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**From Isolation to Integration: Investigating Student Belonging and Its
Relationship with Course Value**

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**From Isolation to Integration: Investigating Student Belonging and Its
Relationship with Course Value**

by

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Abstract

From Isolation to Integration: Investigating Student Belonging and Its Relationship with Course Value

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Achievement gaps persist among minoritized and lower socioeconomic status (SES) students in higher education. Prior research has demonstrated that these disparities may be related to (1) students' sense of belonging in academic settings and (2) the amount of value they see in their pursuit of education. Thus, I examine these two factors as they relate to underrepresented (i.e. minoritized and lower SES) students' academic achievement in higher education. I specifically focus on how the two constructs may be related to one another and whether these relationships differ for students who are underrepresented in higher education. The following research examined the relationship between belonging and value in two separate diverse samples of undergraduate students

($N_1 = 426$, $N_2 = 551$). In Study 1, I found belonging to be significantly correlated with students' overall value, but especially with interest value. This finding was also observed among minoritized and lower SES students. Study 2 served as a replication of Study 1 with a different sample, and the same general results were obtained. This research illustrates the importance of belonging and value for students who are underrepresented in higher education, and how instructors might better support this particular population of students as they pursue college.

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Chapter 1: Introduction

As has been well documented, considerable achievement gaps exist for minoritized students and students from lower socioeconomic backgrounds in a wide variety of educational contexts (Bowman et al., 2023; Broer et al., 2019; Williams et al., 2020). These achievement gaps only exacerbate as students progress through their academic careers, becoming particularly salient as they enter the context of higher education (Walpole, 2003). Understanding and addressing these gaps is essential in promoting equity in our education system, given that the experiences of minoritized students often serve as an indicator of how fair and democratic our society is as a whole (Guinier & Torres, 2002).

One avenue psychologists have taken in attempting to understand why such achievement disparities exist has been to examine minoritized students' sense of belonging in academic settings. A great deal of research on academic motivation has found belonging to be significantly associated with undergraduates' persistence, engagement, and achievement in their studies (Du Toit-Brits, 2022; Korpershoek et al., 2020; Pedler et al., 2020). However, much belonging literature has found that students who are underrepresented in higher education tend to have a lower sense of belonging than those who belong to the dominant group (i.e., White, Asian, and upper/middle class), thus placing them at risk for more negative academic outcomes (Jury et al., 2019; Walton & Cohen, 2007).

Another widely studied antecedent of academic motivation and performance is the value students see in studying a particular subject. A number of studies in this domain have indicated that when undergraduates see more value in their coursework, they tend to demonstrate greater academic achievement and engage in more self-regulated learning strategies (Breetzeke et al., 2023; Harackiewicz et al., 2016; von Keyserlingk et al., 2022). However, this work has not examined between-group differences in how the different types of value (i.e. utility, interest, and attainment value) might function, making it one of the aims of this study along with how belonging and value might be associated with each other.

A significant gap exists in the current literature regarding the role of belonging in students' perceptions of value. While research by Eccles & Wigfield (2020) and others has explored various factors influencing subjective task value, sense of belonging has not been at the forefront of these discussions. The importance of investigating the relationship between STV and belonging is demonstrated by existing research highlighting the positive impact of a sense of belonging on academic motivation and participation (Freeman et al., 2007). However, the mechanisms through which belonging affects STV, particularly the specific aspects of attainment value, utility value, and interest value, remain relatively unexplored.

Because the major focus of this study is to examine the unique experiences of minoritized students in higher education, I investigate the relationship between belonging

and value in this particular population. Although prior literature has documented the importance of course belonging in students' STV more generally, this research has not examined whether belonging might play a more salient role in informing underrepresented students' STV. However, research has been conducted using stereotype threat as a framework to understand this relationship. For instance, Mello et al. (2012) examined stereotype threat among minoritized adolescents and whether it impacted their school belonging. The authors found that marginalized adolescents who were exposed to a stereotype threat manipulation demonstrated decreased school belonging compared with their peers in the control condition. Additionally, in an investigation of stereotype threat and motivation among minoritized undergraduates, Totonchi et al. (2021) found that ethnically minoritized students in undergraduate science courses demonstrated increased stereotype threat over the course of their college experience, as well as decreased attainment and intrinsic value. Because stereotype threat has been found to impact both minoritized students' belonging and value, these two constructs may very well be related to one another. This relationship may also differ from that of White students because they do not experience stereotype threat as it relates to their racial background. By bridging these gaps in the literature and examining the nuanced relationships between belonging and STV, my research aims to provide valuable insights for educators and researchers interested in enhancing student motivation and engagement in undergraduate courses, particularly among underrepresented populations.

PURPOSE

This study investigates the relationship between students' sense of belonging in their undergraduate courses and their subjective task value (STV) perceptions of those courses. Specifically, I achieve the following:

1. To examine the association between sense of belonging in undergraduate courses and students' overall ratings of course value.
2. To explore the relationships between students' sense of belonging and three specific aspects of STV: attainment value, utility value, and interest value.
3. To understand how the aforementioned associations may differ for students from underrepresented racial backgrounds and lower socioeconomic families.

By addressing these objectives, this study seeks to contribute to the understanding of how a sense of belonging influences students' perceptions of course value and how these relationships may vary across different demographic groups.

Chapter 2: Literature Review

AN OVERVIEW OF EXPECTANCY-VALUE THEORY

Expectancy-Value Theory (EVT) is a fundamental framework in the field of academic motivation. At its core, EVT posits that two key components, student expectations for success (ES) and subjective task value (STV), are primary determinants of academic motivation. ES refers to an individual's belief regarding how well they will perform in an upcoming task or academic endeavor. This belief is strongly related to students' perceptions of their competency in the skill area, and it plays a pivotal role in shaping their motivation to engage in the task (Eccles & Wigfield, 2020). On the other hand, subjective task value (STV) is a complex construct comprised of four distinct components: intrinsic value, attainment value, utility value, and cost. However, contemporary research increasingly shows that the 'cost' component deserves recognition as a subconstruct independent of STV (Barron & Hulleman, 2015).

To further elaborate on each of the types of value, intrinsic value reflects the inherent pleasure and enjoyment an individual anticipates from completing a specific task, emphasizing that this enjoyment positively influences a student's motivation. Second, attainment value focuses on how closely a task aligns with a student's identity and personal goals. When a task resonates with a student's values and self-concept, it becomes more significant, resulting in increased motivation to pursue it. Third, utility value is related to the perceived usefulness of completing a task regarding the student's broader goals and aspirations. Students are more likely to be motivated when they

perceive a task as directly contributing to their future success or well-being. Finally, cost considers the task's potential drawbacks or negative consequences, including time, effort, or other resources. Higher perceived costs can decrease a student's motivation to engage in the task. There is some debate about the place of cost in this theory (e.g., Barron & Hulleman, 2015; Flake et al., 2015), so I chose to focus on the more concrete aspects of value (i.e. attainment value, utility value, and interest) in the current study.

VALUE AND ITS RELATION TO MOTIVATION AND ACHIEVEMENT IN HIGHER EDUCATION

A number of studies suggest that students' perceptions of value are strongly related to their academic outcomes in various domains (Hulleman et al., 2010; Hulleman et al., 2017; Rosenzweig et al., 2020; von Keyserlingk et al., 2022). Although much of the work supporting this relationship has previously focused on adolescents' academic experiences, research has been more recently extended to include students in higher education. For instance, von Keyserlingk et al. (2022) examined the relationship between undergraduate students' motivational beliefs, including their perceptions of value, and how they were related to students' use of goal-oriented control strategies to study for an upcoming exam. Conducted using a relatively diverse sample of students from various racial backgrounds and fields of study, the authors found that students' subjective task values were positively associated with whether they planned to use primary control strategies to prepare for a future exam. This relationship between subjective task value and planned use of self-regulated learning strategies suggests that when students see

greater value in a particular course, they may be more likely to engage in strategies that facilitate their success.

Additional research has examined specific types of value and how they might be uniquely related to college students' academic motivation and achievement. For instance, utility value has been frequently used to enhance students' interest, performance, and self-efficacy in a particular course (Hulleman et al., 2010; Hulleman et al., 2017; Rosenzweig et al., 2020). Many of these utility value interventions are conducted in a similar manner, with the researcher asking students to complete an activity that involves connecting course material with aspects of their daily lives. Additionally, these interventions have been found to promote greater academic achievement not only in laboratory settings but also in real-world educational contexts, suggesting that the relationship between utility value and academic achievement remains valid.

Because this specific study focuses on the academic experiences of underrepresented and lower SES students, I examine the function of value in this specific population. Because motivation research has historically been conducted with white, upper/middle class undergraduates, most of the work seeking to understand how value factors into students' motivation and achievement has been examined within that particular population. Although data collection in these studies has become more diverse in recent years, fewer studies specifically examine how motivation uniquely manifests in underrepresented and lower SES college students (Emery et al., 2023; Kumar & DeCuir-

Gunby, 2023). However, some research on value and its relationship to student motivation and achievement has examined how race and social class might factor into the equation, such as Harackiewicz et al. (2016). In this study, the authors examine how the interaction of race and social class moderates the efficacy of a utility value intervention in an introductory biology course. Their results suggest that the utility value intervention they employed helped reduce both performance and achievement gaps among underrepresented and first-generation students, emphasizing the importance of utility value in this population's academic motivation and achievement.

SENSE OF BELONGING IN HIGHER EDUCATION

In addition to value, much of the research on the social precursors to academic success in higher education contexts demonstrates the significant role that a sense of belonging plays. Belonging is one of the primary constructs highlighted by Self-Determination Theory which proposes that that autonomy, relatedness (i.e. belonging), and competence are fundamental psychological needs that, when fulfilled by their environments, enhance individuals' motivation to engage in learning and academic pursuits (Ryan & Deci, 2020). The research on belonging in academic contexts provides evidence for its crucial role in students' academic motivation and achievement. For instance, Won et al. (2021) investigated the influence that having a strong sense of belonging might have on academic help-seeking behaviors among college students. Their findings affirmed that having a sense of belonging significantly predicts reported use of adaptive help-seeking strategies. Being that research supports the notion that adaptive

help-seeking is related to academic success (e.g., Fong et al., 2023), cultivating a sense of belonging in the college classroom is particularly crucial to consider.

The belonging literature also demonstrates that having a sense of belonging is particularly important for students who are typically underrepresented in academic spaces. For example, Pedler et al. (2022) conducted an investigation with university students to explore how students' sense of belonging might relate to their retention, academic motivation, and enjoyment in their studies. The authors were particularly interested in how a sense of belonging might function differently for students based on whether they were the first in their family to attend college or not. In line with this assumption, Pedler et al. found that first-generation university students had a significantly lower sense of belonging in academic spaces than did their peers whose parents had attended college. The authors of this study also found that sense of belonging was positively related to levels of academic enjoyment and motivation to study. Thus, the findings of this study indicate that first-generation college students may be at greater risk of adverse academic outcomes.

In addition to exploring first-generation status and its relation to belonging in academic contexts, some research has been conducted on SES more broadly and how it informs the degree to which they feel they belong. Specifically, Jury et al. (2019) examined how undergraduates perceived prestige due to their SES and how that contributes to their sense of belonging in academic spaces. After collecting data on each

of these variables, the authors found that SES significantly predicted students' sense of belonging, with perceived prestige significantly mediating that relationship. The results of this study demonstrate that developing a targeted intervention for lower SES students aimed at enhancing their perceived prestige in academic contexts may increase their sense of belonging, and potentially, their academic success.

BELONGING AND STEREOTYPE THREAT

Additional research has indicated that ethnically minoritized students are more likely to experience stereotype threat – anxiety that arises from the need to affirm negative stereotypes linked to one's identity – in academic spaces, contributing to decreased motivation and desire to persist (Steele & Aronson, 1995). This finding is supported by Totonchi et al. (2022), who conducted a longitudinal examination of stereotype threat and academic motivation among undergraduates from racial/ethnic groups typically underrepresented in STEM. Their results indicated that over the four years between when students began their undergraduate career and when they completed it, students' stereotype threat and perceived cost of studying science increased. In addition, students' science self-efficacy, intrinsic value, and attainment value declined. However, lower levels of stereotype threat and higher levels of motivation were related to higher STEM GPAs and more STEM courses completed. These findings indicate that reduced stereotype threat may be related to more positive academic outcomes.

One way that adverse outcomes related to stereotype threat might be mitigated is by increasing underrepresented students' sense of belonging in the classroom. The body of literature examining belonging and how it affects student achievement has demonstrated that whether students feel that they belong in a course may have a significant impact among underrepresented students. For example, Weber et al. (2018) examined how recurring experiences of stereotype threat among immigrant students might be related to their academic outcomes, including their sense of academic belonging. Over the course of the academic year, the authors found that immigrant students were much more likely to be vulnerable to stereotype threat and that their experiences of stereotype threat were significantly predictive of lower levels of academic belonging. Additionally, Schnabel et al. (2013) examined how students' writing about social belonging might decrease stereotype threat and boost academic performance. In two separate studies, one of which was field-based and the other of which was lab-based, the authors found that when negatively stereotyped students affirmed their social belonging by writing about it, they demonstrated larger gains in GPA than White students. Thus, each of these studies demonstrated the power of belonging and its potential buffering effect on achievement gaps.

To further elaborate on the notion that greater perceived stereotypes are associated with a lower sense of belonging among underrepresented students, Master and Meltzoff (2020) presented a theoretical model known as the Stereotypes, Motivation, and Outcomes (STEMO) developmental model. Here, the authors propose that both

stereotypes prevalent in a given environment and one's social identity contribute to an individual's self-representation in that context. Consequently, an individual's self-representation predicts both their interest and academic outcomes in that environment. Thus, their study provides evidence that students' perceived stereotypes are associated with their sense of belonging.

SENSE OF BELONGING AND VALUE

Being that both value and sense of belonging are significantly related to underrepresented student success, the primary aim of this study is to examine how the two constructs might be related to one another. Some research has examined this relationship, though it has not been explored extensively. As was briefly stated, Master & Meltzoff's (2020) STEM-O model suggests an association between belonging and subjective task value, particularly interest. That is, when students feel that they belong in a particular context, they feel free to develop an interest in that particular context. Xu & Lastrapes (2021) built on the STEM-O model in their examination of undergraduates' sense of belonging on future career interest. The authors conducted their study using a diverse sample, the majority of which was Hispanic and/or pell-grant eligible, and found an indirect relationship between belonging and interest among female students and both a direct and indirect relationship between belonging and interest among male students. Thus, both of these studies provide evidence of the relationship between belonging and interest.

In addition to interest, research has also found other types of value to be related to students' sense of belonging. For example, Freeman et al. (2007) explored first year undergraduates' sense of belonging in class, and how it was related to their academic motivation, instructor perceptions, and university-level sense of belonging. In terms of the motivational variables, the authors found that students' sense of class belonging was significantly associated with intrinsic motivation and utility value. However, due to the scarcity of literature exclusively examining relationships between belonging and value, further research is needed to corroborate the relationship between sense of belonging and utility value, as well as other types of value.

This study aims to fill these gaps in the literature by examining how students' sense of belonging is related to their perceived value in a particular course. I specifically investigate this relationship among minoritized students and students of lower socioeconomic status, given that few studies have focused on these particular student populations (Emery et al., 2023; Kumar & DeCuir-Gunby, 2023). Given that these students are beginning to comprise larger proportions of the student body in higher education (NSCRE, 2024), it is particularly important to consider the ways in which we can facilitate their engagement and achievement.

PRESENT STUDY

The present study extends the current literature on students' sense of belonging in higher education and on perceived course value by 1) examining how the two constructs

are associated with one another, 2) identifying which types of value are most associated with student-level belonging, and 3) examining the prior two objectives specifically among minoritized and lower SES students. More explicitly, I asked three research questions and corresponding hypotheses. Additionally, I conducted two separate studies asking these same questions to replicate my results with a different sample of students.

My first research question asks the following: what is the association between students' sense of belonging in their courses and their overall course value ratings? Overall, this study examines the relationships between a sense of belonging in college courses and subjective task value in those courses. Based on findings that suggest a sense of belonging correlates with higher levels of achievement and course participation (e.g., Freeman et al., 2007), I expect that a greater sense of belonging will correlate with higher overall course value ratings.

My second research question asks the following: which aspects of subjective task value are more strongly associated with students' sense of belonging in class? Based on prior findings that a sense of belonging is positively related to both interest and utility value (e.g., Harackiewicz et al., 2016; Rosenzweig et al., 2020), I expect to find a positive association between sense of belonging, interest value, and utility value. However, because no research has specifically examined the relationship between attainment value and belonging, this aspect of this research question remains exploratory.

Because identity is essential in examining a sense of belonging (Master & Meltzoff, 2020; Xu & Lastrapes, 2021), we ask a third question: do these associations differ for students from underrepresented racial backgrounds and lower socioeconomic families? We expect these associations to be stronger for these students, given the research finding that a sense of belonging is more salient for students from underrepresented backgrounds (Vaccarro & Newman, 2015) and for students from lower-income households (Walpole, 2003).

Chapter 3: Study 1

METHOD

Participants

Data were collected at a large public university in the southwestern United States in the Spring of 2023. Participants were undergraduate students who completed an online survey on Qualtrics for research credits as part of a subject pool. The final sample ($N = 426$, $M_{\text{age}} = 20.53$, $SD = 2.53$) included 66.8% female students, and the racial breakdown was 42% White, 25.8% Asian, 23.4% Hispanic, 6.4% Black, 1.4% Middle Eastern/North African, 0.7% Multiracial, and 0.2% Native American. In terms of year in college, participants were 21.4% first-year, 23% second-year, 26.5% third-year, 26.1% fourth-year, and 3.1% fifth-year and above. Lastly, 20.7% of the sample identified themselves as first-generation college students.

Measures

Below, I describe the measures used to test my three research questions. As part of the larger survey, I also measured expectancy/ability beliefs, effort cost, opportunity cost, psychological cost, imposter feelings, perception of professor mindset, and overall GPA (see Appendix A for all items).

Course Value

Participants self-reported three types of course value using adapted scales based on expectancy-value theory (Perez et al., 2019). Course interest value was a composite of

7 items ($\alpha = 0.85$; e.g., “Compared to the other courses you are taking this semester, how much do you like this course?”). Course attainment value was a composite of 4 items ($\alpha = 0.85$; e.g., “Being someone good at this course is essential to me.”). Course utility value was a composite of 4 items ($\alpha = 0.94$; e.g., “How useful is this course for what you want to do after graduation?”). All course value items were measured using a 6-point Likert scale.

Course Belonging

Participants responded to eleven items measuring their sense of belonging in class adapted from Goodenow et al. (1993) ($\alpha = 0.91$; e.g., “I feel like a genuine part of this course.”). Each of these items were measured using a five-point Likert scale.

Demographic Factors

Participants reported their age, gender, ethnicity, and subjective socioeconomic status (SES). SES was measured using the MacArthur Scale of Subjective Social Status (Adler et al., 2000). Participants were presented with a ladder consisting of ten rungs and were asked to choose the rung that they felt best represented their placement in society based on their family’s level of education, income, and occupational status. The first rung represents the lowest SES, and the tenth rung represents the highest SES.

Procedure

At the beginning of the survey, participants were asked to consider all the courses they were enrolled in that semester. Participants were then asked to list the course that came to their mind first. When answering course value and belonging questions, participants thought about the course that they listed.

Data Analysis

To conduct all the analyses, I used R version 4.3.3 (R Core Team, 2024). To answer my first research question (What is the association between students' sense of belonging in their courses and their overall course value ratings?), I first created a measure of overall course value by averaging all responses to the course value items. I then conducted a correlational analysis to test the relationship between course belonging and overall course value. I followed a similar procedure to answer my second research question (Which aspects of subjective task value are more strongly associated with students' sense of belonging in class?), conducting correlational analyses to test the relationships between course belonging and each of the different types of course value (i.e. course interest value, course attainment value, and course utility value). I then conducted a Fisher's z test to compare the relative magnitudes of the relations between belonging and each of the different types of value.

To answer my third research question (Do these associations differ for students from underrepresented racial backgrounds and lower socioeconomic families?), I began

by creating two subsets of my data: one consisting of underrepresented minority students and the other consisting of lower SES students. The underrepresented minority subset included students who identified as Hispanic, Black, Native American, and Middle Eastern/North African ($N = 133$; 31.2% of the total sample). The lower SES subset included students who placed themselves at rungs 1-5 of the subjective SES ladder ($N = 126$; 29.6% of total sample). I then conducted the same analyses as I did for research questions 1 and 2 within these particular subsets.

RESULTS

Descriptives and Correlations

Descriptive statistics (i.e., means and standard deviations) and correlations of all variables are presented in Table 1.

Table 1: Study 1 Zero-order Correlation Matrix and Means (SD)

Variable	M	SD	Pearson's Correlation r				
			1	2	3	4	5
1. Interest Value	4.46	1.23					
2. Attainment Value	4.25	1.01	0.55**				
3. Utility Value	4.45	1.25	0.58**	0.64**			
4. Overall Value	4.43	0.96	0.84**	0.84**	0.88**		
5. Belonging	3.90	0.70	0.59**	0.39**	0.37**	0.53**	
6. Subjective SES	6.36	1.76	0.02	-0.06	-0.08	-0.05	0.12*

* $p < .05$. ** $p < .01$

Research Question 1

In terms of the relationship between course belonging and overall course value, I found a significant positive correlation ($r = .53, p < .01$). Thus, when students felt that they belonged in a course, they were significantly more likely to see value in that particular course.

Research Question 2

Among each of the types of value (i.e., interest, attainment, and utility), I found there to be a significant positive correlation with course belonging. Interestingly, interest value ($r = .59, p < .01$) was more strongly correlated with belonging than was attainment value ($r = .39, p < .01$) and utility value ($r = .37, p < .01$). Furthermore, z -tests for

differential correlations revealed a significant difference in the strength of correlations among these pairs of variables for attainment value ($z = 5.391, p < .01$) and for utility value ($z = 5.914, p < .01$), indicating that belonging is significantly more strongly related to interest value than to attainment value and utility value. Thus, when students felt they belonged in a course, they were significantly more likely to see any of the three types of value in the course, but specifically, were more likely to be interested in the course.

Research Question 3

Among the underrepresented minority (URM) subset, we found there to be a significant positive correlation between sense of belonging and overall course value ($r = .58, p < .01$) that was slightly higher than it was for the overall sample. In terms of the individual types of value, I also generally saw correlations to be greater for these relationships among URM participants. Similar to the pattern observed in the whole sample, correlations between belonging and value were all positive, but were greater for interest value ($r = .64, p < .01$) than for attainment value ($r = .47, p < .01$) or utility value ($r = .38, p < .01$).

Among the lower SES subset, we again found a significant positive correlation between sense of belonging and overall course value ($r = .54, p < .01$) that was similar to the one found in the overall sample. Again, the correlation between interest value and belonging ($r = .56, p < .01$) was higher than the correlations between attainment value and belonging ($r = .37, p < .01$) and utility value and belonging ($r = .40, p < .01$).

Interestingly, the correlation for utility value among lower SES participants was slightly higher than that for attainment value, when for URM participants and overall sample, this pattern is reversed.

Chapter 4: Study 2

Study 2 primarily served as a replication of Study 1 using a different sample of undergraduate students. However, there were some differences in terms of measurement between the two studies. In Study 1, course value was evaluated in terms of the course participants initially brought to mind when completing the survey. In Study 2, however, participants were asked to list their favorite course from the current semester and their least favorite course from that semester. Students were then asked to consider their perceptions of value with regard to these two courses separately. I decided to obtain data on course value in this way for Study 2 given that, in Study 1, interest value had the greatest mean out of each type of value examined (see Table 1), indicating that students had likely used their favorite course as the referent course. Thus, in Study 2, students also reported perceived value for their least favorite course to determine whether associations between course value and belonging differed significantly on the basis of students' perceived course interest. In addition to asking about students' favorite and least favorite courses, Study 2 employed a newer measure of belonging developed specifically with the college context in mind.

METHOD

Participants

Data were collected at a large public university in the southwestern United States in the Fall of 2023. Participants were undergraduate students who completed an online survey on Qualtrics for research credits as part of a subject pool. The final sample (N =

551, $M_{age} = 20.38$, $SD = 1.98$) included 68.5% female students, and the racial breakdown was 42.3% White, 33.8% Hispanic, 27.2% Asian, 10.7% Multiracial, 6.2% Black, 1.5% Native American, 1.3% Middle Eastern/North African, 0.5% Pacific Islander, and 0.5% other. In terms of year in college, participants were 11.6% first-year, 16.2% second-year, 37.6% third-year, 30.7% fourth-year, and 4% fifth-year and above. Lastly, 21% of the sample identified themselves as first-generation college students.

Measures

Below, I describe the measures used to test my three research questions. As part of the larger survey, I also measured expectancy/ability beliefs, effort cost, opportunity cost, psychological cost, university-level belonging, imposter feelings, perception of professor mindset, course grade, and overall GPA (see Appendix for all items).

Course Value

The same measure of course value used in Study 1 was used in Study 2. As before, participants self-reported three types of course value using adapted scales based on expectancy-value theory (Perez et al., 2019). Course interest value was a composite of 7 items ($\alpha = 0.93$; e.g., “Compared to the other courses you are taking this semester, how much do you like this course?”). Course attainment value was a composite of 4 items ($\alpha = 0.84$; e.g., “Being someone good at this course is essential to me.”). Course utility value was a composite of 4 items ($\alpha = 0.93$; e.g., “How useful is this course for what you want

to do after graduation?”). All course value items were measured using a six-point Likert scale, with 1 representing the lowest side of the scale.

Course Belonging

In Study 2, I used a different measure of student belonging than that used in Study 1, which was specifically developed with the college context in mind. Participants responded to twelve items measuring their sense of belonging in class, as adapted from Slaten et al. (2018). This measure contained three subscales: support and acceptance (6 items; $\alpha = 0.87$; e.g., “I believed I had enough academic support to get through this course.”), affiliation (2 items; $\alpha = 0.83$; e.g., “I found it easy to establish relationships in this course.”), and faculty/staff relations (4 items; $\alpha = 0.94$; e.g., “I believe that my professor and/or TA for this course cared about me.”). Each item in this measure was measured using a six-point Likert scale (1 = Not at all true, 6 = Very true).

Demographic Factors

As in Study 1, participants reported their age, gender, ethnicity, and subjective socioeconomic status (SES). SES was measured using the MacArthur Scale of Subjective Social Status (Adler et al., 2000). Participants were presented with a ladder consisting of ten rungs and were asked to choose the rung that they felt best represented their placement in society based on their family’s level of education, income, and occupational status. The first rung represents the lowest SES, and the tenth rung represents the highest SES.

Procedure

The procedure in this study differed slightly from that used in study 1. Participants were first asked to list their favorite course from the previous semester and then answered a battery of questions as they related to that course. Participants were then asked to list their least favorite course from the previous semester and respond to the same set of items. The coefficient alphas listed above were calculated using data from students' responses to their favorite course items.

Data Analysis

Similar analytical procedures were used in Study 2 as in Study 1. To conduct all the analyses, I again used R version 4.3.3 (R Core Team, 2024). To answer my first research question (What is the association between students' sense of belonging in their courses and their overall course value ratings?), I created two separate measures of overall course value for the favorite and least favorite courses by averaging all responses to the course value items separately for each course. I then conducted separate correlational analyses to test the relationship between course belonging and overall course value for students' favorite and least favorite courses. I followed a similar procedure to answer my second research question (Which aspects of subjective task value are more strongly associated with students' sense of belonging in class?), conducting correlational analyses to test the relationships between course belonging and each of the different types of course value (i.e. course interest value, course attainment value, and course utility value) separately for students' favorite and least favorite courses. I then

conducted a Fisher's z test to compare the relative magnitudes of the relations between belonging and each of the different types of value for both students' favorite and least favorite courses.

To answer my third research question (Do these associations differ for students from underrepresented racial backgrounds and lower socioeconomic families?), I again created two subsets of my data: one consisting of underrepresented racial minority students and the other consisting of lower SES students. The underrepresented racial minority subset in this study included students who identified as Hispanic, Black, Native American, Middle Eastern/North African, and Pacific Islander ($N = 223$; 40.5% of sample). The lower SES subset included students who placed themselves at rungs 1-4 of the subjective SES ladder ($N = 83$; 15.1% of sample). I then conducted the same analyses as I did for research questions 1 and 2 within these particular subsets.

RESULTS

Research Question 1

In terms of the relationship between course belonging and overall course value, I found a significant positive correlation of roughly the same size as that in Study 1 for students' favorite course ($r = .56, p < .01$) and for students' least favorite course ($r = .53, p < .01$). Thus, when students felt that they belonged in a course, they were significantly more likely to see value in that particular course regardless of their feelings toward the course.

Research Question 2

Among each of the types of value (i.e., interest, attainment, and utility), I found there to be a significant positive correlation with course belonging for both students' favorite and least favorite courses. The results for students' favorite courses are detailed in Table 2. Similar to the results of Study 1, interest value ($r = .58, p < .01$) was more strongly correlated with belonging than was attainment value ($r = .39, p < .01$) and utility value ($r = .43, p < .01$). Furthermore, z -tests for differential correlations revealed a significant difference in the strength of correlations among these pairs of variables for attainment value ($z = 5.104, p < .01$) and for utility value ($z = 4.221, p < .01$), indicating that belonging is significantly more strongly related to interest value than to attainment value and utility value. Thus, when students felt they belonged in a course, they were significantly more likely to see any of the three types of value in the course, but specifically, were more likely to be interested in the course.

Table 2: Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Overall Value	4.67	0.80					
2. Interest Value	5.15	0.78	0.67**				
3. Attainment Value	4.25	1.01	0.85**	0.39**			
4. Utility Value	4.62	1.17	0.88**	0.39**	0.64**		
5. Course Belonging	4.95	0.75	0.56**	0.58**	0.39**	0.43**	
6. Subjective SES	6.35	1.68	-0.11*	-0.08*	-0.09*	-0.08	-0.05

** $p < .01$, * $p < .05$

A similar pattern of results is demonstrated in Table 3 for students' least favorite courses, with belonging being more highly correlated with interest value ($r = .61, p < .01$) than with attainment ($r = .38, p < .01$) or utility ($r = .34, p < .01$) value. Furthermore, z -tests for differential correlations again revealed a significant difference in the strength of correlations among these pairs of variables for attainment value ($z = 6.794, p < .01$) and for utility value ($z = 7.501, p < .01$), indicating that belonging is significantly more strongly related to interest value than to attainment value and utility value. Thus, even when students dislike the course they are in, that dislike is highly related to their sense of belonging in that course.

Table 3: Least Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Overall Value	3.16	1.08					
2. Interest Value	2.76	1.27	0.76**				
3. Attainment Value	3.25	1.24	0.86**	0.47**			
4. Utility Value	3.46	1.40	0.86**	0.43**	0.67**		
5. Course Belonging	3.67	1.05	0.53**	0.61**	0.38**	0.34**	
6. Subjective SES	6.35	1.68	-0.06	-0.04	-0.04	-0.07	-0.03

** $p < .01$

Research Question 3

Among the underrepresented racial minority participants in Study 2, I found a significant positive correlation between sense of belonging and overall course value for both students' favorite ($r = .58, p < .01$) and least favorite ($r = .64, p < .01$) courses. Here, the correlation for students' favorite courses was slightly higher than that for the overall sample, but the correlation for students' least favorite course was much higher than that for the overall sample ($r = .53, p < .01$). In terms of the individual types of value, correlations were generally observed to be greater for these relationships among URM participants. Similar to the pattern observed in the whole sample, correlations between belonging and value were all positive for students' favorite courses, but were greater for

interest value ($r = .57, p < .01$) than for attainment value ($r = .42, p < .01$) or utility value ($r = .50, p < .01$). The same pattern was observed for students' least favorite courses, where the correlation between belonging and interest value ($r = .63, p < .01$) was greater than that between belonging and attainment ($r = .50, p < .01$) and utility value ($r = .47, p < .01$). All results for the URM participants are provided in Tables 4 and 5.

Table 4: URM Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Overall Value	4.80	0.82				
2. Interest Value	5.24	0.74	0.71**			
3. Attainment Value	4.38	1.04	0.87**	0.42**		
4. Utility Value	4.79	1.14	0.90**	0.48**	0.67**	
5. Course Belonging	5.10	0.73	0.58**	0.57**	0.42**	0.50**

** $p < .01$

Table 5: URM Least Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Overall Value	3.24	1.15				
2. Interest Value	2.96	1.37	0.81**			
3. Attainment Value	3.31	1.27	0.85**	0.52**		
4. Utility Value	3.46	1.44	0.87**	0.52**	0.66**	
5. Course Belonging	3.81	1.07	0.64**	0.63**	0.50**	0.47**

** $p < .01$

Among the lower SES subset, we again found a significant positive correlation between sense of belonging and overall course value for both favorite ($r = .60, p < .01$) and least favorite ($r = .54, p < .01$) courses that were similar to those found in the overall sample. Again, as Table 7 demonstrates, the correlations between interest value and belonging in least favorite ($r = .50, p < .01$) courses were higher than the correlations between attainment value and belonging for least favorite ($r = .42, p < .01$) courses, as well as utility value and belonging for least favorite ($r = .38, p < .01$) courses. Interestingly, however, this result was not replicated for students' favorite courses in this subset, where correlations were relatively similar for all types of value (See Table 6).

Table 6: Low SES Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Overall Value	4.85	0.75				
2. Interest Value	5.31	0.66	0.65**			
3. Attainment Value	4.44	0.96	0.89**	0.42**		
4. Utility Value	4.80	1.09	0.89**	0.35**	0.70**	
5. Course Belonging	5.07	0.71	0.60**	0.50**	0.49**	0.50**

** p < .01

Table 7: Low SES Least Favorite Course Zero-order Correlation Matrix and Means (SD)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Overall Value	3.27	1.11				
2. Interest Value	3.01	1.32	0.77**			
3. Attainment Value	3.29	1.28	0.88**	0.51**		
4. Utility Value	3.52	1.40	0.85**	0.41**	0.70**	
5. Course Belonging	3.83	1.12	0.54**	0.55**	0.42**	0.38**

** p < .01

Chapter 5: General Discussion

The two studies described in this paper were guided by three research aims. My first aim was to examine the association between undergraduates' sense of belonging in their courses and their overall ratings of value for those courses. In both studies, I found course belonging and value to be positively associated with each other. In my second aim, I explored the relationships between students' sense of belonging and three specific aspects of STV: attainment value, utility value, and interest value. In both studies, I found that interest value was highly positively correlated with belonging, whereas attainment and utility value were moderately positively correlated with belonging. My third and final aim was to investigate how these associations may differ for students from underrepresented racial backgrounds and lower socioeconomic families. I generally found that the patterns observed among the full sample of students applied to my subsamples of racially minoritized and lower SES students.

BELONGING AND OVERALL VALUE

Among both samples used in this thesis, I found that students' sense of belonging in a specific course was positively correlated with their perceived value in that specific course. That is, when students felt as though they belonged in a class, they were more likely to see value in that class as well. This finding generally aligns with prior research conducted on how students' sense of belonging relates to their perceived value, which found the two constructs to be positively associated with one another (Freeman et al., 2007; Master & Meltzoff, 2020; Xu & Lastrapes, 2021).

BELONGING AND SPECIFIC TYPES OF VALUE

Regarding the more specific types of value, I found in both studies that interest value was highly positively correlated with belonging, whereas attainment and utility value were moderately positively correlated with belonging. This finding is in line with the current literature examining how interest relates to belonging, which proposes that students' sense of belonging may facilitate their development of interest in a particular academic field (Master & Meltzoff, 2020; Xu & Lastrapes, 2021). Study 2 expanded this line of research by examining a novel question regarding students' favorite and least favorite courses, and how perceptions of value in each of those courses were related to student belonging. Interestingly, the correlation between interest value and belonging was greater for students' least favorite course than for their favorite course. That is, when students had lower interest value in a particular course, they also tended to feel a much weaker sense of belonging in that course. Thus, belonging may be even more salient to students when they are taking a course that they do not enjoy. Students who are uninterested in the course content may instead find value in the relationships they have with other students in the course, thereby making belonging more important (Bergin, 2016).

Following interest, attainment and utility value were both moderately correlated with students' sense of belonging in their courses, with attainment value slightly more correlated with belonging among students' favorite courses and utility value slightly more correlated with belonging in students' least favorite courses. The finding regarding

utility value aligns with prior research, which found utility value to be positively associated with a sense of belonging (Freeman et al., 2007). Because there is very little work on how utility value relates to students' belonging, my research adds to this line of research, demonstrating how this association is consistent across contexts (i.e., favorite and least favorite courses).

In addition, it is worth noting that no research has examined the relationship between attainment value and students' belonging. Prior literature suggests that attainment value would be highly correlated with belonging, given the pertinence of identity to both attainment value and belonging (Eccles & Wigfield, 2020; Master & Meltzoff, 2020). In contrast to this line of reasoning, we found attainment value to have the smallest association with belonging when compared to each type of value. Future research could explore the relationship between attainment value and belonging in more detail to better understand why these two variables are not as strongly associated as the literature suggests they might be.

BELONGING AND VALUE AMONG RACIALLY MINORITIZED AND LOWER SES STUDENTS

I observed that the associations between belonging and value among participants in my broader samples were generally similar to those present among the URM and lower SES subsets. Particularly among the URM students, associations between belonging and value tended to be slightly more robust than those observed in the total sample. This finding was particularly evident in Study 2, where the association between belonging and

value for URM students' least favorite class was larger ($r = .64$) than that for the total sample ($r = .53$). This finding adds to the notion that belonging may be more salient to students in courses they do not enjoy by adding a layer of how identity may factor into the equation; students who are generally underrepresented in academic spaces may experience lower levels of belonging, which may then impact the amount of value they perceive a course to hold. This idea largely aligns with the STEM-O model developed by Master and Meltzoff (2020), which asserts that students' sense of belonging impacts their self-representation in a particular domain, affecting their level of interest in that domain. The authors also propose that stereotypes regarding who belongs in a particular field of study feed into these self-representations. Thus, for racially marginalized students who are often negatively stereotyped in higher education, having a strong sense of belonging may be particularly important in helping them develop or maintain interest in a particular field of study.

However, regarding the lower SES subset of students, I did not observe any extreme deviations from the total sample; these students generally followed the same patterns as those from the total sample. It is difficult to say whether these results align with prior literature on lower SES students' perceptions of value and belonging, given that most of the research on low SES students examines the intersectional experience of being racially minoritized and lower SES. Thus, this finding suggests that perhaps being an underrepresented racial minority in the context of higher education is more impactful in terms of student outcomes than being from a lower SES background alone. Some

research suggests that the relationship between a student's SES and their outcomes depends on that student's racial identity (Adedeji et al., 2022). Thus, future work might consider examining the intersection of race and SES and how those intersecting identities impact belonging and value rather than examining the two constructs separately. It is also worth noting that the measure of SES used in this study was based on students' subjective perceptions of their status, and not based on more objective measures of SES, such as parental education and family income. Future research could use these more objective measures of SES in their analyses to see if they produce different results from those I describe here.

LIMITATIONS AND FUTURE DIRECTIONS

One significant limitation of this study is that we cannot infer causality between belonging and value. The methodology employed in this research is purely correlational, which limits the ability to make any directional claims regarding the associations I have found (Rohrer, 2018). However, this study adds to the current literature exploring associations between students' sense of belonging and their subjective ratings of course value, including the three specific types of value (i.e., interest, attainment, and utility value) as outlined by Expectancy-Value Theory (Eccles & Wigfield, 2020). Future research should consider using experimental or quasi-experimental designs to establish causation and directionality between these variables. For example, one possible direction could be to design an intervention where professors are trained on best practices to increase belonging within their classroom. In this study, students' perceived value before

and after the training could be a dependent variable. Such interventions could involve participants responding to an overall measure of perceived value or their perceptions of one specific type of value (i.e., interest, importance, or utility). In addition, future work could consider predicting and testing the interaction between URM status and belonging on the different types of value. This approach may be more statistically sound than simply examining the correlations between belonging and value within URM students and comparing them to the overall sample.

The participants I recruited for this research also present limitations in terms of the degree to which I can generalize my findings because they attend a selective public university. Although this university houses a significant number of lower-income and URM students (UT Austin, 2024), students from this university may have more social and cultural capital than students at other institutions of higher education because they attend a relatively prestigious university. Thus, future research should consider recruiting students from more diverse educational backgrounds, such as community colleges and less-selective public institutions. Future research might also consider controlling for students' achievement levels in their analyses. As was discussed, belonging interventions can be particularly effective for URM students, who are often performing academically at lower levels than their White, middle-upper class peers (Bowman et al., 2023; Harackiewicz et al., 2016). Thus, the relationship between belonging and value might differ depending on students' current academic performance. This research also addresses belonging among college students; therefore, future research could examine if these

relationships hold for younger students. A great deal of existing research on motivation has examined the effects of belonging in younger adolescents (e.g., Goodenow & Grady, 1993; Kiefer et al., 2015; Mulvey et al., 2023), so it could be worthwhile to conduct a similar study with middle or high school students.

It is also worth noting that the types of courses in which students may be enrolled may differ depending on their field of study. Courses generally tend to be either theoretically oriented (e.g., a traditional lecture-style course) or more practically oriented (e.g., a lab-based or practicum course), with STEM fields generally involving more of these practical-formatted courses (Jones, 2011; Neumann, 2001). Thus, the formats of the classes students indicated while completing the survey may have introduced variability into my analyses. Future research could control for these differences by using the field of study/course format as a covariate or recruiting only students from one particular field/course format.

Lastly, because participation in this research was voluntary and students were granted course credit for completing the surveys, the data could have some degree of bias; the students who elected to participate in the study could also be students who already possess a relatively large amount of motivation to do well in the course they are taking. Students who are less motivated to do well might be less likely to participate in the study simply because they do not care about their grade in the course. Future research could consider using a financial incentive (e.g., Amazon gift card) to motivate

participants to complete the survey rather than using an academic incentive, such as course credit.

IMPLICATIONS FOR PRACTICE

As a practical implication, this study provides university-level faculty with evidence suggesting the importance of students' sense of belonging in the classroom, especially for students who are racially minoritized and/or from lower SES backgrounds. Our results demonstrate that students' perceptions of interest are strongly connected to their sense of belonging in class, and that this relationship is even more salient among underrepresented students. Additional research confirms that interest and academic achievement are highly related to one another, making students' interest development particularly important in terms of their academic outcomes (Master & Meltzoff, 2020; Xu & Lastrapes, 2021). Thus, this finding regarding the relationship between belonging and interest is crucial for faculty of large public universities to consider, where racially minoritized and lower SES students often form a significant proportion of the student body (NSCRE, 2024). The results from this study will hopefully prompt instructors to consider ways they can create more inclusive learning spaces that help all students feel connected in their courses.

Appendix

STUDY 1 ITEMS

General Questions:

What degree program are you in? (degree)

How many courses are you taking this semester? (no_courses)

How many hours per week do you spend on schoolwork? (school_time)

Do you have a job? (job)

How many hours per week do you work? (job_time)

Course Characteristics:

Think of all the courses you are enrolled in this semester. Which course comes to your mind first? (course)

Which department offers this course? (course_dept)

On a scale of 1-5, how challenging do you find this course? (challenge)

On a scale of 1-5, how much effort do you feel you put into this course? (effort)

How many hours per week do you spend studying, completing assignments, etc., for this course? (course_time)

Expectancy/Ability Beliefs - Adapted from Perez et al., 2019 (6-point Likert):

Compared to other students, how well do you expect to do in this course this semester?

(E1)

How well do you think you will do in this course this semester? (E2)

How good are you at this course? (E3)

Where would you put yourself if you ordered all of the students in this course from the worst to the best? (E4)

Interest Value - Adapted from Perez et al., 2019 (6-point Likert):

How interesting do you find this course? (I1)

I generally find working on assignments/studying for this course... (Very boring, Very interesting) (I2)

Compared to the other courses you are taking this semester, how much do you like this course? (I3)

I am fascinated by this course. (I4)

I enjoy this course. (I5)

This course is exciting to me. (I6)

I like this course. (I7)

Attainment Value - Adapted from Perez et al., 2019 (6-point Likert)

I feel that to me, being good at this course is... (Not at all important, Very important)

(AV1)

Compared to the other courses I am taking this semester, how important is it to you to do well in this course? (AV2)

Being someone good at this course is essential to me. (AV3)

Being good at this course is an essential part of who I am. (AV4)

Utility Value - Adapted from Perez et al., 2019 (6-point Likert)

How useful is this course for what you want to do after graduation? (UV1)

This course will be important when I get a job or graduate school. (UV2)

This course will be helpful for me later in life. (UV3)

Concepts in this course are helpful because they will help me in the future. (UV4)

Effort Cost - Adapted from Perez et al., 2019 (6-point Likert)

When I think about the hard work needed to get through this course, I am not sure it will be worth it. (EC1)

I am unsure if I have the energy to do well in this course. (EC2)

For me, taking this course just might not be worth the effort. (EC3)

This course sounds like it requires more effort than I'm willing to put into it. (EC4)

Opportunity Cost - Adapted from Perez et al., 2019 (6-point Likert)

Studying for this course takes a lot of time away from other activities I want to pursue. (OC1)

I'm concerned about losing valuable relationships because of the work required for this course. (OC2)

I'm concerned that I must give up a lot to do well in this course. (OC3)

I'm concerned that success in this course requires that I give up a lot of other activities I enjoy. (OC4)

Psychological Cost - Adapted from Perez et al., 2019 (6-point Likert)

I'm concerned about being embarrassed if my work in this course is inferior to that of my peers. (PC1)

I'm concerned that my self-esteem will suffer if I fail this course. (PC2)

I worry that others will think I am a failure if I do not do well in this course. (PC3).

Belonging - Adapted from Goodenow et al., 1993 (5-point Likert):

I feel like a genuine part of this course. (B1)

People notice when I am good at something in this course. (B2)

People in this course take my opinions seriously. (B3)

The professor for this course is interested in me as a student. (B4)

I can talk to the professor and/or TA about this course if I have a problem. (B5)

People in this course are friendly to me. (B6)

I am treated with as much respect as other students in this course. (B7)

I can be myself in this course. (B8)

The professor and/or TA for this course respect me. (B9)

People in this course know I can do good work. (B10)

Other students in this course like me the way I am. (B11)

Imposter (6-point Likert):

In this course, I feel like people might discover that I am not as capable as they think.

(imposter_1)

I feel like my success in this course is due to luck. (imposter_2)

In this course, I am afraid others will discover how much knowledge or ability I lack.

(imposter_3)

In my classes, I feel like an “imposter.” (imposter_4)

Perception of Professor Beliefs (6-point Likert):

My professor for this course seems to believe that students have a certain amount of intelligence, and they really can't do that much to change it. (profmindset_1)

My professor for this course seems to believe that students can learn new things, but they can't change their basic intelligence. (profmindset_2)

My professor for this course believes students can learn new things and significantly grow their intelligence. (profmindset_3)

My professor for this course seems to believe that some students are smart while others are not. (profmindset_4)

My professor for this course seems to believe that less smart students will always be less smart than the other students in this course. (profmindset_5)

My professor for this course seems to believe that when students work hard at their schoolwork, they are not very smart. (profeffort_1)

My professor for this course seems to believe that if students are not good at a subject, working hard won't make them good at it. (profeffort_2)

Demographics:

Age:

Gender:

What is your ethnicity? (ethnicity)

What is your race/ethnicity or origin? Mark all boxes that apply AND print origins in the spaces below. You may report more than one group. (race_ethnicity)

What year of college are you currently in? (year)

Are you an international student? (international)

What is your home country? (home_country)

What are your plans after graduation? (post-grad)

Are you the first in your family to attend college? (firstgen)

What is your major GPA? (major_gpa)

What is your current college GPA? (overall_gpa)

If you took the SAT, what is your SAT score? (SAT)

If you took the SAT, is your score out of 1600 or 2400? (SAT_total)

If you took the ACT, what is your ACT score? (ACT)

Did you transfer to UT Austin? (transfer)

Socioeconomic Status:

This ladder represents where people stand in our society. At the top of the ladder are the people who are best off, those who have the most money, the most education, and the best jobs. At the bottom are people who are the worst off, those who have the least money, the least education, and the worst jobs or no job. Which rung best represents where you think you stand on the ladder?

STUDY 2 ITEMS

Open-Ended Items

Describe what it feels like to belong at UT Austin. What helps you feel like you belong?

Describe what it feels like to belong in your major/degree program. What helps you feel like you belong?

Describe what it feels like to belong in class. What helps you feel like you belong?

Favorite Course Questions

Think of all the courses you were enrolled in last semester. Which course was your favorite?

Which college/school at UT Austin offers this course?

On a scale of 1-6, how challenging did you find this course?

On a scale of 1-6, how much effort did you put into this course?

What grade did you get in this course?

Compared to other students, how well did you expect to do in this course at the beginning of the semester?

How well did you think you would do in this course at the beginning of the semester?

How good are you at this course?

How interesting do you find this course?

I generally find working on assignments/studying for this course...

Compared to the other courses you are taking this semester, how much do you like this course?

I am fascinated by this course.

I enjoy this course.

This course is exciting to me.

I like this course.

Why did you enjoy or not enjoy this course?

I feel that to me, being good at this course is...

Compared to the other courses I am taking this semester, how important is it to you to do well in this course?

Being someone good at this course is essential to me.

Being good at this course is an essential part of who I am.

How useful is this course for what you want to do after graduation?

This course will be important when I get a job or graduate school.

This course will be helpful for me later in life.

Concepts in this course are helpful because they will help me in the future.

When I think about the hard work needed to get through this course, I am not sure it was worth it.

I did not have the energy to do well in this course.

For me, taking this course was not worth the effort.

This course required more effort than I was willing to put into it.

Studying for this course took a lot of time away from other activities I wanted to pursue.

I was concerned about losing valuable relationships because of the work required for this course.

I felt that I had to give up a lot to do well in this course.

I was concerned that success in this course required that I give up a lot of other activities I enjoy.

I was embarrassed if my work in this course was inferior to that of my peers.

I was concerned that my self-esteem would suffer if I failed this course.

I worried that others would think I was a failure if I did not do well in this course.

This course provided me with opportunities to engage in meaningful activities.

The environment of this course provided me with an opportunity to grow.

This course provided me with opportunities to have diverse experiences.

My cultural customs were accepted in this course.

I believed I had enough academic support to get through this course.

This course valued individual differences.

I found it easy to establish relationships in this course.

I felt similar to other people in this course.

I believe that my professor and/or TA for this course cared about me.

I felt connected to my professor and/or TA for this course.

I felt that my professor and/or TA for this course appreciated me.

I felt that my professor and/or TA for this course valued my contributions in class.

In this course, I felt like people might discover that I am not as capable as they think.

I felt like my success in this course is due to luck.

In this course, I was afraid others would discover how much knowledge or ability I lack.

In this course, I felt like an “imposter.”

My professor for this course seemed to believe that students have a certain amount of intelligence, and they really can't do that much to change it.

My professor for this course seemed to believe that students can learn new things, but they can't change their basic intelligence.

My professor for this course seemed to believe that some students are smart while others are not.

Least Favorite Course Questions

Think of all the courses you were enrolled in last semester. Which course was your least favorite?

Which college/school at UT Austin offers this course?

On a scale of 1-6, how challenging did you find this course?

On a scale of 1-6, how much effort did you put into this course?

What grade did you get in this course?

Compared to other students, how well did you expect to do in this course at the beginning of the semester?

How well did you think you would do in this course at the beginning of the semester?

How good are you at this course?

How interesting do you find this course?

I generally find working on assignments/studying for this course...

Compared to the other courses you are taking this semester, how much do you like this course?

I am fascinated by this course.

I enjoy this course.

This course is exciting to me.

I like this course.

Why did you enjoy or not enjoy this course?

I feel that to me, being good at this course is...

Compared to the other courses I am taking this semester, how important is it to you to do well in this course?

Being someone good at this course is essential to me.

Being good at this course is an essential part of who I am.

How useful is this course for what you want to do after graduation?

This course will be important when I get a job or graduate school.

This course will be helpful for me later in life.

Concepts in this course are helpful because they will help me in the future.

When I think about the hard work needed to get through this course, I am not sure it was worth it.

I did not have the energy to do well in this course.

For me, taking this course was not worth the effort.

This course required more effort than I was willing to put into it.

Studying for this course took a lot of time away from other activities I wanted to pursue.

I was concerned about losing valuable relationships because of the work required for this course.

I felt that I had to give up a lot to do well in this course.

I was concerned that success in this course required that I give up a lot of other activities I enjoy.

I was embarrassed if my work in this course was inferior to that of my peers.

I was concerned that my self-esteem would suffer if I failed this course.

I worried that others would think I was a failure if I did not do well in this course.

This course provided me with opportunities to engage in meaningful activities.

The environment of this course provided me with an opportunity to grow.

This course provided me with opportunities to have diverse experiences.

My cultural customs were accepted in this course.

I believed I had enough academic support to get through this course.

This course valued individual differences.

I found it easy to establish relationships in this course.

I felt similar to other people in this course.

I believe that my professor and/or TA for this course cared about me.

I felt connected to my professor and/or TA for this course.

I felt that my professor and/or TA for this course appreciated me.

I felt that my professor and/or TA for this course valued my contributions in class.

In this course, I felt like people might discover that I am not as capable as they think.

I felt like my success in this course is due to luck.

In this course, I was afraid others would discover how much knowledge or ability I lack.

In this course, I felt like an “imposter.”

My professor for this course seemed to believe that students have a certain amount of intelligence, and they really can't do that much to change it.

My professor for this course seemed to believe that students can learn new things, but they can't change their basic intelligence.

My professor for this course seemed to believe that some students are smart while others are not.

UT Austin Questions

I take pride in wearing UT Austin's colors.

I tend to associate myself with UT Austin.

One of the things I like to tell people about is how I go to UT Austin.

I feel a sense of pride when I meet someone from UT Austin off campus.

I would be proud to support UT Austin in any way I can in the future.

I have UT Austin merchandise that others can see (pens, notebooks, bumper sticker, etc.).

I am proud to be a student at UT Austin.

I attend UT Austin sporting events to support my university.

I feel "at home" on campus.

I feel like I belong to my university when I represent UT Austin off campus.

I have found it easy to establish relationships at UT Austin.

I feel similar to people in my major.

UT Austin provides opportunities to engage in meaningful activities.

I believe there are supportive resources available to me on campus.

UT Austin's environment provides me with an opportunity to grow.

UT Austin provides opportunities to have diverse experiences.

My cultural customs are accepted at UT Austin.

I believe I have enough academic support to get me through college.

I am satisfied with the academic opportunities at UT Austin.

UT Austin values individual differences.

I believe that a faculty/staff member at UT Austin cares about me.

I feel connected to a faculty/staff member at UT Austin.

I feel that a faculty/staff member has appreciated me.

I feel that a faculty member has valued my contributions in class.

Demographic Questions

What is your age?

What is your gender? (check all that apply)

What is your race/ethnicity or origin? Mark all boxes that apply AND print origins in the spaces below. You may report more than one group.

What year of college are you currently in?

What is your major(s)?

Are you an international student?

If yes, what is your home country?

What are your plans after graduation?

Are you the first in your family to attend college?

What is your major GPA?

What is your overall GPA?

Did you transfer to UT Austin?

What is your family's approximate combined household income?

What is the highest level of education achieved by parent/guardian number 1 (e.g., mother)?

What is the highest level of education achieved by parent/guardian number 2 (e.g., father)? You can skip this question if there is only one parent/guardian in your household.

What is parent/guardian 1's job title? Please put "N/A" if unemployed"

What is parent/guardian 2's job title? Please put "N/A" if unemployed. You can skip this question if there is only one parent/guardian in your household.

This ladder represents where people stand in our society. At the top of the ladder are the people who are best off, those who have the most money, the most education, and the best jobs. At the bottom are people who are the worst off, those who have the least

money, the least education, and the worst jobs or no job. Which rung best represents where you think you stand on the ladder?

What is the zip code for the town in which your family lives?

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