

Appreciating the Journey: How Roles in the Classroom Influence Undergraduate Teaching Assistants' Perception of Their TA Experience

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Abstract

Creating educational experiences in the classroom can be challenging for faculty when the number of students in a section follows the large auditorium format, or when the content has become more advanced, often to an extent that makes it difficult for students to master. Though faculty members always have student success in mastering content as a core goal, being able to provide small-group or one-on-one instruction, whether inside or outside the classroom, to increase the likelihood for content mastery is difficult. This is often due to the student-to-educator ratio in the classroom and the need to devote their work time to responsibilities beyond teaching. One way faculty members, their corresponding departments, and college/university institutions have worked towards lowering the student-to-educator ratio is by having graduate or advanced undergraduate students serve as teaching assistants. The way in which faculty members can decrease their workload while increasing opportunities for skill and content development for advanced undergraduate students who serve as teaching assistants can vary, from traditional teaching assistant roles to peer learning assistants. The most common roles for traditional teaching assistants have been in the areas of grading, leading class discussion, and tracking attendance (Armstrong et al., 2021; Cavazos et al., 2024; Driver et al., 2023; Fitz & Gurgung, 2021; Hogan et al., 2007; Komarraju, 2008; McKeegan, 1998; Weidert et al., 2012), while other roles that involve different responsibilities include peer leaders (Riser et al., 2021) and learning assistants (Talbot et al., 2015).

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In programs designed with learning assistants, the goal is to provide students in a course a more advanced undergraduate student who can support their learning and development of study skills. For example, Talbot and colleagues (2015) at the University of Colorado – Denver, explain the core tenets of their learning assistant program as content, pedagogy, and practice. Learning assistants are required to further their own learning: 1) in the content of the course, 2) about teaching strategies that will enable them to help their assigned students master course material, and 3) how to facilitate student interactions within the classroom. Those who serve as learning assistants are focused on serving the students and less on serving the professor teaching the course. Their tasks involve answering questions students may have, both inside and outside class time; facilitating group discussions within class; and providing ideas to students regarding their study skills. Learning assistants do not, however, participate in evaluating students (i.e., grading exams or assignments). Though not required, some universities pay their learning assistants for their work. This type of program can be found at several institutions, with support from the Learning Assistance Alliance (<https://www.learningassistantalliance.org/>).

While learning assistant programs emphasize providing student support by having students led by more advanced undergraduates, peer leader programs are designed with student success in mind but also include an emphasis on the professional development of the peer leader. For example, Riser and colleagues (2021) require their peer leaders to meet with students to answer questions, in both face-to-face and online office hours and assist the professor with basic tasks like tracking attendance and assignment submissions. Peer leaders in their program, however, engage in one of the classic tasks of teaching assistants – evaluating student work. Peer leaders are also required to develop at least one lesson plan or class demonstration, and they work with a faculty member in their department to complete at least one component of a scholarship of teaching and learning project (e.g., survey construction, data input and analysis, etc.). Other peer mentoring programs include similar tasks for their advanced undergraduate students (e.g., Chapin et al., 2014; Lewis & Lewis, 2008; Mitchell et al., 2012; Otero et al., 2010).

Certain aspects of both learning assistant and peer leader programs are congruent with traditional teaching assistant programs (Armstrong et al., 2021; Cavazos et al., 2024; Driver et al., 2023; Fitz & Gurung, 2021; Hogan et al., 2007; Komarraju, 2008; McKeegan, 1998; Talbot et al., 2015; Weidert et al., 2012). However, the duties of a teaching assistant can vary widely among professors and courses. One of the authors of the present paper was a TA in college, and their only duty was to process Scantron© exams in a windowless room and evaluate a research paper. In that situation, the role of a teaching assistant was simply to reduce the workload of the professor; no interaction with students or attending classes was required nor encouraged. In other more traditional programs, the activities for the teaching assistants can include assisting students in a class, lab, or library setting, tracking student attendance, and providing a short presentation or lecture in class. Moreover, Silverstein (1982) suggested it would not be possible to offer large lecture courses such as “Introduction to Psychology” with up to 1200 students without highly involved teaching assistants. In that situation, teaching assistants lead discussions and provide extensive feedback for individual assignments. The primary task historically, though, has been assisting the professor with grading (e.g., McKeegan, 1998). While it is recognized that serving as a teaching assistant may improve one’s soft skills (e.g., public speaking, organization, etc.), the focus is on providing students in a course another avenue for support while alleviating the workload for the professor.

For both psychology departments at the primary and regional colleges at our institution, our teaching assistant program resembles a more traditional format. However, the program we have in place was created several decades ago. As part of reviewing various aspects of the undergraduate student program, we determined a need to evaluate the program, including our teaching assistants’ experiences, to identify ways to improve this opportunity for both the teaching assistants and the students they serve. At both colleges, the professor and student work together to determine what activities or responsibilities the student will have as a teaching assistant for the course. Some teaching assistants are required to sign a learning contract that describes in detail the expectations surrounding their role in the course, although there is no centralized system for this documentation. At the beginning of the semester for both colleges, each teaching assistant in the respective Psychology department is required to watch training videos on information crucial to

being a successful teaching assistant, including how to use Canvas under the teaching assistant role, how to interact with students in the course, ethics related to the Family Educational Rights and Privacy Act (FERPA), and so on. At the end of the semester at both colleges, some teaching assistants are required to submit a review or evaluation of their experience as part of their final teaching practicum course grade, but this process also varies among professors.

A key issue, however, involves the potential lack of consistency in teaching assistant experience for our students, as there is no specified protocol in place that mandates the use of a learning contract, the need for a final reflection or presentation for the teaching assistant as part of their final course grade, etc. While the teaching assistant system has been more unified and streamlined at each campus separately, the only required step at this point is student preparation through the training videos. This means that there is potential for our students serving as teaching assistants to receive significantly varied experiences that may impact their appreciation of their time in this position, their ability to further develop their soft skills, and the potential impact on the undergraduate students in the courses for which they assist.

The purpose of this study was to gain feedback from our undergraduate teaching assistants on the structure of the teaching assistant practicum and the variety of their duties within their assignments, as well as their appreciation of the experience, to determine what improvements need to be made to our teaching practicum structure. If there are certain tasks related to their assignments that are predictors of their satisfaction with the experience, then we would like to use that information to modify our teaching assistant program so that the faculty who work with these students can provide them opportunities to ensure satisfaction. These predictive factors may include class standing of the teaching assistant (e.g., junior vs. senior), number of hours per week doing their assigned work, the size of the course for which they are assisting, and types of duties engaged in (e.g., grading assignments, responding to student emails, facilitating class discussion, lecturing of the course content). By surveying our current teaching assistants regarding their responsibilities and the potential relationships of those to their appreciation of their experiences, we can improve the program for both students and faculty members.

Method

Participants

During the Fall 2020 semester, and again during the 2021-2022 academic year, we emailed undergraduate students, via their university email addresses, who were serving as teaching assistants to ask them to complete a survey. A total of 30 undergraduate students (93% female; 86% White; $M_{\text{age}} = 21.23$, $SD = 2.90$) responded. A majority of those sampled indicated they were either juniors ($n = 5$) or seniors ($n = 18$) in their bachelor's degree program. Most (i.e., 90%) indicated that they were psychology majors. This sample is similar to typical graduating classes of psychology majors regarding gender and ethnicity; for example, 76% of the graduating students of the 2023-2024 class were female, and 68% were White.

Materials and Procedure

As part of a larger program evaluation effort, participating undergraduate teaching assistants were asked to respond to an online survey administered via Qualtrics survey software during the last three weeks of the academic semester. After providing their consent to participate and completing a brief demographics questionnaire, students were asked to respond to a series of questions about their experiences serving as an undergraduate teaching assistant in the psychology program (see Appendix A). More specifically, students were asked to respond to a series of questions about the courses they assisted with (e.g., delivery format, number of students enrolled in the course) and how many hours each week they dedicated to their role as a teaching assistant. In addition, students were asked to indicate the frequency in which they engaged in 10 teaching related tasks using a 5-point frequency scale, ranging from 1 (*Never*) to 5 (*Very Frequently*). Examples of tasks include facilitating class discussion, conducting lab or study sessions, grading homework assignments, and distributing and/or copying course materials. Finally, students were asked to respond to a six-item measure assessing their overall appreciation of the teaching assistant experience. Example items include "Being a TA this se-

mester was a rewarding experience,” “I liked being a TA,” and “I learned a lot from being a TA.” Students were asked to respond to each item using a 7-point Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). The six-item measure demonstrated an acceptable level of internal reliability ($\alpha = .86$). Participants’ responses across the six items were averaged to create an overall composite appreciation score wherein a higher overall score reflected a greater overall appreciation of the teaching assistant experience.

Results

Characteristics of the Experience

A series of descriptive frequency analyses, including calculating percentages, means, and medians, were conducted to examine the characteristics of the students’ teaching experiences. As seen in Table 1, more than half of the students served as teaching assistants for an online course while only about a third served as a teaching assistant for an in-person course. Only a small percentage of students assisted with a hybrid course. Inspection of students’ reports concerning class size revealed that class sizes ranged from small classes of 17 to 36 to relatively large classes of 136 to 200. The median number of students enrolled in a class size was 100 students. Given the ranges in class sizes, it is perhaps no surprise that there was also a considerable range of teaching assistants assigned to each class. Some students – who helped with small classes - reported being the only assistant for the course while others – who helped with large class sections - reported that there were up to nine other teaching assistants helping with the course. The median number of other teaching assistants in a respondent’s section was three (see Table 1). Finally, frequency analyses examining the number of hours students reported spending each week on their duties for their teaching assistant assignment revealed that the median response was 3-4 hours. However, responses ranged from 1-2 hours a week to 8-9 hours a week. Nobody reported that they spent less than an hour a week on their duties, and nobody reported that they spent 10 or more hours on their teaching assistant work.

Table 1

Results of frequency analyses examining students' responses to items assessing the overall characteristics of the students' teaching experiences.

Class Format (n = 27); Mode = Online

	In-person	Online	Hybrid
Valid %	33%	59%	8%
(N)	(9)	(16)	(2)

Class Size (n = 27); Median = 100 students

	17-36	70-95	96-115	116-135	136-200
Valid %	22%	15%	37%	15%	11%
(N)	(6)	(4)	(10)	(4)	(3)

Number of Other TAs (n = 27): Median = 3 other TAs

	0 TAs	1-3 TAs	4-6 TAs	7-8 TAs	9 TAs
Valid %	7%	55%	24%	7%	7%
(N)	(2)	(16)	(7)	(2)	(2)

Hours per week (n = 30): Median = 3-4 hours

	1-2 hrs	3-4 hrs	5-6 hrs	7-8 hrs	8-9 hrs
Valid %	30%	40%	20%	7%	3%
(N)	(9)	(12)	(6)	(2)	(1)

Note. n's provided next to each variable denotes the total number of valid responses.

Appreciation of Teaching Assistant Experience

Descriptive analyses examining the students' appreciation scores revealed that students largely appreciated the teaching assistance experience. As seen in Table 2, the median response across all individual items was 6 or more on the 7-point scale with mean scores ranging from 5.93 to 6.20. The mean score for the composite index averaging participants' responses across the six items was 6.11 ($SD = .84$). Further frequency analyses revealed that although there was one person in the data with a relatively low score of 3.33 on this overall index of appreciation, the remaining 29 students in the data set (representing 96.7% of responses) had composite scores well above the midpoint on the measure (ranging from 4.83 to 7.00). Overall, the data suggest that most students appreciated the teaching assistance experience.

Table 2

Descriptive statistics summarizing students' responses to the individual items (and the overall composite score) assessing students' appreciation of the TA experience.

Individual Items	Mode	Median	Mean	Min	Max	SD
Being a TA for this course was a rewarding experience.	6	6.00	6.07	2	7	1.01
I enjoyed my experience as a TA.	6	6.00	6.20	2	7	1.00
I like being a TA.	6	6.00	6.13	2	7	1.14
Being a TA has helped me become a better student.	7	6.00	6.30	4	7	0.88
I learned a lot from being a TA.	7	6.00	6.03	3	7	1.10
Being a TA was an excellent professional development experience.	7	6.00	5.93	2	7	1.41
Overall Composite Score						
Appreciation of TA Experience	7	6.00	6.11	3.33	7	0.84

Note. All items were rated on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

Duties and Responsibilities

Frequency analyses were used to examine the frequency in which participating teaching assistants engaged in various instructional and supportive duties. As can be seen in Table 3, the most frequent types of tasks students reported engaging in were more supportive tasks like grading assignments (77%) and responding to student emails (70%). In contrast, the most infrequent types of tasks included more instructional roles, such as creating lecture materials, creating homework/assignments, and lecturing or presenting to the class. In fact, only one teaching assistant indicated that they created lecture materials or assignments on a frequent basis, and only two of the teaching assistants

surveyed said they presented material to the class in a lecture format sometimes.

Table 3

Results of frequency analyses examining the frequency in which students engaged in 10 teaching related tasks.

<i>In your duties as an undergraduate teaching assistant, how often did you...</i>	<u>Never/Rarely</u>	<u>Sometimes</u>	<u>Frequently/Very Frequently</u>
grade assignments?	13%	10%	77%
respond to student emails?	10%	20%	70%
work one-on-one with students to solve problems?	37%	30%	33%
conduct lab or study sessions?	63%	10%	27%
facilitate class discussions?	60%	27%	13%
distribute/copy materials	77%	10%	13%
prepare answer keys or supplementary notes?	77%	13%	10%
create lecture materials?	90%	7%	3%
create homework/assignments?	87%	10%	3%
lecture/present materials to the class?	93%	7%	0%

Exploratory Analyses

An exploratory stepwise linear regression was conducted to identify variables that may strongly predict students' overall appreciation of the teaching assistant experience scores. In the regression, we included age, gender, and class level as potential demographic variables that may impact or otherwise uniquely predict students' overall appreciation scores. We also included characteristics of the teaching assistant experience (i.e.,

course format, class size, number of other assistants, and hours per week) as potential predictors as well as the students' ratings concerning the frequency in which they were asked to engage in 10 teaching related tasks as part of their assignment. As seen in Table 4, results revealed that only two variables emerged as unique predictors of the students' overall appreciation ratings: the frequency in which the student facilitated class discussions, and class standing. Together, these two variables explained approximately 46% of the variability in students' appreciation scores, $F(2, 21) = 8.87, p = .002, R^2 = .46$, Adjusted $R^2 = .41$. Students' enjoyment of their experience was primarily predicted by how frequently they facilitated class discussions – which explained roughly 32% of the variability in students' appreciation scores. In the final model, inspection of the standardized beta coefficient for this variable revealed that the more frequently they facilitated class discussions, the more they appreciated the teaching assistant experience, $\beta = .47, t(21) = 2.84, p = .01, R^2 = .32$, Adjusted $R^2 = .29$. The only other variable that was found to be a unique predictor of students' appreciation ratings, explaining an additional 14% of the variance in students' scores, was their class standing. The farther along in their education (higher class standing), the more they appreciated the teaching assistant experience, $\beta = .38, t(21) = 2.32, p = .03, \Delta R^2 = .14$. None of the other variables included in the analyses emerged as unique predictors of students' appreciation ratings.

Table 4

Results of exploratory stepwise regression predicting students' overall appreciation of the teaching assistant experience scores.

	<i>b</i>	<i>SE</i>	β	<i>t</i>	ΔR^2	R^2
Step 1					0.32**	0.32**
(Constant)	5.84	0.19		31.60***		
Facilitating class discussions	0.27	0.08	0.57	3.21**		
Step 2					0.14**	0.46**
(Constant)	4.79	0.49		9.83***		
Facilitating class discussions	0.22	0.08	0.47	2.84*		
Class level	0.32	0.14	0.38	2.32*		

Discussion

The purpose of this study was to survey students who serve as undergraduate teaching assistants in psychology courses at both our primary and regional colleges. We wanted to identify the level of appreciation students may have for this experience, the variety of responsibilities they have for the courses they serve, and the possible relationships between a number of factors and their level of satisfaction. We wanted to use this information to determine what improvements we might want to make to our teaching assistant program to improve the experiences for both students and faculty. The results indicate that indeed there is a wide variety of experiences these students have, from type of course format, how much time is devoted to their teaching assistant work, and activities they engage in as an assistant.

The majority of the students surveyed were teaching assistants for online sections of psychology courses, with in-person courses second; this may be an aberration, though, because much of this data was collected while we maintained a greater number of online courses than usual due to the Covid-19 pandemic. There was a wide variety of class sizes for the teaching assistants, with the greatest percentage (37%) assisting in courses that had 96-115 students, and with 22% of those surveyed assisting in courses with 17-36 students. The majority (55%) served courses with 1-3 additional teaching assistants, with 24% having served with 6 other teaching assistants (likely for the largest Introduction to Psychology sections). Regarding weekly time devoted to the teaching assistant role, 40% spent 3-4 hours per week, while 30% spent 1-2 hours per week on their duties; one student spent 8-9 hours per week on their teaching assistant work, however this student indicated that they assisted for three courses that term.

The wide variety of duties performed by the teaching assistants surveyed was apparent. The most common duties performed frequently were grading assignments and responding to student emails. More than half of the respondents either sometimes or frequently worked with students one-on-one to solve problems. The majority rarely or never conducted lab or study sessions, facilitated class discussions, distributed/copied class materials, prepared answer keys or supplementary notes, created lecture materials, created homework or assignments, lectured or present materials to the class. Though it is clear that the primary duties shared by the teaching assistants involved grading and handling student email, other tasks varied for the students in our sample.

The results of the appreciation statements indicated that overall, teaching assistants appreciated the experience, with strongly agreeing as the most common response. Most students strongly agreed that being a teaching assistant has helped them be a better student, and most agreed they enjoyed their experience in this role. The lowest ratings were for the statements regarding the experience being excellent for their professional development and that they learned a great deal from being a teaching assistant; however, while both statements had the lowest means, the most common rating was strongly agree, indicating that just a few students did not agree with the survey items.

The exploratory stepwise linear regression indicated that the primary predictor of higher appreciation scores was having the opportunity to facilitate class discussions. The more the teaching assistants were able to facilitate discussion with the students in the class, the more they appreciated their role as a teaching assistant. The only other significant predictor was class standing, with those who were farther along in their undergraduate education appreciating this experience more. Though not asked on the questionnaire, it is reasonable to suggest that this could be due to the growth in maturity and responsibility we tend to see over the four years of undergraduate education and/or the ability for more senior students to have had more coursework leading up to their teaching assistant experience, which would allow them to be more confident in having mastered the content they would cover with students, particularly during facilitated class discussions.

Our findings are consistent with others who have surveyed their undergraduate students who have served as teaching assistants, peer leaders, or learning assistants. Riser and colleagues (2021) found that their peer leaders believed their experience allowed them to develop strong skills, including professionalism, personal responsibility, and self-efficacy in psychology content; our teaching assistants agreed that “Being a TA was an excellent professional development experience.” Just as we found that the more the teaching assistants were able to facilitate in-class discussions the more they appreciated the experience, Weidert and colleagues (2012) reported that the more responsibilities their undergraduate teaching assistants had, the more viewed their assisting experience as beneficial. Nearly all our teaching assistants had a high average appreciation score, which is similar to what McKeegan (1998) found, with all her sampled teaching assistants rating their overall experience as excellent or good.

Based on this study, we suggest that the current version of our teaching assistant program leads to positive experiences for our more advanced undergraduate students. We do, however, see areas for improvement moving forward. To create a more equitable experience for teaching assistants, we will work with faculty in our departments to develop a standardized contract document that better outlines the responsibilities and expected weekly time required for the teaching assistantship work. We will also recommend that the faculty find ways to incorporate assistant-led discussions during class time to increase appreciation of the experience. We will look to prioritizing more advanced undergraduate

students for assigning this role, as it appears they tend to gain the most from their time as a teaching assistant. We will also discuss the potential for including a final reflection piece for these teaching assistants to describe what they gained from the experience and how it may have helped their professional development, similar to the requirements outlined by Riser et al. (2015) and Schalk et al. (2009). Finally, we will consider including some discussion topics integral to the teaching assistant role, such as how to encourage active learning during discussions, detecting cheating (including the use of AI), and the steps for handling a difficult student (e.g., Hogan et al., 2007).

We acknowledge there are limitations to this current teaching assistant program evaluation. The data was primarily collected during the height of the Covid pandemic when a greater proportion of our courses were fully online than usual. This could have made the task of facilitating discussions challenging or nonexistent for some fully online courses; it may be the case that those courses are now being taught in face-to-face sections again. Those who reported the higher appreciation with greater ability to lead those discussions may have been more thankful than usual due to the reduced in-person interactions we all had during that time. In addition, only two of the respondents were teaching assistants for the psychology program at the regional college; having a better representation of regional college teaching assistants may provide insight into any differences that may occur in appreciation of the experience and types of tasks required between the two campuses. Subsequent surveying of our teaching assistants is required to determine the validity of those potential differences.

Though our students indicated great appreciation for their undergraduate teaching assistant experience, this program evaluation provided us with the information we needed to consider improvements for future students. We plan to continue surveying our teaching assistants post inclusion of the improvements mentioned above, as well as survey our faculty who work with our teaching assistants on their perceptions of our teaching assistant program and the undergraduate students in the courses they serve. Cyclical review of teaching assistant programs allows for continued growth and enhancement, and we encourage others who have these programs at their institutions to do the same to provide the best learning experiences possible for their advanced undergraduate students.

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Appendix A

Teaching Assistant Experience Survey

Demographic Information

1. **Gender:**

- Male
- Female
- Non-binary
- Write in: _____
- Prefer not to respond

2. **Race/Ethnicity** (please select all that apply):

- American Indian
- Asian
- Black/African American
- Hispanic American or Latino/a
- Native Hawaiian or Pacific Islander
- White/European American
- Write in: _____
- Prefer not to respond

3. **Age** (in years): _____

Prefer Not to Respond

4. **Political Orientation**

- Extremely Conservative
- Solidly Conservative
- Slightly Conservative
- Moderate
- Slightly Liberal
- Solidly Liberal
- Extremely Liberal
- Write in: _____
- Prefer not to respond

1. **Teamwork** – being able to effectively work as part of a team
2. **Communication** – being able to communicate effectively in both written and oral forms.
3. **Time management** – being able to manage your time effectively and meet deadlines
4. **Leadership** – being able to lead and motivate others.
5. **Conflict resolution** – being able to resolve conflict or dispute between individuals
6. **Accept responsibility** – being able to accept responsibility for your work, regardless of whether it is good or bad
7. **Adaptability** – being able to adapt to change
8. **Initiative** – being able to take initiative and be proactive
9. **Autonomy** – being able to work independently without the need for supervision
10. **Problem solving** – being able to solve problems
11. **Critical thinking** – being able to analyze, synthesize, evaluate, and apply creative thought when problem solving or making decisions.
12. **Advocacy** – being able to speak-up for yourself and others
13. **Organization** – being organized
14. **Pressure tolerance** – being able to effectively and efficiently work under pressure
15. **Professionalism** – being able to act like a professional

Prevalence of Academic Tacit Knowledge

Leonard & Insch (2005)

For each behavior below please provide an estimate of the percentage (from 0 to 100%) of students that routinely demonstrate that behavior using the scale provided.

In your experience, what percentages of college students....

0% -----100%

1. Attend class regularly
2. Make time to study
3. Get to class on time
4. Act responsibly regarding school work
5. Demonstrate self-control
6. Stay on task
7. Actively participate in class
8. Participate in assigned group work outside of class
9. Speak with professors after class

10. Speak with teaching assistants or professors during office hours
11. Ask the professor questions for clarification during and at the end of class
12. Consult with other, more experienced/knowledgeable students

Note. Items 1-4 tap cognitive self-motivational skills, items 5-8 tap cognitive self-organizational skills, and items 9-12 tap individual technical skills.

Importance of Academic Knowledge

When it comes to being successful in college, how important is it for a student to...

Not at all important -----Essential

1. Attend class regularly
2. Make time to study
3. Get to class on time
4. Act responsibly regarding schoolwork
5. Demonstrate self-control
6. Stay on task
7. Actively participate in class
8. Participate in assigned group work outside of class
9. Speak with professors after class
10. Speak with teaching assistants or professors during office hours
11. Ask the professor questions for clarification during and at the end of class
12. Consult with other, more experienced/knowledgeable students

Note. Items 1-4 tap cognitive self-motivational skills, items 5-8 tap cognitive self-organizational skills, and items 9-12 tap individual technical skills.

Assorted Academic Questions Questionnaire

Using the scale provided below, please indicate how much you disagree or agree with each statement below.

Strongly Disagree Dis-agree Disagree a little Neither Dis-agree or Agree Agree a little Agree Strongly Agree

1. If I don't do well on a test, the professor should make tests easier or curve grades.
2. Professors should only lecture on material covered in the textbook and assigned readings.
3. If I am struggling in a class, the professor should approach me and offer to help.
4. It is the professor's responsibility to make it easy for me to succeed.
5. If I cannot learn the material for a class from lecture alone, then it is the professor's fault when I fail the test.
6. I am a product of my environment. Therefore, if I do poorly in class, it is not my fault.
7. I should be given the opportunity to make up a test, regardless of the reason for absence.
8. Because I pay tuition, I deserve passing grades.
9. I feel good about the major I've selected.
10. I want to be a college professor someday.
11. I can see myself being a teacher in the future.
12. I like teaching.
13. All in all, I am satisfied with the education I am receiving at this school
14. I'm satisfied with the intelligence of my teachers here.
15. I'm satisfied with the extent to which my education will be useful for getting future employment.
16. I'm happy with the amount I learn in my classes.

Note. Items 1-8 assess Academic Entitlement (Koppe et al., 2011), Item 9 assesses satisfaction with major (Nauta, 2007), Items 10-12 assess desires to be a teacher, and Items 13-16 assess academic satisfaction (Schmitt et al., 2008).

Academic Locus of Control & Benefits of Hard Work

Using the scale provided below, please indicate how much you disagree or agree with each statement below.

Strongly Disagree	Dis- agree	Disagree a little	Neither Disagree or Agree	Agree a little	Agree	Strongly Agree
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1. Most bad grades are the result of lack of ability, ignorance, laziness, or all three.^a
2. With enough effort, anybody can get a good grade in a class.^a

3. Exam questions often tend to be so unrelated to course work that studying is useless.*
4. Getting a good grade largely depends on the professor you get.^a

Note. Items 1-4 assess academic locus of control (adapted from Rotter, 1966)

Growth Mindset

Dweck (1995)

Strongly Disagree	Disagree	Disagree a little	Neither Disagree or Agree	Agree a little	Agree	Strongly Agree
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Instructions: Read each sentence below and then, using the scale provided, indicate how much you disagree or agree with the statement. There are no right or wrong answers.

1. Students have a certain amount of intelligence, and they can't really do much to change it.
2. A students' intelligence is something about them that they can't change very much.
3. Students can learn new things, but they can't really change their basic intelligence.

Perspective Taking and Empathy

The following statements inquire about your thoughts and feelings in a variety of situations. Please use the scale provided to indicate how much you disagree or agree that the statement describes you personally.

READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

1. Facilitate class discussion
2. Work one-on-one with students to solve problems
3. Create lecture materials
4. Lecture/present materials to the class
5. Create homework/assignments
6. Conduct lab/study sessions
7. Grade homework/assignments
8. Respond to student emails
9. Distribute/copy materials
10. Prepare answer keys or supplementary notes

Note. Items 1-6 assess the extent to which the student took on a teaching role, and Items 7-10 assess the extent to which the student took a supportive staff role.

Using the scale provided, please indicate how much you disagree or agree with each statement below.

Strongly Disagree	Disagree	Disagree a little	Neither Dis- agree or Agree	Agree a little	Agree	Strongly Agree
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1. Being a TA for this course was a rewarding experience.
2. I enjoyed my experience as a TA.
3. I liked being a TA.
4. Being a TA has helped me become a better student.
5. I learned a lot from being a TA.
6. Being a TA was an excellent professional development experience.