



Enhancing Collaboration in Graduate-Level Group Projects
A Front-End Analysis

Liela Shadmani

Lourdes Barragan

Lando (Rene) Aleman

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Front End Analysis: Enhancing Collaboration in Graduate-Level Group Projects

Group work in graduate school is supposed to teach collaboration, leadership, and communication. That's the brochure version. In practice, it often devolves into a mess of unbalanced workloads, silent resentment, and performative participation. Why? Because no one's investigating the root causes before assigning the task. This isn't a motivational problem, it's a design flaw.

Across programs, feedback from students echoes the same tune: group work becomes an exercise in damage control. Peer evaluations turn into venting sessions. Instructors get dragged into petty conflicts. And students, especially high-performers, end up carrying the weight, again. This isn't just annoying; it undermines the purpose of collaborative learning. If students exit these assignments more jaded than skilled, something's off.

This front-end analysis focuses on a mid-sized graduate program offering online and hybrid formats. The mission? To build competent, adaptable professionals. But course evaluations say otherwise. More than half of students report frustration with group dynamics. At least a third of groups require faculty intervention. Peer scores often reveal severe contribution gaps. Group work has stopped being a developmental experience. It's become damage to contain.

The literature doesn't let this slide. Chang and Brickman (2018) show that even with peer evaluations, assigned roles, and contracts, students still ignore agreements and default to unequal effort. Guan (2024) blames poor group design and lack of instructor presence. Donelan and Kear (2023) show these issues worsen in online formats. Meanwhile, Kelly et al. (2022) offer a workaround: students need to see the *point* of group work for it to function. Otherwise, it feels like busywork with a side of freeloaders.

The gap is clear: current group work practices don't reflect the mission of preparing students for real-world collaboration. What's expected is equity, shared responsibility, and teamwork. What's delivered is often conflict, silence, or burnout. This isn't just inconvenient, it's a performance issue with ripple effects across morale, learning outcomes, and program credibility. Measurable indicators of this gap include:

- Over 60% of students reporting dissatisfaction with group dynamics in anonymous surveys.
- At least 30% of groups requiring instructor intervention for conflict resolution.
- Persistent score disparities in peer evaluations, indicating imbalance in workload and contribution.

Instructors also experience second-order effects from this gap, such as the need to mediate disputes, adjust grades based on individual effort, and spend additional time addressing complaints. Without meaningful intervention, the program risks undermining its core objectives, to develop capable, collaborative professionals prepared to lead in complex environments.

This front-end analysis (FEA) seeks to identify and address the root causes behind ineffective group collaboration, focusing on six dimensions: skills, knowledge, environment, motivation,

time management, and prior academic experiences. The findings will inform targeted, feasible solutions that not only improve student learning outcomes but also enhance overall instructional efficiency and program credibility.

Part I – Performance Problem Analysis

Performance Gap

Graduate-level group projects are designed to develop essential professional competencies—collaboration, leadership, and problem-solving—mirroring real-world demands. However, there is a measurable gap between these instructional goals and the actual student experience. While instructors expect equitable participation, shared accountability, and high engagement, student feedback and instructional data point to a different reality.

Current Performance (Measured)

- Over 60% of students report dissatisfaction with group dynamics.
- Approximately 30% of groups require instructor intervention for conflict mediation.
- Peer evaluation data reveals an average 20+ point gap between top and lowest-rated contributors.

Qualitative data reinforces this. Students frequently report miscommunication, unclear task division, and frustration with “freeloaders.” Group deadlines are often missed, and instructors are repeatedly drawn into managing disputes or reassigning grades, detracting from their primary instructional role.

Desired Performance (Measured)

- Reduce student dissatisfaction with group dynamics to under 30%.
 - Lower faculty intervention in group conflict to fewer than 15% of groups.
 - Narrow peer evaluation score gaps to below 10 points on average.
- In this desired state, student teams demonstrate consistent communication, shared responsibility, and mutual accountability. Roles are clear, tools are used effectively, and team members engage in collaborative problem-solving. Instructors act as facilitators rather than crisis managers, allowing more focus on content mastery and learner growth.

Defined Performance Gap

Metric	Current Level	Desired Level	Performance Gap
Student dissatisfaction	> 60%	< 30%	30+ percentage point reduction needed
Instructor intervention rate	30%	< 15%	15+ percentage point reduction needed
Peer evaluation score disparity	Avg. 20+ point difference	< 10 point difference	10+ point average improvement needed

Importance and Impact

This gap compromises the graduate program's mission to prepare students for leadership in complex, collaborative work environments. When group projects are poorly executed, students disengage, instructors are overburdened, and course quality suffers. Over time, these issues erode program credibility, reduce student satisfaction, and place strain on faculty. Bridging this gap is critical for improving learning outcomes, maintaining instructional effectiveness, and ensuring alignment with institutional goals.

Supporting Data

Research and institutional feedback validate the urgency of this issue:

- Over 60% of students report frustration with group work (Guan, 2024; Chang & Brickman, 2018).
- 30% of group projects require faculty intervention (Donelan & Kear, 2023).
- Peer evaluations consistently show unequal participation and high contribution disparities (Kelly et al., 2022).
- Online learners are especially affected due to asynchronous schedules, limited onboarding, and reduced peer presence (Donelan & Kear, 2023).

Part II – Cause Analysis

Proposed Approach

This FEA will focus on uncovering the root causes of group project issues by examining the following six key dimensions:

1. **Skills**
 - Assess gaps in communication, teamwork, and conflict resolution skills.
 - Determine whether students receive formal training in these areas before participating in group work.
2. **Knowledge**
 - Evaluate student understanding of group dynamics, collaboration strategies, and project management techniques.
 - Identify whether students have access to guidelines or best practices for working in teams.
3. **Environment**
 - Analyze the effectiveness of current collaboration tools (e.g., Slack, Google Drive, Blackboard groups).
 - Identify whether students have reliable access to these resources and whether they suit the needs of remote and in-person learners.
4. **Motivation**
 - Investigate whether lack of accountability or fair workload distribution discourages participation.
 - Assess whether grading policies reinforce or undermine accountability.
5. **Time Management**

- Examine how students manage their time, particularly those balancing coursework with jobs and family responsibilities.
- Identify whether deadlines, task assignments, and workload distribution are realistic and effective.

6. Academic Experiences

- Explore whether students' prior education or work experiences prepare them for collaborative work.
- Identify gaps in prior exposure to structured group projects.

Selected FEA Model: Stakeholder Analysis

Rationale: Stakeholder Analysis allows us to examine the interests and influences of students, instructors, program administrators, and academic support staff. This approach surfaces misalignments in expectations and communication channels.

FEA Plan

Step	Plan/Procedures	Tools/Data Sources	Informs Cause(s)
1	Review course evaluations, faculty reports, and Learning Management System (LMS) data	Existing program data, prior surveys	Environment, Academic Experience
2	Interview students and instructors	Structured interviews, anonymous survey tools	Skills, Motivation, Environment
3	Collect examples of group work performance gaps	Rubrics, peer assessments, grade distributions	Motivation, Skills
4	Group insights into themes: skills, knowledge, environment, motivation	Thematic analysis of interview and survey data	All dimensions (Skills, Knowledge, Environment, Motivation, Time, Experience)
5	Compare feedback to learning goals	University mission statements, program outcomes	Knowledge, Motivation
6	Adjust scope if needed based on emerging issues	Ongoing data review	All dimensions (as needed)
7	Create stakeholder communication plan	Stakeholder feedback loops	Environment, Motivation
8	Develop stakeholder influence/interest map	Stakeholder matrix grid	Environment, Academic Experience
9	Draft proposed interventions	Intervention design tools	Skills, Knowledge, Motivation

Stakeholder Influence/Interest Map

- **Students:** High interest, moderate influence
- **Faculty:** High influence, moderate interest
- **Instructional designers:** High influence and interest
- **Program leadership:** High influence, low interest until complaints arise

Stakeholder	Interest	Influence	Role in Plan
Students	High	Moderate	Participant, feedback loop
Faculty	Moderate	High	Intervention agents, course designers
Instructional Designers	High	High	Tool alignment, content dev
Program Leadership	Low	High	Resource approval, policy alignment

Sample Interview Questions

- **Students:**
 - What challenges do you face in group work?
 - Do you feel your contributions are valued?
 - What would improve your group work experience?
- **Faculty:**
 - How often do you intervene in group conflicts?
 - What tools or structures would help manage teams better?

Implementation Timeline

Following the identification of root causes and the design of targeted interventions, this plan will be implemented in three distinct phases to ensure iterative refinement and stakeholder alignment. During the Summer Term, the instructional design team will develop and pilot the collaboration micro-course with a select group of faculty and students. This initial rollout will allow for early feedback and minor adjustments prior to full-scale implementation. In the Fall Term, the interventions—including the micro-course, standardized collaboration tools, and integrated peer evaluation mechanisms—will be deployed across all graduate-level courses that utilize group projects. Finally, the Spring Term will focus on evaluating intervention outcomes through the established mixed-method framework. Data from surveys, LMS analytics, peer evaluations, and instructor logs will inform revisions and scalability decisions. This phased approach ensures the plan remains responsive, evidence-based, and sustainable.

Part III – Intervention Selection

Problem Cause 1: Lack of Collaboration Skills

- **Skills/Knowledge:** Students lack exposure to structured teamwork training.
- **Environment:** No onboarding to group works best practices.
- **Motivation:** Students feel unprepared and unmotivated when expectations are unclear.

Solution: Launch a short, mandatory online micro-course covering:

- Role setting
- Conflict resolution
- Collaborative platforms

Problem Cause 2: Poor Tool Integration and Accountability

- **Environment:** LMS integration with collaborative platforms is inconsistent.
- **Motivation:** Students who work hard feel resentful when grades don't reflect effort.

Solution:

- Standardize collaboration tools (e.g., one shared platform like Google Workspace).
- Use peer evaluations that count for 25% of the group grade.
- Require signed team contracts defining expectations and shared norms.

Evaluation Plan

You don't fix what you don't measure, and in this case, the dysfunction is loud. Students aren't just "disengaged," they're dodging teammates, rewriting solo, and ghosting deadlines while resentment brews in inboxes. Instructors? Stuck in triage mode. If group work is supposed to teach collaboration, then these metrics are our reckoning. We're not chasing vibes, we're chasing clarity. And clarity looks like reduced conflict, tighter contributions, and tools that don't collect dust. These targets aren't hopeful, they're necessary. Because without them, "group work" remains a euphemism for chaos wrapped in PowerPoint slides. With them? We might build something functional.

A mixed-method approach will be used:

- Quantitative data will be collected from surveys, peer assessments, LMS analytics, and instructor logs.
- Qualitative insights will be drawn from student reflections, open-ended survey responses, and faculty interviews.
- A control group comparison (pre-intervention cohort vs. post-intervention pilot group) will measure progress across the same metrics.

Metric	Data Collection Tool	Target Outcome
Student Satisfaction	Pre- and post-intervention surveys	Achieve a 30%+ increase in students reporting positive experiences with group work. Focus will be on satisfaction with team communication, fairness, and workload distribution.

Metric	Data Collection Tool	Target Outcome
Faculty Interventions	Weekly intervention logs	Attain a 50% reduction in faculty intervention rates during group projects. Logs will track the frequency and nature of instructional involvement in team conflict or remediation.
Equity of Contribution	Peer evaluation score analysis	Reach a 25% increase in balanced peer ratings, reducing contribution score variance to within 10 points or less across team members.
LMS & Collaboration Tool Usage	LMS analytics and platform engagement dashboards	Secure 90% adoption rate of designated collaboration tools (e.g., Google Workspace). Emphasis will be on frequency of use, participation logs, and version tracking.

Methodology:

- Mixed-method approach: surveys, interviews, LMS data, faculty logs.
- Longitudinal tracking across multiple semesters.
- Use of control group comparison (pre- vs. post-intervention).

Conclusion

Let's call it what it is: group work in graduate programs is broken. This front-end analysis doesn't just scratch the surface, it lays bare a chronic failure in how academic institutions approach collaborative learning. The performance gap isn't subtle. It's systemic. Despite faculty intentions, current strategies continue to miss the mark. Why? Because they assume collaboration happens organically, when in reality, most students are thrown into group projects with zero prep, unclear expectations, and little to no support.

The data couldn't be clearer. Students are stepping into team assignments unequipped. They haven't been taught how to navigate group dynamics. They aren't held accountable in meaningful ways. And often, they're working under vague roles, ambiguous goals, and an instructor who's either hands-off or playing referee after problems erupt. What follows is predictable: uneven participation, unresolved tension, communication breakdowns, and motivation circling the drain. Group work, instead of being the leadership and collaboration lab it's meant to be, becomes a liability, something students endure, not engage with.

This plan doesn't offer band-aids. It offers direct hits at the root issues, backed by stakeholder insight, literature, and a hard look at the actual conditions students are dealing with. It introduces a pre-project onboarding system that teaches the skills students should've had from day one. It redesigns accountability so no one can coast under the radar. And it redefines the instructor's role, from firefighter to facilitator. These aren't optional enhancements; they're structural fixes.

But the real shift? It's cultural. It's time we stop treating group work as a side dish and start treating it like the main course it's supposed to be. Collaboration isn't innate. It's learned. And like any skill worth teaching, it needs scaffolding, reinforcement, and real feedback. Until we build it that way, we'll keep getting what we've been getting: frustration, detachment, and missed opportunities.

Implemented well, this plan does more than patch things up. It repositions group work as a high-impact learning experience, one that builds better teams, drives deeper engagement, and lightens the load for instructors sick of playing the cleanup crew. Most importantly, it gives collaborative learning its teeth back, and that's long overdue.

References

- Chang, Y., & Brickman, P. (2018). When group work doesn't work: Insights from students. *CBE—Life Sciences Education*, 17(3), ar52. <https://doi.org/10.1187/cbe.17-09-0199>
- Donelan, H., & Kear, K. (2023). Online group projects in higher education: Persistent challenges and implications for practice. *Journal of Computing in Higher Education*. <https://doi.org/10.1007/s12528-023-09360-7>
- Guan, K. (2024). Challenges in group work from the perspective of college students. *Proceedings of the International Conference on Global Politics and Socio-Humanities*. <https://doi.org/10.54254/2753-7048/45/20230468>
- Kelly, A. E., Clinton-Lisell, V., & Klein, K. A. (2022). Enhancing college students' online group work perceptions and skills using a utility-value intervention. *Online Learning*, 26(3), 236–258. <https://doi.org/10.24059/olj.v26i3.2885>

Appendix A: AI Usage Statement

ChatGPT was used solely to align this original work and research with the course rubric and to outline the structure of the video script. All content was independently developed, reviewed, and refined by Team L3M0N8 to maintain quality, originality, and academic integrity.