

What Makes an Online Exam an Exam? Student Perspectives on Assessment Practices at a Major Online University in the Pre-Gen AI era

Maria Aristeidou¹, Simon Cross¹, Klaus-Dieter Rossade², Carlton Wood³, Terri Rees¹ and Patrizia Paci³

¹Institute of Educational Technology, The Open University, Milton Keynes, UK

²Faculty of Wellbeing, Education and Language Studies, The Open University, Milton Keynes, UK

³Faculty of Science, Technology, Engineering and Mathematics, The Open University, Milton Keynes, UK

maria.aristeidou@open.ac.uk (corresponding author)

simon.j.cross@open.ac.uk

klaus-dieter.rossade@open.ac.uk

carlton.wood@open.ac.uk

terri.rees@open.ac.uk

patrizia.paci@open.ac.uk

<https://doi.org/10.34190/ejel.23.4.4456>

An open access article under [CC Attribution 4.0](https://creativecommons.org/licenses/by/4.0/)

Abstract: Several universities are evaluating the feasibility of adopting permanent online exam programmes, emphasising the need to assess their decisions and allocate appropriate resources to develop sustainable exam systems. Existing literature on online exams has primarily focused on closed-ended exam formats with immediate feedback, often overlooking other exam types and, importantly, the experiences of distance-learning students. Moreover, most studies concentrate on the perspectives of on-campus students, leaving a gap in understanding for students studying remotely. This study addresses this gap by examining distance-learning students' experiences as they transition from traditional in-person exams to uninvigilated remote online open-book/open-web (OBOW) exams, prior to the widespread adoption of generative artificial intelligence (GenAI). Thus, the study captures student experiences and institutional practices in a pre-GenAI landscape, unaffected by AI-generated content. As part of a larger project involving 562 distance-learning students, we conducted semi-structured interviews with 30 participants three years after the outbreak of the Covid-19 pandemic. Thematic analysis focused on three main areas: (a) students' considerations regarding the place and time of taking remote online exams; (b) their understanding of the changing nature of exams in the online context; and (c) reflections on controlling the exam environment, with particular focus on invigilation and exam integrity issues and challenges faced by students. Key findings indicate that students valued greater flexibility, control, and accessibility in remote online exams but expressed anxiety regarding technology reliability. Unexpectedly, gender differences emerged in perceptions of cheating and exam integrity, with female students emphasising personal learning value and male students expressing greater concern about cheating opportunities. Additionally, confusion existed among students regarding what qualifies as an exam under new flexible formats. These findings contribute to the theoretical understanding of online assessment by highlighting the complex interplay of authenticity, trust, fairness, and learner autonomy. They also point to practical challenges and opportunities in designing equitable, flexible, and sustainable assessment models for higher education. The study's contributions include illuminating the underexplored perspectives of distance learners in OBOW contexts and pre-GenAI environments, informing policy and pedagogy as universities continue to adapt assessment in increasingly online and hybrid landscapes. These insights guide the development of institutional practices that balance technology, pedagogy, and student-centred design to enhance fairness and student confidence.

Keywords: Higher education, Online assessment, Remote online exams, Distance learning, Student experience

1. Introduction

The role, status and method of conducting examinations in Higher Education (HE) have been scrutinised following the Covid-19 pandemic with heightened attention to access, inclusivity, integrity, authorship, and authenticity in assessment. The move to remote, online formats has prompted universities globally to reassess assessment structures, often resulting in a spectrum of solutions that blend formative and summative elements (Heil and Ifenthaler, 2023). While online exams can offer a viable alternative to in-person assessment (Werhner, 2018; Peytcheva-Forsyth and Aleksieva, 2021; Spiegel and Nivette, 2023), recent systematic reviews highlight that effective implementation depends on the synthesis of technology, pedagogical design, and student-centred

adaptation (Heil and Ifenthaler, 2023; Tahir et al., 2025). Such developments also prompt deeper discussion about the ontological boundaries of ‘exam’ – as conventions once rooted in control and invigilation are being replaced by practices that value flexibility and accessibility (Aristeidou et al., 2024). This ‘exam’ discussion prompts further exploration of the examination’s place concerning accreditation, pedagogy, and location and delineates the boundary between exam and ‘not-exam’.

The literature on ‘online exams’ (which can include both digital exams taken in person and remotely) often defines the boundary between exams and ‘not-exam’ based on the levels of process control, knowledge access, and methods of oversight (Heil and Ifenthaler, 2023). Central themes include the permitted time window, resource accessibility, and structure of invigilation – including emerging forms of digital proctoring (Han, Nikou and Ayele, 2024). However, a noticeable gap persists in examining transitions experienced by distance learners – particularly as most recent scholarship and practice remain focused on on-campus, closed-book formats or digital assessment in hybrid contexts (Aristeidou et al., 2024). This study addresses that gap by foregrounding the experiences of distance-learning students as they navigate the shift from in-person, invigilated exams to uninvigilated OBOW remote online formats at scale. We use ‘remote online exam’ to refer to end-of-course summative activities (described in the methodology section) that, in a face-to-face context, would be described as an ‘exam’ conducted remotely (on paper or digitally) and submitted online. This is not a fixed definition but rather one that research, such as this study, needs to refine further by examining the variety of assessment tasks and activities that meet this broad description.

Building on this conceptual framing, this study is guided by the following primary research question:

“What are the perceptions and experiences of distance-learning students regarding the transition to uninvigilated Open Book Open Web (OBOW) remote online exams at The Open University?”

1.1 Remote Online Exams

Emerging studies suggest that distance learning students often express favourable attitudes towards online exams taking place remotely, citing effectiveness, reliability, and accessibility (Ilgaz and Afacan Adanır, 2020; Aristeidou et al., 2024). Yet, recent reviews reveal that positive acceptance is not universally distributed, with students who report disabilities, mental health concerns or lack of requisite technology facing persistent barriers (Heil and Ifenthaler, 2023; Aristeidou et al., 2024). Recent cluster analysis confirms that factors such as assessment competency, workspace satisfaction and tailored support are critical for reducing anxiety and enhancing satisfaction in online assessment environments (Aristeidou et al., 2024).

Contemporary research also highlights the pedagogical potential of remote exams: closed-ended formats can encourage feedback and reflection (Whitelock, 2006; Dermo, 2009; Dreher, Reiners and Dreher, 2011; Hodgson and Pang, 2011; Spector et al., 2016). OBOW approaches specifically foster higher-order skills by inviting practical application of knowledge in authentic contexts and reducing academic dishonesty (Williams and Wong, 2009; Slack and Priestley, 2023; Spiegel and Nivette, 2023). This design paradigm supports academic integrity by shifting away from rote memorisation toward real-world problem-solving while simultaneously boosting student confidence.

Despite the positive student attitudes and pedagogical potential, significant challenges remain. Technical issues, such as inconsistent internet access and device reliability, disproportionately impact many students, particularly those who are less technologically confident (James, 2016; Topuz and Kinshuk, 2021). Older students, for example, often exhibit greater hesitancy toward new exam technologies, although repeated exposure may improve acceptance (Froehlich et al., 2023). Supportive preparation and familiarisation with exam platforms are essential for equity.

Additionally, technological innovations sometimes exacerbate exam stress, with features like visible countdown timers and privacy concerns contributing to anxiety (Choi, Song, and Zaman, 2020; Novick et al., 2022). The stigma of suspicion toward ‘cheating’ fosters distrust among students and faculty, undermining engagement (Lee and Fanguy, 2022). Further, individual factors such as gender and discipline shape stress experiences, demanding student-centred approaches prioritising well-being (Elsalem et al., 2020; St-Onge et al., 2022).

Moreover, trust and integrity remain central challenges. Issues with verifying identities and preventing misconduct are persistent concerns (Muzaffar et al., 2021). The cost-effectiveness and ethical acceptability of digital proctoring, as well as the reliability of anti-plagiarism software, remain under scrutiny (QAA, 2021). Notably, student trust in academic misconduct deterrents remains low, with less than 20% confidence reported in some studies (Peytcheva-Forsyth and Aleksieva, 2021). Accordingly, a well-structured assessment design that

is sensitive to these challenges—such as tool selection, question design, and robust monitoring—is critical (St-Onge, 2022).

A critical gap persists in understanding and addressing the needs of underrepresented student groups in online exam settings, including distance learners, students with disabilities, older learners, and those with caregiving responsibilities or limited technology access (Heil and Ifenthaler, 2023; Aristeidou et al., 2024). Importantly, comparative data from The Open University confirm that these inequities persist in both acceptance and experience among these groups (Aristeidou et al., 2024), underscoring that progress in equitable assessment remains incomplete.

This growing body of evidence increasingly situates these disparities within the wider contexts of assessment authenticity, inclusivity, and student well-being. Consequently, emerging best practices advocate for formative assessment opportunities, transparent communication, and empowerment of learner choice as essential strategies to reduce anxiety and foster engagement (Rossade et al., 2022; JISC, 2025). Thus, effective online exam design must strike a thoughtful balance between technological capability and ethical, inclusive, pedagogically sound principles to support all learners equitably.

Reflecting these themes in practice, comparative studies at The Open University where this study took place reveal little change in revision patterns across most metrics relative to the pre-pandemic era, including learning benefits, enjoyment, and institutional support. However, students reported feeling less anxious during online exam revision and expressed higher satisfaction with the exam environment despite acknowledging associated challenges (Aristeidou et al., 2024). Furthermore, prior research at the same institution also highlights an interconnection between factors such as assessment competencies and acceptance of invigilation approaches, particularly noting that certain groups—those with disabilities, caregiving responsibilities, mental health concerns, or limited technology access—exhibit lower acceptance of online exams (Aristeidou et al., 2024) These findings reinforce the critical importance of bolstering student preparation, confidence, and assessment skills as foundational to advancing equitable and effective online assessment.

1.2 Research Purpose

Motivated by a need to understand how distance-learning students perceive recent trends away from in-person exams and towards remote online exams, this study focuses on the student experience at one large European distance-teaching university during a period of major adjustment and trialling various un-invigilated online exam formats. The study examines key dimensions of this change, including the impact on student well-being and associated concerns. This represents an early study into distance learning university students' narratives about transitioning from a fixed in-person format to OBOW remote online exams. The nature of OBOW will vary across an institution, so it is important to gather a range of views from across disciplines and specific implementations. This work raises questions for and contributes to ongoing research on the boundaries between traditional exams and alternative assessment methods.

2. Methodology

2.1 Context and Settings

The Open University where the study took place has a tradition of distance learning at scale centred around independent learning using course materials via virtual learning environments (VLE) supplemented by tutor support, online tutorials, and small tutorial group interaction. Until 2020, assessments usually included continuous summative (with formative feedforward) online assessments and final summative assessments, which were either face-to-face exams or other coursework submitted online. Approximately 24% of courses end in exams involving over 20,000 learners annually. In response to, and since 2020, in-person exams were replaced with remote OBOW online exams.

The types of questions included in OBOW exams at The Open University vary across discipline areas, schools, courses and levels of study (Cross et al., 2023). These types range from equations and numerical workings through short answer responses and multiple-choice questions to longer essay or report-style responses. Similarly, the time window when students must start and finish OBOW exams varies from one to seven days. The time permitted to complete the exam varies, similar to conventional exams. Literature indicates that both the exam type (e.g., Novick et al., 2022) and the nature of the submission window and time permitted (e.g., Mumtaz et al., 2022) can significantly impact student perceptions. Variants in each format may offer distinct advantages and drawbacks.

The variations of the OBOW implemented by The Open University constitute a longer-term trend of replacing traditional in-person timed exams with alternatives. Courses that still concluded with an in-person exam are those where academic colleagues responsible for designing and approving assessment determined that an exam was still required or preferred over an alternative end-of-model assessment. All OBOW online remote exams were uninvigilated.

Recent research (Domínguez-Figaredo, Gil-Jaurena and Morentin-Encina, 2022) demonstrates that rapid transitions to online assessment in distance learning universities can significantly affect student performance and perceptions, highlighting challenges and opportunities directly relevant to this study.

It is important to highlight that this study was conducted before the widespread adoption of generative artificial intelligence (GenAI) tools, which have recently emerged as significant factors in shaping online assessments. The exam formats and student experiences reported here, therefore, reflect a pre-GenAI academic environment. Subsequent research will need to explore how the availability of AI-generated content and assistance affects notions of exam integrity, academic honesty, and assessment design.

2.2 Study Design and Sampling

We conducted an embedded mixed-method design (Creswell and Clark, 2018), primarily using qualitative data (interviews) supplemented by quantitative data (surveys). Survey responses contributed to participant selection for interviews. The survey from which interview participants were recruited was administered to a random university-wide sample of students between 24 February and 22 March 2023 and received 562 responses. This included students of any year and faculty at The Open University and those with no prior experience taking exams at the university. Ethics exemption was obtained from the university ethics committee, and participation was voluntary.

Previous research suggests that age (Froehlich et al., 2023), gender, field of study (Elsalem et al., 2020), and disability (Ilgaz and Afacan Adanır, 2020) can significantly impact the online exam experience. Students were, therefore, invited for an interview using a purposive sampling approach intended to ensure the sample would be, as much as possible, representative of the university population across demographics (gender, faculty, age group and declared disability representation), student characteristics and academic performance, and would include students who have taken in-person exams, remote online exams, or both. This helped mitigate disciplinary bias as courses in some subject areas used exams more frequently than others. A sample of 30 people was selected for the interviews and deemed sufficient to provide a good range of learner perspectives. Five additional invitations were sent out to additional candidates/participants with the same characteristics to achieve sufficient representation due to non-responses. The 30 interview participants received thank-you vouchers for their time.

2.3 Data Collection

2.3.1 Survey

As part of the survey, students were presented with various potential online exam interaction options as reported in Cross et al. (2023). Students' responses were expected to be informed by their previous experience of online exams at The Open University or elsewhere, and their perception of the proposed future exam model that will include these interaction options. Students were also asked about their feelings towards taking online exams on a 3-point scale (positive, undecided, or negative feelings) and whether they would prefer online exams over their regular in-person exams (yes/no).

2.3.2 Semi-Structured interviews

The research team developed an interview guide to explore student experience with the current OBOW exam format and technology, and other potential remote online exam formats, as well as students' perceptions of invigilation, cheating, and remote online exam validity. The interview aspects derived from the research team's long-term experience with assessment, remote online exams research, the relevant literature, and as directors or members of the institution-wide assessment programme. Interviews were conducted in Microsoft Teams and audio-recorded for transcription purposes.

2.4 Participants

Thirty students participated in the interviews. Table 1 shows the key characteristics of the group. There were equal numbers of male and female students representing all age groups. Compared to the overall student population, there was an over-representation of students from STEM (53.3%) and FASS (30%). However, this

may reflect the greater use of exams as end-of-module assessments in subjects within these faculties compared to FBL and WELS (where schools did not administer many online exams). The interview sample included seven students (23.3%) with a declared disability similar to the university average. Further information about each interview participant was used to interpret and contextualise interview comments, such as if the comment may have been influenced by the specific type of OBOW experienced.

Table 1: Student information (n = 30)

	n	%		n	%
Gender			Faculty		
Female	15	50%	STEM	16	53%
Male	15	50%	FASS	9	30%
Age group			WELS	3	10%
25 and under	2	6.7%	FBL	2	7%
26-35	8	26.6%	Declared disability		
36-45	8	26.6%	Yes	7	23.3%
46-55	5	16.7%	No	23	76.7%
56-65	3	10%			
66 and over	3	10%			

2.5 Data Analysis

Interviews were transcribed and imported into nVivo (Version 12) along with survey and demographic data relating to the participants. Thematic analysis (Braun and Clarke, 2006) was used to identify, analyse, and report patterns across the dataset whilst being sensitive to the interviewee’s original words and meanings. Analysis followed a six-step approach. Two researchers (Authors A and E) became familiarised with the dataset (step 1) and each independently generated descriptive codes to summarise the data (step 2). The researchers compared codebooks and calculated inter-rater reliability (IRR) as 82% using the Miles et al. (2019) approach (dividing the number of times coders agreed by the total number of times coding was possible). This was considered acceptable. Differences were discussed and resolved through consensus, resulting in an agreed codebook with codes grouped into initial themes where possible. Initial themes were reviewed (step 4) and discussed with the research team to help validate groupings. In step 5, Authors A and B proposed theme names and definitions, which were discussed and agreed upon with the rest of the research team. Finally, findings were refined (step 6) and processed, ready for reporting in the data analysis. This included anonymising names. Each interview quote is followed by the participant’s identifier (R1 – R30). The team revised steps four to six after receiving formal feedback from external reviewers. The final codebook can be found in Table 2:

Table 2: Interview Codebook - Interview themes, codes and description

Main themes	Codes	Description
Considering place and time	Convenience	Avoiding travel, time, and parking-related inconveniences
	Anxiety	Tackling mental health-related issues and in-person anxiety
	Accessibility	Benefits for people with mobility issues
	Flexibility	Taking the exam wherever and sometimes whenever they want
	Sustainability	Not travelling has no emission reduction
	Exam atmosphere	Replicating the experiential value and accomplishment feelings of in-person exams
	Technology concerns	Expressing concerns about poor broadband connection, equipment, failure in using hardware, or software issues
	Other commitments	Catering to childcare or employment commitments

Main themes	Codes	Description
Understanding the changing nature of the exam	Exam types	Commenting on the different exam types (e.g., multiple choice, open book) and their pros and cons.
	Authentic assessment	Discussing how the OBOW style exams resemble real-life situations and cultivate skills
	Comparisons with coursework	Spotting similarities and differences with coursework and discussing exam necessity
	Communication	Suggesting clearer instructions on the differences between the different exam types, formats and submission windows
Controlling the environment: invigilation and exam integrity	Cheating	Expressing different opinions about whether or why students would cheat (pointless or easy to cheat, differences between exam types, individual attitudes)
	Invigilation	Supporting or expressing doubts about different invigilation approaches, their effectiveness and their acceptance.
	Validity & worth of degree	Expressing concerns about a reduction in academic standards, devaluation of exams and issues with potential employers

3. Results

3.1 Online Exams Information

Interviewees said they had engaged in one or more assessment tasks during their OBOW remote online exam. This distribution of tasks was broadly as expected, given the nature of representation from each subject faculty/department (Table 3). When viewed across an institution, remote online exams comprise a variety of different combinations of assessment tasks.

Table 3: Online exam activities

Online exam activities	Interview participants	
	n	%
Equations or other numerical workings	18	60 %
Short answers (paragraph or less)	13	43.3%
Essay (more than a page)	13	43.3%
Long answers (more than a paragraph, less than a page)	11	36.7%
Multiple choice exams	10	33.3%
Producing visual output (drawings, photographs, diagrams)	5	16.7%
Self-reflection	2	6.7%
Producing audio output (recording or live)	1	3.3%
Translation	1	3.3%

The period in which students could complete their exams (the period between the start and end) varied. This, in part, reflected variability in subjects and assessment design decisions of course teams. The following table shows the submission windows for the exams taken by students – noting that a student may have taken more than one type of exam (Table 4).

Table 4: Submission windows

	Interview participants	
	n	%
7-day or more submission window	7	23.3%
3-day submission window	7	23.3%
24-hour submission window	9	30%
Timed exams – to be completed within 2-4.5 hours	12	40%

Twenty-three students (76.7%) reported having positive feelings towards taking online exams, five students (16.7%) had negative feelings, and two (6.7%) were undecided. Where relevant, the thematic analysis highlights when the submission window or assessment task type may help explain or contextualise participant comments.

3.2 Thematic Analysis

Three major themes in students' narratives about transitioning from in-person to remote online exams are discussed in this thematic analysis. The first theme unpacks participants' views on issues related to the place and time of exams. Place (i.e., home) and time (i.e., length of submission window, period available) are two key characteristics that differentiate remote online exams from in-person exams. The second theme focuses on the perception of change and, more specifically, the transition experience. The final theme related to participants' views about the exam process and, more specifically, issues associated with exam integrity. This theme was labelled 'control and trust' and refers to student attitudes towards assessment integrity.

3.2.1 Theme 1: Considering place and time

Most distance learning students participating in the study felt that remote online exams offered greater temporal flexibility in duration and starting times. The convenience of not having to travel (often significant distances) to an examination hall to sit exams emerged as one sub-theme. For example, students discussed how 'time-consuming' (R3) it is to travel hours away from home, and even those students more negatively disposed towards taking the online exam conceded how 'much more stressful' (R1) it can be to have to find the examination hall.

Participants with and without declared disabilities also felt that remote online exams could help support equity and inclusivity. Some mentioned how the remote online element could offer 'a lot of equity to students who have additional needs' (R10) and can be 'much more inclusive' (R19). A participant with declared disabilities spoke of the benefits for those with a range of declared disabilities:

"I think it's much more accessible for people with mobility issues who would struggle to get to an exam hall. I think it's much more accessible for people with mental health issues who would struggle with the stress of an exam." (R5).

That such sentiment was quite widespread indicates an awareness of the variety of challenges some students encounter when taking exams. Perhaps this is partly because accessibility and an open approach to all are frequently made visible to students as part of the university's core mission.

Participants also considered that remote online exams could help offer greater choice about when an exam could start and the duration they were 'open.' This meant that when combined with the ability to sit the exam remotely at home, taking an exam could be better accommodated around other personal and work commitments. Even when of fixed limited duration, students saw value in exams that allow flexibility. Examples of perceived or experienced flexibility included having the choice to start at any time over a week, which could help cater for personal or work commitments such as childcare or employment or practical challenges, such as finding an uninterrupted exam environment or ensuring all necessary equipment is in place and working. In some cases, increased flexibility was necessary to accommodate the other demands of taking an exam remotely rather than in person:

"...it can be quite difficult if somebody needs to have three or four hours potentially uninterrupted at a really specific place and time at home. So, having that kind of flexibility where maybe it's over a few days, or even over a day, just having the flexibility of choosing a start time, I think that's really important." (R12)

One significant issue for some students is a sense of anxiety in the use of technologies for remote online exam taking. Whilst all students regularly use an online portal to upload assessments and download feedback and grades during their course, this anxiety may be associated with the actual or perceived higher stakes associated with the assessment being 'an exam.' Concerns were sometimes subject-specific or related to the demands of a particular assessment task. For example, one STEM student taking an exam that involved scanning equations was concerned that a scanner malfunction might jeopardise their timed exam (R24). Another student highlighted worries about accidentally losing their work on the computer during timed exams (R11). Further anxieties related to software usability, such as having to 'send' a multiple-choice questionnaire without a 'save' option (R29), the possibility of uploading difficulties when writing and submitting an essay within 24 hours, and other software issues or unspecified technology failure (R30). One STEM student who was uneasy about taking timed exams felt that technology failure is a major stressor they cannot control:

"I can control how much revision I do or whether I've maybe done my best to understand the work, but something that's outside of my control like the technology is what stresses me." (R24)

Some respondents, particularly those who sat an OBOW remote essay exam, appear to particularly emphasise the value of traditional exam halls' physical environment and atmosphere (R8, R9, R13). They argued that while online exams offer flexibility, they cannot replicate the experiential value of an in-person setting. One respondent, undecided towards online exams, captured the sentiment:

"The absence of critical elements of the process, such as the environment, would make an online exam feel less like a real exam." (R8).

Adding to this point, another participant commented on the value of the exam hall setting:

"The space and concentration provided by a proper exam hall were valuable and may not be replicated at home." (R9)

In the interviews, students said that remote online exams let them feel 'in control of the environment' as 'there are no distractions at home' (R6). Lastly, one participant suggested that an unexpected benefit of remote online exams could be the carbon savings of not travelling to the exam centre (R4).

Overall, this theme explored the perceived benefits and challenges of sitting exams in a remote setting, with sub-themes such as convenience, anxiety, accessibility, flexibility, distractions, and other commitments, all of which were apparent in the interviews.

3.2.2 Theme 2: Transition and contrast

At The Open University, the transition from in-person to remote online exams was often accompanied by transitioning from one assessment style to another. This reflected the move from an invigilated exam to the OBOW format. In experiencing this transition, students were allowed to contrast one approach to an exam with another and, subsequently, to reflect on how they felt about the new format.

Overall, those interviewed were satisfied with the new OBOW approach to remote online exams. This was observed for both those positive about online exams and those who were more circumspect. Several participants felt that their OBOW remote online exams promoted a more authentic assessment approach by making the assessment activity more realistic and reflective of real-life situations. This was especially observed in those who were given between 1 and 7 days to complete the exam activity. Contrast was made between the artificial nature of in-person timed exams and work, with one participant noting 'in real life, you would never need to sit intensely in a hall for three hours and extract from your memory with no support, no internet, no reference material' (R10). Others noted the lack of pressure (R22), the benefit of having access to all their study materials (R2, R17), and that the assessment seemed to do better at assessing skills rather than memory (R16):

"[There was] the time pressure that makes you do the work, but without any of that sort of horrible anxiety of, oh, God, I've not revised this or that. It was within your power to sort of do reading simultaneously. It didn't feel like a test of raw learning. It felt like a test of research skill" (R22).

Students also noted the alignment between the types of assessment activity used in exams and their continuous assessment. For example, STEM students who sat short-timed multiple choice questions exams commented how much it helped that 'the format was similar to [their] coursework' (R18). Disciplines will differ with respect to preferred or more effective assessment activity type, but reflective comments from students with respect to how well it promoted prompted deeper engagement with tasks such as problem-solving (for example, in STEM context, multiple-choice format (R24)).

For some participants, more so for those accustomed to in-person exams, the contrast with remote online exams was not entirely positive. Reservations were expressed about the suitability of longer submission windows (24 hours or more) for specific question types, such as multiple-choice questionnaires, short-answer questions, and equations (R17). This crosscuts the theme of integrity and trust, which will be discussed later.

Of most note was the emerging theme of how and why the university referred to these as assessments exams. Interview transcripts of students from different faculties indicated some were puzzled by extended submission windows and how this compared (and materially differed) to their familiar coursework (R1, R10, R13, R15). A participant who took an essay "exam" with a 3-day window suggested that it could be replaced with a final assignment "I don't think it has to be an exam; it could have a more flexible format, it could be [having] the 72-hour window" (R13). This indicates that the student considered the format used to fall outside their conception

of what an exam is, and a sense that alternatives to exams may work better. The students then said that they felt exams were only still being used because of a technological rather than a pedagogic imperative. They explained, "... [so] what this exam idea is, is [that] we have the technology, now we are going to use it, rather than we have technology, *how* could we use it, if we don't need exams, why are we having exams?" (R13, our emphasis).

Indeed, one participant specifically raised the question of what is and what is not an exam and suggested the university could be clearer on the differences between the in-person and online exams (R1). The ambiguity in definition and messaging may be complicated further by the specific, historically-routed terminology used by the university where 'end of module assessment' without capitals means something different with capitals (the form referring to the last assessment in the module, which usually contributes most the final module score and the latter to an assignment without specified time limit, due on a given date specified months in advance and considered distinctly 'not' an exam). Here, the shift to remote online exams disrupted existing terminologies and may have created confusion, especially for students transitioning to the new format and its consequences for question formats, study material access, and overall assessment approaches.

Overall, issues associated with this theme of transition and contrast included the changing nature and definition of the exam, responses and reactions to different remote online exam types, expressions of concern with the technology used, and comparison with other assessments encountered during the course (i.e., continuous assessment).

3.2.3 Theme 3: Control and trust: Invigilation, and exam integrity

The third theme that emerged strongly during the interviews and is discussed in this paper is control and trust. Most comments coded to this theme related to exam integrity, cheating and the capacity of OBOW remote online exams to adequately control for this. Some participants, otherwise generally positive about online exams, expressed cynicism that all students would follow the rules and a firm belief that students would cheat if given the opportunity. It is worth noting that participant reflections on exam control, trust, and integrity occurred before generative AI tools were widely accessible to students. The emergence of GenAI may significantly impact these themes by introducing new dynamics in potential academic misconduct and necessitating innovative assessment designs to uphold integrity.

Our analysis indicates that most comments related to this sub-theme were made by male students. A (male) STEM student who took timed multiple choice and equation exams felt that 'the greater the opportunity [to cheat], the greater likelihood of cheating' (R27, Male, aged 40). Similarly, a FASS student who sat a 3-day essay exam believed that 'if you give people the chance, they will cheat' (R22, Male, aged 29). Additionally, three STEM participants with experience in multiple types of exams raised concerns about proxy exams, where someone might complete the exam on another student's behalf (R12, R26, R4, all males aged 39, 54 and 69). One participant who took a long answer and equation exam felt that whether cheating takes place depends on the nature of the exam (R18, Female, aged 30), as the following (male) FASS participant eloquently summarised the complexity by focusing on the individual:

'Whether you follow the rules and just take the maximum advantage you can of the situation or cross the line and breach the rules because you don't think you're going to get caught depends on you as an individual. But there's definitely more scope, isn't there?' (R15).

In contrast, several respondents from different faculties (but all of whom took exams with submission windows of a day or more) appear to trust their fellow students not to cheat and even emphatically deny the possibility of cheating taking place. We observe that most comments relating to this sub-theme were made by female students. Students viewed cheating as pointless because their studies were 'all about [studying] for [their] own benefit' (R3, Female, aged 47), that 'they've invested in [them]selves' (R25, Female, aged 37) and that cheating would undermine the personal 'sense of achievement' (R13, Female, aged 56). It would appear that for the female participants interviewed in this study, the OBOW nature of the exams further eliminated the need for deception, as they were permitted to consult notes (R14) or use course materials (R17). Some even felt that certain subjects, like business case studies, were inherently resistant to cheating (R23), which brought up the notion of authentic assessment again.

The responses suggest that the issue of cheating in remote online exams is complex and may depend on various factors, including what students choose to emphasise and discuss in an interview context.

None of the remote online exams that students experienced in this study included forms of surveillance technology (e.g., online proctoring), so students could not comment on how such systems may have impacted their perception of control. However, many expressed views on online invigilation and the impact of its use or absence on degree validity.

Several respondents representing diverse faculties and experiences with online exams (both positive and negative perspectives) voiced strong opposition to the practice of browser blocking. They expressed significant concerns about access to personal computers (R13, R20), arguing that implementing the concept would be challenging and likely negatively impact the wider user experience (R27). Additionally, some respondents pointed out the ineffectiveness of browser blocking, citing the ease of accessing browsers through other devices (R7, R13, R28). Face and voice recognition was more positively viewed, although some doubted their effectiveness. For example, some respondents representing different discipline areas pointed out that cameras and voice recognition can be circumvented by those intent on cheating (R4, R14, R21), highlighting the need for additional measures to prevent cheating. Additionally, a respondent who sat timed exams and held overall negative views towards remote online exams pointed out that continuous invigilation measures would be impractical for exams with longer (i.e., a few hours) submission windows (R24).

Leading from this, despite generally positive attitudes towards remote online exams, some students (spanning faculties and exam types) expressed concerns about the potential impact on degree validity and worth (R14, R15). Respondents feared that reliance on remote online exams could weaken academic standards and potentially compromise exam integrity (R16). This is partly related to potential employer perceptions and the perceived need to uphold the robustness of academic qualifications.

4. Discussion

When encountering contrasting approaches to assessment, students will inevitably make comparisons and take a view of how well the new approach performs. This study aims to understand the reactions and experiences of distance learners as their university transitions from an in-person, timed exam format to a remote, online, and more flexible open-book exam approach. The analysis directly responds to the research question by showing how distance learners conceptualise and adapt to change in exam format, environment, and expectations.

One challenge in unpacking the student perspective is that moving from in-person to remote online exams involves several changes simultaneously. Students take the exam at home rather than in an exam centre; students take the exam (usually) online rather than only on paper; students must rely on technology for successful completion and submission rather than this being physically managed manually by an invigilator; students may have longer or a more flexible time window to start and end the exam, and students may be set different types of assessment task because of the change assessment format and time window (i.e. open-book assessment).

This study has identified several key elements of the student narrative associated with changing place and time. Overall, students were positive about the flexibility in space and time for remote online exams, although this was tempered by some anxiety over the risks associated with technology malfunction. They appreciated the flexibility in start time and the ability to sit the exam in an (uninterrupted) environment under their control. This supports the finding of Aristeidou et al. (2024), who found that for students at the same university as used in this study, the main difference between in-person and remote online exams was a perceived improvement in the physical environment of exam-taking. The benefits for those with caregiving responsibilities, those in paid employment, or those with disabilities were also mentioned. The latter appears to align with prior research on the benefits of online exams for students with accessibility needs (Ilgaz and Afacan Adanir, 2020).

Technology facilitated the process of taking remote online exams, but was viewed as a potential risk to success, generating anxiety similar to concerns reported in Topuz and Kinshuk (2021). These findings extend current literature by confirming that while distance learners tend to have high technological familiarity, perceptions of fairness and reliability remain closely tied to institutional support structures and technical dependability. Thus, familiarisation activities and mock-exam opportunities (Froehlich et al., 2023) are likely to reduce anxiety and reinforce student confidence in online assessment. However, unlike Heil and Ifenthaler (2023) and Tahir et al. (2025), who stress that the educational benefits of digital assessment depend on coherent pedagogical alignment and student preparedness, the participants in this study focused more on logistical flexibility and exam control than on pedagogical coherence. This suggests that implementation success, from the learner's point of view, may rely as much on perceived autonomy as on instructional soundness, underscoring the importance of aligning design intent with student experience.

A second challenge to interpretation has been that not all OBOW practices are identical. Our analysis offers a view of how students across faculties and variants experience the OBOW remote online exams differently. Benefits such as authenticity and reflection found in this study support previous conceptual arguments about open-book assessment (Hodgson and Pang, 2011). However, the findings also nuance these claims by showing that greater flexibility can blur students' perceptions of what constitutes an "exam," suggesting the need for more transparent communication and a clear definition of assessment purpose—an insight that advances understanding of assessment literacy in digital contexts. These challenges aside, our analysis has raised two additional findings of particular interest. First, moving to remote online exams can throw existing definitions of what an 'exam' is and what an exam 'is not' into sharp relief, echoing tensions reported in the current reassessment of high-stakes testing (Lee and Fanguy, 2022). It is beholden on educators to pay attention to defining and explaining the reason for continuing to use, or changing the use, of these terms and identifying points of student confusion. What defines an exam may include aspects that we discuss in this paper, such as the place and timing of the assessment. For example, our study indicates the greatest perceived distinguishing factor is time – between time-pressured exams and those with larger submission windows.

Second, female students appeared to talk about exam integrity differently than male students. Female students generally emphasised the value of the assessment for their personal learning. They, therefore, saw cheating as a wasted effort, while male students expressed greater concerns about potential cheating opportunities in remote exams. This was unexpected. Lee and Fanguy (2022) call for greater critical engagement in educational fairness discussions, and our findings could indicate these need to consider student demographics and prior experiences. Student attitudes towards remote invigilation – a phenomenon not experienced by the students interviewed – were more in line with previous work (e.g., Novick et al., 2022), as were general comments regarding concerns about academic standards.

In terms of implications, these findings highlight that online and OBOW exams require ongoing design review to maintain both perceived fairness and authenticity. Institutions should integrate training that helps students understand the rationale behind remote assessment models and supports equitable learner experiences. Programme leads and policymakers might also consider how different student groups interpret the purpose and value of these exams, ensuring design decisions balance flexibility with perceived rigour.

The present study focused exclusively on distance-learning students within a single university who were already writing and submitting continuous assessments remotely. While this may limit the transferability of some findings, more universities are now delivering teaching and assessment at a distance. This growing context enhances the relevance of the findings and their potential applicability to institutions transitioning to online or blended models. The modest interview sample and single-institution focus may limit generalisability, and the research pre-dates the widespread use of GenAI, a factor anticipated to reshape exam design and integrity. Nonetheless, the results provide a timely pre-GenAI benchmark against which future studies can measure the evolving impact of emerging tools.

The flexibility and convenience of remote online exams were frequently praised by participants, although coupled with concerns about technical difficulties and the authenticity of student work. These mixed perceptions underscore the complex balance institutions must strike between enabling accessibility and maintaining rigorous academic standards. The data and themes in this study thus extend existing findings by articulating how distance learners critically negotiate control, responsibility, and trust in remote assessments—a perspective underrepresented in the current literature.

Consequently, policymakers and educators must remain agile, continuously updating assessment frameworks to reflect emerging technologies and evolving capabilities of students. By explicitly linking student experiences to broader debates about authenticity, integrity, and accessibility, this study contributes to both theory and practice in rethinking high-stakes assessment in post-digital education.

5. Conclusion

This study interviewed thirty undergraduate distance learners who experienced a shift in exam format from in-person exams to remote online OBOW-style exams. Four findings of particular note are: First, students appreciated having a sense of control over their assessment, although in so doing, it also made the exam feel less like an exam. Future exam design may need to consider how to reconcile these points. Second, the positive perception of control was evident from comments about the type of remote online examinations – predominantly OBOW-style assessments offered in this study. Third, there were unexpected and tentative indications that perceptions of cheating and exam integrity may have a gendered dimension. This finding

challenges existing assumptions and warrants further investigation due to its implications for the design of equitable and effective assessment. Fourth, students and institutions need clarity on the very definition of what is and is not an exam. Further research across different contexts could enhance the generalisability of these findings.

Recognising that this study was conducted before the widespread adoption of generative AI technologies, the findings describe student experiences in a pre-GenAI context, highlighting the importance of further research to understand how emerging AI tools may impact online exam design and integrity.

Overall, the insights by the participating distance learners contribute original perspectives to the ongoing discourse on assessment reform (Rossade et al., 2022; JISC, 2025), regardless of whether these are termed exams or not. The study advances knowledge by surfacing nuanced learner views, questioning prevailing assumptions, and offering practical implications for creating more inclusive, authentic, and trusted online assessment environments. Future research should build on these findings to expand understanding across diverse institutional contexts and examine the dynamic influence of technological change.

AI statement: No AI tools have been used in the development of this paper.

Ethics statement: ‘Online exams’ was considered a low-risk study that meets The Open University criteria for exemption from formal review (reference number: HREC/4262/Aristeidou), <http://open.ac.uk/research/ethics/>. All subjects gave their informed consent for inclusion before they participated in the study.

References

- Aristeidou, A., Cross, S., Rossade, K.D., Wood, C., Rees, T. and Paci, P., 2024. Online exams in higher education: Exploring distance learning students' acceptance and satisfaction. *Journal of Computer Assisted Learning*, 40(1), pp. 342-359. <https://doi.org/10.1111/jcal.12888>
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), pp. 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Choi, B.-Y., Song, S. and Zaman, R., 2020. *Smart education: Opportunities and challenges induced by COVID-19 pandemic: a survey-based study*. In: 2020 IEEE International Smart Cities Conference ISC2. Piscataway, NJ, USA: IEEE, pp. 1-8. <https://doi.org/10.1109/ISC251055.2020.9239063>
- Creswell, J. and Clark, V.L.P., 2018. *Designing and conducting mixed methods research*. 3rd ed. Sage.
- Cross, S., Aristeidou, M., Rossade, K.D., Wood, C. and Brasher, A., 2023. The impact of online exams on the quality of distance learners' exam and exam revision experience: Perspectives from The Open University UK. *Online Learning*, 27(2), pp. 27-45. <https://doi.org/10.24059/olj.v27i2.3761>
- Dermo, J., 2009. e-Assessment and the student learning experience: A survey of student perceptions of e-assessment. *British Journal of Educational Technology*, 40(2), pp. 203-214. <https://doi.org/10.1111/j.1467-8535.2008.00915.X>
- Domínguez-Figaredo, D., Gil-Jaurena, I. and Morentin-Encina, J., 2022. The impact of rapid adoption of online assessment on students' performance and perceptions: Evidence from a distance learning university. *Electronic Journal of e-Learning*, 20(3), pp. 224-241. <https://doi.org/10.34190/ejel.20.3.2399>
- Dreher, C., Reiners, T. and Dreher, H., 2011. Investigating factors affecting the uptake of automated assessment technology. *Journal of Information Technology Education: research*, 10(1), pp. 161-181. <https://doi.org/10.28945/1492>
- Elsalem, L., Al-Azzam, N., Jum'ah, A.A., Obeidat, N., Sindiani, A.M. and Kheirallah, K.A., 2020. Stress and behavioral changes with remote E-exams during the Covid-19 pandemic: A cross-sectional study among undergraduates of medical sciences. *Annals of Medicine and Surgery*, 60, pp. 271-279. <https://doi.org/10.1016/J.AMSU.2020.10.058>
- Froehlich, L., Sassenberg, K., Jonkmann, K., Scheiter, K. and Stürmer, S., 2023. Student diversity and e-exam acceptance in higher education. *Journal of Computer Assisted Learning*, 39(4), pp. 1196-1210. <https://doi.org/10.1111/jcal.12794>
- Han, S., Nikou, S. and Yilma Ayele, W., 2024. Digital proctoring in higher education: a systematic literature review. *International Journal of Educational Management*, 38(1), pp. 265-285. <https://doi.org/10.1108/IJEM-12-2022-0522>
- Heil, J. and Ifenthaler, D., 2023. Online assessment in higher education: A systematic review. *Online Learning*, 27(1), pp. 187-218. <https://doi.org/10.24059/olj.v27i1.3398>
- Hodgson, P. and Pang, M.Y.C., 2011. Effective formative e-assessment of student learning: a study on a statistics course. *Assessment & Evaluation in Higher Education*, 37(2), pp. 215-225. <https://doi.org/10.1080/02602938.2010.523818>
- Ilgaz, H. and Afacan Adanir, G., 2020. Providing online exams for online learners: Does it really matter for them? *Education and Information Technologies*, 25(2), pp. 1255-1269. <https://doi.org/10.1007/S10639-019-10020-6/TABLES/9>
- James, R., 2016. Tertiary student attitudes to invigilated, online summative examinations. *International Journal of Educational Technology in Higher Education*, 13(1), pp. 1-13. <https://doi.org/10.1186/S41239-016-0015-0/TABLES/3>
- JISC, 2025. *Trends in assessment in higher education: considerations for policy and practice: shaping the future of assessment practices in higher education*. Available at: <https://www.jisc.ac.uk/reports/trends-in-assessment-in-higher-education-considerations-for-policy-and-practice> (Accessed 14 October 2025).
- Lee, K. and Fanguy, M., 2022. Online exam proctoring technologies: Educational innovation or deterioration? *British Journal of Educational Technology*, 53(3), pp. 475-490. <https://doi.org/10.1111/bjet.13182>

- Mumtaz, S., Parahoo, S.K., Gupta, N. and Harvey, H.L., 2023. Tryst with the unknown: navigating an unplanned transition to online examinations. *Quality Assurance in Education*, 31(1), pp. 4-17. <https://doi.org/10.1108/QAE-12-2021-0197>
- Muzaffar, A.W., Tahir, M., Anwar, M.W., Chaudry, Q., Mir, S.R. and Rasheed, Y., 2021. A systematic review of online exams solutions in e-learning: Techniques, tools, and global adoption. *IEEE Access*, 9, pp. 32689–32712. <https://doi.org/10.1109/ACCESS.2021.3060192>.
- Novick, P.A., Lee, J., Wei, S., Mundorff, E.C., Santangelo, J.R. and Sonbuchner, T.M., 2022. Maximizing academic integrity while minimizing stress in the virtual classroom. *Journal of Microbiology & Biology Education*, 23(1), pp. e00292–21. <https://doi.org/10.1128/jmbe.00292-21>
- Peytcheva-Forsyth, R. and Aleksieva, L., 2021. *Forced introduction of e-assessment during COVID-19 pandemic: How did the students feel about that? (Sofia University case)*. In: AIP Conference Proceedings. <https://doi.org/10.1063/5.0041862>.
- Rossade, K-D., Janssen, J., Wood, C. and Ubachs, G. (eds.) 2022. *Designing online assessment: Solutions that are rigorous, trusted, flexible and scalable*. Maastricht, The Netherlands: European Association of Distance Teaching Universities (EADTU). <https://doi.org/10.5281/zenodo.6563226>. Available at: <https://oro.open.ac.uk/87399/> (Accessed 14 October 2025).
- Slack, H.R. and Priestley, M., 2023. Online learning and assessment during the Covid-19 pandemic: exploring the impact on undergraduate student well-being. *Assessment and Evaluation in Higher Education*, 48(3), pp. 333-349. <https://doi.org/10.1080/02602938.2022.2076804>
- Spector, J.M. et al., 2016. Technology Enhanced Formative Assessment for 21st Century Learning. *Journal of Educational Technology & Society*, 19(3), pp. 58–71.
- Spiegel, T. and Nivette, A., 2023. The relative impact of in-class closed-book versus take-home open-book examination type on academic performance, student knowledge retention and wellbeing. *Assessment and Evaluation in Higher Education*, 48(1), pp. 27-40. <https://doi.org/10.1080/02602938.2021.2016607>
- St-Onge, C., Ouellet, K., Lakhal, S., Dubé, T. and Marceau, M., 2022. COVID-19 as the tipping point for integrating e-assessment in higher education practices. *British Journal of Educational Technology*, 53(2), pp. 349–366. <https://doi.org/10.1111/bjet.13169>
- Tahir, M.H.M., Saputra, S., Othman, S., Shah, D.S.M., Sulaiman, S.H., Azhari, M.A. and Mohandas, E.S., 2025. Online assessment in higher education: A systematic literature review. *Multidisciplinary Reviews*, 9(1), 2026024. <https://doi.org/10.31893/multirev.2026024>
- Topuz, A.C. and Kinshuk, 2021. A review of literature to understand student’s perceptions regarding online assessments. In: Y. Wen et al., eds. *Expanding Global Horizons Through Technology Enhanced Language Learning*. Singapore: Springer Singapore, pp. 49–72. https://doi.org/10.1007/978-981-15-7579-2_4
- Werhner, M.J., 2018. A comparison of the performance of online versus traditional on-campus Earth science students on identical exams. *Journal of Geoscience Education*, 58(5), pp. 310–312. doi: 10.5408/1.3559697
- Whitelock, D., 2006. Electronic assessment: marking, monitoring and mediating learning. *International Journal of Learning Technology*, 2(2–3), p. 264. <https://doi.org/10.1504/ijlt.2006.010620>
- Williams, J.B. and Wong, A., 2009. The efficacy of final examinations: A comparative study of closed-book, invigilated exams and open-book, open-web exams. *British Journal of Educational Technology*, 40(2), pp. 227-236. <https://doi.org/10.1111/j.1467-8535.2008.00929.x>