Salisbury University DIT-2 Social Responsibility & Humane Values Report, Fall 2015

This report, authored by SU office of University Analysis, Reporting & Assessment (UARA) staff, discusses Social Responsibility and Humane Values-related survey data collected during fall 2015 GULL Week sessions.

Executive Summary

Background and Findings

- 1. Faculty and UARA staff agreed that the Defining Issues Test, Version 2 (DIT-2) is aligned with General Education student learning outcomes 3.1.1, 3.1.2, and 3.2.1.
- 2. The DIT-2 instrument is comprised of five dilemmas, each of which has one multiple choice decision item about the dilemma, twelve Likert-type rating items, and four ranking items. There are several indices which are measured by the DIT-2, but for brevity in this report we report only on N2 which can be used to summarize an individual's overall moral judgment. There are several studies compiled across years of institutional data collection on the DIT-2 N2 score to which we can compare our students' results and identify areas of strength and those that need improvement.
- 3. The results of our administration of the DIT-2 instrument supported its validity and reliability.
 - a. DIT-2 scores demonstrated validity:
 - i. <u>Content Validity</u>: response options based on authentic interview responses in an earlier, open-ended version of the assessment
 - ii. Criterion and Construct Validity: supported in many studies (e.g., experts achieve high scores on the test; scores correlate with Moral Comprehension and the original DIT-1 instrument; as well as group differences, particularly based on age and experience) also, scores on this instrument have a positive correlation with the SU students' related measures of SAT Verbal scores, r = .363 (p < .01), and SAT total scores, r = .364 (p < .01)
 - b. DIT-2 scores demonstrated reliability in previous studies and approached levels of generally acceptable reliability criteria in our more limited SU sample of only undergraduate students ($\alpha = .668$)
- 4. Generally, the students that completed the DIT-2 instrument were representative of the overall and non-test-taker populations at SU.
- 5. In general, SU students' average overall N2 score on the instrument (29.2) was lower than typical freshman scores in the norm report analyses.
- 6. In general, as SU and other institutions' students' class level (i.e., freshman, sophomore, junior, senior) increased, so too did the average score on the instrument.

Action Items

1. The norms/benchmarks with which SU students' Social Responsibility and Humane Values skills are compared should be evaluated by objective faculty and/or staff with expertise in the

- discipline or assessment of those skills. Although SU data are lower than published norms, it is not possible to test significance between SU data and the norms.
- 2. Evaluate the need to revise the current SU Social Responsibility general education student learning outcomes.
- 3. Teaching faculty, General Education Steering Committee, and other relevant parties should consider whether or not the DIT-2 instrument is well aligned with current (or revised) Social Responsibility and Humane Values general education student learning outcomes. If the DIT-2 instrument is not aligned, then an alternative assessment that is aligned should be identified.
- 4. Consider results from the assessment to develop interventions or review and update curriculum to align with areas that need improvement.
- 5. SU stakeholders should request follow-up analyses on DIT-2 data that were not included in this report that will be relevant to other questions of students' abilities in these outcomes.
- 6. Determine a timeline to re-collect assessment data related to Social Responsibility and Humane Values.
- 7. Increase student participation in future GULL Weeks, to increase the likelihood of participant samples that are representative of the entire SU student population, via competitions and marketing to both students as well as faculty that might offer course-embedded incentives for their students that participate.

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Detailed Social Responsibility and Humane Values Report

DIT-2 Instrument

The assessment is an instrument comprised of five dilemmas, each of which has one multiple choice decision item about the dilemma, twelve Likert-type rating items, and four ranking items. There are also other demographic items following the five dilemmas. See a DIT-2 example item in <u>Appendix 1</u> and its alignment with SU's student learning goals, outcomes, and curricular area mapping in <u>Table 1</u>. Details about the instrument can be found at the <u>Center for the Study of Ethical Development, The University of Alabama – About the DIT website (2016).</u>

There are several indices which are measured by the DIT-2 and are described below. The first index is to what degree each individual is accessing each of three moral judgment schemas for their decisionmaking: Personal Interest, Maintain Norms, and Post Conventional (Bebeau & Thoma 2003; Rest et al. 1999a; Rest et al. 1999b). An individual always uses each schema to some extent, but the degree of usage of each schema changes across moral judgment development. Personal Interest is described as considering things such as direct advantages to the actor, intentions of the parties, or on maintaining approval with parties. Maintain Norms is described as "maintaining the existing legal system...existing roles, or a formal organizational structure" (Bebeau & Thoma 2003). Post Conventional is described as considering an organized society through consensus-building procedures, safeguarding minimal basic rights, and "organizing social arrangements and relationships in terms of intuitively appealing ideals" (Bebeau & Thoma 2003). Other useful summary scores include the Type Indicator and N2. Type indicator helps to determine the overall extent to which an individual, at the time of assessment, is either consolidated in a single schema, or is transitioning between two schemas – there are seven types. The N2 score indicates the degree to which Post Conventional items are prioritized as well as the degree to which Personal Interest items are rated lower than Post Conventional items - which can be used to summarize an individual's overall moral judgment. Although more details can be derived from the SU student responses of the DIT-2, for brevity in this report we will only report on N2.

Faculty and UARA staff agreed that the DIT-2 instrument is aligned with the General Education Social Responsibility and Humane Values student learning outcomes (<u>Table 1</u>).

Table 1. The SU general education student learning goal, outcomes, and area mapping related to Social Responsibility and Humane Values.

Student	Outcome	Area Mapping
Learning Goal		
3.1. Social	3.1.1. Recognize how their personal activities and choices are connected to and influence the actions of the larger society and world.	IIIA, IIIB
Responsibility	3.1.2. Recognize the importance of applying General Education concepts to everyday life.	IVA, IVB, IVC, V
3.2. Humane Values	3.2.1. Demonstrate the ability to make judgments based on ethical considerations.	IIIA, IIIB

Related to Social Responsibility and Humane Values, results from this instrument can: provide a benchmark of student outcomes at SU; inform instructional efficacy and possible interventions; evaluate curricular strengths and weaknesses; and continuously improve student outcomes if we use this instrument for future GULL Week administrations.

Methodology and Sample

Data were collected from volunteer students at SU that self-selected and signed up to participate in various Gaining Understanding as a Lifelong Learner (GULL) Week testing sessions during a week in September, 2015. GULL Week sessions were open to the entire SU undergraduate student population. The assessments were administered in a proctored computer lab setting and lasted approximately one hour, of which ~25 minutes was dedicated to the DIT-2 instrument administration, ~25 minutes was dedicated to a different assessment aligned with a separate General Education Area, and ~5 minutes for a Student Opinion Scale (SOS) Survey (Appendix 2; Sundre & Thelk 2007). The SOS Survey estimates the GULL Week participant's perceived importance of the assessment(s) and effort expended by the participant in completing the assessment(s) (i.e., DIT-2 instrument).

Some faculty offered incentives (such as extra credit) to participating students, some mentioned GULL Week and encouraged students to participate, and some did not interact with students about GULL Week. The office of University Analysis, Reporting & Assessment (UARA) publicized GULL Week across campus via many avenues. Particularly, competitions between both Schools and Greek life groups were set up to improve participation.

In all, n=1359 undergraduates participated in fall 2015 GULL Week and of those, quality responses from n=734 students were collected on the DIT-2 instrument (17.3% and 9.4% of total fall 2015 undergraduate enrollment [n=7849] at SU, respectively). These participants included students that self-reported that English was not their primary language. When we compared that group (n=16) and those for whom English was reported as their primary language, there were no significant differences for any of the DIT-2 performance score variables. Therefore, although English as a Second Language (ESL) students were removed from the norm groups in external studies (Bebeau & Thoma 2003; Dong 2014; Saculla *et al.* 2016), we have retained them in this sample. Demographic analyses of the non-DIT-2 test-takers (n=7115; 90.6%) were compared to the test-takers that completed DIT-2 to evaluate the extent to which the sample of test-takers was representative of the entire SU undergraduate population during fall 2015. Further analyses within the test-takers were performed to evaluate the validity and reliability of the instrument administration at SU as well as to determine whether or not scores on the instrument varied by student characteristic(s). The students with data for both DIT-2 and the SOS Survey were analyzed to evaluate student responses on those scales.

Results

Demographic Comparison of Test-takers vs. Non-test-takers

In general, the demographics of the students that took the DIT-2 instrument were similar to the non-test-takers (Tables 2-7; not significant (ns) annotations). However, female test-takers (Table 3) and SU native first time students (Table 4) were disproportionately high and, in four cases of student success metrics (i.e., High School GPA, SU Cumulative GPA, as well as SAT mathematics and SAT total scores), the test-takers of the DIT-2 instrument were significantly more successful than the non-test-takers (Table 7). Although it should be considered that another success metric (i.e., SAT verbal scores) did not reveal any significant differences between the two groups. Therefore, the sample of DIT-2 test-takers was fairly representative of the entire SU undergraduate population during fall 2015. In the future, efforts to publicize GULL Week should be targeted more directly to males, transfer students, and students that

represent the less successful students (in terms of GPA) as well as continuing previous publicity efforts to ensure even further representative sampling.

Table 2. Student Race/Ethnicity Compared between the DIT-2 Test-takers, Non-test-takers and All SU Undergraduates

Race/Ethnicity	Test-taker	Non-test-taker	Total
African American	86	967	1053
	(11.7%)	(13.6%)	(13.4%)
American Indian/ Alaska Native	5	37	42
	(0.7%)	(0.5%)	(0.5%)
Asian	31	204	235
	(4.2%)*	(2.9%)*	(3.0%)
Caucasian	530	4976	5506
	(72.2%)	(69.9%)	(70.1%)
Hispanic	26	297	323
	(3.5%)	(4.2%)	(4.1%)
Native Hawaiian/ Pacific Islander	1	10	11
	(0.1%)	(0.1%)	(0.1%)
Non-resident Alien	9	129	138
	(1.2%)	(1.8%)	(1.8%)
Two or more races	24	258	282
	(3.3%)	(3.6%)	(3.6%)
Unknown/ Not specified	22	237	259
	(3.0%)	(3.3%)	(3.3%)
Total	734	7115	7849
	(100.0%)	(100.0%)	(100.0%)

Note. Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), $p \le .05$.

Table 3. Student Gender Compared between the DIT-2 Test-takers, Non-test-takers and All SU Undergraduates

Gender (code)	Test-taker	Non-test-taker	Total
Male (1)	183	3188	3371
	(24.9%)*	(44.8%)*	(43.0%)
Female (2)	551	3922	4473
	(75.1%)*	(55.2%)*	(57.0%)
Total	734	7010	7844
	(100.0%)	(100.0%)	(100.0%)

Note. Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), p ≤ .05.

Table 4. Student Admit Type, to SU, Compared between the DIT-2 Test-takers, Non-test-takers and All SU Undergraduates

SU Admit Type (code)	Test-taker	Non-test-taker	Total
First time student (F)	528	4177	4705
	(72.5%)*	(60.7%)*	(61.8%)
Transfer (T + U)	200	2703	2903
	(27.5%)*	(39.3%)*	(38.2%)
Total	728	6880	7608
	(100.0%)	(100.0%)	(100.0%)

Note. Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), $p \le .05$.

Table 5. Student Undergraduate Class Level Compared between the DIT-2 Test-takers, Non-test-takers and All SU Undergraduates

Class Level (code)	Test-taker	Non-test-taker	Total
Freshmen (1)	156	1439	1595
	(21.3%)	(20.2%)	(20.3%)
Sophomores (2)	155	1529	1684
	(21.1%)	(21.5%)	(21.5%)
Juniors (3)	212	1915	2127
	(28.9%)	(26.9%)	(27.1%)
Seniors (and +) (4)	205	1877	2082
	(27.9%)	(26.4%)	(26.5%)
Unclassified non-degree undergrads (7)	6	355	361
	(0.8%)*	(5.0%)*	(4.6%)
Total	734	7115	7849
	(100.0%)	(100.0%)	(100.0%)

Note. Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), $p \le .05$.

Table 6. Student School Enrollment Compared between the DIT-2 Test-takers, Non-test-takers and All SU Undergraduates

School	Test-taker	Non-test-taker	Total	
Fulton	192	1810	2002	
	(26.2%)	(25.4%)	(25.5%)	
Henson	158	1884	2042	
	(21.5%)*	(26.5%)*	(26.0%)	
Perdue	183	1441	1624	
	(24.9%)*	(20.3%)*	(20.7%)	
Seidel	176	1509	1685	
	(24.0%)	(21.2%)	(21.5%)	
Undeclared	25	471	496	
	(3.4%)*	(6.6%)*	(6.3%)	
Total	734	7115	7849	
	(100.0%)	(100.0%)	(100.0%)	

Note. Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), $p \le .05$.

 Table 7. Student Success Metrics compared between the DIT-2 Test-takers and Non-test-takers

Success Metric	Т	est-taker	Non-test-taker		
	n	Avg (SD)	n	Avg (SD)	
High School GPA	320	3.68 (.45)*	2813	3.54 (.48)*	
SAT Verbal	518	532 (72)	4348	529 (76)	
SAT Math	518	545 (74)*	4349	536 (79)*	
SAT Cumulative	518	1077 (127)*	4348	1064 (136)*	
SU Cumulative GPA	567	3.15 (.57)**	5170	2.97 (.62)**	

Note. Cell values are sample sizes (n) or averages with standard deviation reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' average values are indicated by an asterisk (*), $p \le .05$, or two (**), $p \le .001$.

Validity and Reliability of the DIT-2 Instrument Administration at SU

The results of our administration of the DIT-2 instrument supported its validity and reliability. Much of the validity of the DIT-2 instrument is described in the published documentation of the development of the instrument (Bebeau & Thoma 2003; Rest *et al.* 1998; Rest *et al.* 1999a; Rest *et al.* 1999b). A summary of details about the instrument's validity and reliability can be found at the Center for the Study of Ethical Development, The University of Alabama – Indicators of Validity website (2016). Content validity was achieved through development of the response options based on authentic interview responses in an open-ended earlier version of the assessment (Rest *et al.* 1999b). Criterion and construct validity were supported in many studies, including those whose results demonstrated experts achieve high scores on the test; scores correlate with Moral Comprehension and the original DIT-1 instrument; as well as discriminant validity (e.g., group differences), particularly based on age and experience. Based on the SU student scores in fall 2015, criterion and construct validity were supported because students' N2 scores on this instrument had a positive correlation with the SU students' related measures of SAT Verbal scores, r = .363 (p < .01), and SAT total scores, r = .364 (p < .01). Correlation coefficients $\geq .3$, but $\leq .5$ are evidence of medium effect sizes (Field 2013).

Similarly, past studies have supported the reliability of the dilemmas in DIT-2, where Cronbach's alpha (α) value, which is a measure of reliability, or consistency, of these data has been > .7 over the five dilemmas for the N2 score (Bebeau & Thoma 2003; Rest *et al.* 1998a, Rest *et al.* 1998b). Typically, an α score \geq .7 is considered indicative of a reliable scale (DeVellis 2012). However, Bebeau & Thoma (2003) warn that "if your sample does not contain the entire range of educational levels (from Junior high to Graduate School), your Cronbach alpha is likely to be lower." Therefore, since the SU sample is only comprised of undergraduates, the SU fall 2015 DIT-2 instrument's value of α = .668 is therefore quite close to acceptable instrument reliability for this group.

SU Student Scores on DIT-2 Instrument

On average, the students that participated (n=734) had a N2 score of 29.2 (standard deviation, SD=14.3) with a range of -7.2 to 67.4 on the DIT-2 instrument. Although there are no benchmark values for the N2 score, there are several studies compiled across years of institutional data collection on the DIT-2 (Bebeau & Thoma 2003; Dong 2014; Saculla *et al.* 2016) to which we can compare our students' results. The overall SU N2 average score is below the average score of freshmen in all previous norm reports. However, since we do not have the raw data to compare the norm data set to our own, we cannot evaluate statistically significant differences between them. Also, overlapping standard deviation of the norm studies' groups' scores with our groups' scores indicates high variance within samples that may result in inability to identify statistical difference between groups.

On average, SU native first time students were not different from transfer students in terms of N2 score from the DIT-2 instrument ($\frac{\text{Table 8}}{\text{Table 8}}$). The difference, 1.9 was not significant t(725) = 1.64, p > .05.

Table 8. Student Admit Type, to SU, Average Scores on the DIT-2 Instrument.

/	-		
SU Admit Type (code)	n	N2 Score	SD
First time student (F)	528	29.8	13.9
Transfer (T + U)	199	27.9	15.0

In general, based on the norm data reports from DIT-2 researchers (Bebeau & Thoma 2003; Dong 2014; Saculla *et al.* 2016), as SU and other institutions' students' class level (i.e., freshman, sophomore, junior, senior) increased, so too did the average score on the instrument (<u>Table 9</u>). Specifically at SU, there was

no significant difference between class level groups (F(4, 728) = 1.1, p > .05). However, in general, there was an increase in N2 score as class level increased, as was seen in the norms from both Bebeau & Thoma (2003) and Dong (2014), except that juniors scored only slightly higher than freshmen and less than sophomores.

Table 9. SU (white columns) and Norm (gray columns) Student Undergraduate Class Level Average Scores on the DIT-2 Instrument.

Class Level (code)	_	003 Norr per & Pe		2005-09 Norms il) (Paper & Pencil)			2010-14 Norms (Online)			SU Fall 2015 (Online)		
	n	N2	SD	n	N2	SD	n	N2	SD	n	N2	SD
		Score			Score			Score			Score	
Freshmen (1)	2096	31.05	14.42	10319	33.42	15.25	3482	35.8	15.05	154	28.5	13.6
Sophomores (2)	1028	31.24	14.94	3542	34.60	15.65	1308	33.5	15.85	155	29.3	14.1
Juniors (3)	1333	32.65	16.04	6909	34.65	15.52	1189	35.3	14.94	213	28.8	13.9
Seniors (and +) (4)	2441	36.85	15.53	12204	36.01	15.42	1807	37.0	15.39	205	30.4	15.1
Unclassified non-degree undergrads (7)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	20.7	19.1

Note. The format of the assessment (i.e., paper & pencil or on an online survey platform) is noted parenthetically after each data title in the top row. The 2003 Norms are reported in Bebeau & Thoma (2003), 2005-09 Norms are reported in Dong (2014) and the 2010-14 Norms are reported in Saculla *et al.* (2016).

Student performance by SU School is listed in <u>Table 10</u>. There was no significant difference in the DIT-2 N2 score based on enrollment in school at SU (F(4, 728) = 2.0, p > .05). Although there is no significant differences between School's student average N2 scores, Henson had the highest value, followed by Fulton, which was the same value as the overall SU average N2 score.

Table 10. Student School Enrollment Average Scores on the DIT-2 Instrument

Tiverage scores on the Bir 2 mstrament.					
School	n	N2 Score	SD		
Fulton	191	29.2°*	14.0		
Henson	159	31.9 ^a *	15.0		
Perdue	183	28.1	14.5		
Seidel	176	28.4 ^b	13.6		
Undeclared	24	26.7	13.9		

Note. Significant difference, p < .05, of categories' average scores are indicated by group letters and b, where the group a categories differ significantly compared to group b category are indicated by an asterisk (*), $p \le .05$.

Although not presented here, student performance by primary major is available <u>upon request</u> to programs or Departments when at least 30 students in that major participated in this instrument's administration. These data can be used for informal review and improvement efforts, or for more formal program review and improvement efforts such as Academic Program Review required reporting related to assessment of program student learning outcomes aligned with this instrument, when applicable.

DIT-2 and SOS Survey Student Responses

The DIT-2 test-takers also took the SOS Survey (n \sim 731; <u>Table 11</u>). We were able to evaluate the reliability of both subscales within the SOS Survey. The *Importance* subscale, which addresses the extent

to which the student thought it was important to do well on the DIT-2 instrument, demonstrated reliability (α = .784). Similarly, the *Effort* subscale, which addresses the extent to which the student fully engaged in effortful behavior on the DIT-2 instrument, demonstrated reliability (α = .842). The validity of the instrument is discussed in the SOS Survey Manual (Sundre & Thelk 2007). The 10 items, five in each subscale, are measured in a 1 to 5 scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. There are four items that are negatively worded, and their scores were reverse coded prior to analysis.

In general, students were fairly "Neutral" in their responses for the *Importance* subscale, whereas they ranged more in the "Disagree" to "Neutral" response for the *Effort* subscale. For *Importance*, this indicates that students thought that their scores on the DIT-2 instrument would not affect them strongly in either a negative or positive way. For *Effort*, it indicates that students put in a low to moderate effort towards completing the DIT-2 instrument. The two subscales had a positive correlation with one another, r = .484 (p < .01; medium effect size) and both subscales were also minimally negatively correlated with the DIT-2 N2 score (*Importance*, r = .174 (p < .01; small effect size; *Effort*, r = .285 (p < .01; small effect size). The latter two correlations of SOS subscales with the N2 scores seem to indicate that the students that self-reported that the DIT-2 was an important test and exerted more effort on performance on the test also scored lower than those who did not self-report the high importance of the test or exerting as much effort on the test, respectively, although the effect sizes were small.

Table 11. Student Opinion Scale (SOS) Survey subscales' administrative results for the students that also participated in the DIT-2 instrument administration.

SOS Subscale	Number of Items	Reliability (α)	n	Average Score (out of 25)	SD
Importance	5	.784	730	13.7	3.9
Effort	5	.842	731	10.7	3.6

Discussion

Based on the results presented here it seems that there is room for improvement in student learning outcomes related to Social Responsibility and Humane Values at SU. Several action items are suggested below towards this end.

- 1. To determine whether or not our students are meeting SU expectations for Social Responsibility and Humane Values, the benchmarks with which SU students' Social Responsibility and Humane Values are compared should be evaluated by objective faculty and/or staff with expertise in the discipline or assessment of it. Since the DIT-2 instrument lacks any definition of a proficiency level and only provides norm values for certain groups for which we can only assume and not test whether or not our data is statistically less than those norms, it is difficult to evaluate actual student ability with the current instrument. Also, since for some schemas there are not clear trends for scoring across groups for which we would expect to see increases with age, schooling, and experience this instrument may have deficiencies in how we can use it to evaluate and inform curricular interventions for improvements in student learning outcomes.
- 2. Since the General Education Steering Committee is currently revising the General Education Curriculum, they should evaluate the need to revise the current SU Humane Values and Social Responsibility General Education Area student learning outcomes. Do the current student learning outcomes align with our expectations of students' skills in Social Responsibility and Humane Values that should be achieved while they are at SU? Is the language clear? Are they assessable? These should be targeted at the institutional level, but other levels of student learning outcomes related to these may be generated as well to address program, or course-level assessment needs.
- 3. Based on discussions and decisions related to Action Items #1-2, relevant parties such as faculty teaching courses aligned with these student learning outcomes and the General Education Steering Committee should consider whether or not the DIT-2 instrument is aligned well with the current (or revised) SU Social Responsibility and Humane Values General Education Areas' student learning outcomes. If it is not aligned, then an alternative assessment that is aligned should be identified.
- 4. Relevant stakeholders at SU should consider the results from the DIT-2 assessment to develop interventions or review and update curricula to align with areas that need improvement. Successful projects at other institutions may be considered to guide instructional interventions at SU.
- 5. Relevant stakeholders at SU should request further analyses of the DIT-2 data to address additional questions of interest that relate to other variables measured that were not described here (e.g., schema and type index scores). Some areas of potential research questions as well as literature review are provided by King & Mayhew (2002).
- 6. Based on discussions and decisions related to Action Items #1-5, a timeline for re-assessment of the SU Social Responsibility and Humane Values General Education Area student learning outcomes should be proposed. This will allow an analysis of whether or not there is change in student learning outcomes based upon either a change in assessment or instructional or curricular interventions.
- 7. Attempt to increase student participation in future GULL Weeks, particularly in traditionally disproportionately low groups, to increase the likelihood of participant samples that are representative of the entire SU student population. This can be done via efforts that have occurred in the past, such as competitions and marketing to both students as well as faculty that might offer course-embedded incentives for their students that participate. However, new ways

to incentivize participation of traditionally disproportionately low groups should also be identified and implemented.

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Appendices

<u>Appendix 1</u>. Example dilemma and associated decision-making, rating, and ranking items from the DIT-2 Instrument (Rest & Narvaez 1998)

Appendix 2. Student Opinion Scale (SOS) Survey (Sundre & Thelk 2007)

Appendix 1. Example dilemma and associated decision-making, rating, and ranking items from the DIT-2 Instrument (Rest & Narvaez 1998)

Famine Dilemma. The small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.

Item 1. What should Mustaq Singh do? Do you favor the action of taking food?

- A. Should take the food
- B. Can't decide
- C. Should not take the food

Item 2. Rate the following issues in terms of importance.

Great	Much	Some	ماttt ا	No
Great	iviuch	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
Great	Much	Some	Little	No
	Great Great Great Great Great Great Great Great	Great Much	Great Much Some	Great Much Some Little

Item 3. Consider the 12 issues above and rank which issues are the most important.

Most important item	1	2	3	4	5	6	7	8	9	10	11	12
Second most important	1	2	3	4	5	6	7	8	9	10	11	12
Third most important	1	2	3	4	5	6	7	8	9	10	11	12
Fourth most important	1	2	3	4	5	6	7	8	9	10	11	12

Descriptions of the Neo-Kohlbergian developmental schemas of moral judgment aligned with some issues from the example dilemma above (Bebeau & Thoma 2003; Rest et al. 1999b):

Schema	Kohlberg Stage(s)	Schema Foci	Aligned Issues
Personal Interest	Stages 2 and 3	"the direct advantages to the actor and on the fairness of simple exchanges of favor for favor" or "the good or evil intentions of the parties, on the party's concern for maintaining friendships and good relationships, and maintaining approval."	1. Is Mustaq Singh courageous enough to risk getting caught for stealing? 2. Isn't it only natural for a loving father to care so much for his family that he would steal?
Maintaining Norms	Stage 4	"maintaining the existing legal system, maintaining existing roles and formal organizational structure."	3. Shouldn't the community's laws be upheld?5. Does the rich man have any legal right to store food when other people are starving?
Post Conventional	Stages 5 and 6	"organizing a society by appealing to consensus-producing proceduresinsisting on due processand safeguarding minimal basic rights" or "organizing social arrangements and relationships in terms of intuitively appealing ideals"	7. What values are going to be the basis for social cooperation? 11. Would stealing bring about more total good for everybody concerned or wouldn't it? 12. Are laws getting in the way of the most basic claim of any member of a society?

Appendix 2. Student Opinion Scale (SOS) Survey (Sundre & Thelk 2007)

Item	Item Text	Subscale
1	Doing well on these tests was important to me.	Importance
2	I engaged in good effort throughout these tests.	Effort
3*	I am not curious about how I did on these tests.	Importance
4*	I am not concerned about the scores I receive on these tests.	Importance
5	These were important tests to me.	Importance
6	I gave my best effort on these tests.	Effort
7*	While taking these tests, I could have worked harder on them.	Effort
8	I would like to know how well I did on these tests.	Importance
9*	I did not give these tests my full attention while completing them.	Effort
10	While taking these tests, I was able to persist to completion of the tasks.	Effort

^{*} Denotes items that are reversed prior to scoring.