

Modified Definitional Grading – A Stepping Stone to Content Mastery and Competency-Based Education?

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Issues in Nursing Today

- ▶ Students graduating not possessing KSA's
- ▶ Response = Change
 - ▶ Competency-based education
- ▶ But...this is difficult to measure in didactic courses, especially when we rely on grades to reflect whether a competency has been met

(AACN, 2008,2021; Benner, 2012; Giddens, 2020; IOM, 2003; La Chimea et al., 2020; Murphy & Janisse, 2017; QSEN, 2007; Sharifabadi et al., 2019)

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Issues with Grades

- ▶ Meant to imply achievement of objectives and mastery of content
- ▶ What do they really mean?
 - ▶ Grade inflation
 - ▶ Poor grading systems
 - ▶ Fluff points

(Bachan, 2017; Carifio & Carey, 2013; Chowdhury, 2018; Finefter-Rosenbluh & Levinson, 2015; Walvoord & Anderson, 2011)

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Why is this an Issue?

- ▶ If we are relying on grades to imply mastery of content and achievement of objectives, and grades are unreliable...
 - ▶ What do grades really mean?
 - ▶ How do we know students have mastered anything?

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Traditional grading systems

- ▶ Don't ensure mastery of content
- ▶ Allow for offsetting poor performance on a valued component by a good performance on another – grade inflation
- ▶ Can't guarantee that they prepare students with requisite knowledge for practice

(Carifio & Carey, 2013; Chowdhury, 2018; Walvoord & Anderson, 2011)

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Traditional Grading Scenario

Sample traditional grading system

40% exams

30% HW

30% project

Total Grade

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40% exams
 30% HW
30% nursing care project
 Total Grade

Nursing Student A

Nursing Student B

Exam avg. 50
 HW avg. 100
 Project 100

Exam avg. 95
 HW avg. 95
 Project 50

Course grade – 80
 grade - 80

Course

Who do you want as your
 nurse???

Solution?

- ▶ We need a method of ensuring that grades convey mastery of content
- ▶ We need a method of ensuring that grades reflect competency
- ▶ Can definitional grading be a solution?

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What is definitional grading?

- ▶ Means of communicating importance of class material
- ▶ Communicates clearly what the teacher values, and does not allow for offsetting poor performance on a valued component by a good performance on another
- ▶ Clearly illustrates to the student how to achieve a desired grade...puts power and information in the students' hands

(Gillette & Gillette, 2019; Looney, 2003; Walvoord & Anderson, 2011)

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Definitional Grading System

- different categories of work are all valued equally
- **student grade is determined by the highest achieved performance in meeting or exceeding standards across all categories of work**
 - What does this mean???
 - The lowest grade achieved is the highest achieved performance in meeting or exceeding standards across all categories

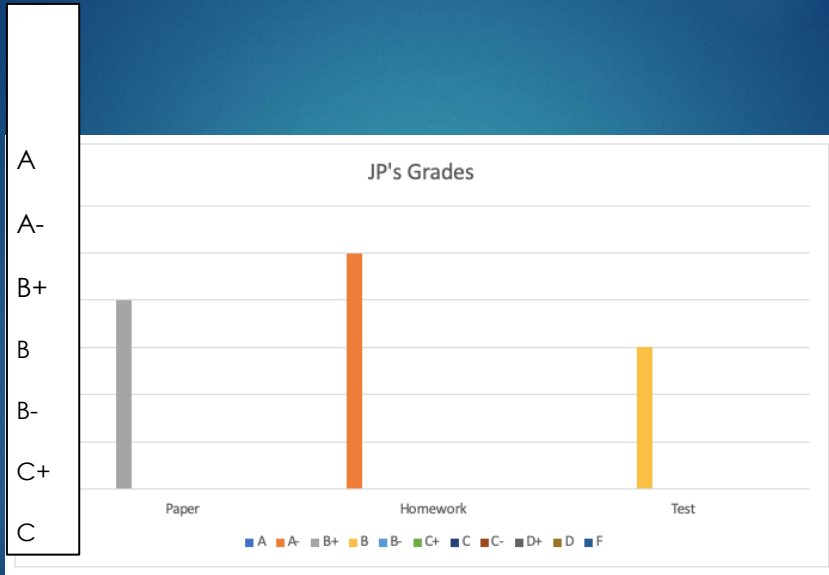
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Definitional Grading Example

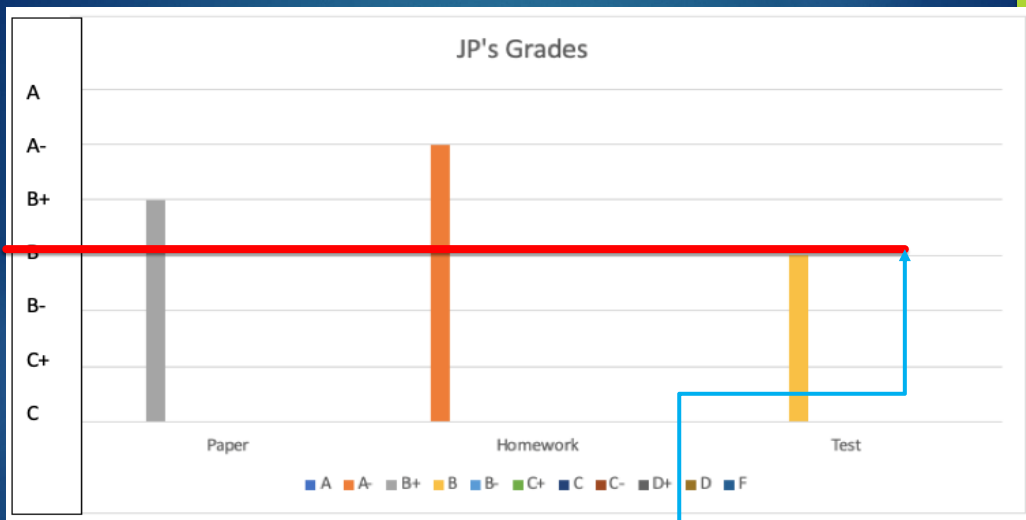
- ▶ Student JP gets the following grades in the class: an A- on homework, a B+ on the class paper, and B as a test grade average.

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Definitional Grading



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The highest score that was achieved consistently across *all* assignments is a B.

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A Modified Approach

- ▶ A modification is needed
 - ▶ To decrease potential harm to students
 - ▶ To motivate continued learning
 - ▶ To allow for remediation and improvement

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The Do Over

- ▶ A modification was provided to allow for ONE course “Do Over” in any area the student chooses
 - ▶ Did you do poorly on exam 1? Study, reinforce the material, commit it to long-term memory, and re-take it for the higher achieved grade
 - ▶ Do poorly on the paper? Learn by making corrections as directed by your instructor to get a portion of your grade back

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Methods

- ▶ Convergent mixed-methods design
- ▶ 84 participants recruited from the 188 BSN students in freshman didactic nursing course.
- ▶ Control group data was accessed from Spring 2019 semester

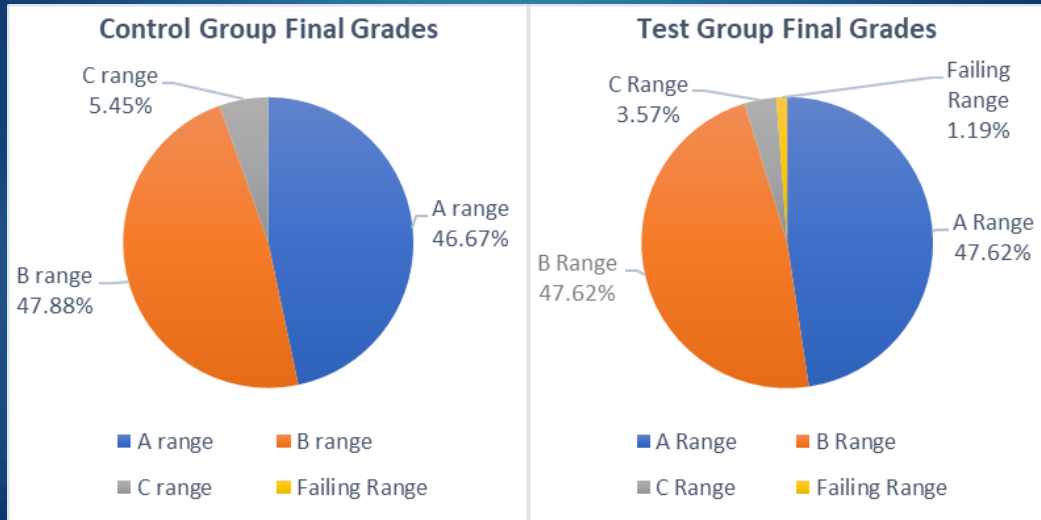
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Methods

- ▶ Quantitative data: grade-related data relative
 - ▶ independent sample t-tests, Cohen's d analysis for effect size, and the Cochran-Armitage trend, etc.
- ▶ Qualitative data: post-survey in the final week of the semester

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Final Course Grades

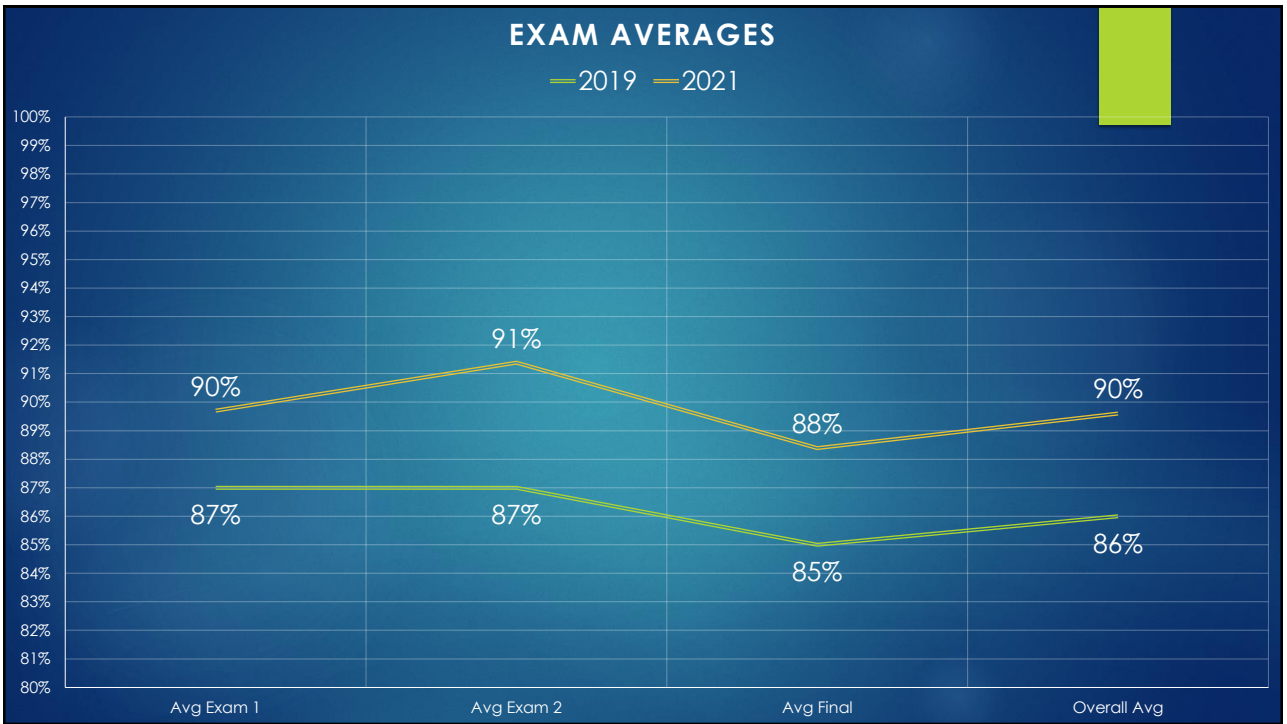


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Final Course Grades

	Group	N	A	A-	B+	B	B-	C+	C	F
Final Course Grades	Control	165	19	58	35	26	18	8	1	0
	Test	84	13	27	15	14	11	1	2	1
	Total	249								
	Z	-0.126								
	dim	8								
	p	.900								

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Exam Scores

- ▶ Scores for independent samples t-test revealed:
 - ▶ Exam 1 = $p = .029$
 - ▶ Exam 2 = $p = .007$
 - ▶ Final = $p < .001$
 - ▶ Exam Avg. = $p < .001$
- ▶ ...all statistically significant

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Qualitative Results: Motivation and Diligence

- Created new study habits to be used in future courses
- Forced them to study more
- Encouraged appreciation for all course activities
- Long-term memory learning occurred
- Increased understanding of content

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Qualitative Results: Stress

- Modified DGS was stressful
- Altered study and work habits were motivated by stress
- Added to stress of already high stress nursing courses
- Added to stress of pandemic, the resultant online learning environment, and stress of being freshmen

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Qualitative results: Highlighting of Student Weaknesses

- ▶ Did not like their weaknesses being identified and were concerned they were being used for grade evaluation
- ▶ Recognized that their weaknesses were not being compensated for in other areas
- ▶ Lack of intrinsic motivation highlighted
- ▶ Belief that all overall grades were impacted negatively

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Discussion

- ▶ participants remarked that final course grades were lower using the modified DGS
 - ▶ final grade distributions between the control and test groups were not significantly different ($p=.900$)
- ▶ individual exam scores and overall exam averages were significantly higher in the test group ($p= .029, .007, <.001, \text{ and } <.001$ respectively)

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Discussion

- ▶ Potential for enhanced content mastery exists
- ▶ With no compensatory means of inflating grades, modified DGS may prove more meaningful than traditional grades

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Discussion

- ▶ Not viewed positively
- ▶ Improved habits, more study, motivation to work
- ▶ Retention of information
- ▶ Stress?
- ▶ Highlights weaknesses
- ▶ Messaging is important
- ▶ Potential for improved content mastery

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Questions???

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