

Summative Student Reflections: Grades and Gender Differences

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Abstract

Student reflective writing is considered a useful tool for supporting student engagement, connecting experience to learning, and fostering improved student-learning outcomes. Reflections are used across many pedagogical traditions in higher education to foster greater empowerment among students. However, it is seldom explored how tools for empowerment function among already empowered populations. This mixed-methods research explores gender and student-athlete status to understand the dynamics of summative student reflections and grade arguments. Analysis of variance reveals that gender is a significant factor in students' estimation of their classroom performance, but student-athlete status is not predictive. Qualitative themes varied by gender. Results suggest that men tend to systematically overestimate their accomplishments while citing effort, enjoyment of class, and extenuating circumstances. Women are more conservative in reflecting on final grades, and cite effort, helping others, and objective data.

Keywords: Gender; Competency-based pedagogies; Ungrading; Student-athlete

1. Introduction

Many pedagogical traditions support student reflective practices. Specifically, student reflections may be designed to connect experience to learning, to support a growth mindset (e.g., Dweck, 2006), or to encourage metacognition or learning about learning (e.g., Fink, 2003). Competency-based pedagogies may use student reflections to help students connect effort to performance, to support student persistence, or to foster self-tracking of mastery. Student reflections can support both the process and product of learning (Sturgis & Casey, 2018).

Many critical pedagogies focus on reflective practices as tools for student empowerment (e.g., CAST, 2024; Freire, 1970/1993; hooks, 1994; Inoue, 2015), to support their voice and their freedom. Feminist and critical pedagogies seek to disrupt the power structure built into conventional classrooms by fostering reflective practices both among students and teachers. And more radical pedagogies have suggested using reflection as a tool to replace conventional assessments altogether and disrupt hierarchical educational structures (Kohn, 2011; Stommel,

2025). In short, educational reflective practices are often deployed as a tool for empowerment across vulnerable populations, including students from lower socio-economic positions, marginalized racial or ethnic groups, young students, LGBTQI+ students, and women.

While it is valid to explore whether students are ever truly empowered in educational settings, it is also reasonable to recognize that some students enter with greater social power than others. In the United States, white, male student-athletes are often viewed as particularly empowered. However, masculine gender socialization, particularly in the US, is perhaps best described as ‘brittle’ (Snyder, 2017). Young men socialized into this masculinity present a strong façade to disguise insecurities and anxieties about their power and role in the world. It is these young men that higher education needs to reach and help them to recognize the scope and uses of their power.

The dynamics of gender with formative and summative reflective practices are the subject of some debate. Keddie (2006) advocates applying feminist social justice principles in the classroom to deconstruct problematic masculinities and empower boys’ learning. Ross and colleagues’ (2024) systematic review did not explore gender as a key factor in summative reflection. In contrast, while Miller and Morrison (2025) explore feminist reflective journaling as a mechanism for theorizing one’s own experiences, the reflection process is varied and not always empowering. And, to the extent that cognitive reflective thinking can be considered a substrate for the skills necessary for academic grade reflections, Otero and colleagues’ (2024) meta-analysis suggests that men are marginally more accurate than women.

The purpose of this mixed-methods project was to explore the dynamics of student reflections, when deployed as an empowerment tool, among students stratified by gender, race, and student-athlete status in a single professor’s classroom across six years. Specifically, student grade reflections about earned grades (“I deserve ___ grade because...”) were stratified by students’ race, gender, and student-athlete status. Qualitative thematic analysis revealed themes in the data that differ by students’ identity groups. An autoethnographic reflective practice was used to explore how critical and empowerment pedagogies function and fail among populations that may appear outwardly empowered.

2. Methods

This mixed-methods project includes three components: 1) a quantitative analysis of the differences between student grade reflections and actual student scores, 2) a qualitative thematic analysis of grade reflection arguments, and 3) a bracketing, autoethnographic reflection (Bochner & Ellis, 2016) by the professor of the classes in question.

2.1. Quantitative Analysis of Course Grades and Grade Reflections

Student final scores were recorded from classes taught between April, 2019, and November, 2025. In total, 23 courses required grade reflections, while 11 courses did not. In grade reflection courses, students reflected on how many assignments they completed and how well they completed those assignments. As part of ongoing reflective practices, students were then asked to use the data to argue for a final grade. All grading data was available to students via the online learning management system. Total final grade scores and grade reflections were converted to a four-point grading scale, and a difference score was calculated as (reflected grade – earned grade).

Of the 398 students enrolled in grade reflection courses, 299 completed grade reflections, 22 reflected on their performance but did not argue for a grade, and 77 did not complete a reflection at all. Additionally, 194 students were enrolled in classes that did not require grade reflections.

Two sample t-tests were used to explore differences in grades earned among groups, including grade reflection students, reflection but no grade argument students, reflection required but did not complete students, and students enrolled in traditional courses. Analysis of Variance (ANOVA) was used to explore earned final grades and difference scores between subjects in the grade reflection condition. Race was removed as a variable due to low sample size and repeated student observations.

2.2. Thematic Analysis of Grade Reflections

Qualitative data were drawn from student grade reflections and from students who did not provide an argument for a grade. Reflections were analyzed for themes using methods drawn from Braun and Clarke (2006). After initial coding of the entire data set, refinement involved stratifying the data by gender to refine codes between groups.

2.3. Autoethnographic Reflection and Bracketing Statement

My (CJ) exploration of this data has been years in the making. Early in my career, as a feminist scholar, I looked for ways to both empower my students while simultaneously navigating the challenges of being a young, female professor. It felt as if students perceived me simultaneously as a threatening feminist, a mother figure, and an objectifiable female. With time, I found that male students occupied both a position of privilege—as men—while simultaneously feeling disenfranchised as students. This complicated position sometimes emerged as anger in the classroom, retaliatory course evaluations, or empty-eyed stares from the back of the room.

My classroom reflections were designed partially in response to this observation. Although I had experimented with contract grading and summative reflections for several years, I seriously began embedding formative, summative, and personal reflections as part of my classroom ecosystem during the Covid-19 pandemic. It felt consistent with the Universal Design for

Learning approach that my campus advocated, the techniques I had drawn from Competency-Based Learning, and the trendy, new Ungrading approach. Asking students for regular reflections was a natural extension of the “checking in” work that professors were asked to do.

These reflections have been valuable for me to better understand my students’ needs and adjust my class structure, daily work, and assignment structures. In short, reflections are very valuable. However, I felt disconnects between students’ daily effort, their goal-setting, formative reflections, and their summative evaluations of their effort and mastery of course materials. As often happens in US institutions, some colleagues challenged the academic nature of my discipline (kinesiology) by suggesting that academic effort is impacted by the number of student-athletes in my classes. While some athletes might enroll in college for athletic rather than academic goals, my experience is that student-athletes are hardworking and accustomed to objective metrics of their performance. I wanted to know more about the connections between gender socialization, athlete status, and reflections on academic achievement.

3. Results

Two sample t-tests demonstrated no significant difference in final earned scores between students who completed required grade reflections and gave a grade argument ($M=87.0$, $sd=7.96$) and students in classes not requiring grade reflections ($M=86.4$, $sd=8.83$), $p=0.443$. A significant difference was found in final earned scores between students who completed grade reflections and gave a grade argument ($M=87.0$, $sd=7.96$) and students who completed only a discussion of their work but did not offer a grade argument ($M=81.5$, $sd=11.18$); $p=0.033$. Another significant difference was detected in final scores between students who completed grade reflections and offered a grade argument ($M=87.0$, $sd=7.96$) and those who were required to complete a grade reflection but chose not to ($M=73.6$, $sd=21.78$), $p<.001$. Each t-test result was verified with a non-parametric Kruskal-Wallis test, yielding the same outcomes. While there are additional concerns about dependence among students, these tests were used as part of an exploratory analysis that will be considered in depth elsewhere. Only students who fully completed grade reflections and offered a grade reflection were used in other analyses.

A two-way ANOVA was used to examine the effects of gender and student-athlete status on the difference between the reflected final grade and the earned final grade (See Table 1). Total final grade scores were converted to a four-point grading scale for this analysis. Four extreme outliers were removed, and a log transformation was applied, after which the model met ANOVA’s normality assumptions. A Levene’s Test showed no evidence of unequal variance between groups ($p=.477$). To evaluate the independence assumption, a random sample of sizes ranging from 30 to 100, in increments of 10, was considered. For each sample size, 100,000 samples were drawn from the sample data, and the same ANOVA model was fit to each random sample. The distribution of the test statistics for gender was examined; all test statistics in the first

quartile and above indicated that gender is a significant factor in the difference in scores, suggesting that the independence assumption between students is reasonable for this data. Lastly, an interaction model was considered, but the interaction between gender and athlete was not significant and was removed.

Table 1. Effects of gender and student-athlete status on difference between reflected final grade and earned final grade

Term	Degrees of Freedom	MSE	Statistic	p-value
Gender	1	3.100000	21.200000	0.000006
Athlete	1	0.000265	0.001810	0.966000
Residuals	292	0.146000		

Statistically significant results included a main effect for gender ($p=0.000006$) with an effect size of 0.07. In contrast, the main effect of student-athlete status alone was nonsignificant ($p = .966$). See Table 2 for a comparison of mean differences between reflected and earned grades.

Table 2. Earned grade and difference between reflected final grade and earned final grade, women and men, Student-Athlete (SA) and Non-Student-Athlete (nSA) [*denotes significant main effect]

Group	Mean Reflected- Earned grade on 4-point scale (sd, [range])
Women SA	.246 (.541, [-0.7, 3.0])
Women nSA	.297 (.495, [-0.7, 1.0])
Men SA	.561 (.654, [-1.15, 3.5])
Men nSA	.500 (.716, [-0.3, 2.3])
All women	.253 (.534, [-0.7, 3.0])*
All men	.553 (.661, [-0.7, 3.5])*
All SA	.429 (.628, [-1.15, 3.5])
All nSA	.414 (.633, [-0.7, 2.3])

Notably, 9.1% of men and 18.9% of women argued for a grade lower than they had earned (negative reflected-earned difference scores); similarly, 21.8% of men and 38.6% of women argued for exactly the grade they had earned (0 reflected-earned difference scores).

Qualitative analyses revealed three themes among women's grade reflection arguments: effort, helping others, and data. In contrast, the three themes among men's grade arguments included effort, enjoyment of class, and extenuating circumstances (see Table 3).

Table 3. Grade reflection argument themes by gender

Gender: Theme	Example
Women: Effort	I completed every low-stakes writing ...spent more than 3 hours studying each day. ...very proud of how hard I worked on the final paper.
Women: Helping	I used the material from class to help my mom... I was a leader in my discussion groups ...helped my classmates understand class materials
Women: Data	Based on the scores on [the LMS], I believe I earned... My scores have all been in the [grade] range
Men: Effort	I worked harder in this class than I ever have before. I did good work, which accounts for my lack of effort I tried to show up on time, but could have set my alarm earlier I was punctual and showed up for every class
Men: Enjoyment	I really had fun in this class This was the best class I've ever taken [Professor] was the GOAT! Thank you!!
Men: Extenuating Circumstances	Life stuff was really hard this block... There were a lot of family distractions for me The low-stakes writings seemed pointless and were only worth 15% of the grade, so I didn't waste my time on them because I was busy

4. Discussion

In this data, men, both student-athletes and non-student athletes, argued that they deserved grades much higher than the level of mastery their grade-completion data suggested they earned. This is somewhat inconsistent with Ross et al.'s (2024) work, which did not address gender in reflective summative assessment, and with Otero et al.'s (2024) meta-analytic observation that men score marginally higher than women on Cognitive Reflective measures.

Women offered much more modest arguments for higher grades than their grade-completion data suggested they had earned. Notably, more women than men argued for grades at or below their earned grade data. Despite completing fewer assignments and demonstrating lower levels of mastery on activities such as quizzes or low-stakes writing, men argued for higher grades based on their perception of effort. Interestingly, women's more modest self-advocacy echoes the notion that reflective practices are complex and dynamic (Miller & Morrison, 2025).

These findings are consistent with observations of gender socialization and self-advocacy in the US (e.g., Exley & Kessler, 2022). Similarly, here, women are less likely to aggressively advocate for higher grades than what the objective data indicated they attained.

Qualitative data suggested differing patterns of self-advocacy strategies that are consistent with stereotypical gender socialization. Whereas both men and women highlight effort as a key factor when arguing for their final grade (as was cued in the grade reflection prompt), women highlight their helping behaviors as a contributor to the grade they deserved, whereas men tend to highlight enjoyment of the course experience or extenuating circumstances that prevented their full engagement.

5. Conclusions

Although these data were drawn from one professor's classroom at a small liberal arts college, some cautious conclusions may be drawn. Public narratives about student-athletes in US higher education often suggest that athletic participation drives disengagement and detachment from academic experiences. These data suggest that gender socialization, rather than athlete status, is a notable factor when considering students' reflections and connections with classroom experiences.

This pairing of arguments about effort ("I tried hard!") with extenuating circumstances ("...but there was drama in my social life, and it got in my head...") may be responsive to a certain brittleness in men's academic experiences. These students looked for ways to protect themselves from exploring their vulnerabilities. Because classroom environments are fraught with complex power structures, they tend to expose vulnerabilities: fears of being judged, fears of writing, fears of failure. This defensive posturing may prevent deeper engagement.

Caution is warranted when navigating students' insecurities. Classroom reflections may highlight men's own perceived inadequacies. If men systematically over-value their effort and fail to fully consider mastery or completion of course content, they may be particularly disenfranchised to discover that both mastery of course content and completion of course requirements are important to educational attainment. Yet this is the path forward in education.

Furthermore, to the extent that reflective practices across pedagogical traditions seek to help students connect effort to attainment, these reflective practices warrant caution when working with sociologically complex emerging adult male populations. Individual reflective practices may be deployed in many ways to serve a variety of educational goals. It is incumbent on the educator to support men's reflections without coddling or triggering brittleness, which may lead to withdrawal and disenfranchisement.

These data suggest that caution is warranted in framing student reflections. Reflective writing, for me (CJ), has been a consistent challenge. On the one hand, I want my students to celebrate their hard work and their achievements. Simultaneously, I seek to avoid encouraging overconfidence or inflating egos when considering effort. Useful reflections allow students to measure effort while still offering empathy for the ways in which classroom environments may

challenge them. With reflection, students can discover unknown wells of strength. An advisee said it most clearly: “I wish somebody would have told me I wasn’t really working hard at school. But, I knew I needed to pass, so I changed my study habits, and I earned a decent grade. It was the first time I really worked at something and I didn’t know I could work that hard.”

References

- Bochner, A., & Ellis, C. (2016). *Evocative autoethnography*. Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- CAST (2024). CAST Universal Design for Learning Guidelines version 3.0. Retrieved from <https://udlguidelines.cast.org>
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
- Exley, C. L., & Kessler, J. B. (2022). The gender gap in self-promotion. *The Quarterly Journal of Economics*, 137(3), 1345-1381. <https://doi.org/10.1093/qje/qjac003>
- Fink, L. D. (2003). A self-directed guide to designing courses for significant learning. *University of Oklahoma*, 27(11), 1-33.
- Freire, P. (1970/1993). *Pedagogy of the oppressed*. Continuum.
- hooks, b. (2014). *Teaching to transgress*. Routledge.
- Inoue, A.B (2015). *Antiracist writing assessment ecologies: Teaching and assessing writing for a socially just future*. Parlor Press.
- Keddie, A. (2006). Pedagogies and critical reflection: Key understandings for transformative gender justice, *Gender and Education*, 18(1), 99-114. <https://doi.org/10.1080/09540250500195184>
- Kohn, A. (2011). The case against grades. *Educational leadership*, 69(3), 28-33.
- Miller, C., & Morrison, J. (2025). Feminist pedagogy within constraints: Teaching reflective writing in a UK higher education institution. *Gender and Education*, 37(6), 653–669. <https://doi.org/10.1080/09540253.2025.2508761>
- Otero, I., Martínez, A., Cuadrado, D., Lado, M., Moscoso, S., & Salgado, J. F. (2024). Sex differences in cognitive reflection: A meta-analysis. *Journal of Intelligence*, 12(4), 39. <https://doi.org/10.3390/jintelligence12040039>
- Ross, M., Bohlmann, J., & Marren, A. (2024). Reflective writing as summative assessment in higher education: A systematic review. *Journal of Perspectives in Applied Academic Practice*, 12(1), 54-67. <https://doi.org/10.56433/jpaap.v12i1.577>
- Snyder, T. (2017). Don’t underestimate the harm ‘brittle masculinity’ can do to the world. *The Guardian*, 4(20), 17. <https://www.theguardian.com/commentisfree/2017/apr/20/dont-underestimate-harm-brittle-masculinity-do-world>
- Stommel, J. (2025). The practice of ungrading. *The Journal of Cinema and Media Studies*, 64(8). <https://quod.lib.umich.edu/cgi/t/text/idx/j/jcms/18261332.0064.808/--practice-of-ungrading?rgn=main;view=fulltext>
- Sturgis, C., & Casey, K. (2018). *Quality principles for competency-based education*. iNACOL.