

# Recommendations for Final Exams and Midterms

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# Curriculum Development: SCTA Connection



**Graduation rates among all high schools and demographic groups are at exemplary levels.**

# Purpose

- Review of research literature for guidance on weights for midterm and final exams in high school grades
- Conduct an analysis of pre-pandemic high school grades to examine different weighting models for midterm and final exams on pass rates

# Research Literature Findings

## Optimal Weights for Midterms and Finals

- Peer-reviewed research that gave specific guidance on midterms' and finals' weights in high school grading practices was not available.

## General Use of Tests (Not Specific To Midterms and Finals)

- Empirical support exists for the use of testing, defined as the retrieval of learned material (Keus et al., 2019), as an instructional tool to increase retention of learning (Karpicke & Roediger III, 2007; Nungester & Duchastel, 1982).

# Research Literature Findings

## Frequency of Testing and Performance on the Final

- Bangert-Drowns et al. (1991) conducted a meta-analysis of 35 high school and college studies on the relationship between the frequency of classroom tests/quizzes and student performance on the end-of-course exam: Increasing the frequency of tests/quizzes increased student performance on the end-of-course exam, but there was a diminishing return in improvement.
- Keus et al. (2019) found that increasing the frequency of midterm exams from one to two was positively related to the performance on the final exam for college freshmen but not for college juniors in college science courses.

# Research Literature Findings

## Relationship Between Testing and Stress/Anxiety

- Wuthrich et al. (2021) examined factors, including self-reported test anxiety, that moderated Australian student stress during their final year of high school. Researchers found that student self-reported stress and anxiety increased over time and peaked around the time students took their trial Higher School Certificate (HSC) examinations, which were worth up to 30% of their final grade.
- Over 30% of students reported severe to extremely severe stress prior to their trial HSC examinations, which was consistent with prior research showing an increase in distress before major examinations.

# HCPSS Grade Analysis

HCPSS analyzed 135,779 full-year course grades from SY17-18 and SY18-19 school years to compare the following grading methods:

	<b>Contribution to Final Grade</b>		
<b>Method</b>	<b>Midterm</b>	<b>Final</b>	<b>Quarter Grades</b>
A	10.0%	10.0%	20.0%
B	0.0%	10.0%	22.5%
C	0.0%	0.0%	25.0%

# HCPSS Grade Analysis Findings

- The overall pass rates for each method were all at least 95%.
- Slightly higher pass rates across English, mathematics, science, and social studies were observed using Method C for these student groups: American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander, Hispanic Latino, economically disadvantaged, special educational, and ESOL eligible.
- For at least 95% of the course grades, pass/fail designations remain unchanged regardless of Method A or Method C being used. Less than 5% of all grades would change pass/fail designations depending on whether Method A or C is used.
- Historical data patterns suggest that slightly more students would pass courses in the absence of weighted midterms and finals, but that the majority of students would pass regardless of midterm and final weighting.

# Conclusion

- Neither the review of the research literature nor the analysis of pre-COVID HCPSS high school grading data provides a definitive argument for the adoption of one midterm and final weighting framework over another.
- Extant research supports testing (the retrieval of learned material) as an instructional tool that helps students retain knowledge while being mindful of potential stress and test anxiety for students; however, the literature does not prescribe an optimal weighting framework for high school grades.

# Next Steps

- June 9, 2022 - Report on Policy 8020
- July 14, 2022 - Public Hearing on Policy 8020
- August 2022 - Policy 8020 is approved for implementation in the 2022-2023 school year

**Questions**