Leveraging the CoursePlus Quiz Generator to Promote Academic Integrity

BSPH Center for Teaching and Learning

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This session will be recorded.

Our team

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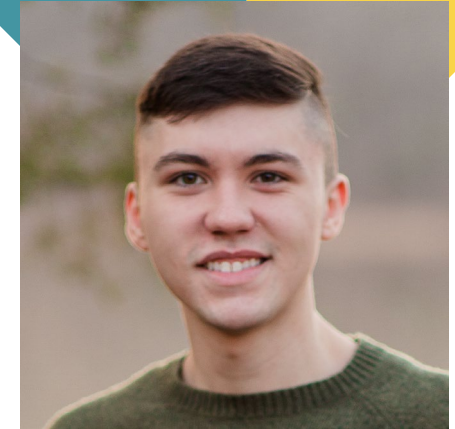

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Learning Outcome

After this session, you will be able to:

- Describe the benefits of low stake assessment and formative assessment

- Apply best practice strategies for supporting academic integrity during quiz question creation

- Select quiz settings that support academic integrity

- Explain how quiz statistics can help instructors make improvements on quiz questions

Agenda

01. Assessment

Formative and low-stake assessment: knowledge checks, in-lecture quiz

02. Quiz Question Creation

- Quiz sets
- Question blocks
- Question tagging

03. Quiz Settings

- Honor statement
- Open book
- Time limit
- Randomization

04. Quiz Statistics

Review the quiz data to improve the quiz questions.

05. Closing

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Poll: Why Does Academic Dishonesty Occur?

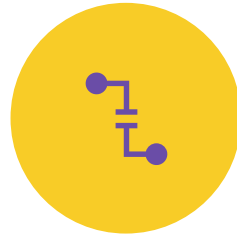# Why Does Academic Dishonesty Occur?
Things to consider...

MISUNDERSTANDING
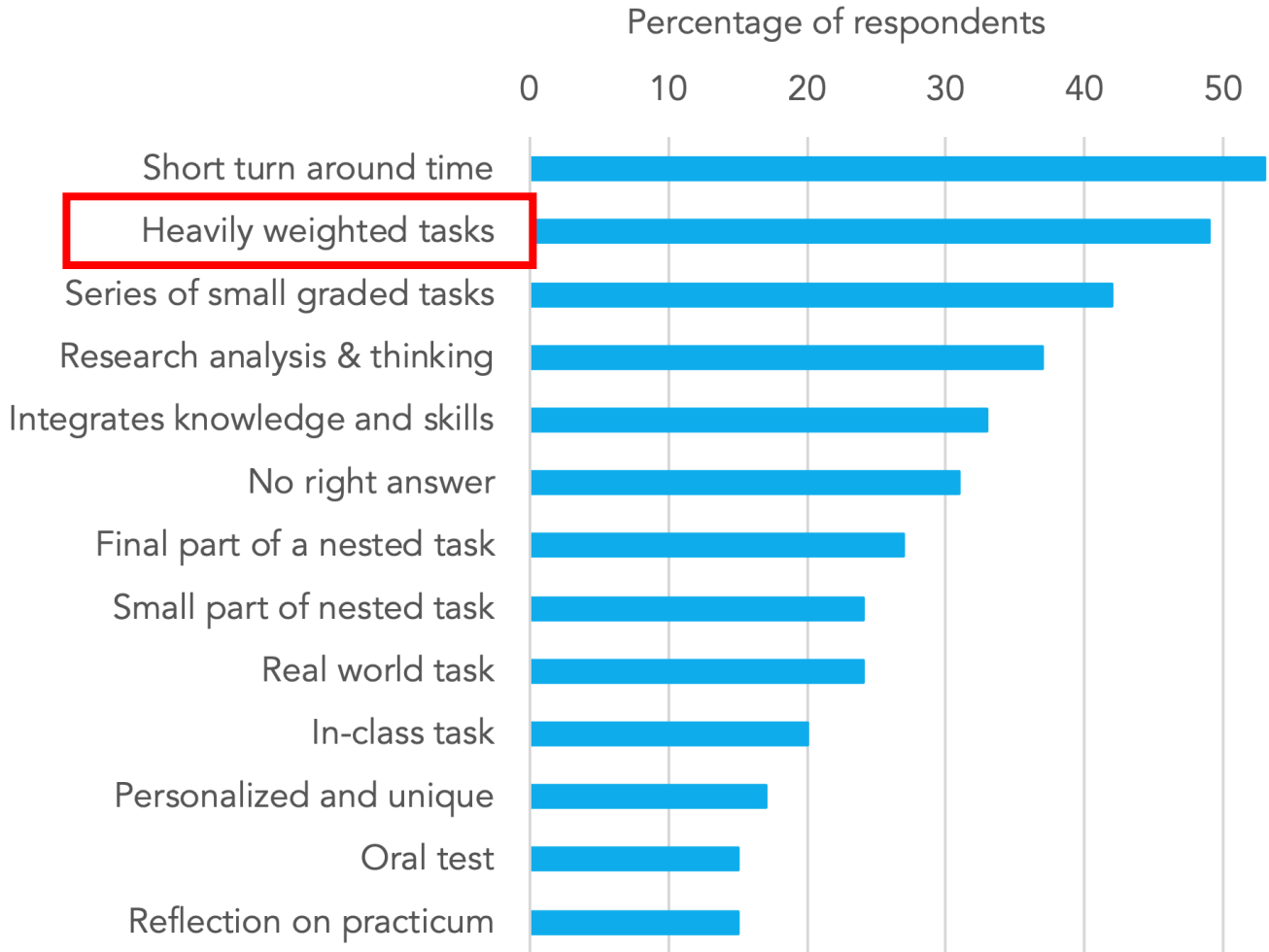
POOR TIME MANAGEMENT

FEELING DISCONNECTED

LACK OF CONFIDENCE

ANXIETY

Source: Bernard, W. Jr. and Keith-Spiegel, P. (2002)

Percentage of respondents

Probability of Cheating on Assessments

As reported by those who cheated

Chart adapted from Dr. Martin Wielemaker. The data are from Bretag, T., Harper,R., Burton, M., Ellis, C., Newton, P., Van Haeringen, K., Saddiqui, S., and Rozenberg, P. (2019). Contract Cheating and Assessment Design: Exploring the Relationship, Assessment & Evaluation in Higher Education, 44(5): 676-691.

Part 1: Assessment Types

- Low-stakes/ Formative Assessment
  - *Low or no point value*
  - *Throughout the term*
  - *Frequent*
  - *Ongoing feedback*

Low-stakes/Formative Assessment – Why and How

Benefits

- Help **students** identify their strengths and weaknesses and target areas that need work
- Improve **students'** retention and performance
- Enhance **students'** learning efficiency
- Help **faculty** recognize where students are struggling and address problems immediately

MCQ Examples

- In-lecture quizzes
- Knowledge checks
- Pre-test and Post-test
- Practice/Review quizzes
- Self assessment

Part 2: Quiz Question Creation

- Quiz sets

- Question blocks

- Question tagging

Quiz Sets

What is a quiz set?

- A set of at least <u>two</u> quizzes

- Each student only receives <u>one</u>

What are the benefits?

- Quiz set settings override individual settings

How does it promote academic integrity?

- Not all students will take exact same exam

Quiz View: View All Quizzes

Quiz Title	Questions	First Open Day	Last Open Day	C	🗑
Module 1 Quiz	8	01-Mar-23	15-Oct-23	Duplicate	Delete
Quiz Set Test **Quiz Set**	—	27-Jun-23	27-Jun-23	—	Delete
Record answers after an abandoned attempt	15	02-Nov-22	30-Nov-23	Duplicate	Delete
Test	1	12-Aug-23	12-Aug-23	Duplicate	Delete
Test quiz **Part of Quiz Set: Quiz Set Test**	3	02-Nov-22	20-Aug-23	Duplicate	Delete
test quiz	1	17-Jan-24	17-Jan-24	Duplicate	Delete
Test quiz (Duplicate) **Part of Quiz Set: Quiz Set Test**	3	02-Nov-22	20-Aug-23	Duplicate	Delete
This is test quiz	0	17-Jan-24	17-Jan-24	Duplicate	Delete

Question Blocks

What is a question block?

- Group of questions that always <u>appear together</u>

What are the benefits?

- Keeps questions that have a common reference together

How does it promote academic integrity?

- Option to randomize the display order of questions

Question Tagging

What is question tagging?

- 2-step process:
  - Assigning descriptors, or tags, to questions
  - Using rules to determine which questions will appear

What are the benefits?

- Ensures that all desired topic areas are included on a quiz
- Achieves something similar to a quiz set on a smaller scale

How does it promote academic integrity?

- Offers ability to present students with completely different questions

Create New Rule

Select Tag(s) : test ✕

Total available question(s) matching tag(s): 3

Number of questions to include in quiz that match this rule: 2

➕ Add Rule ✕ Cancel

Part 3: Quiz Settings

- Honor statement
- Open book
- Time limit
- Randomization

Part 4: Quiz Statistics

- Responses to Questions Report
- Quiz Completion Statistics
- Quiz Grade Statistics
- Discrimination Value on Questions Report

Question Responses

Item Difficulty Levels

Item Difficulty (p value)	Frequency
81 – 100%	Easy
70 – 80%	Average
51 – 69%	Difficult
>50%	Very difficult

Student response statistics

% Chosen		Question / Answers
Answered:	30	Which of the following is MOST true about the flow of public health data?
Did Not Answer:	1	
Full Credit:	67.8%	
Partial Credit:	3.2%	
No Credit:	29.0%	
12.9%		Just as in bank robberies, it follows the money.
9.7%		The Centers for Disease Control and Prevention is enabled by Health Information Portability and Accountability Act (HIPAA) to collect Protected Heath Information (PHI) whenever it wants it.
6.5%		It is supported by well-defined funding lines, program missions, and organizational structures.
70.9%		Much of it starts in clinical care and travels first to state and local public health agencies.

Quiz Completion

Student	Grade	Date/Time Completed	# Attempts	Time to Complete (hr : min : sec)
	8.08 / 9 (89%)	10/15/22, 4:22 AM	1	0:20:01
	9 / 9 (100%)	10/18/22, 9:20 PM	1	0:28:25
	6.83 / 9 (75%)	10/18/22, 12:20 PM	1	15:29:02
	4.42 / 9 (49%)	10/18/22, 11:59 PM	1	0:23:20
	7.83 / 9 (87%)	10/18/22, 6:09 PM	1	0:14:46
	7.58 / 9 (84%)	10/15/22, 11:41 AM	1	8:49:16
	7 / 9 (77%)	10/18/22, 8:30 PM	1	0:06:03
	0 / 9 (0%)	10/23/22, 10:27 PM	1	0:01:00
	7.83 / 9 (87%)	10/10/22, 8:50 AM	1	0:03:59

Quiz Grades

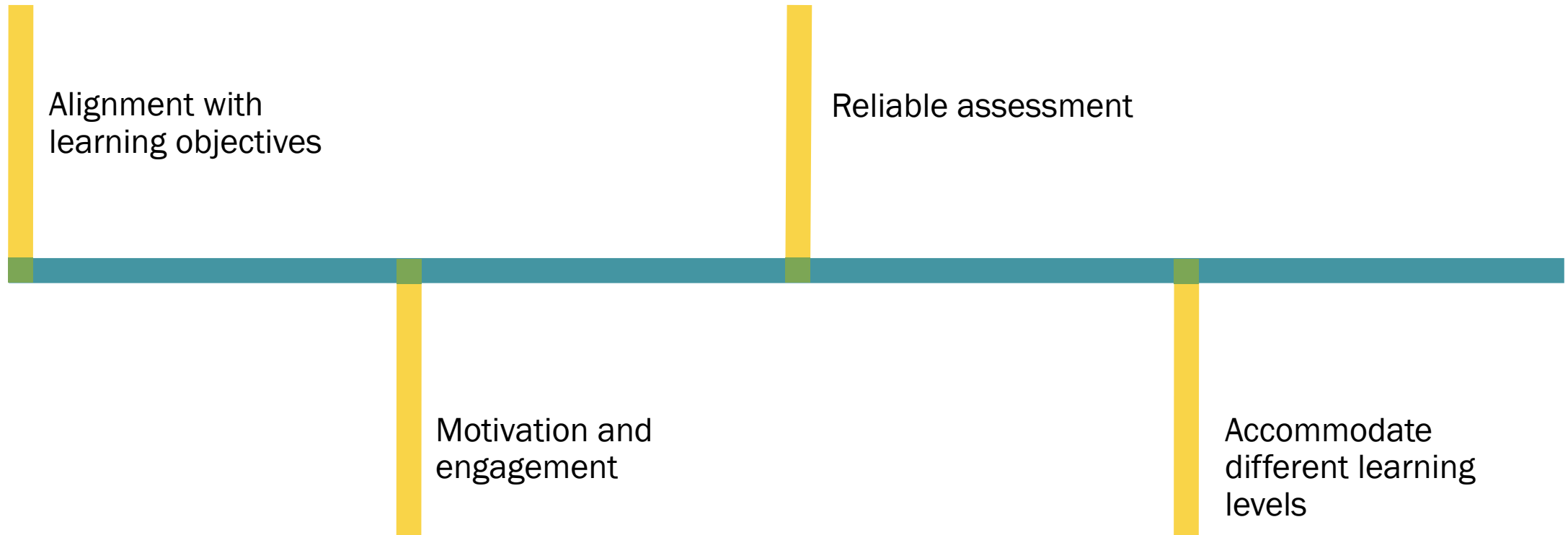Standard Deviation: 19.58

Mean: 81%

Median: 84.0000%

Range: 100%

Min / Max: 0% / 100%

n = 31

Poll: Should quiz questions that are too easy or too difficult be excluded? Why / why not?

Should quiz questions that are too easy or too difficult be excluded? Things to consider...

Alignment with learning objectives

Reliable assessment

Motivation and engagement

Accommodate different learning levels

Discrimination Value

Question	#Correct Answer(s)	#Incorrect Answer(s)	Difficulty (0 to 1)	#Correct (Top Performers)	#Correct (Low Performers)	Discrimination Index (-1 to 1)
Question 1	21	10	0.68	15	6	0.56
Question 2	24	7	0.77	14	10	0.25
Question 3	29	2	0.94	16	13	0.19
Question 4	28	3	0.90	16	12	0.25
Question 5	24	7	0.77	14	10	0.25

Discrimination Value (2)

Based on the data above:

1. **The quiz question(s) answered correctly by the most students:**
   - question 3

   (p=0.94 — 94% of the students got it correct)

2. **The quiz question(s) answered correctly by the fewest number of students:**
   - question 9

   (p=0.58 — only 58% of the students got it correct)

Questions with discrimination index (D) values of .20 and above are considered to be desirable. Questions with negative D values should be reviewed for possible revision or elimination.

3. **The following quiz question(s) may need to be reviewed because they have a D value of less than .20:**
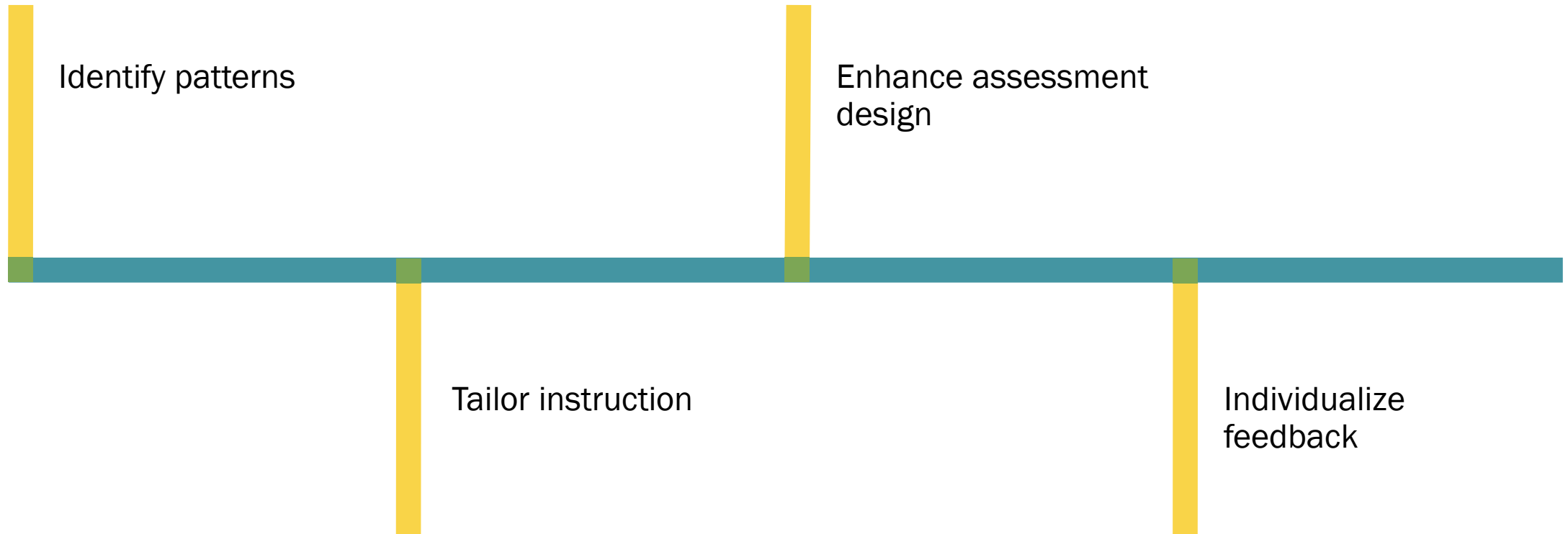   - question 3

Source data can be downloaded here

Poll: How will using this data for quiz improvements help support academic integrity?

How will using this data for quiz improvements help support academic integrity? Things to consider…

Identify patterns

Enhance assessment design

Tailor instruction

Individualize feedback

Q & A

Key Takeaways

- Incorporate low-stake and formative assessment whenever appropriate
- Utilize quiz blocks, quiz sets and add tags to quiz questions
- Add an honor statement
- Consider open-book assessment
- Utilize randomization
- Regularly improve quiz questions based on quiz statistics

Resources

Instructional Design Team

- The instructional design team is ready to assist in the design, development, and delivery of academic courses.

CTL Help

- Technical Support for CoursePlus

- Open a help call or email us at ctlhelp@jhu.edu

- Available M-F 8:30 AM – 5 PM EST

CoursePlus Faculty Guide

- Detailed instructions on how to use various CoursePlus tools including Quiz Generator.

Upcoming MCQ Workshop

Part 3: Writing Multiple Choice Questions for Higher Level Thinking – *a hands-on working session*

The date and registration link will be posted on the Events page of the Teaching Toolkit website, SPHeed Read and BSPH Events Calendar.

Thank you!

We value your feedback. You are invited to complete the following survey. It takes about 3 minutes.

Session evaluation:
https://forms.office.com/r/dryfdRaLNU

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