes are also included, as well as the *p*-value for the null hypothesis that the grades do not vary between class sizes. Grade A is given a score equal to 5, B is equal to 4, etc. All the results are shown for UiS in total. The results at a faculty level are given in Appendix A.

From Fig. 1 and Table 3, we see a clear tendency toward more good grades (A and B) in courses with fewer students. The Chi-square tests all reject the null hypothesis that the grades follow the same distribution independently of class size. In fact, in all but one of the levels (Level 4), the average grade decreases monotonically with class size; as an exception, it

Table 3 Distribution of grades at UiS for different course levels and class sizes

	A = 5 (%)	B = 4 (%)	C = 3 (%)	D = 2 (%)	E = 1 (%)	F = 0 (%)	Avg.	p-value
Level 100								
1–25 stud.	14.5	31.0	30.9	13.7	4.5	5.4	3.21	< 0.001
26–50 stud.	11.7	26.9	31.8	14.7	6.2	8.8	2.97	
51–75 stud.	9.1	23.4	32.5	18.2	7.0	9.8	2.80	
76–100 stud.	8.7	21.9	31.3	18.8	8.0	11.2	2.71	
> 100 stud.	10.5	19.5	29.4	17.6	10.2	12.9	2.64	
Level 200								
1–25 stud.	17.3	35.8	28.2	10.3	3.9	4.6	3.39	< 0.001
26–50 stud.	12.5	26.6	30.9	14.8	7.1	8.2	2.98	
51–75 stud.	12.0	25.2	34.9	13.6	6.3	8.1	2.99	
76–100 stud.	9.4	20.5	34.0	18.2	8.2	9.6	2.76	
> 100 stud.	9.8	20.5	29.4	19.2	10.1	11.0	2.68	
Level 300								
1–25 stud.	17.6	34.5	28.6	11.3	3.9	4.1	3.39	< 0.001
26–50 stud.	15.7	29.2	32.4	13.4	4.6	4.4	3.24	
51–75 stud.	12.8	28.4	33.2	14.2	6.0	5.5	3.12	
76–100 stud.	11.6	26.9	32.9	16.2	6.0	6.3	3.03	
> 100 stud.	14.5	26.4	31.2	15.4	6.8	5.8	3.09	
Level 400								
1–25 stud.	15.0	39.2	30.8	12.0	1.2	1.8	3.49	< 0.001
26–50 stud.	7.6	33.9	37.0	16.8	1.7	3.0	3.20	
51–75 stud.	12.2	27.4	39.2	15.6	4.0	2.2	3.23	
76–100 stud.	17.0	27.0	33.0	10.0	6.0	7.0	3.18	
> 100 stud.	–	–	–	–	–	–	–	
Level 500								
1–25 stud.	21.1	34.3	28.2	9.9	3.4	3.1	3.50	< 0.001
26–50 stud.	17.5	33.5	31.6	10.3	3.7	3.4	3.41	
51–75 stud.	16.1	32.5	31.5	11.1	4.8	4.1	3.32	
76–100 stud.	14.7	29.0	33.4	12.6	5.0	5.2	3.20	
> 100 stud.	14.4	25.8	33.8	12.8	7.1	6.1	3.10	

The data from this table is visualized as line charts in Fig. 1

is the second largest class size that has a slightly weaker average grade than the largest class. It is then also as expected: that we observe a clear tendency towards more poor grades (D, E and F) in courses with many students. These results apply to both the university as a whole and to all the faculties at UiS, as reported in the Appendix.

The data also allows us to investigate the hypothesis that grades improve at higher levels, presumably because less motivated students disappear. This is supported, as the null hypothesis—that the grade distribution is the same for all levels—is rejected. We can also observe that the difference in good and poor examination results for different class sizes is reduced as the level at which the course is delivered increases. Finally, for the data at the university level, we divided the sample into two periods, 2011–2015 and 2016–2021 to investigate if there have been temporal changes that may impact the conclusions. As this null hypothesis was rejected in both cases, the conclusions are independent of the time window.

5 Discussion

It is common to think that examination results are based on many factors, both in the framework conditions for the student and in relation to the close meeting between student, teacher, and the teaching material. The relationship is complex and is the basis for why the student's achievements can be explained by conditions of the framework, e.g., conditions in the administrative follow-up of students (so-called framework quality) and by conditions in the teaching program the students have encountered, the so-called teaching quality. In the study quality model shown in Fig. 2 [10], we see that the

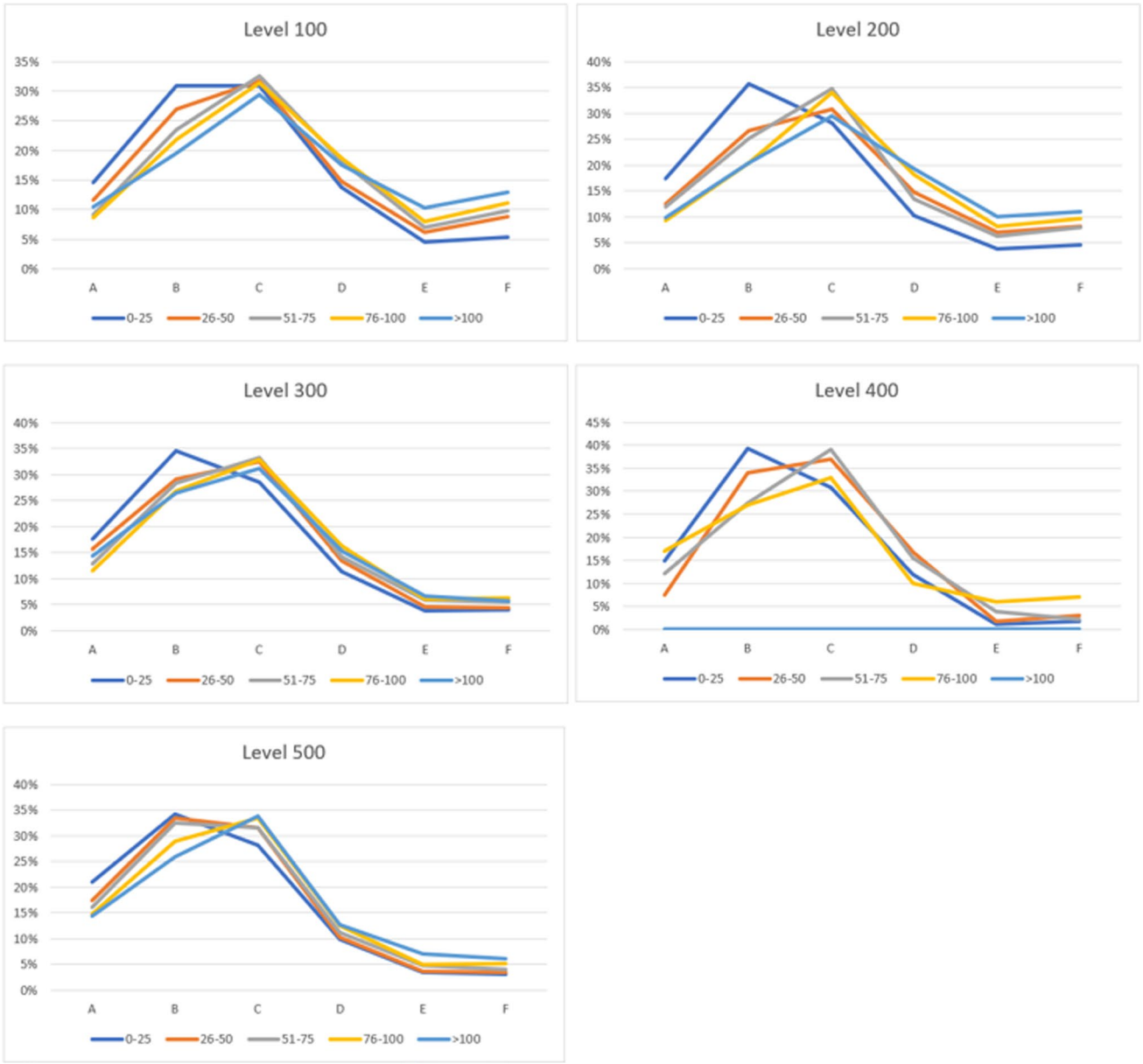

Fig. 1 Line chart showing the distribution of grades for different class sizes and course levels at UiS

examination result should be seen in relation to the admission quality, the student's prior knowledge, the quality of the results, the relationship between learning outcomes in the courses and the student's prerequisites for succeeding in exams.

Several factors described above can and should be seen together with the number of students taking a course, and it is common to think that large courses provide weaker conditions for following up each individual student, which the result in our study underlines. According to Iglesias et al. [11], larger student-to-class ratios result in a less favorable social climate in MBA programs' academic and social environments. Additionally, they discovered that having a large class size raises the dropout rate. Acknowledging that a less favorable social atmosphere may impact the group's learning atmosphere and, consequently, the student's academic performance is imperative. Thus, the program quality will be a function of the number of students taking a cours -also indirectly in that, on courses with many students, there will be greater challenges in clarifying and communicating the relationship between learning outcomes and teaching- and assessment methods for the student [2, 11].

We may think that, regardless of the quality level of admitted students, larger courses make it more difficult to: follow up each individual student and thus compensate for weak prerequisites; adapt the teaching to the individual; and

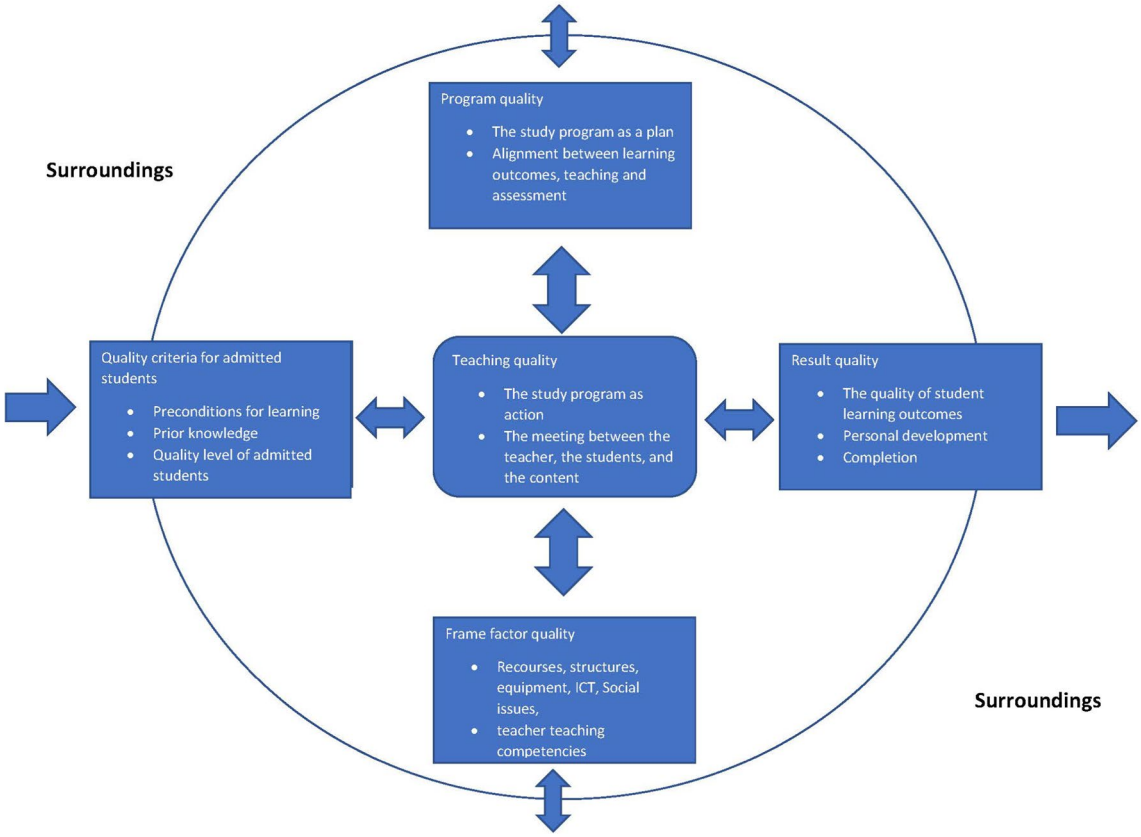

Fig. 2 The study quality model, Handal [10]

follow up administratively where necessary. Having many students on a course makes it more demanding to facilitate student active learning and relational follow-up than on courses with fewer students. In the study quality model, we find this relationship made particularly clear in the center of the figure, ref. the teaching quality, and in the meeting between teacher, student, and course content. The meeting itself, as a metaphor for the link between teacher, student, and course material, is particularly important [12, 13]. This meeting will have a different form, depending on the number of students taking the course. If we assume that the actual meeting between teacher, student, and the teaching material will have a different framing and thus provide different prerequisites for learning in courses with many or few students, we see an explanation for the differences in examination results. But such relationships are complex. High quality level of admittance can help to compensate for such effects, while weaker quality can make high program and teaching quality important for students' learning. We may then assume that poor quality level of admittance will lead to poorer grades, while high teaching quality can compensate for poor quality. At the same time, we may assume that it will be easier to maintain high teaching quality and high quality on courses with fewer students. Further, it is reasonable to assume that high program quality will, to some extent, compensate for less satisfactory teaching quality, especially for students who fall into the category of high-quality level of admittance. This could be independent students who, within the framework of a clearly structured program (high program quality), where the link between the didactic categories is clear, will be able to get good grades even if subject teachers' follow-up of students and other study social conditions are weak. With reference to the framework quality, we may also think that good social and non-academic support, both that provided by the study support system and that which the students themselves experience in relation to their own study environment, could be of importance for the examination results. It is difficult to see clear connections between such support and the number of students taking a course, but they could exist.

Another condition, under what is referred to as frame factor quality in the study quality model, is the teaching competence of the teachers. This aspect is found in the bottom blue frame in Fig. 1. In much of the literature regarding, e.g., the problem of dropping out of higher education, it seems that this aspect, for instance the question of teaching methodology, has a bit of a "touchy" feel about examining it critically [11]. Such a perspective would then mean turning attention from external factors

toward one's own and colleagues' practice. Such practice is vulnerable to criticism and questioning, since it is so closely related to both the professional and personal identities of being a university teacher [14, 15]. Being a competent university employee is closely linked to being successful as a teacher, although many university employees experience a conflict between the role of teacher and the role of researcher [16]. However, there is reason to assume that the educational competence of staff will also be able to contribute to a high quality of study in courses with many students and will thus be able to help compensate for both weaker quality level of admitted students and weak program quality. Skilled and experienced university teachers can, for example, have taken over weakly justified courses, in which they themselves have not had the opportunity to carry out the course- or program planning, but can still succeed well in working with the students' learning.

We must also ask whether experienced university teachers, to a greater extent than their inexperienced colleagues, are in a position to choose which courses they want to teach. They may then have a tendency to skip courses with many students, at the same time as there being a competence factor. Courses with many students are usually introductory courses at a basic level, while courses with fewer students are usually at master's level. That said, this will vary between faculties. There will be a natural distribution of courses between highly formally qualified university teachers, where experienced teachers receive or are assigned courses at master's level with few students, while new and less experienced university teachers have to take responsibility for introductory courses with many students. Such conditions could be one of the explanations for courses with many students seeming to have weaker grades than courses with fewer students. In addition to that mentioned above, it is also important to highlight the "relationship effects", which have been given less attention in the literature. These effects contribute to complicating the matters we have raised above. We think that a close link between the student and the university teacher, which in the model falls under teaching quality, in itself can contribute to a feeling of responsibility for the subject (ownership relationship) among the teachers [17]. In this way, one "blurs" the connection between candidate and performance. It is reasonable to assume that such an effect will be strongest for courses with few students, since this connection will, in most cases, be closer. Courses with few students create a form of shared ownership of the work, which can create unclear boundaries in the relationship between the student and university teacher and between the university teacher and the course, on the one hand, and between the assessment of the student's performance, on the other.

We implicitly think that large courses provide weaker prerequisites for learning, which in turn affect the examination results. Courses with many students may contribute to less student contact, more alienation, and weaker prerequisites for identifying and following up students who are performing poorly. An important aspect, especially in connection with the points highlighted above, is whether the university teacher is an internal examiner (if there is a two-examiner system) or an examiner. If so, one explanation for the fact that censorship can be stricter on large courses could be that there is a greater distance between the student and the teacher. On courses with small class sizes, where the contact or meeting between teacher and student is close, a relational link is possibly created, as well as a direct and more implicit responsibility of the teacher. There is a closeness between student and teacher in courses with few students, which, on the condition that the subject teacher is also a (co)examiner, can contribute to better grades due to the closeness and not just as a result of the qualities of the tasks or the teaching program itself.

Despite the results in our study showing that courses with fewer students give better grades than courses with more students, it is still important to highlight that, even if we run our analysis based on courses at the same level, there is still a challenge in that large courses with many students are often compulsory, to a greater extent than courses with few students. The students taking the large courses are then not necessarily as motivated as those taking the more specialized smaller courses which students have chosen and are particularly interested in and/or good at. This may influence students' motivation, which in turn affects the examination results.

It is also common to think that large courses contribute to less teaching resources per student, leading to poorer examination results. However, such a series of arguments is too hasty. It is not necessarily the case that the teacher/student ratio is worse in courses with more students. In some education programs, one can have a situation where large courses are divided into many small classes. We may also have situations in the larger courses where many student assistants are used to provide individual help and feedback. This can then contribute to more help and feedback on the largest courses, compared with more moderately sized courses, where the university teachers are often working alone.

In addition, large courses, combined with few lecturers, place some limitations on what can be done with student active learning methods: methods that have been documented to contribute to good examination results. The question is, however, whether student active learning methods are used more often in courses with fewer students, despite the opportunity for doing so being at its greatest in such courses.

Based on the results from our analysis, it is particularly interesting to see that the difference in examination results for the different class sizes decreases for higher course levels. Such results are not surprising. Students' experience of

being students could be one reason. More time spent in the routine of being a student could be an important explanatory variable. It is reasonable that students with several years' experience better handle being a student than students without such experience.

6 Conclusions

In this paper we analyze the relationship between class sizes and examination results in higher education. Based on the data from the University of Stavanger, collected from the Common Student System (FS) in the period from 2011 to 2021, we show that there is a negative correlation between the number of students enrolled in courses and examination results, and that an increased number of students taking a course negatively affects the examination results.

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Author contributions Conceptualisation of the study was developed by EBA. The statistical analyses was carried out by FA. EBA drafted the original manuscript, which was revised by VM and FA. All the authors made revisions and accepted the manuscript in its final wording.

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Data availability The dataset is shown in the present article. On request we can provide the full dataset (raw data) from the database FS (Common Student System).

Code availability Not applicable.

Declarations

Ethics approval and consent to participate Only anonymous data is processed in this project. According to The Norwegian Agency for Shared Services in Education and Research (SIKT), notification of the project is therefore not required.

Competing interests The authors declare no competing interests.

Appendix A

Distribution of grades for different levels and class sizes for all the faculties at UiS.

	Faculty of Science and Technology							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25 stud.	15.9%	30.6%	32.0%	10.2%	4.3%	7.0%	3.22	< 0.001*
26–50 stud.	12.4%	22.6%	31.8%	12.4%	9.0%	11.9%	2.81	
51–75 stud.	10.7%	24.1%	34.0%	12.7%	8.2%	10.5%	2.85	
76–100 stud.	13.0%	25.5%	30.8%	9.8%	7.6%	13.6%	2.86	
> 100 stud.	12.8%	19.2%	27.9%	12.7%	10.4%	17.0%	2.60	

	Faculty of Science and Technology							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 200								
1–25 stud	21.3%	37.2%	25.3%	8.5%	3.5%	4.3%	3.52	< 0.001*
26–50 stud.	13.8%	22.3%	28.6%	13.6%	9.3%	12.6%	2.80	
51–75 stud.	12.5%	21.4%	34.5%	12.5%	7.9%	11.2%	2.84	
76–100 stud.	10.1%	20.4%	36.1%	14.4%	9.2%	9.6%	2.79	
> 100 stud.	10.7%	18.0%	28.0%	14.7%	12.6%	16.1%	2.52	
Level 300								
1–25 stud.	20.0%	32.7%	27.0%	9.9%	5.0%	5.4%	3.37	< 0.001*
26–50 stud.	22.5%	30.3%	28.3%	9.2%	4.2%	5.4%	3.42	
51–75 stud.	20.1%	27.7%	29.2%	10.2%	5.5%	7.4%	3.25	
76–100 stud.	17.0%	27.1%	27.9%	11.2%	7.3%	9.4%	3.07	
> 100 stud.	16.2%	22.1%	29.4%	14.3%	8.2%	9.7%	2.94	
Level 400								
	–	–	–	–	–	–	–	
Level 500								
1–25 stud.	19.6%	34.1%	28.4%	9.9%	4.3%	3.7%	3.43	< 0.001*
26–50 stud.	18.4%	31.8%	31.2%	9.5%	4.2%	4.9%	3.36	
51–75 stud.	17.7%	32.4%	30.4%	9.9%	4.9%	4.8%	3.34	
76–100 stud.	16.0%	27.0%	32.5%	12.0%	5.8%	6.6%	3.15	
> 100 stud.	15.6%	24.8%	34.3%	12.1%	7.3%	5.9%	3.11	
	Faculty of Arts and Education							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	13.5%	31.6%	29.2%	15.1%	4.3%	6.3%	3.16	< 0.001*
26–50	11.5%	29.2%	30.6%	14.6%	4.6%	9.4%	3.00	
51–75	8.1%	22.3%	31.3%	20.0%	6.4%	12.1%	2.70	
76–100	7.5%	20.5%	30.8%	20.9%	7.7%	12.6%	2.62	
> 100	6.4%	20.4%	35.2%	20.4%	5.8%	11.7%	2.66	
Level 200								
1–25	12.3%	36.4%	32.5%	11.9%	3.4%	3.5%	3.32	< 0.001*
26–50	10.4%	31.8%	32.9%	15.2%	5.0%	4.4%	3.14	
51–75	9.4%	29.2%	34.6%	16.7%	5.1%	5.2%	3.06	
76–100	9.7%	20.4%	34.4%	22.8%	6.5%	6.0%	2.86	
> 100	6.6%	19.0%	36.8%	21.7%	6.0%	9.8%	2.69	
Level 300								
1–25	18.2%	36.3%	28.2%	10.9%	3.2%	3.2%	3.46	< 0.001*
26–50	12.7%	30.4%	36.4%	14.8%	2.8%	2.8%	3.27	
51–75	8.8%	28.6%	32.7%	18.1%	7.0%	4.8%	3.00	
76–100	12.0%	28.9%	34.4%	14.5%	3.5%	6.5%	3.11	
> 100	9.5%	28.8%	40.8%	12.3%	3.0%	5.5%	3.12	
Level 400								
1–25	11.0%	35.5%	35.4%	14.7%	1.2%	2.4%	3.33	
26–50	7.6%	33.9%	37.0%	16.8%	1.7%	3.0%	3.20	
51–75	12.2%	27.4%	39.2%	15.6%	4.0%	2.2%	3.23	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	

	Faculty of Arts and Education							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 500								
1–25	22.6%	31.7%	27.3%	11.5%	3.0%	4.0%	3.47	< 0.001*
26–50	14.2%	32.1%	35.6%	12.8%	3.2%	2.2%	3.35	
51–75	9.4%	35.2%	39.2%	12.2%	2.4%	1.8%	3.32	
76–100	6.0%	33.0%	35.0%	17.0%	2.0%	7.0%	3.03	
> 100	9.7%	41.3%	39.3%	7.3%	1.7%	1.0%	3.48	
	Faculty of Performing Arts							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	29.5%	47.8%	13.1%	8.6%	0.4%	0.5%	3.96	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 200								
1–25	23.3%	40.7%	21.7%	7.1%	2.1%	5.2%	3.61	
26–50	46.0%	32.0%	11.0%	4.0%	0.0%	7.0%	3.99	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 300								
1–25	6.7%	49.3%	27.3%	7.4%	2.5%	6.7%	3.30	
26–50	29.0%	48.0%	19.0%	3.0%	0.0%	0.0%	4.00	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 400								
1–25	22.0%	40.9%	27.5%	7.7%	1.1%	0.8%	3.73	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 500								
1–25	39.9%	38.5%	14.1%	5.1%	0.0%	2.4%	4.06	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
	Faculty of Social Sciences							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	13.2%	29.7%	36.4%	13.8%	4.4%	2.6%	3.26	< 0.001*
26–50	11.0%	26.9%	35.6%	16.4%	6.1%	3.9%	3.09	
51–75	8.8%	24.5%	34.8%	18.9%	7.8%	5.2%	2.92	
76–100	8.5%	22.6%	32.3%	20.1%	8.8%	7.6%	2.79	
> 100	10.1%	20.3%	29.8%	19.6%	10.3%	10.1%	2.70	
Level 200								
1–25	8.6%	35.2%	25.2%	7.5%	11.5%	12.1%	2.86	< 0.001*

	Faculty of Social Sciences							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
26–50	12.7%	32.4%	34.0%	11.3%	2.5%	7.3%	3.20	
51–75	10.4%	29.4%	36.9%	13.4%	2.4%	7.4%	3.10	
76–100	8.7%	20.0%	31.7%	19.4%	8.3%	12.0%	2.65	
> 100	6.4%	18.8%	30.0%	22.9%	10.2%	11.7%	2.53	
Level 300								
1–25	13.7%	33.0%	32.9%	15.3%	2.4%	2.8%	3.33	< 0.001*
26–50	12.1%	26.4%	33.0%	14.8%	7.1%	6.6%	3.02	
51–75	11.5%	27.8%	34.9%	15.1%	5.9%	5.0%	3.09	
76–100	9.0%	27.1%	35.0%	17.9%	5.7%	5.2%	3.00	
> 100	8.5%	25.2%	37.2%	18.2%	7.0%	4.0%	2.98	
Level 400								
1–25	–	–	–	–	–	–	–	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 500								
1–25	20.6%	33.3%	28.5%	10.4%	3.6%	3.2%	3.46	< 0.001*
26–50	17.5%	36.6%	29.4%	10.6%	3.1%	2.7%	3.47	
51–75	11.5%	35.1%	32.5%	13.4%	4.4%	3.1%	3.27	
76–100	7.0%	34.3%	39.4%	14.8%	3.3%	1.1%	3.23	
> 100	11.0%	30.0%	42.0%	13.3%	3.0%	1.7%	3.31	
	Faculty of Health Sciences							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	12.3%	27.4%	27.6%	14.4%	9.4%	8.8%	2.92	< 0.001*
26–50	5.0%	11.8%	20.3%	18.2%	17.0%	27.8%	1.87	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	3.2%	15.4%	30.4%	23.7%	13.0%	14.5%	2.29	
Level 200								
1–25	13.3%	30.9%	27.8%	14.3%	5.6%	8.3%	3.08	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	10.2%	19.3%	25.2%	22.1%	11.7%	11.4%	2.60	
Level 300								
1–25	15.6%	39.5%	27.8%	10.2%	3.6%	2.9%	3.44	< 0.001*
26–50	1.5%	25.5%	39.5%	22.0%	6.5%	5.0%	2.79	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	12.7%	30.8%	31.5%	16.4%	5.9%	3.0%	3.20	
Level 400								
1–25	4.7%	52.7%	20.1%	16.7%	2.0%	3.6%	3.30	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	

	Faculty of Health Sciences							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 500								
1–25	17.9%	36.3%	31.0%	10.8%	2.8%	1.2%	3.52	< 0.001*
26–50	10.0%	29.0%	35.2%	17.9%	5.4%	2.6%	3.13	
51–75	6.6%	23.5%	40.4%	21.0%	5.1%	3.4%	2.95	
76–100	10.3%	28.3%	36.3%	21.0%	0.7%	3.0%	3.17	
> 100	11.0%	33.0%	50.0%	4.0%	1.0%	1.0%	3.46	
	UiS Business School							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	14.5%	13.4%	26.3%	21.5%	14.6%	9.6%	2.62	< 0.001*
26–50	12.1%	24.8%	33.3%	17.5%	7.4%	5.4%	3.02	
51–75	12.2%	26.5%	32.6%	16.1%	6.7%	5.6%	3.04	
76–100	7.5%	22.3%	38.0%	19.0%	11.0%	2.0%	2.90	
> 100	15.7%	20.0%	25.3%	15.7%	11.6%	11.8%	2.77	
Level 200								
1–25	15.5%	21.2%	38.6%	15.8%	6.9%	1.9%	3.17	< 0.001*
26–50	11.0%	28.2%	32.9%	18.6%	6.5%	2.6%	3.11	
51–75	14.5%	28.4%	34.1%	14.3%	6.8%	2.0%	3.24	
76–100	9.5%	31.0%	38.0%	12.0%	7.5%	2.0%	3.17	
> 100	12.0%	24.2%	31.0%	17.2%	8.1%	7.6%	2.93	
Level 300								
1–25	9.8%	20.4%	31.5%	20.9%	10.4%	6.9%	2.77	< 0.001*
26–50	12.8%	27.5%	32.1%	16.8%	6.1%	3.3%	3.10	
51–75	10.5%	30.3%	35.0%	14.0%	5.8%	4.7%	3.13	
76–100	14.4%	22.7%	29.9%	20.1%	8.1%	5.1%	3.01	
> 100	20.8%	30.2%	26.1%	13.8%	5.5%	3.7%	3.36	
Level 400								
1–25	–	–	–	–	–	–	–	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	17.0%	27.0%	33.0%	10.0%	6.0%	7.0%	3.18	
> 100	–	–	–	–	–	–	–	
Level 500								
1–25	28.0%	37.5%	24.1%	6.5%	1.5%	2.5%	3.77	< 0.001*
26–50	19.3%	33.8%	31.2%	9.7%	3.5%	2.5%	3.48	
51–75	18.2%	34.3%	28.8%	11.1%	5.2%	2.7%	3.42	
76–100	17.4%	31.0%	31.8%	11.1%	4.7%	3.9%	3.33	
> 100	12.3%	25.9%	29.5%	15.9%	8.3%	8.1%	2.94	
	Division for Education							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 100								
1–25	35.2%	34.4%	21.2%	0.0%	0.0%	9.2%	3.77	< 0.001*
26–50	44.0%	40.5%	13.5%	1.5%	0.0%	0.0%	4.26	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	

	Division for Education							
	A = 5	B = 4	C = 3	D = 2	E = 1	F = 0	Avg.	
Level 200								
1–25	–	–	–	–	–	–	–	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 300								
1–25	13.0%	20.9%	43.6%	11.3%	7.4%	4.1%	3.09	< 0.001*
26–50	3.0%	20.0%	33.0%	40.0%	3.0%	0.0%	2.77	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 400								
1–25	–	–	–	–	–	–	–	
26–50	–	–	–	–	–	–	–	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	
Level 500								
1–25	21.3%	37.4%	30.4%	7.9%	2.3%	0.9%	3.65	< 0.001*
26–50	18.6%	40.1%	32.1%	6.9%	1.6%	0.7%	3.65	
51–75	–	–	–	–	–	–	–	
76–100	–	–	–	–	–	–	–	
> 100	–	–	–	–	–	–	–	

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