From Familiarity to Proficiency: Using an Updated Student Assessment of Learning Gains Survey to Guide Course Design in Engineering Statics

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1. Introduction

As part of a Research Initiation in Engineering Formation (RIEF) project funded by the National Science Foundation (grant no. 2306156), we reimagined a post-secondary engineering statics course through the lens of real-world, non-abstracted problems. Over the span of a two-year cycle, we designed a statics course that utilized Problem-Based Learning (PBL) [1] to fully immerse students in collaboratively solving non-abstracted problems. Problem-Based Learning has been proven to push students past the regurgitation of formulas and develop a deeper comprehension and ability to analyze real-life problems [1]. In the first iteration of the course (Fall 2024), we transformed the course to emphasize PBL through varying forms of group work that allowed students to tackle non-abstracted problems directly tied to statics concepts. In our second iteration of the course (Fall 2025), we are refining the transformed course to include more opportunities for structured group work, individual problem solving, and scaffolded levels of difficulty across problems.

Due to the evolution of the course, we are interested in determining how the emphasis on non-abstracted problems and PBL has influenced students' understanding of common statics topics (e.g., "Solve 2D rigid body equilibrium problems," "Calculate the center of area by integration," etc.). The purpose of this study is to utilize the results from the Student Assessment of Learning Gains (SALG) [2] and the Student Assessment of Learning Familiarity (SALF) to answer the following research questions:

a) *How do engineering students' self-reported learning gains in a reimagined statics course compare to their baseline familiarity with course topics, as measured by the SALF and SALG surveys?*
b) *Which instructional strategies do students identify as most helpful in supporting their learning of addressing real-world, non-abstracted statics problems?*

2. Literature Review

2.1 Scholarship of Teaching and Learning

Scholarship of Teaching and Learning (SoTL) was coined by Ernest Boyer who "sought to bring greater recognition and reward to teaching, suggesting that excellent teaching is marked by the same habits of mind that characterize other types of scholarly work" [3]. Now, SoTL is commonly used by educators to engage in inquiry-based education research dedicated to fostering innovative instructional techniques and supporting student learning [3]. More specifically, SoTL focuses on investigating the effects of instructional practices on student learning [3]. We define our study as being SoTL-based because we are directly looking at self-reported student learning data and how instructional methods impact student learning; thus, emphasizing the teaching-learning relationship. Additionally, our goal is to utilize the results of this study to support subsequent iterations of this statics course and provide transferable instructional techniques to other engineering contexts.

2.2 Student Assessment of Learning Gains (SALG)

An instrument that instructors use to provide formative feedback on instructional choices and subsequent student growth in course topics is the SALG [2]. The SALG was developed through a study focused on comparing instructionally traditional chemistry courses and instructionally innovative chemistry courses across eight institutions [4]. The study summarized observations from the interviews into two categories: "Whether students learned from the pedagogy" and "What students liked about the pedagogy and/or the instructor" [4]. The results of the observations prompted the hypothesis "that it is more productive to ask students how much they have gained from specific aspects of the class than what they liked or disliked about the teacher and his or her pedagogy" [4]. The original SALG included two 5-point Likert-scale sections. One section had students rate from 1 (was of no help) to 5 (was of very much help) and asked students specifically about instructional techniques that helped support student learning [4]. The other section had students rate course specific learning objectives or skills from 1 (I gained nothing/not at all) to 5 (I gained a great deal) [4]. The intent of the SALG is to highlight course elements that support or hinder student learning [5].

In the Fall 2024 semester, we adapted the SALG to fit the needs of our students and instructor. These updates included reducing the Likert scale options from a 5-point to a 3-point Likert scale ("no," "moderate," and "high"). For us, the SALG is being used primarily as an instructional tool to elicit and reflect student perspectives, rather than as a rigorous research instrument. As such, a reduced scale was deemed sufficient to capture meaningful variation in student responses while maintaining clarity and usability for the students. Additionally, the SALG was only provided at the end of the Fall 2024 semester in preparation for Fall 2025 course iterations. We utilized student-reported instructional technique data as a way to inform the types of activities and instruction we prepared for the Fall 2025 semester. However, we found it difficult to draw conclusions from the self-reported learning gains data. During our analysis of the Fall 2024 data, we realized there was no baseline for student learning which made it difficult to establish what their self-reported gains meant in relation to their actual knowledge of the course topics. We found that students enrolled in the statics course came in with a wide range of background knowledge and course experiences that may have shaped their familiarity with course topics.

For the Fall 2025 semester, we developed a second iteration of the SALG focused on assessing students' prerequisite familiarity with the course topics which we refer to as the Student Assessment of Learning Familiarity (SALF). We utilized a Likert scale from 1 to 3 ("no," "moderate," and "high") for familiarity of course topics (e.g., "Solve 2D rigid body equilibrium problems," "Calculate the center of area by integration," etc.) to determine a baseline of students' prerequisite knowledge on the course topics. We also had students reflect on previous courses' instructional techniques using the same scale of "no," "moderate," and "high" to determine students' preconceived notions of instructional practices that impact their learning.

3. Methods

3.1 Course Description

Students have the opportunity to enroll in this three-credit statics course after their first year of college; however, it is considered a sophomore-level civil engineering course. The course was redesigned by the Principal Investigator (PI) of the RIEF grant in the Fall 2024 semester to incorporate PBL and team-based assignments to solve non-abstracted real-world problems [6]. The course covered four distinct modules which include: (1) equilibrium at a point, (2) rigid body equilibrium, (3) structural analysis (trusses, frames, and machines), and (4) internal forces (shear force and bending moment diagrams and second moment of area). In this second iteration of the course (Fall 2025), the team of researchers working on the grant iteratively refined the course to include more opportunities for structured group work, individual problem solving, and scaffolded levels of difficulty across problems. Students completed group work tasks that included homework sets, design projects, end of class group formative assessments, and exams while also following a problem-solving process rubric ("PROCESS") [7]. The problem-solving rubric supported students as they delved into PBL as well as provided the graders and students with a joint understanding of how students were approaching non-abstracted problems.

3.2 Data Collection

During the Fall 2025 semester, we collected student data for the SALF and SALG surveys, deploying the SALF in August to gain a baseline understanding of students' familiarity with statics course topics and the SALG in December to determine how students perceived gains in each course topic. We distributed the Qualtrics surveys via the learning management system (Canvas) as part of a class assignment. Students received course credit for uploading a screenshot of the final page of the survey after they had indicated that they had either completed the survey or opted out of the survey, per IRB-approved protocol. Because the final page of the survey was the same whether students opted out or completed the survey, the instructor did not know who had and had not completed the survey. This point was emphasized in all communications with the students about these surveys. Once data were collected, student identities were anonymized before the course instructor (also the study PI) could access the data using the following nomenclature: semester (F25) and student number.

3.3 Data Analysis

By matching the student responses from the SALF and SALG datasets through a unique identifier for each student, we were able to remove responses of students who had only filled out one of the two surveys (n = 10 removed). To determine any significant gain across the beginning of the semester (familiarity) and end of semester (gain), we calculated the median score for each topic across both surveys. Due to the discrete nature of the Likert Scale (e.g., 1, 3, 5), we determined that median was the best descriptive statistic to demonstrate a typical response for students. We ran a Wilcoxon signed-rank test using the wilcox.test() function in R to determine if there were any statistically significant differences across the two timepoints (August and December). We utilized the same procedure when comparing students' perceptions of course structure and pedagogical techniques from the beginning to the end of the course.

We conducted a multi-step inductive, descriptive content analysis of the open-ended survey responses to capture both individual change over time and broader patterns across students. SALF and SALG survey responses were aligned by student ID, and conceptually similar questions were grouped for review for a longitudinal analysis (e.g., "Please reflect on how prior courses have been taught. What instructional methods were most helpful in remembering key concepts?" (SALF) aligned to "Please comment on how the way this class was taught helps you remember key concepts." (SALG)).

Authors 2 and 6 then conducted a within-case analysis by examining each student's responses across time points to identify shifts in perspectives, and reported learning. Following this individual-level analysis, we conducted a cross-case analysis to identify recurring ideas, shared patterns, and notable or divergent cases across students. This layered approach—combining within-student longitudinal analysis and across-student analysis—provided descriptive insights to complement quantitative findings without applying a formal thematic analysis framework.

4. Results

After matching student responses across the SALF and SALG surveys, 40 students remained in the datasets. We conducted paired analyses to examine changes in students' understanding of course topics and perceptions of course structure and pedagogy from the beginning to the end of the semester. Results are presented in two subsections aligned with the study's research questions. The first subsection examines engineering students' self-reported learning gains in a reimagined statics course relative to baseline topic familiarity, as measured by the SALF and SALG surveys. The second subsection examines students' perceptions of instructional strategies that most effectively supported their learning of real-world, non-abstracted statics problems.

4.1 Engineering Students' Self-Reported Learning Gains

After comparing each topic across students' perceived familiarity and reported gains, we found statistically significant increases in students' reported knowledge across topics taught in the statics course. Specifically, students reported statistically significant gains for 17 of the 21 topics examined (e.g., *solve 2D static equilibrium problems at a point, represent forces in 2D using trigonometry*), all with $p < .001$ (see Table 1). An additional three topics (*represent forces in 2D using vector notation, represent forces in 2D using unit vectors,* and *calculate the equivalent* *point force for a distributed load*) also demonstrated statistically significant positive change ($p < .05$ or $p < .01$). One topic (*Draw free-body diagrams*) did not show a statistically significant change from the beginning (SALF) to the end (SALG) of the semester. Taken together, these quantitative findings demonstrate consistent positive changes in students' reported knowledge across course topics.

To support our quantitative findings, we delved into the qualitative component of the SALG survey, focused on identifying students' written perspective on learning gains. We found that responses to the SALG survey consistently reflected an increase in students' conceptual understanding as a result of the course. Many students provided broad statements such as, "I got a deeper understanding of the subjects" (F25042), while others specified key concepts, noting, "I have gained extensive knowledge in FBDs [free body diagrams], forces, and equations of equilibrium" (F25023). Still others connected the concepts to real-world applications, as illustrated by, "I now understand a lot more about how physical objects interact with the surrounding environment" (F25006).

We found that these qualitative reflections aligned closely with the quantitative findings. In particular, students F25001, F25010, F25011, F25021, F25022, F25023, F25026, F25036, and F25043 explicitly reference increased understanding of equilibrium and forces on objects – concepts central to the course's learning objectives.

Table 1. The medians of students' perceived familiarity and content gains for each of the course topics and the *p*-value associated with the Wilcoxon signed-rank test.

Topic	*p*	SALF Median	SALG Median
Solve 2D static equilibrium problems at a point	< .001***	3	5
Represent forces in 2D using vector notation	0.013*	5	5
Represent forces in 2D using unit vectors	0.005**	4	5
Represent forces in 2D using trigonometry	< .001***	3	5
Solve 3D static equilibrium at a point using unit vectors	< .001***	3	5
Solve 2D rigid body equilibrium problems	< .001***	3	5
Draw free body diagrams	0.095	5	5
Calculate the equivalent point force for a distributed load	< .001***	3	5
Calculate the center of area by integration	0.015*	3	5
Calculate the center of area for composite shapes	< .001***	3	5
Solve static equilibrium problems with friction	< .001***	3	5
Solve 3D rigid body equilibrium problems using vector calculations	< .001***	2	5
Solve 3D rigid body equilibrium problems by reducing to a set of 2D problems	< .001***	1	5
Analyze a truss using the method of joints	< .001***	1	5
Analyze a truss using the method of sections	< .001***	1	5
Analyze frames	< .001***	1	5
Analyze machines	< .001***	1	5
Calculate internal shear forces and bending moments	< .001***	1	3
Draw shear force and bending moment diagrams	< .001***	1	3
Calculate the second moment of area by integration	< .001***	1	3
Calculate the second moment of area for composite shapes	< .001***	1	5

4.2 Students' Perceptions of Instructional Strategies

The second part of the SALF and SALG surveys included questions on the structure of the course and instructional strategies used throughout the semester. In the SALF, students reflected on previous courses and the instructional strategies they deemed as most helpful. While in the SALG, students reflected on the instructional strategies used in the current statics course. For example, *listening to discussions during class*, *working with physical models during class,* or *group homework problem sets*, just to name a few. There were four instances of students' perceptions of course attributes that positively shifted from the SALF to the SALG with significance ($p < .05$ or $p < .01$) (see Table 2). These instructional strategies that had significant positive change included *participating in discussions during class, graded group projects, the mental stretch required for tests,* and *interacting with the instructor during office hours*. We define *the mental stretch required for tests* as students finding homework and classwork assignments as more difficult than tests; ultimately, viewing tests as a learning support rather than a daunting task.

To complement the quantitative analysis on what types of instructional strategies support students' learning, we present some of the recurring ideas, commonalities, and notable cases found in the open-ended questions from the SALF and SALG. Our analysis of SALF survey responses revealed that students favored traditional lecture-based structure supplemented with occasional group work and hands-on activities. When reflecting on prior courses, many described learning best through a "you do, we do, I do" approach, emphasizing opportunities to ask questions and access practice problems evident through responses such as "Working through practice examples in class with the teacher walking us through the solution step by step…" (F25042) or "study guides and lots of practice" (F25036). To retain concepts students highlighted the importance of study guides/practice exams, and repeated problem solving with peers exemplified by the response "group work problems and access to prior years exams have been useful to me" (F25039).

The SALG survey responses collected at the end of the semester revealed a notable shift in what students perceived as most supportive for their learning from the beginning of the semester. When asked about strategies for remembering concepts, students increasingly pointed to hands-on learning opportunities and the use of physical objects in "real-life formats." They also emphasized the benefits of structured group work for deepening understanding and improving recall. Although the quantitative SALF results highlighted positive perspectives of both lecture-based and group-based activities, the qualitative responses provide a deeper understanding of this shift from repetition-based practices (e.g., study guides and lecture notes) to collaborative peer to peer learning environments with applied activities – which was a driving force in the design of the course.

In designing the second iteration of this statics course, we made intentional pedagogical decisions, including: 1) scaffolding assignments and knowledge to ensure alignment in problem types and complexity across formative (homework) and summative (exam) assessments; 2) emphasizing PBL and group work by being transparent about the purpose of collaboration and creating a supportive classroom environment; and 3) utilizing clear communication and accessible resources. We found that students' qualitative responses directly aligned with our pedagogical choices. For example, students noted how "the assignments and projects helped me build an understanding of the material and the tests helped me keep the lessons learned in my memory" (F25006) and how "[the assignment, graded activities, and test] all built off each other…" (F25020), supporting our intentional choice of increasing alignment across course difficulty and material. Many students also described peer support as highly impactful, exemplified by comments such as: "My peers / group members were the biggest help in learning this year" (F25041) and "Group work allowed me to see what my understanding vs my classmates were. Office hours were extremely helpful" (F25016). Lastly, students positively described the transparency in communication when asked how class resources supported their learning: many referenced the course LMS page, some valued frequent announcements – "The frequent announcements help keep me on track and up to date…" (F25023) – and others appreciated the supplemental content "the Canvas page helped any time I was unsure of what was going on in the course" (F25020).

We noticed an additional theme across students' responses that supported our restructuring of the course, the influence of instructor presence. Students expressed appreciation for the instructor's support and availability, as illustrated by comments such as: "[the instructor]'s support was instrumental to my success for this class" (F25039) and "[the instructor] had a great desire to help, which benefitted me a lot…" (F25030). Many also noted the value of office hours in their experience, which aligns with our quantitative results. Students found the course instructor to be an invaluable resource for their learning.

Table 2: Medians of students' perceived usefulness of course structure before and after the course, with corresponding Wilcoxon signed-rank test *p*-values.

Course Structure	***p***	**SALF Median**	**SALG Median**
The instructional approach taken in this class	0.638	5	5
How the class topics, activities, reading and assignments fit together	0.638	5	5
The pace of the class	0.196	5	5
Attending class sessions	0.488	5	5
Participating in discussions during class	0.024*	3	4
Listening to discussions during class	0.115	5	5
Participating in group work during class	0.644	5	5
Working with physical models during class	0.286	5	5
Creating a team contract at the start of the semester	0.351	3	3
Group homework problem sets	0.307	5	5
Graded group projects	0.013*	3	5
Opportunities for regrading problem sets	0.790	5	5
The number and spacing of tests	0.275	5	5
The fit between class content and tests	0.227	5	5
The mental stretch required for tests	0.035*	3	5
The way the grading system helped me understand what I needed to work on	0.165	5	5
The combination of individual and group tests	0.539	5	5
Online notes or presentations provided by the instructor	0.186	5	5
The open access materials online (other than instructor-provided notes or presentations)	0.417	5	5
Visual resources used in class (i.e., slides, physical models, demonstrations)	0.299	5	5
Announcements in Canvas about upcoming class activities and deadlines	0.484	5	5

Table 2 (continued): Medians of students' perceived usefulness of course structure before and after the course, with corresponding Wilcoxon signed-rank test *p*-values.

Course Structure	*p*	SALF Median	SALG Median
Explanation of how the class activities, readings and assignments related to each other	1.000	5	5
Explanation given by instructor of how to learn or study the materials	0.091	5	5
Explanation of why the class focused on the topics presented	1.000	5	5
Explanation of why the class involved teamwork	0.144	5	5
Interacting with the instructor during class	0.236	5	5
Interacting with the instructor during office hours	0.005**	4	5
Working with peers during class	0.594	5	5
Working with peers outside of class	0.296	5	5

4.3 Additional Skills and Knowledge Developed Through the Course

Qualitative findings showed that students identified a range of skills, beyond content knowledge, that they were taking away from the course. When explicitly asked, "What will you carry with you into other classes or other aspects of your life?" students most commonly pinpointed two areas: teamwork skills and refined problem-solving skills. Students who focused on teamwork emphasized practical strategies for collaboration, such as "how to work with a team" (F25029), "the communication skills from the group work and scheduling times to meet" (F25042) and "group work strategies…" (F25023). These reflections suggest that students valued not only technical learning but also interpersonal and organizational skills developed through collaborative activities. Others highlighted growth in problem-solving abilities, describing skills such as "dissect a problem and figure out the best way to solve it" (F25043) and "the knowledge of how to solve these problems but also of how to think critically about complex problem solving aspects of this class" (F25010). Some responses were broader, noting "increased problem solving skills and resiliency" (F25016). These comments indicate that students recognized transferable cognitive strategies that extend beyond the course content.

Although students primarily shared non-content-related skills, a smaller subset of students mentioned specific technical skills they expect to use in future coursework or careers. For example, one student reflected, "summing forces, finding moments, and center of area I think will come in hand later in life, especially in the engineering field…" (F25002) while another thought "likely all of [the course material is relevant] as I want to get into structural engineering"

(F25049). These comments suggest that, for some students, the course provided transferable skills and foundational knowledge directly relevant to their future career goals.

5. Discussion

An intended purpose of this study was to evaluate student learning gains from the beginning to the end of the Fall 2025 semester by using the previously developed course evaluation tool, SALG, and the newly adapted background familiarity tool, SALF. Unsurprisingly, we found that students made significant gains in knowledge across almost every topic in the statics course. We recognize that most topics were unfamiliar to students at the start of the semester, as they represent the intended learning outcomes of the statics course. However, we thought it was interesting that every topic except for *draw free-body diagrams* produced a significant change. We attribute the lack of significant change in students' responses to *draw free-body diagrams* to successful acquisition of that skill during their previous physics course(s), as evidenced by the median score for this skill being 5 ("high") on both the SALF and SALG.

Additionally, we wanted to investigate how pedagogical decisions impacted students' perceptions of beneficial classroom practices. By asking students to reflect on previous courses' instructional practices (SALF) and on the statics courses' instructional practices (SALG), we hoped to gain an understanding of how students' perceptions of instructional practices changed due to the statics course. The course was structured in a way that heavily relied on real-world examples, physical models, and group work. Four of the pedagogical techniques asked about returned as statistically significant: *participating in discussions during class, graded group projects, the mental stretch required for tests,* and *interacting with the instructor during office hours.* Yet, the qualitative responses revealed students' finding success in the course changes (e.g., real-world examples, physical models, group work, etc.) highlighting student recognition of these changes benefitting their learning in the course.

We recognize that when quantitatively assessing students' perceptions of instructional techniques, there is a risk that students may initially provide responses they believe align with our expectations. For example, students are often told that group work is beneficial for learning, which raises the question of whether they genuinely find it valuable or simply believe they are expected to say so. In our results, students quantitatively identified the majority of pedagogical techniques as beneficial prior to taking the course; yet, students' qualitative responses reinforced the practice of "you do, we do, I do" a scaffolded technique associated with primarily lecture-based courses. With slight skepticism, we argue that there could be more examples of statistically significant change among pedagogical techniques besides the four we found. However, we justify that the significant changes are connected to the intentional pedagogical decisions the instructor made. For example, implementing in-depth, long-term group projects that required sustained collaboration proved to be an effective pedagogical approach.

Our work also contributes to broader SoTL literature on formative assessment by situating both the SALG and the newly adapted SALF within long-standing traditions of formative evaluation. Classroom assessment techniques (CATs), as defined by Cross and Angelo, represent "instruments and methods designed to inform teachers what students are learning in the classroom and how well they are learning it" [8]. The SALF aligns with one of the feedback tools Cross and Angelo discuss, the Background Knowledge Probe (BKP), which intends to "provide feedback on the range of preparation among students within a class" [8] by asking sets of interrelated questions relevant to the course. Although both the SALF and the BKP seek to determine students' baseline understanding of course topics, the SALF furthers this approach by quantifying familiarity across a structured set of course-specific topics and pairing these data with end-of-semester learning gains. Therefore, the SALF functions not only as a diagnostic tool but also as a mechanism for tracking conceptual development over time.

Conceptually, both the SALF and the BKP aim to illuminate what students bring into the classroom, acknowledging that prior knowledge shapes subsequent learning. Methodologically, however, the SALF represents an adaptation that moves beyond the open-ended responses typical of the BKP. By operationalizing familiarity on a Likert-type scale and aligning items directly with course learning outcomes, the SALF provides a more scalable way to quantify students' starting points. This structured approach allows for statistical comparison across time points and across topics, something a traditional CAT does not typically provide. In this sense, the SALF can be viewed as a modernized, course-specific evolution of the BKP.

Our study also holds particular relevance for new engineering educators, many of whom enter the classroom with strong technical expertise but limited preparation in evidence-based instructional practices. Tools like the SALG and SALF offer accessible entry points for new instructors seeking to improve student experience and learning outcomes. Our study advances prior SoTL research by offering an example of how the SALF and SALG can be used to capture shifts in students' perceptions of learning gains and instructional practices. An integration that allows for early-career instructors to engage with a wider picture of how instructional practices support student learning. Additionally, our study also foregrounds the role of intentional pedagogical design, demonstrating how specific instructional choices (e.g., real-world examples, physical models, long-term group projects) shape students' perceptions of what supports their learning. This explicit linkage between pedagogical decisions and student-reported outcomes contributes to a growing body of literature emphasizing evidence-based instructional design in engineering courses and provides an easy entry point for new engineering educators.

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Appendix

The table contains the aligned prompts for the SALF and the SALG. The following Course Topic Statements and Course Structure Statements should be used with the original 5-point Likert scale and three anchors—no, moderate, and high—if the goal is to use the SALF/SALG for more research-aligned purposes and less instructional-aligned purposes. Furthermore, the prompts for each section can be found in Table 1 and Table 2 respectively.

<table>
<tr><th></th><th>SALF</th><th>SALG</th></tr>
<tr><td>Course Topic Statements</td><td>Thinking about previous courses you've taken, what familiarity do you have with each of the following?</td><td>As a result of your work in this class, what gains did you make in your understanding of each of the following?</td></tr>
<tr><td>Course Structure Statements</td><td>Thinking about previous courses you've taken, how much did the following aspects of the class help your learning?</td><td>As a result of your work in this class, how much did the following aspects of the class help your learning?</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td rowspan="10">Open Response: Course Structure and Pedagogy</td><td>What class structure works best for you? Why?</td><td>Please comment on how assignments, graded activities, and tests helped your learning.</td></tr>
<tr><td rowspan="3">How do you learn the best? What helps you learn?</td><td>Please comment on how class resources helped your learning.</td></tr>
<tr><td>Please comment on how the information you received helped your learning.</td></tr>
<tr><td>Please comment on how support you received from others helped your learning.</td></tr>
<tr><td>What instructional methods were most helpful in remembering key concepts?</td><td>How the way this class was taught helps you remember key concepts.</td></tr>
<tr><td>How did the instructional approaches help your learning?</td><td>Please comment on how the instructional approach to this class helped your learning.</td></tr>
<tr><td>How did class activities help your learning?</td><td>Please comment on how class activities helped your learning.</td></tr>
<tr><td>What would encourage your participation in class?</td><td>Please comment on how often you participated in class discussions and how the atmosphere in the classroom encouraged or discouraged your participation.</td></tr>
<tr><td></td><td>Please comment on how your understanding of the subject has changed as a result of this class.</td></tr>
<tr><td></td><td>What will you carry with you into other classes or other aspects of your life?</td></tr>
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