

# White Paper on Test Banks and Releasing Past Exams

## **Part 1: Test Banks**

### 1.1 What are Test Banks?

Test banks are a subset of Academic Archives containing past exams. Academic Archives are resources, usually stored online, containing useful materials gathered by fellow students for various classes, usually available through academic communities and extracurricular organizations. Students use past exams in Test Banks to prepare for quizzes, midterms, and exams (See Section 2: Benefits of Past Exams). While many professors often vary in the degree to which they would like their tests to be distributed, **no Penn policy currently expressly forbids the distribution or use of past exams among students**<sup>1</sup>.

### 1.2 How prevalent are Test Banks?

Test banks are usually tied to student groups, which can include:

- Greek organizations, including Professional, Panhellenic, Interfraternity, and Multicultural (approximately 25% of Penn students are in greek life)
- Academic programs<sup>2</sup> (eg. at least 130 students participate in one of Wharton's four coordinated dual degrees per class year)
- Many clubs and student organizations (both Wharton- and Penn-Wide)

While students' concerns about academic integrity make it difficult to survey students on test bank access, WAB attempted to conduct an informal survey through Wharton class facebook groups, and while the number of responses was relatively low (N=28), the survey did reveal that two thirds of respondents had access to past exams through test banks, and that **there is no core class for which no student had access to past exams** (See Appendix for results).

## **Part 2: Benefits of Releasing Past Exams**

In this section, WAB will discuss some of the benefits of releasing past exams.

Reducing Unfair Advantage: The reality is that some students have access to past exams for courses while other students do not. This puts those that do not have access at a severe disadvantage. Releasing past exams makes preparation resources equal across all students.

Familiarity with Difficulty: When old exams are consistent with the demands and difficulty levels of the current course they are a great way for students to gauge their level of preparedness and understanding of material (Dunlosky, et. al, 2002).

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<sup>1</sup> According to Julie Nettleton in OSC and students on the Honors Council, while cases of access to past exams have been brought to the Office of Student Conduct, students will usually win the case on appeal.

<sup>2</sup> We chose to avoid specificity for confidentiality

Familiarity with Format: Understanding the style of an exam removes the shock of seeing an exam for the first time. When shocked, students are less likely to perform well, and exam scores can be corrupted by student anxiety (Messick, 1982, cited in Perlman, 2003).

Improved Exam Performance: Using practice exams is proven to improve student scores on examinations (Snooks, 2004). At Wharton, when one core class decided to release practice exams, averages on the exams went from 50% to 80%<sup>3</sup>.

Improved Learning of the Material: Practice tests are especially effective in courses that are mechanical and require practice to internalize theory. It is not study time that correlates with higher GPAs. Rather, GPA is more correlated with deliberate practice..." (E. Ashby et al. 2005).

Course satisfaction: When practice exams began being released in one of Wharton's core classes, students became more satisfied with the course<sup>4</sup>.

Less Need for Additional Materials: For Professors, releasing past exams can also save time by removing the need to create extra practice materials/questions.

### **Part 3: Solutions to Common Problems with Releasing Past Examinations**

#### Rapidly changing field/ changing professors

*Problem:* If the fundamental concepts of the taught subject change frequently, then past examinations will be unhelpful to students.

*Solution:* Clarify the potential detriments of using past examinations as study material or publishing a list of the material that has changed since the exam was written.

#### Creating new tests

*Problem:* Crafting a new test that addresses the specific pedagogical demands of a course is difficult and time consuming, so it is easier to re-use past exams.

*Solution:* Releasing past exams reduces the need for other study resources, such as review sessions or practice questions, so professors can re-allocate resources to creating a new exam. Furthermore, for some questions (eg. what is the formula for the present value of an annuity?), if a student knows the answer from a past exam, this is just as good as knowing the material, so the same question can be reused regardless.

#### Memorization vs. Learning

*Problem:* Releasing previous examinations may encourage students to memorize answers and techniques rather than internalizing material, especially for multiple choice questions.

*Solution:* Incorporate more open ended problems into examinations that test for understanding and not rote memorization.

#### Copyright

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<sup>3</sup> These results may be confounded by other changes that were made to the course at the time

*Problem:* Examinations are the property of the University of Pennsylvania and the professor who created them.

*Solution:* The exams are already online. When professors or departments release exams themselves, they have more control over their distribution and create more equal opportunity for success for all students

**Section 4: Alternatives to Releasing Past Exams**

| <b>Alternative</b>  | <b>Advantages</b>   | <b>Disadvantages</b>  |
|---|---|---|
| <p><u>Sample problems:</u> Create one or two examples of each type of question that will be on an exam, students will get a better sense of what the format of the exam will look like.</p> | <ul style="list-style-type: none"> <li>-Alleviates anxiety caused by uncertainty about exam format and style of questions</li> <li>-Less work to create a limited number of questions than to write a new exam every year</li> </ul>                    | <ul style="list-style-type: none"> <li>-May increase anxiety if students do not understand or do well on the limited number of questions released</li> <li>-Students with access to significantly more questions from unofficial past exams will be at an advantage</li> </ul>  |
| <p><u>Examination Outlines:</u> Providing students with a summary list of topics and subtopics can help students identify what areas they need to focus on for the exam.</p>                | <ul style="list-style-type: none"> <li>-Alleviates some anxiety caused by uncertainty about exam content</li> <li>-Does not take much time, as professors should already have this material compiled in their syllabus</li> </ul>                       | <ul style="list-style-type: none"> <li>-Does not provide students with information about exam format and style of questions</li> <li>-May increase student anxiety if they are uncertain how certain topics will be tested</li> <li>-Students may inadvertently study the wrong material if their notes from class or understanding of a topic is wrong.</li> </ul> |
| <p><u>Study Guides:</u> Professors can make study guides for students that summarize the material that has been taught in class</p>   | <ul style="list-style-type: none"> <li>-Alleviates some anxiety caused by uncertainty about exam content</li> <li>-Ensures students study the correct material for an exam</li> </ul>   | <ul style="list-style-type: none"> <li>-Does not provide students with information about exam format and style of questions</li> <li>-A detailed and thorough study guide may take as much time to complete as a new exam</li> </ul>  |
| <p><u>Review Sessions:</u> Professors or TAs can host review sessions either in class or outside of class hours to go over the material that will be on an exam.</p>                        | <ul style="list-style-type: none"> <li>-Alleviates anxiety caused by uncertainty about exam content</li> <li>-Ensures students study the correct material for an exam</li> <li>-Allows more professor/ TA access to address student concerns</li> </ul> | <ul style="list-style-type: none"> <li>-If review sessions are hosted outside of class time, students with conflicts may be unfairly disadvantaged by not being able to attend</li> <li>-Preparing and delivering the review session may take as much time as creating a new exam</li> </ul>  |

|  |  |   |
|--|--|---|
| <p><u>Protecting Exam Materials:</u> Limit the opportunities for past exams to be leaked by not releasing paper or solutions and establishing set viewing times for students to see their exams.</p> | <p>-Will likely limit the number of past exams available to students</p> | <p>-It is impossible, or nearly impossible, to prevent some exam questions from making it into a student test bank, and existing past exams will remain in test banks, and students who manage to get access to past exams will be at an even greater advantage</p> <p>-Students who did not do well on an earlier examination/midterm will have an extra barrier to learning from their mistakes</p> <p>-Set viewing times require a large amount of administrative effort for TAs and course organizers</p> |
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**Bibliography:**

Dunlosky, John, Katherine A. Rawson, and Susan L. McDonald. "Influence of practice tests on the accuracy of predicting memory performance for paired associates, sentences, and text material." *Applied metacognition* (2002): 68-92.

Dunlosky, John et al. "Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology." (2013) *Psychological Science in the Public Interest*, vol. 14, no. 1, pp. 4-58.

Freeman, Scott, et al. "Prescribed active learning increases performance in introductory biology." *CBE-Life Sciences Education* 6.2 (2007): 132-139.

Perlman, Carole L. "Practice Tests and Study Guides: Do They Help? Are They Ethical? What Is Ethical Test Preparation Practice?." (2003).

Plant, E. Ashby, et al. "Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance." *Contemporary Educational Psychology* 30.1 (2005): 96-116.

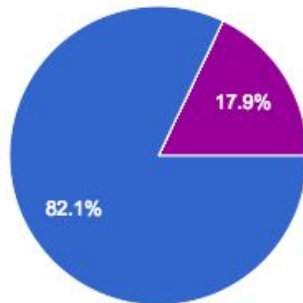
Pressley, Michael, et al. "Some of the Reasons Why Preparing for Exams Is So Hard: What Can Be Done to Make It Easier?" *Educational Psychology Review*, vol. 9, no. 1, 1997, pp. 1-38.

Snooks, Margaret K. "Using practice tests on a regular basis to improve student learning." *New Directions for Teaching and Learning* 2004.100 (2004): 109-113.

## Appendix:

### What school are you in?

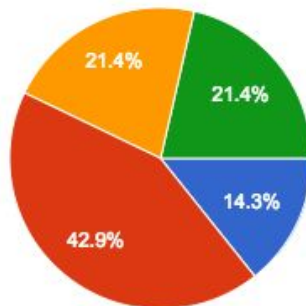
28 responses



- Wharton
- College
- Engineering
- Nursing
- Coordinated Dual Degree (Wharton + another school)
- Uncoordinated Dual Degree (Wharton + another school)
- Non-Wharton Coordinated Dual De...
- Non-Wharton Uncoordinated Dual...

### What year are you?

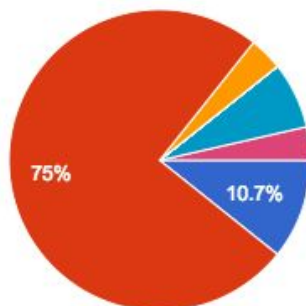
28 responses



- 2018
- 2019
- 2020
- 2021

### What is the most common way you study for exams?

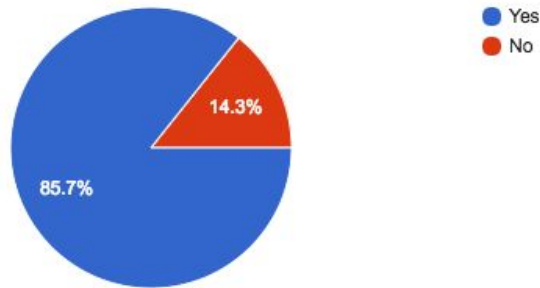
28 responses



- Make a study guide
- Do past tests or practice questions
- Read through slides
- Reading the text book
- Read through class notes
- Make flashcards
- all of the above

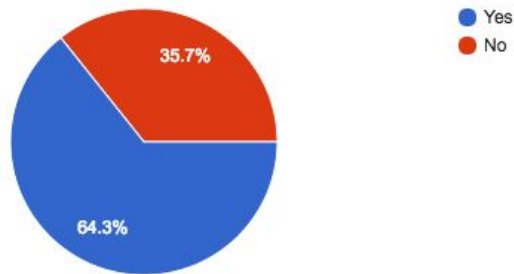
### Are you aware that "Test Banks" exist?

28 responses



### Do you have access to any "Test Banks"?

28 responses



### Which core class's Past Exams have you had access to from test banks in the past? (remember these results will be shared completely anonymously!)

22 responses

