



**“The Exam was about Thinking and Explaining, Not Just Memorizing”: A
Hybrid Open-Book Take-Home Collaborative Test for an Inclusive Transnational
Class**

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Abstract

Technology, social change, and the collective nature of major problems facing the world present challenges for contemporary classrooms where ability to cooperatively research and synthesize information is at a premium over individual ability to memorize and recall information during a short period of time, presenting a validity issue for the skills university classes are cultivating. This study presents the student reactions to hybrid open-book take-home collaborative tests in a diverse transnational social science class. Sixteen students wrote their reaction to the question “How was your experience of examinations in this class compared to examinations in other classes?” after completing hybrid open-book take-home collaborative midterm and final exams. The student perceptions offered support for using hybrid open-book take-home collaborative exams to reduce the need for memorization in exams in preference for promoting general learning with limited support for increased retention. In addition, the study supported student appreciation of the hybrid format, more thinking and reflection, reduced stress, reduced time pressure, engaging concepts more deeply, and more opportunity and incentive to practice research skills.

Key words: open-book test, take-home test, collaborative test, classroom ICT

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1. Introduction

Students and educators now face a number of novel challenges in the classroom and in their environment that have disrupted some of the traditional ways of helping young people adapt to society. Previous generations have been able to depend on a relatively limited source of information gathered in predictable and traditional ways where contemporary education must contend with constant information overload. Technology, including “social” technology, has managed to connect students in unprecedented ways, but has also left many simultaneously isolated and with outsized expectations of both the rewards and demands of peer relationships, and opened vulnerabilities online. Young people are particularly at risk for the negative effects in dealing with new information communication technologies (ICT) though everyone has paid the costs. New technologies have also blurred the boundary between the world inside and outside of schools, making media literacy an important skill for addressing student questions when their online sources contradict what is taught in the classroom and students feel they are backed up by legitimate authority.

At the same time, the worldwide social responses to the early stages of the COVID-19 pandemic disrupted the regular school environment for many students who were sent home for prolonged breaks. Students suddenly had to participate online in classes taught by teachers with limited preparation teaching in the format (Ulvi et al., 2022) or had to study in “socially distanced” classrooms that further disrupted their regular school life. Anecdotally, this disruption left individual students frustrated, feeling left behind, unprepared for subsequent stages in their education, and even more focused on online relationships to the detriment of relationships with peers around them in their daily life.

Meanwhile, the nature of the problems students will have to confront in the future is increasingly collective, requiring more collaboration and making the ability to work in groups more important for the future. Social skills and collaboration are needed for working with peers on projects, even when one is only doing their little part in the collective effort. While students often expect to make use of mediating digital technologies. As students have more resources available and expect to use those resources, they have weaker peer relationships to depend on in dealing with ICT as increasing online activity has been shown to relate to decreasing in-person social activity (Sadagheyani & Tatari, 2021; Braghieri et al., 2022). They may also need more guidance from educators in integrating more resources into their education, including teacher role modelling of healthy and constructive ICT device use (Mathewson, 2020).

These factors lead to a reduced need for memorization when students spend time using electronic resources in the process of doing their actual work. Practical skill application is at a greater premium than memorization, particularly under typical real-world conditions that vary from in-class testing conditions (Kim et al., 2021). Research skills are representative of the type of skills with real-world applicability taught in schools. At the same time, there has been increasing concern over student AI use and even preference (Manning et al., 2026), particularly as academic literature points in the direction of AI failing in writing readability and complexity even when just used to assist student writing (Craven, 2026). This again suggests a need for more instructor guidance regarding AI in the context of classrooms with a writing and research component.

In addition to managing these challenges, there is the added challenge of valid testing of classes focused on cooperative discussion. Memorization is not at a premium in a context where the students discuss and refer to the material with their textbook and digital resources at hand, sharing their opinions and conclusions with the class based on

notes. This is at odds with the typical memorization-heavy in-class written examination where students often stay up late the night before memorizing expected material for the short-term and then quickly forget the information as they move on to their next exam. Furthermore, the students who excel during class are not the same ones who excel on the examination, suggesting that typical written examinations lack validity for such classes.

This research took place in a fourth-year level social science course taught along the lines of a graduate seminar, with extensive discussion and research in class, and presentations. After experimenting with different written examination formats, the instructor has settled on conducting midterm and final examinations as collaborative open-book tests with a take-home element. The basic considerations were that the format would allow for students to practice using ICT with teacher guidance, that the format was compatible with social distancing and online formats, the exams would practice cooperation and address collective concerns while allowing for measuring individual contribution, there was less need for memorization, and the tests would more accurately reflect and measure the work done in class. The instructor has been satisfied with the results on each of these dimensions.

At the same time, there have only been anecdotal suggestions as to how the students have related to the exams. These have varied from enthusiastic embrace in the case of a student shouting out with joy not having to memorize the extensive material in contrast to her secondary education to the dismissive in the case of a student who asks a colleague whether she had “real” tests. Most students, however, have kept their reactions to themselves. This research seeks to discover their reactions. First, the study reviews literature regarding the intersect of findings related to open-book, take-home, and collaborative examinations. Next, students’ reactions to the tests are reviewed. The results are then discussed and conclusions drawn.

2. Literature Review

Students have shown a preference in research for open-book, take-home, and collaborative tests over individual in-class closed-book tests. For example, several studies show that students generally prefer open book tests (Gharib et al., 2012; Johanns et al., 2017; Rummer et al., 2019; Kim & Cho, 2021) though some students perceive the tests to be harder (Krarup et al., 1974). Similarly, some studies show a preference for take-home tests (López et al., 2011; D'Souza & Siegfeldt, 2017; Jamil et al., 2023) though student preference is not universal (Weber et al., 1983). In any case, students in several studies have found take-home tests to be more meaningful (Andrada & Linden, 1993; López et al., 2011; Isbell & Kremmel, 2020; Jamil et al., 2023; Curbo et al., 2025). Likewise, several studies show students preferring collaborative tests (Russo & Warren, 1999; Meseke et al., 2010; Wiggs, 2011; Rivaz et al., 2015; Patiwaël et al., 2021).

Reduced need for rote memorization is not mentioned generally in studies of collaborative tests, but it is a feature of both open-book (Theophilides & Koutselini, 2000; Durning et al., 2016; Kim et al. 2021; Kim & Cho, 2021) and take-home tests (Weber et al., 1983; López et al., 2011; D'Souza & Siegfeldt, 2017; Jamil et al., 2023) where students do not engage in as much or as intense memorization.

Thinking and reflection are benefits of all three types of tests. Deeper thinking, higher-order thinking, and critical thinking have been found to be benefits of open-book tests (Theophilides & Koutselini, 2000; Brightwell et al., 2004; Durning et al., 2016; Green et al., 2016; Johanns et al., 2017; Senkova et al., 2018; Rummer et al., 2019; Kim et al., 2021; Zagury-Orly & Durning, 2021), though students may bypass deeper thinking with an information scanning strategy (Kim et al., 2021). The most common theme in

studies of take-home tests was their promotion of deeper and higher-order thinking (Andrada & Linden, 1993; López et al., 2011; Durning et al., 2016; D'Souza & Siegfeldt, 2017; Isbell & Kremmel, 2020; Şenel & Şenel, 2021; Jamil et al., 2023; Curbo et al., 2025; Namatovu & Kyambade, 2025) though some (Weber et al., 1983) found take-home tests mostly assist recall, assist lower-order thinking tasks (Jamil et al., 2023; Bode-Staud et al., 2025) or just promote surface learning (Bode-Staud et al., 2025). Collaborative tests promote critical thinking (Russo & Warren, 1999; Rao et al., 2002; Meseke et al., 2008; Wiggs, 2011; Duane & Satre, 2014; Mahoney & Harris-Reeves, 2019), provide opportunity for reflection (Patiwael et al., 2021), and develop of reasoning skills (Rao et al., 2002; Tung & Tseng, 2013; Duane & Satre, 2014; Johanns et al., 2017; Mahoney & Harris-Reeves, 2019).

Among the most mentioned benefits of all three types of testing has been reduced stress and anxiety. Students taking open-book tests mention reduced stress (Kim et al., 2021; Kim & Cho, 2021) and less test anxiety (Brightwell et al., 2004; Rakes, 2008; Gharib et al., 2012; Durning et al., 2016; Green et al., 2016; Johanns et al., 2017; Senkova et al., 2018; Rummer et al., 2019; Kim et al., 2021; Kim & Cho, 2021). The same has been reported for take-home tests (Weber et al., 1983; Durning et al., 2016; D'Souza & Siegfeldt, 2017; Bengtsson, 2019; Şenel & Şenel, 2021; Jamil et al., 2023; Bode-Staud et al., 2025). Likewise, decreased anxiety is a frequently mentioned benefit of collaborative examinations (Russo & Warren, 1999; Kapitanoff, 2009; Meseke et al., 2010; Wiggs, 2011; Duane & Satre, 2014; Rivaz et al., 2015; Wissman & Rawson, 2016; Johanns et al., 2017; Levine et al., 2018; Mahoney & Harris-Reeves, 2019; Eastridge & Benson, 2020).

Time is a factor that impacts the three types of tests, but it works differently. Open-book and collaborative tests are usually done in class so they work like closed-book tests

in terms of time, though open-book tests do not provide an advantage for spending more time (Brightwell et al., 2004) and collaborative testing includes time-consuming discussions that may generate more time pressure (Wiggs, 2011; Mahoney & Harris-Reeves, 2019). Take-home tests reduce time pressure (López et al., 2011; Bengtsson, 2019) but are more time-consuming (Bengtsson, 2019; Şenel & Şenel, 2021; Jamil et al., 2023), making time management more important (Isbell & Kremmel, 2020).

Deeper engagement with course content is seen as a benefit for open-book tests (Theophilides & Koutselini, 2000; Brightwell et al., 2004; Durning et al., 2016; Green et al., 2016; Johanns et al., 2017; Senkova et al., 2018; Rummer et al., 2019; Kim et al., 2021; Zagury-Orly & Durning, 2021), take-home tests (Andrada & Linden, 1993; López et al., 2011; Durning et al., 2016; D'Souza & Siegfeldt, 2017; Isbell & Kremmel, 2020; Şenel & Şenel, 2021; Jamil et al., 2023; Curbo et al., 2025; Namatovu & Kyambade, 2025), and collaborative tests as well (Meseke et al., 2010; Tung & Tseng, 2013; Wissman & Rawson, 2016; Mahoney & Harris-Reeves, 2019; Patiwaël et al., 2021).

There is evidence that some students doing take-home tests take advantage of the greater time to do more research (Namatovu & Kyambade, 2025) and students have found take home tests to be more meaningful than in-class assessments (Andrada & Linden, 1993; López et al., 2011; Isbell & Kremmel, 2020; Jamil et al., 2023; Curbo et al., 2025). Meanwhile, more engaged discussion was sometimes reported on collaborative tests (Rao et al., 2002; Meseke et al., 2008; Tung & Tseng, 2013; Duane & Satre, 2014; Mahoney & Harris-Reeves, 2019; Patiwaël et al., 2021). Collaborative testing allows for expressing diverse perspectives (Wiggs, 2011) and developing cooperation and social skills (Rao et al., 2002; Duane & Satre, 2014). Peer feedback and explanation are valued by students as helpful (Russo & Warren, 1999; Rao et al., 2002; Kapitanoff, 2009; Wiggs, 2011; Leight et al., 2012; Wissman & Rawson, 2016; Patiwaël

et al., 2021), even specifically increasing understanding (Kapitanoff, 2009). Several studies reported the students benefiting from what they perceived as useful feedback provided immediately by their peers (Rao et al., 2002; Meseke et al., 2008; Duane & Satre, 2014; Rivaz et al., 2015; Patiwaël et al., 2021).

Open-book tests better assess understanding over recall (Kim et al., 2021; Kim & Cho, 2021). Collaborative tests have further been found to improve understanding (Rao et al., 2002; Kapitanoff, 2009; Meseke et al., 2010; Wiggs, 2011; Tung & Tseng, 2013; Levine et al., 2018; Mahoney & Harris-Reeves, 2019).

The testing types are divided on the question of retention effects. Open book tests may hurt retention (Agarwal & Roediger, 2011; Rummer et al., 2019), make no difference (Gharib et al., 2012; Heijne-Penninga et al., 2013), or even improve retention (Senkova et al., 2018). Retention does not appear to be affected by take-home tests relative to in-class tests (Bode-Staud et al., 2025). In contrast, increased retention of material is often mentioned as a benefit of collaborative tests (Meseke et al., 2008; Kapitanoff, 2009; Wiggs, 2011; Leight et al., 2012; Duane & Satre, 2014; Hollis-Gilley & Clarkston, 2014; Rivaz et al., 2015; Johanns et al., 2017; Kapitanoff & Pandey, 2018; Levine et al., 2018), though some have found no retention benefits to the format (Wissman & Rawson, 2016).

Open-book testing may increase confidence (Theophilides & Koutselini, 2000; Durning et al., 2016) as does take-home testing (D'Souza & Siegfeldt, 2017; Bode-Staud et al., 2025), and particularly collaborative testing (Rao et al., 2002; Kapitanoff, 2009; Wiggs, 2011; Leight et al., 2012; Eastridge & Benson, 2020). However, open-book tests may lead to overconfidence (Johanns et al., 2017). Students may also be more comfortable with take-home tests (D'Souza & Siegfeldt, 2017; Bode-Staud et al., 2025).

All three formats have been touted for being more realistic tests of actual application of knowledge, skills, and abilities. Open-book tests are better for assessing realistic applications over closed-book tests (Kim et al., 2021; Kim & Cho, 2021) and align more with real-world practice where people usually have ready access to resources performing actual tasks (Krarup et al., 1974; Brightwell et al., 2004; Heijne-Penninga et al., 2008; Anaya et al., 2010; Durning et al., 2016; Johanns et al., 2017; Kim et al., 2021; Kim & Cho, 2021; Zagury-Orly & Durning, 2021). Take-home tests provide opportunity for application of real-world skills (López et al., 2011; Isbell & Kremmel, 2020; Şenel & Şenel, 2021). Likewise, collaborative testing provides the opportunity to transfer skills to realistic settings (Russo & Warren, 1999; Rao et al., 2002; Duane & Satre, 2014).

There is evidence that all three testing formats lead to some enhanced level of learning. Open-book tests may promote active learning strategies (Kim et al., 2021). Take-home tests may have deeper learning taking place over memorization (Weber et al., 1983; López et al., 2011; D'Souza & Siegfeldt, 2017; Jamil et al., 2023). Similarly, collaborative testing may enhance learning (Kapitanoff, 2009; Wiggs, 2011; Leight et al., 2012; Kapitanoff & Pandey, 2018; Levine et al., 2018; Mahoney & Harris-Reeves, 2019; Eastridge & Benson, 2020; Patiwaël et al., 2021), even during testing (Hollis-Gilley & Clarkston, 2014; Rivaz et al., 2015). Vygotskian constructivism based on the assumption that knowledge is socially constructed suggests collaborative testing is appropriate for the learning process (Meseke et al., 2008; Duane & Satre, 2014; Levine et al., 2018; Mahoney & Harris-Reeves, 2019).

3. Methodology

The course that is the subject of the study was an elective fourth-year English-language social science class that took place in the fall of 2025 at a public university in the Republic of Korea. The course had 18 students, 16 of whom elected to participate by submitting a written answer to the question “How was your experience of examinations in this class compared to examinations in other classes?” The two students who declined to participate in the study were outliers who had employment-related issues and had not been able to participate in the class fully and did their final exams independent of the rest of the class as take home. The students who participated were 9 male and 7 female, with a mean age 22.38 years old, ranging from 19 to 30. The group was very international, mostly exchange (7) or international (5) students, with four domestic Koreans. Four were from Uzbekistan, two from Denmark, two from Spain, and one each from Germany, Italy, Portugal, and Venezuela. Eleven of the students were in their junior year, with two seniors, two freshmen, and one sophomore. The instructor was a foreign professor from the United States with more than 25 years of experience teaching in Korea.

The class had a midterm and a final examination. The course met in person Thursday and Friday during the Fall 2025 semester. The typical week would include a question-and-answer session on Thursday to clarify issues from the text, then the students would divide into groups, each choosing a section from the week’s lesson to discuss. The groups would choose a spokesperson on Friday to lead the discussion who would present and explain their section, illustrating it with their own examples. For the midterm and the final, a review session was conducted on Thursday. The exams were written to take up two 75-minute class sessions. The objective half of the exam was distributed at the start of class on Friday. The short answer/essay half was given at the end of the Friday class, and both were due at the end of the subsequent week’s Thursday class. The students were

encouraged to work together by discussing their objective work and to proofread and review each other's written work.

The sixteen written answers were analyzed and coded into thirty themes. The pieces were read to identify themes matching the literature as well as authentic student reactions. The minimum number of codes was two and the maximum was nine, the mean was 5.06, and the mode was five. The top three codes were cited by eight students. One code was cited by seven students. Two codes were cited by six students each. One code was cited by five. Two codes were cited by three students. Eight codes were cited by two students. There were thirteen unique comments only mentioned by a single student.

4. Analysis

“I greatly appreciated the examination format of this class. This format provided me with ample time to deeply reflect on the topics and review the course material, rather than making me feel rushed.”

The first theme to emerge was that half of the students expressed an appreciation for the exam format, which is different from the general concern about preference, though an additional two preferred the exams, reflecting a more common theme in the literature for all three types of tests (Kim & Cho, 2021; Patiwaal et al., 2021; Jamil et al., 2023). Two students called the tests “meaningful,” which is a common reaction to take-home tests (Curbo et al., 2025) but not for open-book or collaborative tests. None of the students expressed a negative reaction to the formator as undesirable. One student (a Korean) thought “Compared to other classes, I think the professor's test method is the best” though he considered they were “really questionable for Koreans,” reflecting on his experience of classrooms and tests emphasizing control, regimentation, and a narrow

range of specific answers in a competitive context where students are usually given class rankings and assuming other Koreans might not be as prepared as he was for this testing format.

The first reason students expressed for appreciating the exam was that half of them felt it provided broader learning than just the memorization promoted by their usual in-class tests, which is common to open-book (Kim & Cho, 2021) take-home tests (Jamil et al., 2023) but not for collaborative tests. One student remarked, “Both the longer essay question and the shorter questions pushed me to reflect on the material instead of just memorizing it.” Likewise, two students indicated that the format led to them having a better understanding of the course material, which is a common reaction to collaborative exams (Kapitanoff, 2009; Mahoney and Harris-Reeves, 2019). Another student felt that the exams had led to deeper learning, which is one of the most common themes for take-home exams (Namatovu & Kyambade, 2025). Another student appreciated the emphasis of the exams on learning over performance leading to a particular grade. This was a unique reaction, though several students have mentioned all three types of testing as promoting more actual learning (Kim et al., 2021; Patiwaël et al., 2021; Jamil et al., 2023).

“I reckon this approach is very effective that allows students to think deeply about each task and gives a chance to research and find data on their own when they lack information.”

Further, six of the sixteen students noted that the exams allowed the students to engage and explore deeper concepts, which is consistent with literature regarding all three testing formats (Mahoney and Harris-Reeves, 2019; Zagury-Orly & Durning, 2021; Curbo et al., 2025) with two adding that they practiced and developed more opportunities for critical thinking, which has also been cited as a benefit of all three types of tests (Mahoney and Harris-Reeves, 2019; Rummer et al., 2019; Şenel & Şenel, 2021). Five

students additionally said the tests provided the opportunity and incentive to do more research to supplement what they learned in class, which has been mentioned as a benefit of take-home tests (Namatovu & Kyambade, 2025).

“Overall, the evaluation methods in this course required deeper thinking and offered a much broader scope of academic inquiry than the memorization-based exams common in many other subjects.”

Half of the students mentioned the format offered more chances for thinking and reflection beyond the rote memorization required to pass an in-class test. These are also regularly mentioned as a benefit of all three formats (Johanns et al., 2017; Senkova et al., 2018; Isbell & Kremel, 2020)

Seven of the students liked that the testing format avoided stress and unnecessary pressure, allowing students to “...learn without pressure” and “...removes the stress of having to memorize everything.” This is a common feature of all three exam formats (Green et al., 2016; Bengtsson, 2019; Eastridge & Benson, 2019).

Six of the students noted the opportunity to spend more time on the test “...because they gave me the time and space to think critically, review the material in a meaningful way, and organize my ideas into well-structured arguments.” This is not usually a feature of open-book or collaborative exams, which are typically timed in class, but reduced time pressure has been mentioned for take-home exams (López et al., 2011; Bengtsson, 2019).

“In addition, the open-book format and the chance to share ideas and discuss the exam questions with classmates made the assessment feel much more reflective and collaborative than the traditional, individual-focused exams I have taken in other classes.”

Three students were impressed by the discussion, noting it was more focused and productive than other in-class examinations, which is a commonly cited benefit of collaborative exams (Tung & Tseng, 2013; Patiwaël et al., 2021). Another three felt that

the exam discussions afforded them the chance to express their unfettered true thoughts and to form real opinions in an unrestricted environment (Wiggs, 2011).

Two students emphasized the exchange of ideas as students learned from each other. One student liked that the tests involved explanation in lieu of memorization. Three also noted the collective nature of the answers they submitted. Another two stressed the cooperative nature of the tests. All of these emphasized common elements of collaborative tests (Leight et al., 2012; Duane & Satre, 2014; Wissman & Rawson, 2016).

Two students called the tests meaningful, a common benefit of take-home tests (Curbo et al., 2025), and one other mentioned the exam had led to personal growth. Two students emphasized how different the tests were from what they were used to. One student called the tests “Comfortable.” One student noted better retention of material following the midterm exam compared to her experience of staying up all night to memorize material she would just forget shortly after the test “Because of that, the material has stayed with me much more effectively.” This has sometimes been mentioned as a feature of open-book tests (Senkova et al., 2018) but not for take-home tests, though it is often cited as a benefit of collaborative exams (Kapitanoff & Pandey, 2018; Levine et al., 2018).

One of the younger students felt a confidence boost, not unrelated to being able to express his full ability instead of being limited by the format. This is cited as a potential benefit of open-book (Durning et al., 2016), take-home (Bode-Staud et al., 2025), and especially of collaborative tests (Eastridge & Benson, 2020).

Another student felt that the experience had provided real-world practice, having used skills described by professional guest speakers in a different but related class. The top student in the class found the exams to be challenging in an affirmative, positive sense, which accords with how students sometimes find open-book tests more difficult

(Krarup, et al., 1974). Finally, one student appreciated how the collaborative process (Rao et al., 2002) connected to concepts from the course, which frequently included shared governance as diverse groups work together to solve problems: "...as it felt like collaborative work connected to the very idea of global governance that we studied in the course."

5. Discussion and Conclusion

The top three themes were mentioned by half of the students. Two of these, the tests promoting more learning over memorization (common to open-book, e.g., Kim & Cho, 2021, and take-home tests, e.g., Jamil et al., 2023) and more thinking and reflection on the tests (all three formats: e.g., Johanns et al., 2017; Senkova et al., 2018; Isbell & Kremel, 2020) are also major themes in the testing literature. The third, appreciation, is not a major theme in the literature, which discusses preference extensively (e.g., Kim & Cho, 2021; Patiwael et al., 2021; Jamil et al., 2023). However, if it is assumed as related to preference and the response indicating preference but not appreciation is added in, this becomes the leading theme, the only one expressed by a majority.

The next three themes, each supported by more than a third of the students, (six or seven out of sixteen) all represent major themes in the literature. Two of the themes, reduction of stress and pressure (Green et al., 2016; Bengtsson, 2019; Eastridge & Benson, 2019) and deeper engagement with concepts (Mahoney and Harris-Reeves, 2019; Zagury-Orly & Durning, 2021; Curbo et al., 2025) are common features of all three exam formats, while more time is only a factor for take-home exams (López et al., 2011; Bengtsson, 2019). The seventh theme mentioned by five of the students that the

format allows more opportunity for research is likewise a benefit of take-home tests (Namatovu & Kyambade, 2025).

The rest of the themes mostly represented ideas common in the literature review. However, six of the thirty themes (20%) were idiosyncratic and not supported by the literature review. That the exams were different garnered two mentions, and that the exams were the best ever, were questionable for Koreans, promoted personal growth, were comfortable, and allowed the students to express their full ability to a greater extent than other exams each had a single mention.

The initial concerns for implementing this type of hybrid test included concerns about modeling ICT and AI use, COVID-19, and distance learning, addressing collective problems, inappropriateness of memorization as a major testing skill, and the validity of testing reflecting in-class activities. Though the instructor was satisfied with the results in all regards, the students naturally had nothing to say about COVID-19/distance learning as the class took place in-person after pandemic measures had been dropped. Likewise, the students had nothing to say about validity, which is less of a typical student concern and something teachers worries about more.

On the other hand, one student did make mention of AI, writing, “The open-book format made the exams much less stressful, even though we were not allowed to use AI.” This comment clearly reflects the student preference for AI use (Manning et al., 2026). However, there was no given restriction on AI use on the exam in the verbal or written instructions. It appears that the class culture had enough normative force that the student perceived it as a prohibition. During discussions before the class, some students took notes from their group and referred to group sentiment in their own words while others wrote discussions using AI and read them before their class. The former were better received, had more questions, and more positive comments, while the AI discussions

rarely garnered questions other than from the instructor and did not win praise or encouragement. The positive reinforcement extinguished AI-written discussions well before the midterm in the eighth week and the student apparently took that norm for discussions to have the force of a ban on tests. The instructor took this to represent a success at efforts to model positive ICT, social media, and AI use in class (Mathewson, 2020). He spent the time in class while groups were preparing their materials before class answering questions, helping students write outlines for discussions in front of class, helping search for materials, and modeling searches and social media use on the screen in front of the class.

Across mentions of exchange of ideas, cooperation on the tests, and the collective process in producing answers, five students addressed the motive of developing cooperation to address collective problems in the real world that had motivated the institution of the collaborative tests done with knowledge of this as a potential benefit of collaborative exams in the literature (Leight et al., 2012; Duane & Satre, 2014; Wissman & Rawson, 2016). For example, one student asserted, “The style implemented helped me cooperate with my classmates and exchange ideas, have discussion and find what was the best answer collectively.” Despite the diverse classroom composition, these elements appeared to craft an inclusive atmosphere.

Finally, as mentioned above, half of the students suggested the tests “...gave time to think and reflect instead of just memorizing information for an in-class test.” This is common to open-book and take-home tests (Kim & Cho, 2021; Jamil et al., 2023) but not for collaborative tests. One student remarked, “Both the longer essay question and the shorter questions pushed me to reflect on the material instead of just memorizing it.” The instructor perceived this as taking place in the context of better student retention where students seemed more able to recall concepts from earlier in the class (as well as from

other classes) with less stress on memorization. Even though only a single student mentioned the increased retention, it is cited as a common feature of collaborative exams (e.g., Kapitanoff & Pandey, 2018; Levine et al., 2018).

The student perceptions offered support for using hybrid open-book, take-home, collaborative exams to reduce the need for memorization in exams in preference for promoting general learning with limited support for increased retention. In addition, the study supported student appreciation of the hybrid format, that it promotes more thinking and reflection, reduces stress, reduces time pressure, encourages engaging concepts more deeply, and provides more opportunity and incentive to practice research skills.

It is recommended that anyone interested in emulating this hybrid format begin by familiarizing themselves with all three individual formats individually. Many of their strengths and weaknesses overlap and all three formats require careful construction of tests. Careful and deliberate test design is necessary to make sure that the test is measuring the correct factors valid for the class. It is also important for incentivizing and encouraging the desired skills to be cultivated by the exam. All three individual exam formats may be useful for developing skills and extending more learning through the process of testing itself.

Furthermore, it is important that any testing and student evaluation should be consciously matched to and developed for the nature of what is taught and done in the classroom and should validly reflect the practice. Given that, this hybrid format may also require some retraining of students to meet different class expectations that they may perceive as different from their expectations. In spite of those caveats, the format may be utilized for a positive student experience, promoting more learning, even in a challenging transnational classroom environment.

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