Revisiting flexible assessment in the age of generative AI

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Abstract. An introductory database course at Kristiania University of Applied Sciences offers students a structural choice between a written, individual school exam and an individual video portfolio, revisiting a 2017–2019 pilot that found high self-reported learning gains but low uptake (10%) for the portfolio option. Five years on, and after the introduction of generative AI, we ask what drives students' choice of assessment format and how the choice relates to their motivation, ownership of learning, and perceived competence. We draw on a voluntary post-choice survey (n=124, 28.6% response rate) and aggregate course records for the full fall-2025 cohort (n=434). Portfolio uptake has risen to 26%. The effort and time required to produce the videos remain the main reason students avoid the portfolio, and we find no clear evidence that generative AI is driving the increase, though one in five portfolio students cited access to support materials as a reason for their choice. Among candidates who sat, the written exam's failure rate (41.4%) was more than double the portfolio's (17.9%), although similar shares in both groups chose their format believing it gave them a better chance of passing. Because students choose their format, and a coursework gate routes portfolio non-completers to the written exam, the gap cannot be attributed to the format itself. Portfolio students also reported higher motivation, ownership of learning, and perceived ability to demonstrate competence.

Keywords: video portfolio · flexible assessment · student choice · assessment for learning · database education · generative AI

1 Introduction

Should students be allowed to choose how they are assessed? A 7.5 ECTS introductory database course at Kristiania University of Applied Sciences has offered exactly that choice, in one form or another, since 2017: a traditional, individual school exam, or an individual video portfolio built around a self-selected case. An earlier pilot of this arrangement, run between 2017 and 2019, found that students who chose the portfolio self-reported learning more and achieved higher grades on average than their peers on the written exam – but only 10% of students chose it, mainly due to the time required to produce the videos and discomfort with appearing in them [8]. That pilot ended with the portfolio option removed from the course in 2020.

We revisit these questions with data from the course's fall 2025 cohort, in which the portfolio option has not only been reinstated but restructured: what was once an opt-in pilot open to a single degree programme is now a standing, structurally offered choice, open to students from three programmes and gated behind mandatory coursework.

The timing is not incidental. In December 2025, the Norwegian government's committee on AI in higher education published preliminary assessments of examinations, concluding that candidates' access to generative AI during unsupervised assessment makes it very difficult to assess achieved learning outcomes [12]. The committee recommends more controlled exam forms, and that uncontrolled exams be supplemented with a controlled component. Our course offers one track of each kind: a supervised written exam and an unsupervised portfolio exam. In the portfolio track, students must pass mandatory coursework with an own-voice requirement *before* gaining access to the portfolio exam (Section 3), rather than facing a controlled component *after* it.

This paper asks two questions. **RQ1** asks which factors drive students' choice between portfolio assessment and written exam assessment, and how these factors have changed in recent years. **RQ2** asks to what extent students experience that this choice affects their motivation, their sense of ownership of their own learning, and their perceived ability to demonstrate competence.

To answer these questions, we combine a voluntary post-choice survey (Section 4) with aggregate course records for the full 2025 cohort. Section 2 situates the study in the literature, Section 3 describes the course, Section 5 reports the results, Section 6 discusses them and their implications, and Section 7 concludes.

2 Related Work

Allowing students some choice over how they are assessed is not a new idea. Cook [4] describes a quantitative analysis course where students had one compulsory final exam but could opt in to additional summative activities, finding that the flexibility gave students some power of choice and thus a feeling of being more in control of their own learning approach. Pretorius, van Mourik and Barratt [9] similarly show that a flexible assessment regime encouraged higher-order thinking in a management accounting course. More recently, Jopp, Pallant and Russell [6] surveyed students on why they prefer particular assessment types, identifying interest, clarity of requirements, and workload scheduling as recurring drivers – categories we draw on when coding our own respondents' reasons (Section 5.2). Kessels, Xu, Dirkx and Martens [7] study this question directly in a vocational-education setting. Motivated by the expectation that choice raises perceived autonomy and, in turn, intrinsic motivation, they find assessment *form* to be among students' three most preferred choice dimensions. Barua and Lockee's [1] recent review synthesises this literature across several dimensions of flexibility, while cautioning that too many options, without clear guidelines, can produce *choice overload* rather than the intended benefits.

This connects to our second research question, grounded in Self-Determination Theory (SDT), which holds that autonomy – alongside competence and relatedness – is a basic psychological need whose satisfaction supports intrinsic motivation. Cullen and Oppenheimer [5] report two classroom studies at one US university: letting students make attendance count toward their grade kept attendance stable over the semester, and letting students choose between a demanding and an easy assessment stream led to more effort and better performance on the demanding one. Kessels et al. [7] add a caveat: their interviewed vocational students saw choice as motivating when options are limited and scaffolded, and wanted less guidance as they progressed in their studies.

A recurring theme in the assessment literature is that students' perceptions of an assessment format shape how they approach learning for it. Struyven, Dochy and Janssens' [10] review reports that students often judge conventional examinations as less fair than alternative formats such as portfolios: end-point exams are seen as down to luck and outside the student's control, whereas alternative assessment is seen as rewarding consistent effort over cramming.

Finally, the role of generative AI in assessment is the one dimension of our case with no direct precedent in the pilot [8], and the academic literature on video- or voice-based safeguards against AI misuse is, to our knowledge, still thin. We therefore draw on a policy source: the preliminary assessments of the Norwegian government committee on AI in higher education, published in December 2025 [12].

3 Case and Context

3.1 The course

DB1102 is a 7.5 ECTS introductory database course for students studying Bachelor in IT, Bachelor in Cybersecurity and Year unit IT at Kristiania University of Applied Sciences, with approximately 400 students per cohort. Students are introduced to relational databases through three main topics: SQL, database modelling, and normalisation. Weekly assignments and standard lectures support the students throughout the semester.

3.2 Revitalising a 2017-2019 pilot on flexible assessment

Between 2017 and 2019, the course piloted an optional video portfolio exam as an alternative to the traditional three-hour written exam [8]. Students who chose the portfolio built a database around a self-selected case of personal interest and demonstrated their knowledge through a set of short videos. The pilot found that portfolio students self-reported learning more than their peers, and achieved higher grades on average – yet only 10% of students (out of approximately 200 students per cohort at the time) chose the portfolio option across the three pilot years, mainly due to the time required to produce the videos and discomfort with appearing in them.

The portfolio option was removed in 2020, but re-introduced in 2025. Several aspects of the course and its assessment have changed along the way. Table 1 compares the official course descriptions from 2019 (the final pilot year) and 2025 (the cohort studied here) on the dimensions we consider most relevant to interpreting our results.

Table 1. Selected differences between the 2019 and 2025 course descriptions.

	2019 (pilot)	**2025 (this study)**
Grading scale	Graded A–F	Pass/Fail
Written exam duration	3 hours	5 hours
Written exam support materials	None (closed book)	Printed and self-written texts, specified textbook
Portfolio submission window	2–12 weeks (flexible)	3–4 weeks (fixed)
Portfolio support materials	All materials allowed	All materials allowed (unchanged)
Eligible degree programmes	Bachelor in IT only	Bachelor in IT, Bachelor in Cybersecurity, Year unit IT

Three of these changes are particularly important for interpreting the failure-rate gap reported in Section 5.1. First, the course moved from a graded (A-F) to a Pass/Fail scale, meaning the 41.4% vs. 17.9% failure-rate gap we observe is a pure pass/fail split rather than a difference in grade distributions. Second, the written exam changed over the same period – longer (5 vs. 3 hours) and open to printed and self-written materials, where the 2019 exam allowed none – while the portfolio submission window was simultaneously *compressed* (from up to 12 weeks to a fixed 3-4 weeks). Third, the course is today open to students from three different study programmes rather than one; the bigger, broader and more heterogeneous student population is a plausible contributing factor to the increase in portfolio uptake (from 10% to 26%).

As Table 1 shows, all support materials have been allowed for portfolio students throughout, from the pilot years to 2025. The *description* of permitted materials has not changed – but the materials available to students have: generative AI and ChatGPT entered the picture in late 2022.

3.3 Mandatory coursework

Pilot students and 2025-students all had to pass mandatory coursework in order to gain access to the portfolio exam. The mandatory coursework is issued in week 6 of the semester, with an interim revision deadline before a final deadline four weeks later, and requires students to: (i) select and justify a case of personal interest (e.g. a hobby, a sport, a game) to avoid overly generic submissions such as a "library system"; (ii) design and populate a database of roughly five

tables based on that case; and (iii) produce a short (approximately five-minute) video explaining and demonstrating the resulting database script, optionally accompanied by an entity-relationship model that becomes mandatory in the final portfolio submission. Students who pass the mandatory coursework continue to work with the same case for the final portfolio submission, due 22 December, alongside a written exam for the remaining students on 18 December.

3.4 Video requirements and adaptation to AI

The submission guidelines for the mandatory coursework explicitly require students to explain their work through their videos using their own voice. Using a prepared script is not allowed – a direct, explicit response to the risk that students could otherwise read out a script generated by a large language model, or substitute a synthetic voice, rather than demonstrate their own understanding. Students are further asked to show both themselves presenting and the software they are working in (e.g. MySQL Workbench), recorded via Zoom.

4 Method

This study draws on two data sources collected in fall 2025 in the same course as the 2017–2019 pilot [8]: a student survey and course records. Students choose between a five-hour individual written school exam and an individual video portfolio exam; those who do not attempt or pass the mandatory coursework, or who opt out, are re-registered for the written exam. Both formats are graded Pass/Fail (Section 3).

4.1 Data sources

Survey. An anonymous, voluntary survey was distributed via a link posted on the course's page in Canvas, the institution's learning management system, leading to an external questionnaire hosted in Nettskjema – a data collection tool provided by Sikt (the Norwegian Agency for Shared Services in Education and Research). The survey was sent to all students after they had registered for one of the two assessment formats, but before the exam period; participation or choice of assessment format had no bearing on the students' grades. Of 434 registered candidates, 124 students responded (response rate 28.6%), 40 of whom had registered for the portfolio exam and 84 for the written exam. The survey combined multiple-choice items (predefined reasons for the student's choice of assessment format, with an open-ended "other" option), four 5-point Likert-scale items (1 = *not at all* to 5 = *to a very high degree*) measuring perceived information sufficiency, motivation, ability to demonstrate competence, and ownership of learning (exact wording in Table 4), and open-ended free-text questions.

Course records. Aggregate exam statistics for the same cohort were obtained from the institution's exam administration system: number of registered candidates, number who sat/submitted, and number who failed, broken down by

assessment format. These records are administrative and aggregate; they are *not* linked to individual survey responses. We therefore treat the two data sources as complementary but distinct: the survey captures self-reported reasons and perceptions at the time of choosing, while the course records capture actual outcomes for the full population of candidates, including the 310 candidates who did not respond to the survey.

4.2 Analysis

Reasons for choosing each assessment format were analysed descriptively, as proportions of respondents within each group endorsing each predefined reason (multiple selections were allowed). Likert-scale responses were compared between the two groups descriptively, as differences in group means, given the unequal group sizes. Open-ended responses (reasons for choice, expected effect on learning outcome, suggestions for improvement) were read in full and screened for explicit references to generative AI or related tools (e.g. "KI", "AI", "ChatGPT", "kunstig intelligens"); none were found, which we report and discuss as a limitation of the current survey instrument rather than as evidence of absence (Section 5, 6).

5 Results

5.1 Distribution and pass rates

Of the 434 registered candidates, 112 (25.8%) were registered for the portfolio exam and 322 (74.2%) for the written exam – a substantial increase from the 10% portfolio uptake reported over the three pilot years 2017–2019 [8]. Within our survey sample the portfolio share was somewhat higher still (40/124, 32.3%).

Table 2 summarises the outcomes for each format. A markedly larger share of registered portfolio candidates actually sat/submitted the exam (94.6%) than of registered written-exam candidates (79.5%). Among those who did, the failure rate for the written exam (41.4%) was more than double that of the portfolio (17.9%). Counting also candidates who did not sit or submit, 53.4% of registered written-exam candidates and 22.3% of registered portfolio candidates did not pass.

Table 2. Exam candidates, attendance, and outcomes by assessment format, fall 2025. "Not passed" counts candidates who failed and those who did not sit or submit.

Format	Reg.	Sat	Att. %	Failed	Fail %	Not passed	% of reg.
Written exam	322	256	79.5	106	41.4	172	53.4
Portfolio	112	106	94.6	19	17.9	25	22.3

5.2 Reasons for choosing assessment format

Table 3 shows the most frequently endorsed reasons within each group (respondents could select multiple reasons). The most common reason for choosing the written exam was that producing the portfolio videos was seen as too challenging or time-consuming (44.0%), followed by the written exam not requiring mandatory coursework (36.9%) and prior experience with that format (35.7%). Only 4.8% of written-exam students reported having attempted but failed the mandatory coursework, suggesting that most students who ended up with the written exam did so by proactively avoiding or not starting the portfolio track, rather than as a result of failing it. Among portfolio students, the two most common reasons were the belief that they would learn more and a preference for working steadily over time (both 62.5%), followed by a sense of greater control over one's own exam (50.0%).

Table 3. Selected reasons for choice of assessment format (multiple selections allowed).

Portfolio (n=40)		**Written exam (n=84)**	
I think I will learn more	62.5%	Producing portfolio videos will be too challenging/time-consuming	44.0%
I prefer working steadily over time	62.5%	Does not require mandatory coursework	36.9%
I get more control over my own exam	50.0%	I have prior experience with this type of assessment	35.7%
I think I have a greater chance of passing	40.0%	I think I have a greater chance of passing	33.3%
I am more motivated when I can choose my own case	40.0%	Did not get started with the coursework in time	23.8%
I fear I cannot show what I know in a written exam	22.5%	Attempted, but did not pass, the coursework	4.8%
I have all support materials available	20.0%		

Comparing these self-reported reasons with the outcomes in Table 2: 40.0% of portfolio students and 33.3% of written-exam students cited a *greater chance of passing* as a reason for choosing their respective format, while the written-exam group's failure rate was more than twice that of the portfolio group. The survey item concerns each student's own chances, whereas the outcomes compare two different groups; we return to this in Section 6.5.

5.3 Perceived motivation, ownership, and ability to demonstrate competence

Table 4 shows mean scores (1–5 scale) on the four Likert-scale items, by group. Portfolio and written-exam students reported similarly high levels of feeling sufficiently informed to make their choice (3.90 vs. 3.96), suggesting the choice

process itself was perceived as fair and transparent regardless of format. In contrast, portfolio students reported higher motivation from having the freedom to choose (4.18 vs. 3.40), a greater sense that their format let them demonstrate their competence (4.50 vs. 3.37), and greater ownership of their own learning (4.38 vs. 3.92).

Table 4. Mean Likert scores (1–5) by assessment format.

Item	Portfolio (n=40)	Written exam (n=84)
Sufficient information for informed choice	3.90	3.96
Choice increased motivation	4.18	3.40
Format lets me show what I know	4.50	3.37
Greater ownership of my learning	4.38	3.92

5.4 Traces of AI in student responses

We screened all open-ended responses (reasons for choice, expected effect on learning outcome, and improvement suggestions) for explicit references to generative AI (e.g. "KI", "AI", "ChatGPT", "kunstig intelligens"). None were found. We report this as a limitation of the survey instrument, which did not ask directly about AI use, rather than as evidence that AI played no role in students' choices or work – particularly since the course's own assessment design has already been adapted in response to AI.

6 Discussion

6.1 Continuity in what drives the choice

The clearest finding on RQ1 is continuity, not change. The single most common reason our written-exam respondents gave for avoiding the portfolio – that producing and editing the videos is too time-consuming (44.0%, Section 5.2) – is the same reason we found dominant in the 2017–2019 pilot, where video production time was the most frequently mentioned barrier, closely followed by discomfort at hearing one's own voice and being seen on camera [8]. Five years, a redesigned coursework gate, and a larger and more heterogeneous student population have not changed this. The mirror image holds on the portfolio side: our respondents' two most common reasons for choosing the portfolio were believing they would learn more and preferring to work steadily over the semester (both 62.5%), echoing the pilot's finding that "to learn more" was the most common reason portfolio students gave for their choice [8].

This continuity extends to the broader literature on why students choose one assessment format over another. Half of our portfolio respondents cited greater

control over their own exam as a reason (50.0%), which is close to an echo of Cook's finding, cited in our original pilot study, that flexible assessment gives students "some power of choice and thus a feeling of being more in control of their own learning approach" [4, 8]. Jopp, Pallant and Russell's [6] categories of interest, clarity of requirements, and workload scheduling as recurring drivers of assessment preference map cleanly onto our respondents' own stated reasons: a preference for working steadily over time speaks to workload scheduling, and being more motivated when choosing one's own case (40.0%) speaks to interest. That the specific format of assessment – not just whether a choice exists at all – is itself one of the dimensions students most want a say over is consistent with Kessels et al.'s [7] finding that assessment form ranks among students' three most preferred choice dimensions.

One factor is present on both sides of the choice that was not prominent in the pilot's qualitative coding: a belief in a greater chance of passing, cited by 40.0% of portfolio students and 33.3% of written-exam students as a reason for their respective choice. We return to what this belief can and cannot tell us in Section 6.5.

6.2 From a 10% pilot to 26% of the cohort

We do not think this shift is best explained by a single cause. Three plausible contributors emerge from our data. First, the course in 2025 could build on three years of piloted experience testing and refining the format (2017–2019), even after the format's five-year absence from the course: the video requirements, deadlines, and feedback routines were no longer untested ground but a validated design. The choice architecture itself also changed. In the pilot, taking the portfolio meant actively opting in to an additional, non-default option alongside the standard written exam; in 2025, students instead had to choose one of two co-equal formats, with no default option. This shift from an opt-in extra to a structural binary choice may simply have made the portfolio track more legible and less risky to commit to than an experimental add-on was.

This is in line with Barua and Lockee's [1] emphasis on clear guidelines and manageable, pre-defined options to reduce confusion and stress, and with Kessels et al.'s [7] report that most surveyed students preferred limited choice options, a binary choice being well within the two to five options they consider supportive of autonomy; none of these sources addresses uptake, so this remains a hypothesis. Second, the course is now open to multiple degree programmes rather than one (Table 1), and we cannot rule out that this more heterogeneous population is, on average, more receptive to a process-based, video-based format than the original IT-only cohort. Third, and more speculatively, by 2025 our students have accumulated nearly three years of everyday experience with generative AI tools, widely available since ChatGPT's public release in November 2022. If that familiarity has lowered the perceived burden of preparing and structuring the portfolio's explanatory content – even though our own-voice requirement rules out simply reading a generated script – it could plausibly have lowered

the discomfort or effort barrier the pilot identified. Our data cannot adjudicate between these three explanations.

6.3 Generative AI and the course design

We screened every open-ended response for explicit mentions of AI and found none (Section 5.4), but this does not show that AI played no role. When given a predefined list of reasons, 20.0% of portfolio students selected "I have all support materials available" (Section 5.2). Portfolio students have always been permitted all materials (Table 1); what has changed is what "all materials" now includes, so generative AI may register with some students as a reason for choosing the portfolio without being named in free text. At the same time, a national student survey cited by the Malthe-Sørenssen committee found that 72% of Norwegian students use generative AI to have topics and concepts explained [3, 12], which makes it implausible that AI played no role in how our students worked. Our survey did not ask the right question, and we recommend asking directly in future iterations.

The one place where we can speak to how the course has responded to AI is Section 3. The requirement that portfolio videos be narrated in the student's own voice, with a prepared script explicitly disallowed, is an explicit but informal safeguard against a student reading out an AI-generated script. It is a rule rather than a control: the coursework is completed unsupervised, so we cannot verify that the rule is followed.

Our design also differs from what the Malthe-Sørenssen committee recommends. The committee advises that uncontrolled assessments be supplemented with a controlled component that bears on the examiners' judgement [12]. In our course, access to the uncontrolled portfolio exam is instead conditional on first passing the mandatory coursework: an individual case with an interim revision deadline and the own-voice requirement. This gate is not a controlled component, and it does not inform the examiners' assessment; it regulates access to the exam. What it provides is a sequenced, individually followed route in which students must commit to and develop their own case before the portfolio is submitted. It does not solve the verifiability problem for portfolio candidates. The supervised written exam is the course's controlled alternative.

6.4 Why the portfolio format supports motivation and ownership

Our answer to RQ2 rests on large differences across all three Likert items: portfolio students reported markedly higher motivation from having the freedom to choose (4.18 vs. 3.40), a far greater sense that their format let them demonstrate their competence (4.50 vs. 3.37), and greater ownership of their own learning (4.38 vs. 3.92; Section 5.3). A single explanatory frame can account for all three, and it is not a new one for this case: Biggs' notion of constructive alignment [2] – that learning is best supported when the teaching and learning activities a student engages in are the same activities on which they are ultimately assessed –

is the same lens we used to interpret the 2017–2019 pilot, mapping how "preparing for final school exam" was replaced by portfolio work for students who chose that track [8]. Our results are consistent with the same alignment mechanism five years later, now with quantitative Likert evidence the pilot did not collect; because students chose their format, they do not show that the format itself causes the differences. Working on the self-selected case *is* the semester-long teaching and learning activity for portfolio students, submitted incrementally with feedback along the way; the written exam, by contrast, is a single, high-stakes event only loosely coupled to the ongoing coursework that precedes it.

This is also in line with the reasons our portfolio students gave, and echoes what our interviewees said in the pilot five years earlier: portfolio students then reported that producing the videos forced them to *really understand* the material well enough to explain it to someone else [8], a mechanism our own respondents' reasons for choosing the portfolio – believing they would learn more, wanting to work steadily over time (Section 5.2) – point to as well, without our survey instrument capturing the same first-person detail. Autonomy literature offers converging evidence for why this translates into motivation specifically.

Cullen and Oppenheimer's [5] classroom evidence that choice sustained attendance and effort, and Kessels et al.'s [7] report that vocational students see limited, scaffolded choice as motivating, both fit the pattern we observe, and suggest a reading in which motivation is driven not by the portfolio format itself but by a chosen format that lets students recognise their own effort and progress as their own.

A related, more practical mechanism is worth naming separately: the portfolio track functioned, in effect, as a commitment device. A markedly larger share of registered portfolio candidates actually completed their assessment (94.6%) than of registered written-exam candidates (79.5%, Section 5.1). Distributed deadlines and incremental feedback throughout the semester may keep students engaged in a way a single end-of-semester exam date does not, independent of any effect of the choice itself on motivation – a pattern we also noted in the pilot, where portfolio students invested time steadily across the semester rather than in an intensive pre-exam study period [8].

6.5 Believed and actual chances of passing

In the survey, similar shares of both groups gave a greater chance of passing as a reason for their choice (40.0% of portfolio and 33.3% of written-exam respondents). In the course records, the written exam's failure rate among candidates who sat was 41.4% against 17.9% for the portfolio. The gap is wider when measured against *registered* candidates: 172 of 322 written-exam candidates (53.4%) did not pass, either by failing or by not sitting, against 25 of 112 (22.3%) in the portfolio track. The survey item concerns each student's *own* chances, whereas the outcomes compare two different groups of students, so the two results are not in direct conflict. What matters is what can explain the outcome gap itself.

Routing by the coursework gate. Students who do not start or do not pass the mandatory coursework are re-registered for the written exam. Among written-

exam respondents, 23.8% reported not getting started with the coursework in time and 4.8% reported failing it (Table 3). The gate thus filters the portfolio group before the exam, and the written group receives those who are filtered out. This alone can widen the gap, regardless of format.

Self-selection and comparative advantage. Students differ in preparation, comfort on camera, and ability to work steadily over the semester. If they choose the format that suits them, each group may assess its own odds reasonably well even while the group-level rates differ. We observe no student under the format they did not choose, so we cannot separate this from an effect of the format itself.

The portfolio format itself. If the alignment and commitment mechanisms in Section 6.4 work as argued, they would raise the pass rate of portfolio students regardless of who they are. The higher attendance in the portfolio track (94.6% against 79.5%) is consistent with this, but also with the two explanations above.

Miscalibration. One in three written-exam respondents chose that format partly because they expected a better chance of passing, in the format that was passed less often. Familiarity is one possible reason: students know the written exam from years of schooling and may take the familiar for the safe. This sits uneasily with the literature, where students often judge conventional exams as less fair than alternatives [10], and two of the written-exam respondents' three most common reasons concerned workload (Table 3), which suggests that avoiding effort, not only a misjudged chance of passing, may have driven many choices. Our data do not test either reading. We did not ask students what pass rates they expected. Both groups felt equally well informed about their choice (3.90 vs. 3.96; Section 5.3).

The Pass/Fail bar. Examiners in Pass/Fail courses are expected to follow national guidance that a passing candidate "has attained the requirements of the intended learning outcomes and demonstrates the necessary knowledge, skills and competence" [11, p. 25], which in our reading corresponds roughly to a C rather than an E on the old scale. This may help explain why failure rates are high in both tracks, but not the gap between them.

We therefore draw a limited conclusion. The outcome gap is large and visible under both measures, but our data cannot attribute it to the format: routing by the gate and self-selection are at least as plausible as an effect of the format itself. The survey does not show that students were miscalibrated, only that one in three written-exam respondents cited a better chance of passing in the format that was passed less often. The practical implication does not depend on which explanation is right: students can be shown previous outcome figures for both formats before they choose. Whether that changes their choices, and whether the gap reflects the format or the students, requires individually linked survey and outcome data.

6.6 Implications for computing education

Four practical points follow, none of which depends on which explanation of the outcome gap is correct. *Offer the choice as two co-equal formats.* In 2025 the portfolio was a standing alternative rather than an opt-in extra, and uptake rose

from 10% to 26%; we cannot say how much of this the structure explains, but it is a design other courses can copy. *Show students outcome figures before they choose,* for both formats, and make clear that the figures describe groups that chose and were routed differently, not individual odds. *Do not read the gate as verification.* Our gate tracks students individually and sets own-voice rules, but it is not a controlled component. Courses that need verified authorship could add a short controlled step that bears on the examiners' judgement, for example an oral follow-up on the submitted portfolio [12], and keep a controlled alternative such as our written exam. The committee also recommends fewer uncontrolled forms overall, so offering students a choice of one is a trade-off between autonomy and control that each course must weigh. *Collect linked data.* Linking survey responses to outcomes at the individual level, and asking directly about AI use, would let future iterations test the explanations we could not separate.

6.7 Limitations

Our survey and course records are not linked at the individual level (Section 4), and the survey covers 28.6% of the cohort; the portfolio share was higher in the sample (32.3%) than in the full cohort (25.8%). The student population has broadened since the 2019 comparison point (Table 1), which confounds comparisons over time. The Likert differences are descriptive only, and the survey did not ask directly about AI use. Finally, our accounts of why the portfolio track shows better outcomes – routing by the gate, self-selection, constructive alignment and commitment effects – are interpretations of aggregate patterns, not causal claims.

7 Conclusion

We revisited a pilot on flexible assessment in an introductory database course, now offered as a structural choice rather than an opt-in pilot, against a higher-education landscape that now includes generative AI. Three findings stand out. First, portfolio uptake has grown from a self-selecting 10% of students during the 2017–2019 pilot to 26% of a far larger and more heterogeneous 2025 cohort, with no clear evidence that generative AI is driving the rise, though one in five portfolio students cited access to support materials as a reason for their choice. Second, the written exam's failure rate (41.4%) was more than double the portfolio's (17.9%), although similar shares in both groups cited a better chance of passing as a reason for their choice. Our data cannot separate routing by the coursework gate, self-selection and the effect of the format itself. Third, portfolio students reported higher motivation, ownership, and perceived ability to demonstrate competence than their written-exam peers, consistent with the constructive-alignment mechanism identified in our pilot; both groups felt equally well informed about their choice.

Taken together, these findings suggest that a structural choice of assessment format can support autonomy and motivation. They also suggest that students

would benefit from seeing outcome figures for both formats before they choose, not only a clear description of the choice itself.

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