Dear Professor _____:

Thank you very much for your important participation in the Transparency in Learning and Teaching in Higher Education Project. I am pleased to share with you this confidential report on your students' anonymous, aggregate responses to the Transparency Survey. This report contains:

- *TILT* Higher Ed Overview page 1
- Tips for Reading Your Report page 2
- Recent Findings page 3
- Data for your course
  - Chart A: Students in Your Course and in Similar "Transparent" Courses page 4
  - Chart B: Students' Mean Responses Your Course, End of Term page 5
  - Chart C: Students' Mean Responses in Similar Transparent Courses page 6
  - Chart D: Students' Mean Responses Your Course, Beginning and End of Term page 7
- APPENDIX 1: Teaching and Learning Methods explored by the Transparency Project
- APPENDIX 2: List of Transparency Survey Questions
- APPENDIX 3: Links to further information

I'm grateful for your involvement in this project, and I hope you'll consider participating again and encouraging colleagues to do so. With increasing numbers of teachers and students, we expect to expand the opportunities for all higher education students to succeed, and to determine the impact of various transparent methods on students' learning across a greater variety of disciplines, levels of expertise, course formats and class sizes.

Please send any questions that arise and/or suggestions you have for improving *TILT* Higher Ed"s efforts to increase students' success in higher education.

Sincerely,

Mary-Ann Winkelmes, Ph.D., Principal Investigator

OVERVIEW

The Transparency in Learning and Teaching in Higher Education project (*TILT* Higher Ed) is an award-winning national educational development and research project that helps faculty to implement a transparent teaching framework, making small changes to their teaching practice that can promote college students' success significantly and equitably. Beginning with the aim of informing teachers' decisions about the teaching adjustment that would best benefit their own populations of students, *TILT's* activities have expanded to include:

- Workshops for both faculty and students
- Online surveys that help faculty to gather, share and promptly benefit from data about students' learning by coordinating efforts across disciplines, institutions, countries
- Confidential reporting of survey results to faculty
- Collaborative research on students' learning experiences relative to teaching practices

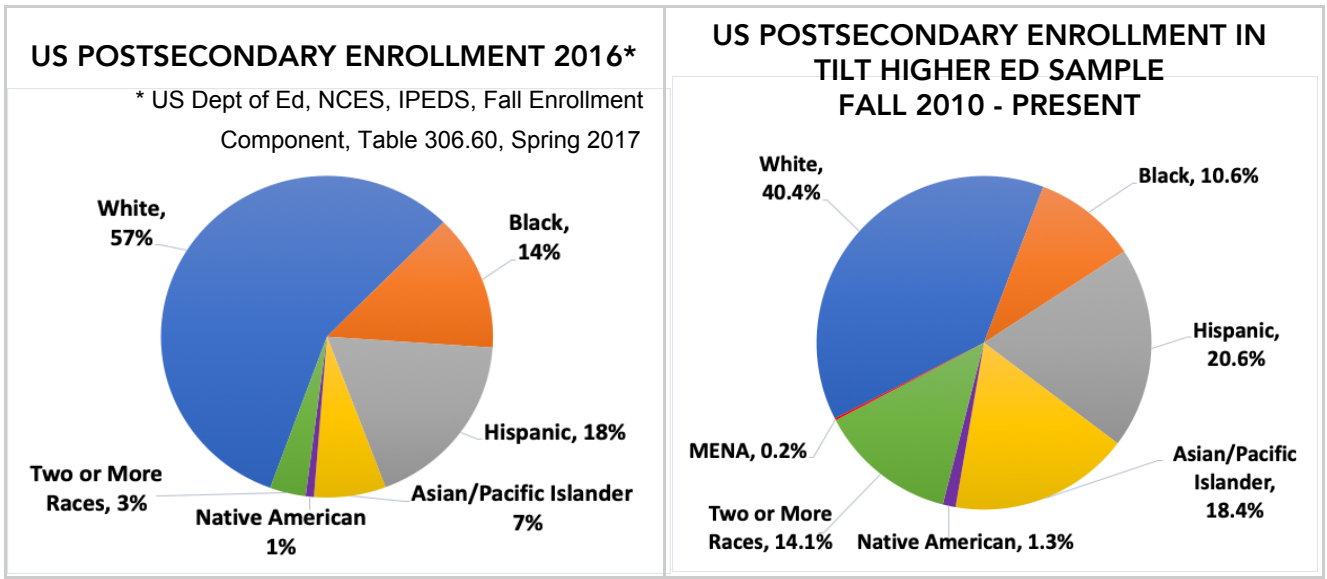
The Project identifies a variety of transparent teaching practices that benefit students' learning when faculty choose to implement them at their own discretion as adjustments to their own teaching practice. Students gain short- and long-term learning benefits, and greater awareness of critical thinking skills. For faculty, the Project helps to identify worthwhile teaching adjustments specific to discipline, level of expertise, student demographics and even class size.

Since 2010, *TILT* Higher Ed has involved over 40,000 students in hundreds of courses at more than forty institutions in seven countries. The response rates are high for a voluntary survey.

Table 1: TILT Higher Ed Transparency Online Survey Response Rates, Fall 2010 - Present

Course Size	Total Enrollment	Total Number of Responses	Avg Rate of Return
< or =30	8936	5338	59.74%
31-65	8319	2493	29.97%
66-299	19681	5952	30.24%
> or = 300	13137	1638	12.47%
Grand Totals	50073	15421	30.80%

Table 2: Ethnicities of TILT Higher Ed Survey Respondents



TIPS For Reading Your Report

What am I seeing?

- Chart A offers a broad overview of your students' learning experiences. Each pair of bars corresponds to a group of TILT survey questions that your students answered.
- Chart B offers the detailed version of Chart A, with each individual TILT survey question listed. For example, the orange bars in Chart B describe the students' views of the amount of transparency in the course.
- Chart C offers the views of students in similar transparent courses.
- Chart D offers your students' views about their learning at the beginning and end of the term.

How to make sense of it?

- Check the numbers/demographics of students who responded from your course ("Data from" section, page 3) to determine how representative this report is of your whole group of students.
- Are there any areas where your students' responses (white bars) are markedly different from the responses by other students in similar courses where faculty aimed to provide transparent instruction (colored bars)? Big differences may highlight the skills your students mastered in your course, and those they didn't.
- Look for where your own students' mean responses (white bars) are particularly high or low. This may highlight the skills your students mastered in the course, and those they didn't.

What to do next? Recommendations

- A common "low point": Most of the students in our study reported that instructors didn't often provide annotated examples of work. The good news is that faculty can turn a lack of annotated examples into an opportunity for students to learn and apply the criteria for good work. Faculty in our study noted that the quality of students' work increased when the faculty engaged students in using a set of criteria during class to evaluate examples of existing work that the teacher offered (like a published paragraph from a journal or newspaper, or a videoclip of a performance or photos of an engineering project in their town).
- If students' responses on Chart D were not very different at the beginning and end of the term in areas where you expected change, try calling explicit attention to the skills from chart D that you are helping students to build in specific class activities or out-of-class assignments. Using the "Assignment Cues" from this chart may be helpful.
- Consider these ways in which faculty have made their instruction more transparent for students. Our research indicates that students who receive transparent instruction about the purposes, tasks and criteria for their academic work report gains in three areas that are important predictors of students' success: academic confidence, sense of belonging, and mastery of the skills that employers value most when hiring (Winkelmes et al., Peer Review 2016). Important studies have already connected academic confidence and sense of belonging with students' greater persistence and higher grades (Walton and Cohen, Science 2011).
- Here are some helpful resources

Please send to mary-ann.winkelmes@unlv.edu any additional materials and resources that you develop and would like to share.

RECENT FINDINGS

A national study by the Assocation of American Colleges & Universities, funded by TG Philanthropy, demonstrated that transparency around academic work enhances students' success -- especially that of first-generation, low-income and underrepresented college students --at statistically significant levels (with a medium-to-large sized magnitude of effect for underserved students) [Winkelmes et al., Peer Review 2016]. Our research indicates that students who receive transparent instruction about the purposes, tasks and criteria for their academic work report gains in three areas that are important predictors of students' success:

- academic confidence,
- sense of belonging, and
- mastery of the skills that employers value most when hiring.

Important studies have already connected academic confidence and sense of belonging with students' greater persistence and higher grades (Walton and Cohen, Science 2011). In addition, college students increased their test scores when supported by a system that advocated the belief that intelligence is not fixed but rather malleable. A year later, these students were 80% less likely to drop out of college (Aronson et al 2002).

DATA FOR FYS1FS

Demographics of Students Responding to the Transparency Survey

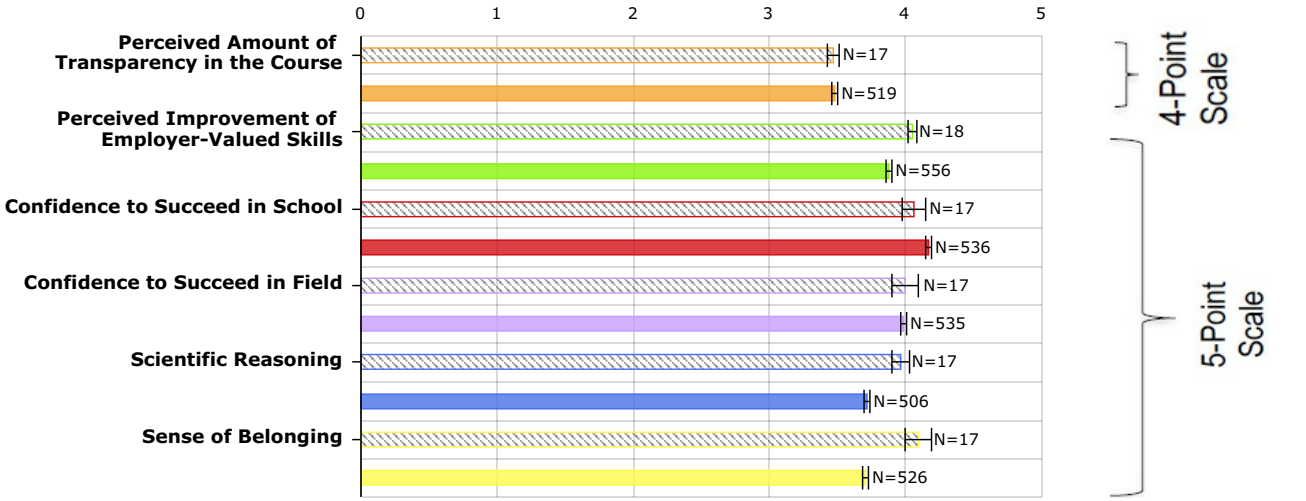
- 17 Students responded to the Transparency Survey
- 19.0% Identified as male students
- 61.9% Identified as female students
- 19.0% Chose not to identify as male/female
- 52.4% Took this course to fulfill a requirement
- 28.6% Took this course primarily out of interest in the subject
- 23.8% Described themselves as first-generation students in college
- 4.8% Described themselves as first-generation students in graduate/professional school
- 69.6% Described themselves as Caucasian
- 30.4% Described their ethnicity as other than Caucasian

Chart A: Students in Your Course (white bars) and in Similar "Transparent" Courses

Chart A offers a broad overview of your students' learning experiences. Each pair of bars corresponds to a group of TILT survey questions that your students answered.

- Striped gray bars correspond to your course in the bar charts.
- Solid colored bars correspond to other courses in our project where students received transparent instruction in courses that are similar to your course in terms of the discipline and level.

The Chart A key indicates which TILT survey questions correspond to which pair of bars. For example, the orange bars indicate students' views of the amount of transparency in the course, calculated from the students' combined mean responses to TILT survey questions 36-44.



KEY	1	2	3	4	5	Transperancy Survey Questions
Perceived Amount of Transparency in the Course	Never	Sometimes	Often	Always	----------	36 - 44
Perceived Improvement of Employer-Valued Skills	Not at all	A little	Moderate	A lot	A great deal	4-6, 8-12
	Much less	Somewhat less	No difference	Somewhat more	Much more	21, 22, 24
Confidence to Succeed In School						25
Confidence to Succeed In Field						26
Scientific Reasoning	Not at all	A little	Moderate	A lot	A great deal	45 - 47
Sense of Belonging						33-35, 48-49

N: number of students responding

Error Bars Indicate +/- 1 SE

Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

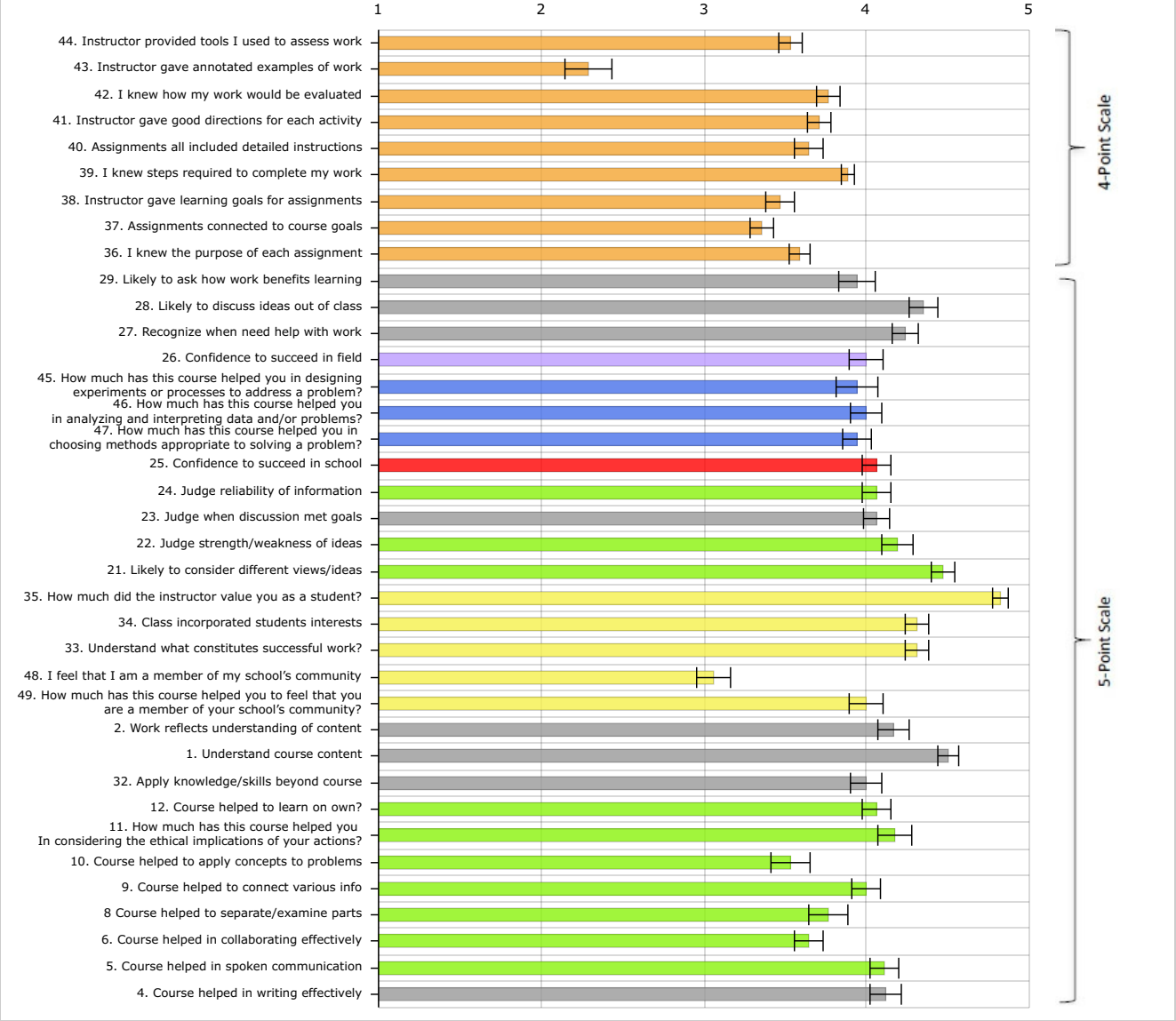
ES: effect size (Hedges' G). Effect size of 0.25 for standard deviations or larger are "substantively Important." [U.S. Department of Education,*What works Clearinghouse Procedure and Standards Handbook*? , version 3.0. Web. March 2014, p.23.]

*Hart Research Associate employer surveys. *Falling Short?(2015), It take more than a Major(2013, Raising the Bar (2009)*.

Gray bars: Your Students
Colored bars: Students in Similar Transparent Courses

Chart B: Students' Mean Responses, End of Term Course #

Chart B offers a more detailed version of Chart A, with each individual TILT survey question listed. For example, the orange bars in Chart B describe the students' views of the amount of transparency in the course.



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Confidence to Succeed In Field						**26**
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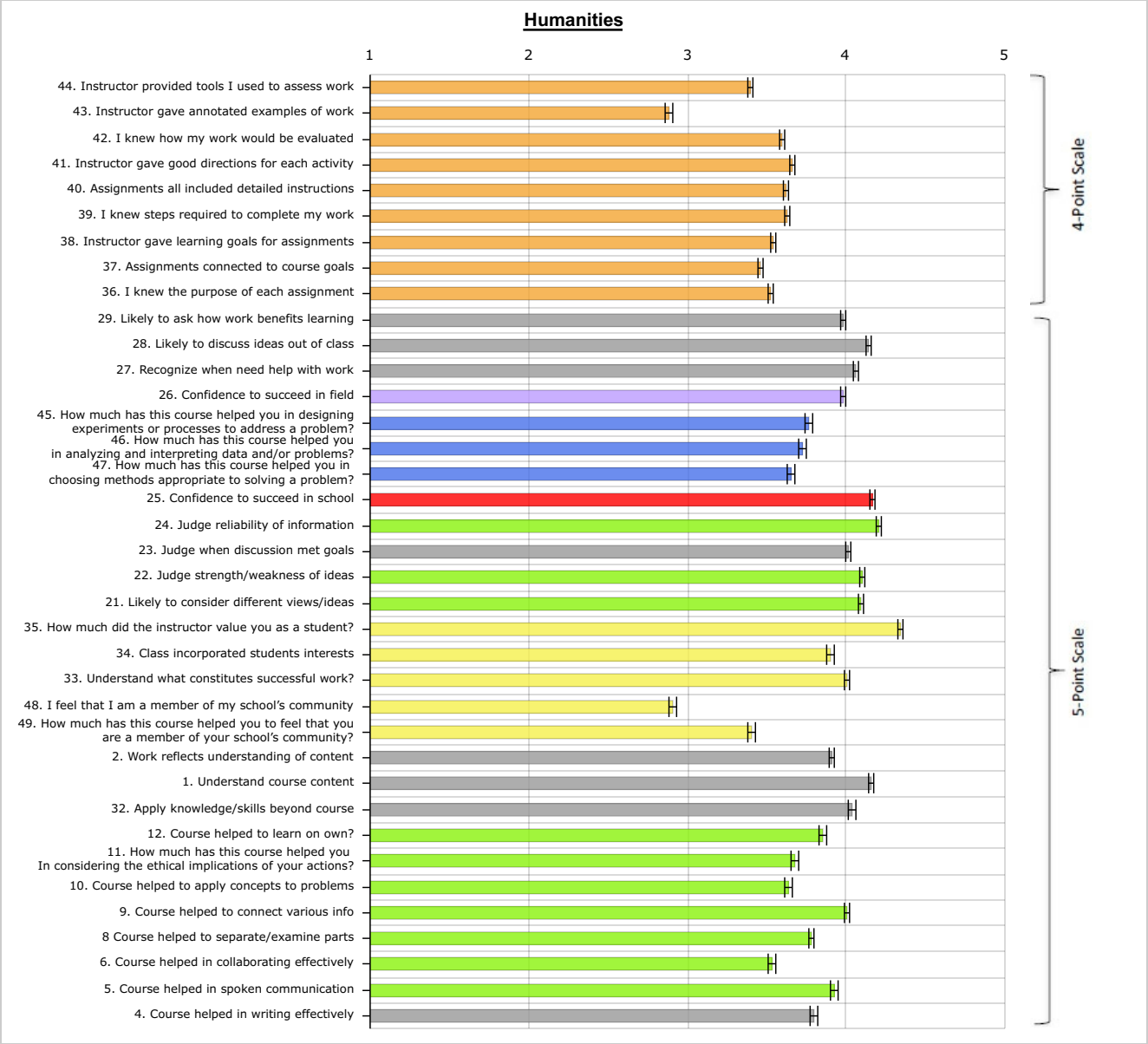
*Hart Research Associate employer surveys. *Falling Short?(2015), It take more than a Major(2013, Raising the Bar (2009)*.

Chart C: Students' Mean Responses in Similar TRANSPARENT Courses

Appendix 2 contains full text of Transparency Project survey questions/responses.



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Confidence to Succeed In Field						**26**
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*Hart Research Associate employer surveys. *Falling Short?(2015), It take more than a Major(2013, Raising the Bar (2009)*.

Chart D: Your Students' Mean Responses Beginning and End of Term*

Chart D offers your students' views about their learning at the beginning and end of the term.

** Hart Research Associates employer surveys: *Falling Short? (2015), It Takes More Than a Major (2013), Raising the Bar (2009)*.

APPENDIX 1: Transparent Methods Explored by *TILT* Higher Ed

Transparent teaching methods help students understand *how* and *why* they are learning course content in particular ways. This list of options is adapted frequently as faculty participants identify further ways to provide explicit information to students about learning and teaching practices. **Faculty participants usually employ one option** from the list and students indicate the impact of this small change when they complete an online survey (taking about 10-12 minutes) at the end of the course. Please email mary-ann.winkelmes@unlv.edu to add your suggestions to the list.

Discuss assignment learning goals and design rationale before students begin each assignment

- Chart out the skills students will practice in each assignments [See example]
- Begin each assignment by defining the learning benefits to students (skills practiced, content knowledge gained, the tasks to be completed, the criteria for success)
  - Examples: Transparent Assignment Templates for Faculty, students;
- Provide criteria for success in advance [See example 1 research paper , example 2 lab report.]
- Offer examples of successful work, and annotate them to indicate how criteria apply. [See examples.]
- Additional examples [See examples.]

Invite students to participate in class planning, agenda construction

- Give students an advanced agenda (2 or 3 main topics) 1-2 days before class, and ask them to identify related sub topics, examples or applications they wish to learn about
- Review the agenda at the outset of each class meeting, including students' subtopics
- Explicitly evaluate progress toward fulfilling the agenda at conclusion of each class meeting
- In large courses, a class committee gathers and contributes students' subtopics to agendas
- Inform students about ideas and questions to be discussed in upcoming class meeting

Gauge students' understanding during class via peer work the requires students to apply concepts you've taught

- Create scenarios/applications to test understanding of key concepts during class [See example 1 description of Eric Mazur's method and video examples of peer instructions, example 2 clickers best practices NCBI.]
- Allow discussion in pairs, instructor's feedback, and more discussion
- Provide explicit assessment of students' understanding, with further explanation if needed, before moving on to teach the next concept

Explicitly connect "how people learn" data with course activities when students struggle at difficult transition points

- Offer research-based explanations about concepts or tasks that students often struggle to master in your discipline [See examples below including Bloom, Bransford, Gregorc, Light, Perry.]
  - Bloom's taxonomy, and discipline-specific versions. [See examples.]
  - William Perry's Phase of intellectual Development, and subsequent work [See chart.]
  - Kathleen Butter / Antony Gregorc's Learning Styles [See example.]
  - Richard Light's Assessment Seminars [See summary of finding.]
  - Researcher on novice vs. expert thinking [See summary.]
  - Neuroscience: synapse formation and learning [See Bransford, et al, How People Learn.]
  - Carol Dweck: fixed vs. growth mindset [Summary diagram.]

Engage students in applying the grading criteria that you'll use on their work

- Share criteria for success and examples of good work (as above in "discuss assignments learning goals"), then ask students to apply these criteria in written feedback on peers drafts [See examples 1 Persuasive Writing Scholastic, example 2 Biology Northwestern U.]

Debrief graded tests and assignments in class

- Help students identify patterns in their returned, graded work: what kinds of test questions were missed; what types of weaknesses characterized the assigned work
- Let students review any changes or revisions they made, and whether these resulted in improvements or not
- Ask students to record the process steps they used to prepare for the exam or complete the assignment, and to analyze: which parts of the process were efficient, effective, ineffective

Offer running commentary on class discussion, indicating modes of thought or disciplinary method in use

- Explicitly identify what types of questioning/thinking and what skills of the discipline your students are using in each class meeting
- Invite students to describe the steps in their thought process for addressing/solving a problem
- Engage students in evaluating which types of thinking are most effective for addressing the issues in each class discussion

See www.unlv.edu/provost/transparency for live links to examples.

APPENDIX 2: *TILT* Higher Ed End-of-Term Survey Questions

Transparency in Learning and Teaching in Higher Education Project
Pre-Survey and End-of-Term Survey Questions

1. How well do you understand the content of this course?
2. How accurately does your submitted work for the course (including exams/quizzes) reflect your understanding of the course content?
3. Did the coursework and course activities benefit your learning?
4. How much has this course helped you in writing effectively?
5. How much has this course helped you in communicating your ideas effectively in your spoken statements?
6. How much has this course helped you in collaborating effectively with others?
7. *question 7 is intentionally skipped*
8. How much has this course helped you in improving your ability to separate and examine the pieces of an idea, experience, or theory?
9. How much has this course helped you in learning how to connect information from a variety of sources?
10. How much has this course helped you in learning how to apply concepts to practical problems or in new situations?
11. How much has this course helped you in considering the ethical implications of your actions?
12. How much has this course helped you in improving your ability to learn effectively on your own?
    Response options: Not at all, A little, A moderate amount, A lot, A great deal

The following 10 questions are asked at the beginning and end of term.

13. I can express my ideas effectively when I write.
14. I can communicate effectively when I speak.
15. I collaborate well with others on academic work.
16. I am good at breaking down the ones, ideas and expenences into pieces so I can consider them.
17. When I am given information from multiple sources, I have an easy time making connections between them.
18. I am able to apply the things I have learned to new problems and situations.
19. I tend to consider the ethical implications of my actions.
20. I am capable of learning on my own.
    Response options: Never, Sometimes, Often, Always
30. Please rate your confidence about your ability to succeed in school.
31. Please rate your confidence about your ability to succeed in this field.
    Response options: Low, Moderate, High

21. As a result of taking this course are you more or less likely to consider opinions or points of view different from your own or has the course made no difference?
    Response options: Much less likely, Somewhat less likely, No difference, Somewhat more likely, Much more likely
22. As a result of taking this course are you a better or worse judge of the strength and weaknesses of ideas, or has the course made no difference?
23. As a result of taking this course are you a better or worse judge of how well a group discussion has met its goals, or has the course made no difference?
24. As a result of taking this course are you a better or wrose judge of the reliability of information from various sources or has the course made no difference?
    Response options: Much worse, Somewhat worse, No difference, Somewhat Better, Much Better
25. As a result of taking this course are you more or less confident about your ability to succeed in school, or has the course made no difference?
26. As a results of taking this course are you more or less confident about your ability to succeed in this field, or has the course made no difference?
    Response options: Much less confident, somewhat less confident, No difference, Somewhat more confident, Much more confident
27. As a result of taking this course are you better or worse at recognizing when you need help with your academic work, or has the course made no difference?
    Much worse, Somewhat worse, No difference, Somewhat Better, Much Better
28. As a result of taking this course are you more or less likely to discuss ideas from your courses, outside of class with others such as students, family members, or co-workers, or has the course made no difference?
29. As a result of taking this course are you more or less likely to ask future instructor about how coursework and course activities benefits your learning, or has the course made no difference?
    Response options: Much worse, Somewhat worse, No difference, Somewhat Better, Much Better

APPENDIX 2: *TILT* Higher Ed End-of-Term Survey Questions

32. Are you likely to apply knowledge and skills you gained from this course in contexts outside of this course?
    Not likely, Slightly likely, Moderately likely, very likely, Extremely likely
33. How well do you understand what constitutes successful work in this course?
    Not well at all, Slightly well, Moderately well, Very well, Extremely well
34. How much did class meetings incorporate the students suggestions and interests?
    Not at all, A little, A moderate amount, A lot, A great deal
35. How much did the instructor value you as a student?
    No at all, A little, A moderate amount, A lot, A great deal
36. In this course, I knew the purpose of each assignment.
37. Each assignment included a section that explained how the assignment was related to the objectives of the course.
38. My instructor identified a specific learning goal for each assignment.
39. In this course, I knew the steps required to complete my assignments.
40. Each assignments included a detailed set of instructor for completing it.
41. My instructor provided detailed directions for each learning activity that was assigned.
42. In this course, I knew how my work would be evaluated.
43. My instructed provided students with annotated examples of past students work.
44. My instructor provided tools I could use to assess the quality of my and others work.
    Response options: Never, Sometimes, Often, Always
45. How much has this course helped you in designing experiments or processes to address a problem?
46. How much has this course helped you in analyzing and interpreting data and/or problems?
47. How much has this course helped you in choosing methods appropriate to solving a problem?
    Response options:Not at all, A little, A moderate amount, A lot, A great deal
48. I feel that I am a member of my school's community:
    Response options: Never, Sometimes, Often, Always
49. How much has this course helped you to feel that you are a member of your school's community? Response options: Not at all, A little, A moderate amount, A lot, A great deal

- What is your gender?
  Response options: Male, Female, I prefer not to respond, Additional: Please describe how you identify your gender.
- Before taking this course, did you complete any other course(s) in this department or field?
- Before taking this course, did you take any course(s) that gave "transparent" or explicit attention to how coursework and course activities benefit your learning?
  Response options: Yes, No, I don't know
- What is your primary reason for taking this course?
  Response options: To fulfill a requirement or prerequisite,Interest in the subject, Another reason
- Are you a person of Hispanic, Latino, or Spanish origin?
  - No, not of Hispanic, Latino, or Spanish origin
  - Yes, Mexican, Mexican American, Chicano/a
  - Yes, Puerto Rican
  - Yes, Cuban
  - Yes, another Hispanic, Latino, or Spanish origin -- *for example: Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* Please indicate:
  - Yes, Cuban

APPENDIX 2: *TILT* Higher Ed End-of-Term Survey Questions

- With which of the following racial/ethnic groups (from the US Census categories below) do you identify? Please select all that apply.
  - White
  - Black, or African American
  - American Indian or Alaska Native. Please enter the name of your enrolled or principal tribe:
  - Asian Indian
  - Chinese
  - Filipino
  - Other Asian -- *for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on. Please indicate:*
  - Japanese
  - Korean
  - Vietnamese
  - Native Hawaiian
  - Guamanian or Chamorro
  - Samoan
  - Other Pacific Islander -- for example, Fijian, Tongan, and so on. Please indicate:
  - Middle Eastern / North African (MENA)
  - Some other race.Please indicate:
- Are you a citizen of the country in which this course is taught?
  Response options: Yes, No, I prefer not to respond
- Which of the following types of schools have you attended other than the one you are attending now?
  - Vocational, technical or trade school
  - Community college, junior college or two-year college
  - University or college other than this one
  - None
  - Other
- Please select a category below that most closely matches your proposed major field of study.
  - Humanities
  - Social and Behavioral Sciences
  - Physical Sciences, Mathematics and Engineering
  - Life Sciences
- Are you a first-generation student (first in your family to attend):
  - College
  - Graduate school
  - I'm not a first generation student
- Are you a first-generation immigrant in the country where you are living?
- Are you a part-time student? Response options: Yes, No, Other
- Please identify the number of people in your household/family.
- Please choose the range that best represents your household/family's income.
  - 0-$17,500
  - $17,501-$23,600
  - $23,601-$29,700
  - $29,701-$35,800
  - $35,801-$41,800
  - $41,801-$47,900
  - $47,901-$54,000
  - $54,001-$60,100
  - $60,101-$66,200
  - $66,201-$75,000
  - Above $75,000
- Comments

APPENDIX 3: Selected Bibliography

A bibliography of publications with live links to full text is available at: tilthighered.com

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