

In-Course Corrections: Data Analysis and Recommendations

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Analyzing student performance during an active course provides instructors with the opportunity to intervene early, strengthen instructional design, and support learners before summative assessments occur. The present analysis examines mid-course data from an online graduate-level class of eleven students. The dataset includes quiz scores, written assignments, discussion participation, presentation quality, collaborative work, and peer feedback. Using Bloom's Taxonomy, Chickering and Gamson's Seven Principles, research on Quality Matters (QM)-certified online courses, and evidence on the benefits of mid-semester evaluation processes, this report identifies the students who are struggling, interprets the potential causes of their difficulties, and recommends targeted interventions for the remaining weeks of the course. The goal is to align instructional improvements with evidence-based practices to support both individual learners and the class as a whole.

Data Analysis

The dataset reveals a wide range of performance, with several students earning consistently high marks and others demonstrating concerning patterns across multiple indicators. Table 1 provides a condensed overview of key performance areas, including quiz averages, the investigative paper, the presentation assignment, Module 3 discussion scores, and the collaborative project, offering a snapshot of academic standing across learners.

Table 1*Selected Performance Measures Across Key Course Components*

Student	Quiz Avg	Investigative Paper	Presentation	Module 3 Discussion	Collaborative Assignment
Maldonado	99.3	100	100	N/A	100
Herring	91.7	95	85	N/A	88
Suplee	95.0	95	90	N/A	94
Rosetti	91.3	90	90	N/A	80
Lawless	69.3	81	90	15	95
Forthright	95.3	95	100	100	95
Mailman	82.3	65	82	79	90
Frieden	67.3	Missing	75	80	85
Broadbent	70.5	70	70	82	95
Hazenberry	96.0	100	100	100	100
Carver	96.7	100	98	100	100

Four students clearly require support. Lawless shows the most significant learning risk, with a low quiz average, weak writing indicators, and an extremely low discussion score (15/100). Mailman demonstrates surface-level understanding, limited time-on-task, and negative peer feedback. Frieden has the lowest quiz average in the class, a missing major assignment, and inconsistent engagement patterns. Broadbent displays low-to-moderate performance across multiple categories, including late submissions and superficial work. A fifth student, Rosetti, maintains strong grades but reports a 0/5 post-course self-evaluation and received lukewarm peer feedback on collaboration, suggesting emerging disengagement.

To synthesize these patterns, Table 2 includes a color-coded risk classification (green = low risk, yellow = moderate risk, red = high risk). This table allows the instructor to quickly identify which students require targeted intervention during the remaining modules.

Table 2*Student Risk Overview Based on Mid-Course Data*

Student	Quiz Avg	Assignment Issues	Discussion Quality	Collaboration Feedback	Risk Level
Lawless	69.3	Some low scores	15/100 (very low)	Mixed feedback	High
Frieden	67.3	Missing paper	80 (moderate)	Negative feedback	High
Broadbent	70.5	Low depth/late work	82 (moderate)	Peer “carried the load”	High
Mailman	82.3	Paper 65	79 (moderate)	Negative feedback	Moderate
Rosetti	91.3	Work strong overall	“weak posts”	Some concerns	Low-Mod
Others (6)	90+	Strong work	88-100	Positive collaboration	Low

This synthesized classification helps reveal not only academic gaps but also engagement patterns, motivational issues, and collaboration difficulties. These insights are essential when determining the next instructional steps, especially since the course still has two modules remaining.

Recommendations

Interpreting the data through Bloom’s Taxonomy helps clarify the types of cognitive challenges students are experiencing. For example, Frieden’s and Broadbent’s low quiz scores and inconsistent assignment quality suggest underdeveloped abilities at the remembering and understanding levels. Na et al. (2021) found that formative assessment explicitly aligned with Bloom’s hierarchy enhances learners’ metacognitive awareness and supports more effective monitoring of their progress; therefore, implementing low-stakes retrieval tasks or short concept checks may help these students solidify foundational knowledge. In contrast, Lawless’s

extremely low discussion score reflects difficulty with analyzing and evaluating course ideas, pointing to the need for structured discussion prompts that guide students to engage more deeply with course content.

Chickering and Gamson's Seven Principles also offer a useful lens for understanding the nature of these students' struggles. Lawless and Broadbent demonstrate limited interaction and minimal peer engagement, which contradicts Principle 2's emphasis on cooperation among students. Their inconsistent or shallow discussion contributions further indicate a need for stronger implementation of Principle 3, active learning. Providing model discussion posts, sentence starters, and required application-based components could encourage more meaningful participation. For students like Mailman and Frieden, Principle 4, prompt feedback, is essential. Targeted, timely feedback may help bridge gaps before they become entrenched. Principle 5, time on task, is particularly relevant for Mailman, whose limited time spent watching presentation videos suggests the need for explicit time-management expectations or progress tracking tools.

The Quality Matters framework reinforces these suggestions. Research by Sadaf et al. (2019) found that student engagement and learning outcomes improve when learning objectives, assessment criteria, and assignment expectations are communicated clearly and consistently. The persistent pattern of shallow writing in Mailman and Broadbent's work may indicate confusion about expectations or insufficient modeling of higher-order thinking. Offering annotated exemplars, clearly aligned rubrics, and explicit descriptions of what constitutes analytical depth may support more sophisticated performance.

Additionally, the research on mid-semester evaluation processes underscores the importance of making instructional adjustments during the course rather than waiting until it

concludes. Sozer et al. (2019) note that mid-semester evaluations, especially when they include open-ended feedback and prompt instructor responsiveness, lead to improved student perceptions and better learning experiences. Applying this approach in the present context suggests that offering students a short feedback opportunity, such as a one-question “What is helping your learning right now?” check-in, could provide insight into which adjustments would be most beneficial in the final modules.

Given these theoretical considerations and the specific issues identified in the data, several targeted interventions can be implemented. Lawless would benefit from structured discussion templates and a brief 1:1 check-in to clarify expectations and reestablish confidence. Mailman may require clearer assignment guidelines, weekly time-planning prompts, and scaffolded writing supports. Frieden should receive foundational retrieval practice opportunities and multiple checkpoints for upcoming assignments. Broadbent may benefit from internally set deadlines and direct modeling of deeper analysis. Finally, Rosetti, while not academically at risk, shows signs of waning motivation; offering choice-based engagement options may help maintain his interest.

Conclusion

The mid-course data reveal meaningful patterns that, when interpreted with the support of learning theory and online pedagogy research, point toward targeted interventions capable of improving student outcomes. By applying Bloom’s Taxonomy to understand cognitive needs, Chickering and Gamson’s Seven Principles to diagnose engagement issues, the Quality Matters framework to strengthen course clarity, and mid-semester evaluation research to reinforce the importance of timely adjustments, instructors can provide responsive, evidence-based support. The remaining modules provide an opportunity for students to rebuild confidence, demonstrate

growth, and achieve stronger mastery of course objectives. Implementing these strategies now ensures that struggling learners receive the support they need at a moment when it can still meaningfully influence their success.

References

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