rEFLections
Vol 32, No 1, January - April 2025

Teaching Quality in Higher Education During A Crisis: Longitudinal Evaluation of Dynamics and Management

EIRIK BJORHEIM ABRAHAMSEN
Faculty of Science and Technology, University of Stavanger, Norway
PATTAMAWAN JIMARKON*
Uniped, University of Stavanger, Norway
JAN TERJE KVALØY
Faculty of Science and Technology, University of Stavanger, Norway
HÅKON BJORHEIM ABRAHAMSEN
Faculty of Science and Technology, University of Stavanger, Norway
Corresponding author email: pattamawan.jimarkon@uis.no

Article information
Article history:
Received: 19 Apr 2024
Accepted: 11 Mar 2025
Available online: 18 Mar 2025

Keywords:
Teaching quality
Higher education
Student satisfaction
Science and technology
COVID-19

Abstract
In this study, we conducted an investigation into student satisfaction with a Norwegian university´s capacity to navigate its management of digital resources to provide remote learning facilities during the two-year period of COVID-19. This was carried out from the perspective of students' course evaluations. We analysed data from over 19,000 course evaluations at the University of Stavanger (UiS), collected between 2020 and 2021. The results indicate that students' reported satisfaction with their courses remained unchanged throughout the pandemic. Results of this study can be used to ensure that the quality of UiS academic operations meets the expectations of its students.

INTRODUCTION

On 12 March 2020, all teaching in higher education in Norway was moved from campus to digital learning platforms, due to the restrictions of the COVID-19 pandemic. Also, during the academic year 2020-2021, most students received all or parts of their teaching through digital tools. It was not until February 2022 that the lecture rooms at all universities and university colleges in Norway were fully reopened.

Risk management in higher education during COVID-19, in retrospect, is crucial for ensuring health and safety, maintaining operational continuity amidst disruptions like closures or online shifts, and safeguarding financial stability by addressing enrollment and funding risks. It also ensures compliance with health regulations, minimises legal liabilities, enhances institutional reputation through proactive measures, and improves the student experience, while fostering adaptability and resilience for future challenges.

Formative assessment, grounded in Vygotsky's Zone of Proximal Development (ZPD) theory, serves as a cornerstone in higher education's risk management framework. By continuously

evaluating student progress and understanding, educators can identify learning gaps and potential risks early on, thus intervening promptly to scaffold students' learning within their ZPD. This approach not only enhances academic achievement but also strengthens institutional resilience by addressing educational challenges proactively. In times of uncertainty, such as during the COVID-19 pandemic, leveraging formative assessment informed by ZPD theory enables educators to adapt teaching strategies effectively, ensuring a supportive and responsive learning environment that mitigates risks and fosters student success.

It is increasingly important to understand these disruptions and adapt our thinking and practice in higher education accordingly. It is highly likely that we will see further changes in the higher education landscape, as universities experiment with flipped classrooms and blended learning, alternative assessment methods and various technologies to interrogate existing practical and efficient teaching practices and determine whether they are obsolete or contain extant principles that are specific in their contexts. That said, we are in need of investigations to allow longer-term projections for teaching and learning due to COVID-19, so that transformative change and new teaching approaches can be invented and incorporated, to allow for more effective teaching in higher education.

Despite the many studies related to COVID-19 and its influence on teaching quality, we know less about teaching quality *during* COVID-19. Was the teaching compromised during the period of COVID-19? Did lecturers' experience with digital teaching during the pandemic contribute to improved teaching quality? Furthermore, do the results differ for the various faculties? These questions form the basis of our study, as seen in the two research objectives below.

- To assess the impact of the COVID-19 pandemic on the quality of teaching, determining whether teaching was compromised during this period.
- To evaluate whether lecturers' experience with digital teaching during the pandemic contributed to improved teaching quality, and to analyse whether the results vary across different faculties.

LITERATURE REVIEW

Teaching quality is closely related to student satisfaction, which is the emotional or cognitive response to the learning experience. Methods of assessment, categorised into instructor, student-peer, and self-assessments, play a crucial role in this relationship (Smimou & Dahl, 2011). Quality in teaching and learning during the pandemic, now more than ever, means going beyond arrangements for tools, systems, mechanism and policies to be available to overcome the limitations and restraints that remote learning entails. It goes as far as to make the learning student-focused, student-involved and even student-initiated, by including their voices as the key message for improving the conditions to learn better during these unusual times. As Daniel (2021, pp. 9-10) puts it, quality in higher education institutions should `take a holistic approach´ and pay `attention to students – their support and guidance, and their progression and achievement – contributes more to quality than the latest technology.´

Studies on student satisfaction should be applicable in all contexts, to ensure comprehensive insights into educational quality across diverse environments (Abrahamsen et al., 2023). While Norway can represent a European student body, the global impact of the pandemic has created unique yet universally shared challenges for students and educators alike. The shift to online learning, disruptions in traditional teaching methods, and changes in assessment practices have affected students worldwide in similar ways. Therefore, research on student satisfaction during this period can provide valuable lessons and strategies that are relevant and beneficial across different countries and educational systems, ensuring that improvements in teaching quality and student satisfaction are universally informed and applicable.

The digital transformation in teaching due to COVID-19 has contributed to many studies focusing on its effect on teaching quality in higher education. We are well aware that the haste of having to prepare large-scale technology and facilities to support remote learning at the outset of COVID presented major challenges in education at all levels. We have also seen that the plight has presented the need to develop responsive education that has the quality to withstand significant disruptions at the earliest possible time. A university in the Philippines conducted an exploratory scenario analysis study (Dayagbil et al., 2021), with a mixed-method design, involving 3,989 respondents: students and staff. It found a mismatch between adjustments made by the teachers in teaching and learning designs and students´ capacity to comply with the learning activities and requirements. The results from the study provided the team with a contextual basis for strategic actions amid and beyond the pandemic at the institution. Similarly, in a larger-scale investigation into teaching and learning in higher education institutes in eight countries during the pandemic (Bartolic et al., 2022), faculty staff reported feeling overwhelmed that more effort had to be put in to support the continuity of the quality of teaching and learning. All in all, the study addresses the short-term, immediate but important effects.

A large part of literature regarding the pandemic and higher education quality has addressed the issues of student satisfaction, attitudes and motivation. It is thought that the most important gauge of a good learning environment is whether students can foster their own motivation during the prolonged crisis. Various factors that affect students' motivation have been put forward. Results from Stevanović et al. (2020) showed that demographic points of the educational cycle (years 1, 2, 3 & 4) correlated with students´ motivation during the pandemic. That is, the more experienced and older students found it less stressful to transition into their new methods of studying, learning goals and learning outcomes. A study by Zheng et al. (2020) that explored the relationship between personality and social capital during the COVID-19 pandemic suggested that digital learning experience can provide an opportunity for universities to determine the effectiveness of online classes, as well as emphasising student personality factors to be most crucial.

The conclusions from the different studies are largely unanimous: COVID-19 contributed to poorer teaching quality for many students. One study conducted at a German university (Händel et al., 2022) reported that, during the summer semester 2020, students who had good access to the digital facilities available to them were found to be satisfied with the emergency remote learning. They further reported that students who were readily prepared for digital

learning through their familiarity with using the equipment and had prior experience and skills for digital learning reported less tension, overload and worries, as well as less social and emotional loneliness. Another interesting study from Sweden (Warfvinge et al., 2022) found that, overall, university students´ experience of emergency remote learning was generally poor and that female students felt more prepared and positive about online teaching, as they gradually developed the necessary skills for groupwork, assignments, communication and planning. One study from Iran (Khari et al., 2024) stresses that it is crucial to consider students´ educational needs and to work on strengthening virtual education where it falls short. In its statistical analysis, the study showed that older students and male students were found to be linked with better academic performance.

To understand the impact of the university closures from spring 2020 through to winter 2022, we utilised course evaluations from the University of Stavanger (UiS) from 2020 to the end of 2021, as the foundation for our analysis. The course evaluation questionnaires were developed by UiS and are used to characterise the quality of courses and teaching. During this period, approximately 19,000 course evaluations were completed by students and submitted to the Division of Education at UiS.

The remainder of this article is structured as follows. In Section 3, the data collection is presented. Section 4 describes the empirical approach, while the results are presented in Section 5. The discussions are provided in Section 6. Finally, in Section 7, we draw some conclusions.

DATA COLLECTION

Since 2020, under the auspices of the Division of Education, the University of Stavanger has sent out course evaluations to students for every course completed at the end of each term. At UiS, there are two terms, spring and autumn. The course evaluations used in the period 2020-2021 are largely the same, with some minor changes. Table 1 shows the evaluation questions and the changes.

Table 1

Course evaluation survey questions at the University of Stavanger in the period 2020-2021

1. To what extent do you think that the teaching and learning method of the course contributes to your learning?
2. To what extent do you think the teaching in this course conveys the teaching material in an understandable way?
3. To what extent are you satisfied with the subject teacher's use of digital tools in teaching?
4. How many hours do you work on the course per week (including preparation, lectures, practice hours, seminars and lab)? In the Spring 2020 survey, a slightly modified question was used: How many hours do you work on the course per week (including preparations, lectures, practice hours, lab)?
5. To what extent do you think that the subject teacher(s) are well prepared for teaching?

6. To what extent do you receive feedback and guidance from the subject teacher(s)? In the Spring 2020 survey, a slightly modified question was used: To what extent are you satisfied with the scope of feedback and guidance from the subject teacher(s)?
7. To what extent are you satisfied with the learning environment of the course? In the Spring 2020 survey, a slightly modified question was used: To what extent does the course contribute to a good learning environment?
8. How satisfied are you overall with the course? This question was not included in the Spring 2020 survey.

Table 2 shows the response alternatives for Questions 1-3 and 5-7.

Table 2

Response alternatives for questions 1-3 and 5-7

Spring 2020	Autumn 2020 – Spring 2021 – Autumn 2021
To a small extent – 1	Not at all – 1
To some extent – 2	To a small extent – 2
To a large extent – 3	To neither a large nor small extent – 3
To a very large extent – 4	To a large extent – 4
Not applicable – 5	To a very large extent – 5
Don't know – 6	Don't know – 6

In Question 4, there are just minor changes in the response alternatives. From Autumn 2020 until Autumn 2021, six categories were used, with the score 1-5 corresponding to 1 = 0-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = More than 25 hours. It is worth noting that, in Spring 2020, the categories for Question 4 were defined differently, with some overlapping ranges, such as: 1 = 0-5 hours, 2 = 5-10 hours, 3 = 10-15 hours, 4 = 15-20 hours, 5 = 20-25 hours, 6 = More than 25 hours.

Question 8 asks about students' satisfaction with the course, and the response alternatives 1-6 correspond to the following satisfaction levels: 1 = Not satisfied at all, 2 = Little satisfied, 3 = Neither satisfied nor dissatisfied, 4 = Satisfied, 5 = Very satisfied, 6 = Don't know.

For the course evaluations conducted, we collected a total of 19,231 responses. In the spring and autumn semesters of 2020, 4,824 and 5,987 evaluations were obtained, respectively. For the spring and autumn semesters of 2021, 3,165 and 5,255 course evaluations were submitted by the students, respectively. The response rates for each semester were: 20% and 21% for the spring and autumn semesters of 2020, and 20% and 22% for the spring and autumn semesters of 2021, respectively.

An overview of the number of course evaluations received for each faculty at UiS is given in Table 3. UiS consists of six faculties, which are the Faculty of Health Sciences (HS), the Faculty of Social Sciences (SS), the Faculty of Science and Technology (ST), the Faculty of Education and Humanities (EH), the Faculty of Performing Arts (PA) and the Norwegian School of Management at UiS (SM). Additionally, UiS also includes a department for continuing and

further education (CFE). However, as we had limited respondents, we did not include the data for CFE and PA in our analysis.

Table 3

The number of course evaluations received in the period 2020-2021

Year	Semester	Number of course evaluations received							
		UiS	ST	SS	EH	CFE	SM	HS	PA
2020	Spring	4824	1400	892	1449	105	390	342	246
	Autumn	5987	1933	1044	1491	0	960	519	40
2021	Spring	3165	1058	297	908	0	605	186	111
	Autumn	5255	1692	1172	988	0	1160	243	0

The results from the course evaluations were published on the UiS-Intranet, meaning that anyone with a UiS employee user account could access them. The results are given as an average score for the questions asked. Information can be retrieved at subject-, study programme-, department- and faculty levels.

As a basis for our analyses, we received all the raw data in the period of 2020-2021 from the Division of Education, Section for Quality and Development in Education. A systematisation of the raw data, to make them more reader-friendly, was carried out by the IT department at UiS.

EMPIRICAL APPROACH

As a basis for studying changes in student satisfaction with teaching and learning quality over time, we first present a table showing the average score for the course evaluation survey questions in the period from the spring semester 2020 to the autumn semester 2021. A complication arises due to the fact that the spring semester of 2020 utilised a 4-point scale (ranging from "1: To a small extent" to "4: To a very large extent"), whereas the other three semesters used a 5-level scale (ranging from "1: Not at all" to "5-: To a very large extent"). When calculating the average score for questions 1-3 and 5-7 during the spring of 2020, responses of "5: Not applicable" and "6: Don't know" were excluded. Similarly, for the last three semesters, responses of "6: Don't know" were disregarded.

To monitor development over time, we first converted the 5-level scale to the 4-level scale used in the spring semester 2020, as outlined in Table 4.

Table 4

Transformation of the 5-level scale to a 4-level scale.

Spring 2020	Autumn 2020 – Spring 2021 – Autumn 2021
To a small extent – 1	Not at all – 1
To some extent – 2	To a small extent – 2
To a large extent – 3	To neither a large nor small extent – 3
To a very large extent – 4	To a large extent – 4
Not applicable – 5	To a very large extent – 5
Don't know – 6	Don't know – 6

Category 5 in the autumn 2020, spring 2021 and autumn 2021 semesters corresponds with Category 4 in the spring of 2020. Similarly, Category 4 for the last three semesters is equivalent to Category 3 in the spring semester of 2020. Further, Category 2 in the last three semesters is equivalent to Category 1 in the spring semester of 2020. Finally, responders choosing Category 1 in the last three semesters would have to express this meaning by choosing Category 1 in spring 2020. We thus end up with the conversion displayed in Table 4.

We decided to calculate the average score for the different questions by also using another transformation approach. In the alternative transformation, we convert the 4-point scale to a scale that could be compared with the 5-point scale. To achieve this, we equated a score of 1 on the 4-point scale to 1.5. Similarly, a score of 2 on the 4-point scale was equated to 2.5, as it can contribute to setting a score of either 2 or 3 on the 5-point scale. Following this approach, a score of 3 was equated to 3.5, while a score of 4 was equated to 4.5.

Using different transformation rules contributes to more robust results and provides a check of the sensitivity of the results to the transformations. To formally test whether there are statistically significant differences between the semesters in the distribution of the response categories, chi square tests are used. To give an efficient summary measure of the results, we report an average category score, although this means averaging over a categorical score.

RESULTS

Table 5 shows the average score based on the transformation rules given in Table 4 for the different course evaluation survey questions for UiS in the period 2020-2021. In the table, we write "-" to show that Q8 was not included in the course evaluation survey in the spring semester of 2020.

Table 5

Average scores for the course evaluation survey questions for the University of Stavanger in the period 2020-2021

UiS								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.7	2.7	2.8	2.8	3.0	2.7	2.9	-
Autumn 2020	2.6	2.6	2.6	2.8	3.1	2.3	2.6	2.6
Spring 2021	2.5	2.5	2.6	2.8	3.1	2.4	2.4	2.6
Autumn 2021	2.6	2.6	2.6	2.8	3.1	2.2	2.6	2.6
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.21

The category distribution for the overall data in Table 5 is given in Figure 1. In Table 6 we show the scores for each faculty.

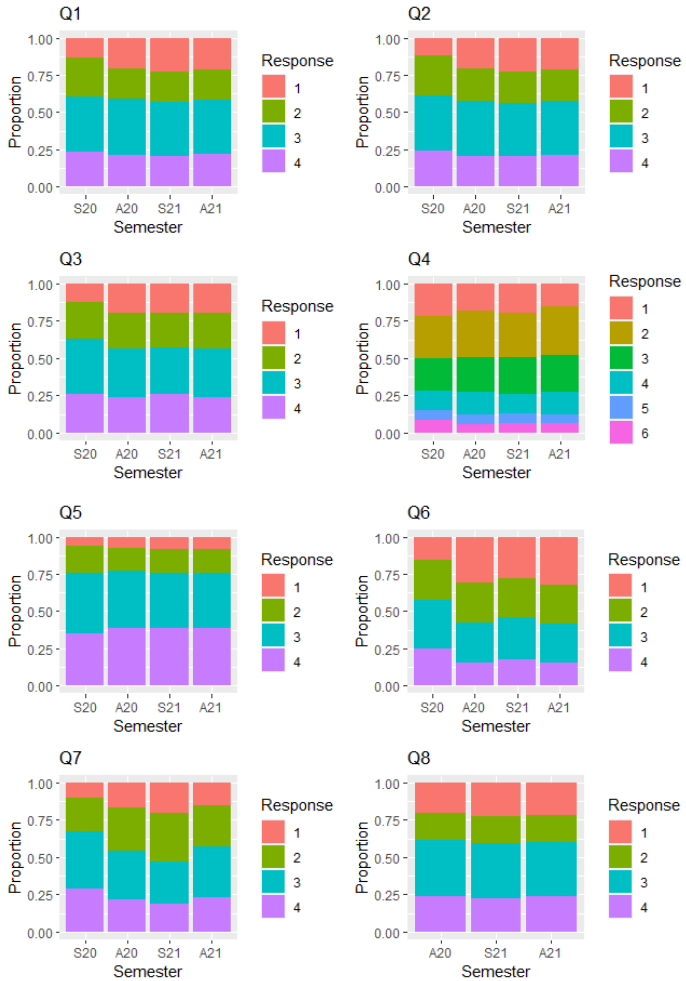

Figure 1 Plot showing the full category distribution for the overall data. The plot is shown for UiS.

Based on these results, students tend to report similar levels of satisfaction across all questions and for all four semesters, including in each faculty of UiS and at the university as a whole. Although the differences between semester for many questions are statistically significant, the differences are small. Due to the large sample size, even minor differences, of little practical impact, become statistically significant here. We also observe that the main tendency to a difference we see lies in the proportion of answers in category 1. These tend to be less frequent spring 2020, which can very well be explained by the different scale used this spring. The rescaling we have done for the later semesters, merging the two lowest categories, might reasonably well explain the slight increase in responses in category 1 for the three last semesters.

Table 6

Average scores for the course evaluation survey questions for the University of Stavanger in the period 2020-2021. The results are presented for the different faculties at UiS

UH								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.8	2.8	2.8	2.7	3.1	2.8	3.0	-
Autumn 2020	2.7	2.7	2.7	2.7	3.2	2.5	2.8	2.8
Spring 2021	2.5	2.6	2.6	2.6	3.1	2.4	2.5	2.6
Autumn 2021	2.7	2.7	2.6	2.8	3.2	2.5	2.8	2.7
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TN								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.8	2.8	2.9	2.8	3.1	2.7	2.8	-
Autumn 2020	2.6	2.6	2.7	2.8	3.1	2.4	2.6	2.6
Spring 2021	2.6	2.5	2.7	2.9	3.0	2.4	2.4	2.6
Autumn 2021	2.7	2.6	2.7	2.8	3.1	2.4	2.7	2.7
p-value	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.025
UK								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.1	3.1	3.0	2.2	3.3	3.0	3.2	-
Autumn 2020	3.3	3.2	3.1	2.2	3.5	2.7	3.2	3.2
Spring 2021	3.0	2.9	3.0	1.5	3.2	2.3	3.1	3.0
Autumn 2021	-	-	-	-	-	-	-	-
p-value	0.20	0.073	0.18	<0.001	0.77	<0.001	0.51	0.40
SV								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.5	2.6	2.6	2.7	2.9	2.5	2.6	-
Autumn 2020	2.6	2.6	2.5	2.6	3.1	2.1	2.5	2.6
Spring 2021	2.2	2.3	2.4	2.6	3.0	2.1	2.3	2.3
Autumn 2021	2.5	2.6	2.5	2.6	3.1	2.1	2.5	2.6
p-value	<0.001	<0.001	0.040	0.12	0.002	<0.001	<0.001	<0.001
HV								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.6	2.7	2.6	3.5	2.9	2.5	2.8	-
Autumn 2020	2.3	2.3	2.3	3.2	2.8	1.8	2.5	2.5
Spring 2021	2.1	2.3	2.1	2.9	2.7	1.8	2.2	2.2
Autumn 2021	2.5	2.6	2.5	3.8	2.8	1.6	2.5	2.6
p-value	<0.001	<0.001	<0.001	<0.001	0.056	<0.001	<0.001	0.005
HH-UiS								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	2.6	2.6	2.7	2.9	2.9	2.5	2.7	-
Autumn 2020	2.4	2.4	2.6	2.9	3.0	2.2	2.4	2.5
Spring 2021	2.6	2.6	2.8	2.9	3.2	2.5	2.5	2.7
Autumn 2021	2.5	2.5	2.6	2.9	2.9	2.2	2.5	2.5
p-value	0.004	<0.001	0.015	0.012	<0.001	<0.001	<0.001	0.002

To ensure the robustness of the results presented above, we have utilised a previously described alternative transformation method, in which the different scores on the 4-point scale are converted to scores equivalent to 1.5, 2.5, 3.5 and 4.5. The average scores for UiS and its different faculties when using these transformation rules are given in Tables A.1 and A.2 in Appendix A.

DISCUSSION

No change in teaching and study quality during COVID-19

The results in this article show that there are small differences in student satisfaction across all questions and for all four semesters. These results might differ from what one might expect, since changing the lectures from traditional teaching on campus to fully digitally lectures overnight could be difficult to handle for many university teachers. Such changes could have contributed to low student satisfaction at the beginning of the pandemic but to gradually higher student satisfaction as university teachers gained more knowledge in digital teaching. There are several reasons for the results being as they are. One reason could be the online teaching and learning platforms used. Such platforms are designed so that students can continue with their studies seamlessly, despite the teaching changing from lectures on campus to full digital teaching. The ease with which students adapted to online learning can be substantiated by findings from recent studies. Händel et al. (2022) noted that students with good access to digital facilities were satisfied with emergency remote learning. Additionally, Warfvinge et al. (2022) found that students who were familiar with using digital equipment and had prior experience and skills in digital learning reported less tension.

Another reason for no changes in teaching and study quality during the pandemic could be due to continuous efforts made by university teachers to help students with their online learning throughout the whole pandemic period. This effort could have relieved possible online-study fatigue among students during the period of the pandemic. From a positive perspective, the pandemic has encouraged innovative approaches in education, increasing the comfort levels of both professors and students with active learning pedagogies, including remote teaching and learning (Kim & Maloney, 2021).

A third potential explanation for the results is that students may have taken into consideration the challenges that their university teachers faced when teaching online during the pandemic, which may have influenced their response to the teaching and study quality surveys. For instance, the students may have reported better study and teaching quality than would have been the case without the teaching requirements brought about by the pandemic. With reference to this, one should be aware that the students' responses to teaching and study quality during the pandemic can be misleading, as they do not necessarily fully reflect their opinions of the teaching and study quality during the pandemic period.

A fourth reason for these results could be that today's students have high technological competence, combined with being resilient to change. A change in study routines where one quickly had to switch from lectures on campus to fully digital studies may then have had little

effect on students' experience of the teaching and the quality of studies, even with possible initial difficulties. One will then arrive in a situation where students' view of study quality is only affected to a small extent during the pandemic period. We can see this as another example of human adaptability, resilience, and inspiration, demonstrating how we can shape the new normal through our collective efforts to adapt (Gonik, 2021).

From the above, we have highlighted several potential reasons for the lack of change in teaching and study quality reported by students during the pandemic. Based on our analysis, we do not know which factor is the most or least important, but it is likely that the reason for students reporting similar levels of satisfaction across all questions and for all four semesters might be a combination of the above-mentioned factors.

Transformation rules

To better understand the "right" calibration between the 4-point scale from spring 2020 and the 5-point scale used in the following semesters, we could have organised a study in which many students evaluated courses by using both the 4-point and the 5-point scales. This has not been done, for logistical reasons and since the results obtained with different transformation rules were similar.

Response rate

The response rate in this study is approximately 20% for all semesters. We recognise that the response rate is low and introduces potential bias into our results. As the response rate is low, it restricts the ability to generalise from the results, as those who did not participate in the study could differ from those who did participate. Nevertheless, we believe that our study could be a good example of making use of the data available, with the capability to generate insights for future practice. From these data, we can say something about change over time among the part of the student populations the responders represent.

CONCLUSION

Student surveys play an important role in formative assessment, providing valuable feedback to enhance the student learning experience. Their responses not only help identify the effectiveness and shortcomings in online learning but also serve as evidence to guide improvements in teaching methods, facilities, teaching mechanisms and the learning environment. This structured feedback enables educators to tailor their approaches effectively, ensuring students benefit optimally. At the university level, these surveys also gauge expectations, attitudes and coping skills within the community, offering insights into the institution's resilience in managing crises or disasters and its ability to recover swiftly. Integrating formative assessment into this process further supports ongoing adaptation and the enhancement of educational strategies to meet evolving challenges.

Lastly, to further leverage this feedback, universities should consider implementing regular survey cycles, ensuring that data are consistently gathered and analysed to track progress and

identify emerging issues. Additionally, involving students in the feedback process through focus groups and forums can provide deeper insights and foster a sense of ownership and engagement. Furthermore, feedback can inform the teacher development programmes in higher education, focusing on the areas needing improvement as highlighted by the surveys. This targeted approach not only enhances the quality of teaching but also promotes a culture of continuous improvement. By using this feedback to inform policy changes and strategic planning, universities can better adapt to future challenges, ensuring a resilient and responsive educational environment.

ACKNOWLEDGEMENTS

We would like to thank Marit Cecilie Farsund and Jon Bjelland at the University of Stavanger, who have given us access to the raw data on which this study is based.

THE AUTHORS

Eirik Bjorheim Abrahamsen is a professor in risk management at the University of Stavanger, Norway. He received his PhD in risk management in 2006. In addition, he holds a master's degree in offshore technology, as well as a master's degree in industrial economics. His research covers a broad spectrum of topics within risk analysis and risk management. The last years strong attention has also been given to research on topics within teaching, learning and supervision in higher education.
eirik.b.abrahamsen@uis.no

Pattamawan Jimarkon is an associate professor in higher education pedagogies at Uniped, University of Stavanger, Norway. She is a teacher trainer, applied linguist and discourse analyst. She specialises in issues of language and interculturality and their relevance in teaching in higher education. Her research is centred around understanding how language is produced, taking into account both the linguistic content and its sociolinguistic context.
pattamawan.jimarkon@uis.no

Jan Terje Kvaløy is a professor in statistics at the University of Stavanger, Norway. He received his PhD in mathematical statistics from the Norwegian University of Science and Technology in 1999, and a masters degree in industrial mathematics from the same university in 1994. His research is in various fields of theoretical and applied statistics, namely survival analysis, statistical process control, medical statistics, as well as applications in risk and reliability, engineering and pedagogy.
jan.t.kvaloy@uis.no

Håkon Bjorheim Abrahamsen has an interdisciplinary background both as an engineer in Medical Technology/ Cybernetics and as a physician. He is an adjunct professor in Patient Safety at the University of Stavanger, Norway. He has also gained a specialist registration in anaesthesiology and works as a consultant anaesthesiologist in the Department of Anaesthesiology and Intensive Care at Stavanger University Hospital. He has broad-based clinical experience in pre-hospital and in-hospital emergency medicine and preparedness. His research focuses on human factors and patient safety as well as foundational issues in risk management and risk analysis.
hakon.b.abrahamsen@uis.no

REFERENCES

Abrahamsen, E. B., Jimarkon, P., Kvaløy, J. T., & Abrahamsen, H. B. (2023). Utilizing students' feedback to ensure quality in teaching and learning: A lesson from COVID-19. *rEFLections, 30*(1), 1–11. https://doi.org/10.61508/refl.v30i1.262976

Bartolic, S. K., Boud, D., Agapito, J., Verpoorten, D., Williams, S., Lutze-Mann, L., Matzat, U., Moreno, M. M., Polly, P., Tai, J., Marsh, H. L., Lin, L., Burgess, J. L., Habtu, S., Rodrigo, M. M. M., Roth, M., Heap, T., & Guppy, N. (2022). A multi-institutional assessment of changes in higher education teaching and learning in the face of COVID-19. *Educational Review, 74*, 517–533. https://doi.org/10.1080/00131911.2021.1955830

Daniel, D. (2021). After COVID-19: Can quality teaching be sustained? *Change: The Magazine of Higher Learning, 53*(2), 6–10.

Dayagbil, F. T., Palompon, R. D., Laurence, L. G., & Olvido, J. M. M. (2021). Teaching and learning continuity amid and beyond the pandemic. *Frontiers in Education, 6*, Article 678692. https://doi.org/10.3389/feduc.2021.678692

Gonick, L. (2020). Scaling silver linings: Change and sustainability in a pandemic. *Change: The Magazine of Higher Learning, 53*(1), 18–21. https://doi-org.ezproxy.uis.no/10.1080/00091383.2021.1850116

Händel, M., Stephan, M., Gläser-Zikuda, M., Kopp, B., Bedenlier, S., & Ziegler, A. (2022). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the COVID-19 pandemic. *Journal of Research on Technology in Education, 54*(2), 267–280. https://doi.org/10.1080/15391523.2020.1846147

Khari, S., Akinabadi, A. S., Zarmehrparirouy, M., Pazokian, M., Moghadam, A. N., Ashtari, M., Abdali, M., Hashemi, K., & Ashtari, S. (2024). Student views on course quality and virtual education during COVID-19: Impact on academic performance. *International Journal of Health Promotion and Education*. Advance online publication. https://doi.org/10.1080/14635240.2024.2331483

Kim, J., & Maloney, E. (2021). Six post-COVID-19 provocations. *Change: The Magazine of Higher Learning, 53*(4), 57–64. https://doi.org.ezproxy.uis.no/10.1080/00091383.2021.1930985

Smimou, K., & Dahl, D. W. (2011). On the relationship between students' perceptions of teaching quality, methods of assessment, and satisfaction. *Journal of Education for Business, 87*(1), 22–35. https://doi.org/10.1080/08832323.2010.550339

Stevanović, A., Božić, R., & Radovic, S. (2020). Higher education students' experiences and opinion about distance learning during the Covid-19 pandemic. *Journal of Computer Assisted Learning, 37*(6), 1682–1693.

Warfvinge, P., Löfgreen, J., Andersson, K., Roxå, T., & Åkerman, C. (2022). The rapid transition from campus to online teaching – How are students' perception of learning experiences affected? *European Journal of Engineering Education, 47*(2), 211–229. https://doi.org/10.1080/03043797.2021.1942794

Zheng, F., Khan, N. A. & Hussain, S. (2020). The COVID-19 pandemic and digital higher education: Exploring the impact of proactive personality on social capital through internet self-efficacy and online interaction quality. *Children and Youth Services Review, 119*, Article 105694. https://doi.org/10.1016/j.childyouth.2020.105694

Appendix A

Table A.1

Average scores for the course evaluation survey questions for the University of Stavanger in the period 2020-2021

UiS								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.2	3.2	3.3	2.8	3.5	3.2	3.4	-
Autumn 2020	3.5	3.5	3.5	2.8	4.1	3.1	3.5	3.6
Spring 2021	3.5	3.5	3.6	2.8	4.0	3.3	3.4	3.5
Autumn 2021	3.5	3.5	3.5	2.8	4.0	3.1	3.6	3.5

Table A.2

Average scores for the course evaluation survey questions for the University of Stavanger in the period 2020-2021. The results are presented for the different faculties at UiS

UH								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.3	3.3	3.3	2.7	3.6	3.3	3.5	-
Autumn 2020	3.7	3.7	3.7	2.7	4.2	3.4	3.8	3.8
Spring 2021	3.5	3.5	3.5	2.6	4.1	3.3	3.4	3.6
Autumn 2021	3.7	3.6	3.6	2.8	4.2	3.4	3.8	3.7
TN								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.3	3.3	3.4	2.8	3.6	3.2	3.3	-
Autumn 2020	3.6	3.5	3.6	2.8	4.0	3.2	3.5	3.6
Spring 2021	3.5	3.4	3.6	2.9	3.9	3.3	3.3	3.5
Autumn 2021	3.6	3.5	3.6	2.8	4.0	3.3	3.6	3.6
SV								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.0	3.1	3.1	2.7	3.4	3.0	3.1	-
Autumn 2020	3.5	3.5	3.4	2.6	4.1	2.9	3.5	3.6
Spring 2021	3.2	3.2	3.3	2.6	3.9	2.9	3.2	3.2
Autumn 2021	3.5	3.5	3.4	2.6	4.0	2.9	3.5	3.5
HV								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.1	3.2	3.1	3.5	3.4	3.0	3.3	-
Autumn 2020	3.2	3.3	3.2	3.2	3.8	2.6	3.4	3.4
Spring 2021	3.0	3.2	3.0	2.9	3.6	2.7	3.1	3.1
Autumn 2021	3.4	3.6	3.5	3.8	3.8	2.4	3.5	3.5
HH-UiS								
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Spring 2020	3.1	3.1	3.2	2.9	3.4	3.0	3.2	-
Autumn 2020	3.4	3.4	3.5	2.9	4.0	3.1	3.3	3.4
Spring 2021	3.6	3.6	3.8	2.9	4.2	3.4	3.5	3.6
Autumn 2021	3.4	3.4	3.5	2.9	3.9	3.1	3.5	3.4