

USING TRANSPARENT ASSIGNMENTS TO INCREASE STUDENTS' SUCCESS EQUITABLY

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Transparency in Learning and Teaching

Overview

PURPOSE:

- Understand how transparently designed assignments can offer equitable opportunities for all college students to succeed; and consider applications

TASKS:

- Review: summary of research findings
- Apply: to sample assignments

CRITERIA:

You'll leave with

- Understanding of our research
- Strategies for applying transparency in assignments



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What College Scorecard Doesn't Show

Department's latest comparison tool brings insights, but without reliable data, students only cheer. **A4**



Mary-Ann Winkelmes, who trains professors in "transparent" teaching, says the approach helps students understand why they have received an assignment, what they are expected to do, and how they will be evaluated.

The Unwritten Rules of College

...for granted the logic and the rhythm of their courses, but students ... don't know what to expect — may get lost. The U. of Nevada at Las Vegas ... the process of teaching explicit to help them succeed. **A26**

GRADUATE SCHOOLS
Ph.D.s in Humanities: Few Feel Called, Fewer Are Chosen
The disciplines will probably continue to thin, a result of choices by students as well as universities. **A10**

TECHNOLOGY
U. of Florida Rethinks Alliance With Pearson
The deal got UF online running on the governor's orders, but interest is low. **A16**



A PUBLICATION OF THE ASSOCIATION OF AMERICAN COLLEGES AND UNIVERSITIES

UNIVERSITY OF NEVADA, LAS VEGAS



2014-2016 AAC&U Study, Funded by **TG** PHILANTHROPY

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 - St Edward's Univ. Austin, TX
 - Univ. of Houston – Downtown, TX
 - California State University, LA
 - Winston-Salem State University, NC
 - Heritage University, Toppenish, WA
- Publication: ***Peer Review*** (Spring 2016)

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CONTEXT

**Underrep, First Gen, Low Income:
half as likely to complete in 4 years**

**High-achievement in HS
can frustrate college success**

Equity of Access



Equity of Experience

**Gatekeepers
stunt research**

**Well-prepared novices
don't think like experts**

Early Engagement Hypothesis

Context:

- We lose the greatest numbers of underserved students from college in their first year.
- Two teaching practices that show learning benefits for all students, especially underserved:
 - **Problem-centered** for underserved engagement (Finley, McNair 2013)
 - **Transparency** in teaching/learning (Winkelmes 2013)

Hypothesis: Combining these in introductory courses might improve students' learning experiences, the quality of students' work, and students' persistence/retention.

What is Problem-Centered?

- Problem-Centered Learning engages students in exploring relevant, complex problems by applying discipline-based inquiry and critical thinking skills.
 - Problem-Centered approaches engage underserved students

Finley, Ashley and Tia McNair. “Assessing Underserved Students’ Engagement in High-Impact Practices.” Washington, D.C.: AAC&U, 2013.

What is Transparency?

- Transparent teaching and learning methods explicitly focus on *how* and *why* students are learning course content in particular ways.
 - Transparent teaching/learning methods benefit students who are unfamiliar with college success strategies by explicating learning/teaching processes.
 - Greater benefits for underrepresented and first-generation students

Winkelmes, MA. “Transparency in Teaching: Faculty Share Data and Improve Students' Learning.” *Liberal Education* 99, 2 (Spring 2013).

Research Question

What is the effect when teachers provide **two transparently designed, problem-centered take-home assignments** (compared to the unrevised, business-as-usual take-home assignments in the comparison group) on **spring-term first-year college students' learning experiences**, especially **underserved students' experiences**, as measured by:

- amount of transparency students perceived in the course
- students' self-ratings of three important predictors of success:
 1. academic confidence,
 2. sense of belonging, and
 3. mastery of skills that employers value
- direct assessment of students' work as indicated by scored student work samples, selected randomly

TILT Higher Ed
Survey

Implementation

2014-2016 AAC&U study funded by **TG™ PHILANTHROPY**

“Transparency and Problem-centered Learning”

- 7 MSIs, 1800 students, 35 faculty
 - 425 First generation students
 - 402 non-white students
 - 479 low-income students
 - 297 multiracial students

- 2 x **small teaching intervention**

Transparent Assignment Design Template



2014 MA Winkelmes

**Faculty/Instructors agreed (in national study, 7 MSIs)
to discuss with students in advance:**

Purpose

- Skills practiced
 - Knowledge gained
- } long-term relevance to students' lives
connection to learning outcomes

**Problem-
centered**

•Task

- What students will do
- How to do it (steps to follow, avoid)

•Criteria for success

- Checklist or rubric in advance so students can self-evaluate
- What excellence looks like (annotated examples where students/faculty apply those criteria)

Research Findings

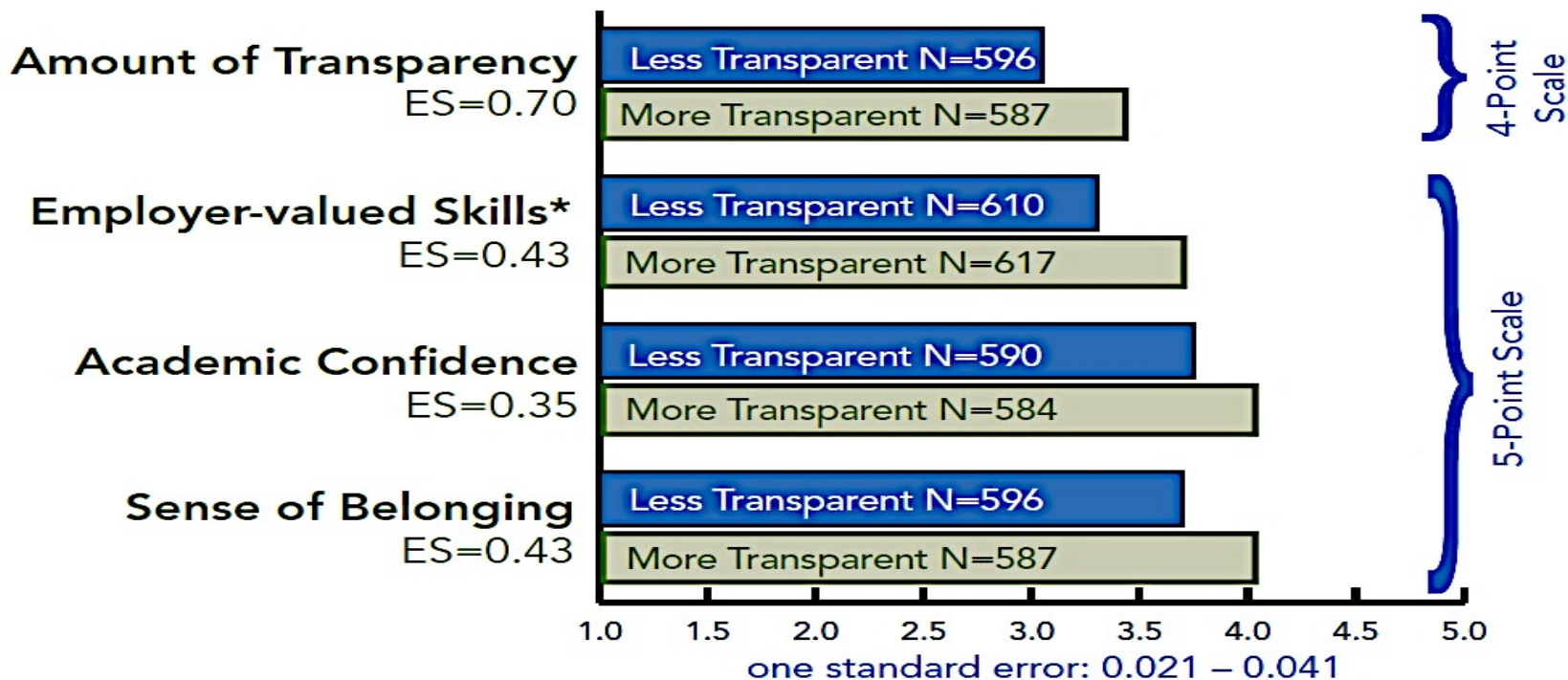
Results

- Boosted students' learning in 3 important ways (medium-large effect for underserved students):
 - Academic confidence
 - Sense of belonging
 - Skills valued most by employers

SUCCESS PREDICTORS
Increased persistence, grades

Impact: Boosted Predictors of success

All Disciplines/All Students, End of Term



KEY: N: number of students responding

ES: effect size (Hedges' G). Effect sizes of 0.25 standard deviations or larger are "substantively important" (US Dept of Education WWC, 2014, p. 23).

Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

*Hart Associates 2015, 2013

Baseline Equivalence

All Disciplines/All Students, Beginning of Term

Confidence to Succeed

Please rate your confidence about your ability to succeed in this field.



Please rate your confidence about your ability to succeed in school.



Skills Highly Valued by Employers*

I am capable of learning effectively on my own.



I tend to consider the ethical implications of my actions.



I am able to apply the things I have learned to new problems and situations.



When I get information from multiple sources, I have an easy time making connections between them.



I am good at breaking down theories, ideas, and experiences into pieces, so I can consider them.



I collaborate well with others on academic work.



I can communicate effectively when I speak.



I can express my ideas effectively when I write.



■ Students in Less Transparent Courses (N=630)

■ Students in More Transparent Courses (N=485)

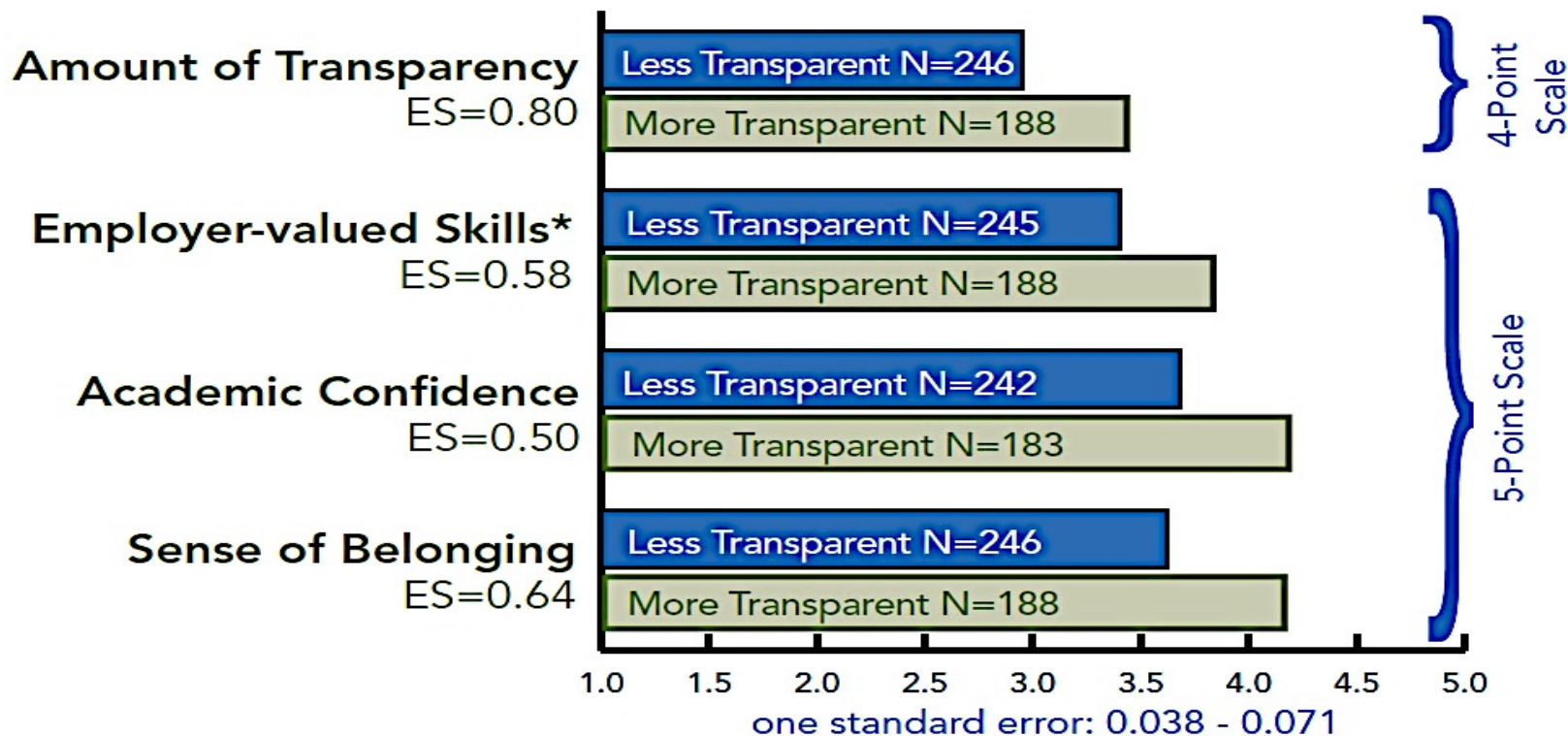
ES: effect size (Hedges' G)

1.0 1.5 2.0 2.5 3.0 3.5 4.0

one standard error: 0.003 - 0.036

*Hart Associates 2015, 2013

First-Generation College Students, End of Term



KEY: N: number of students responding

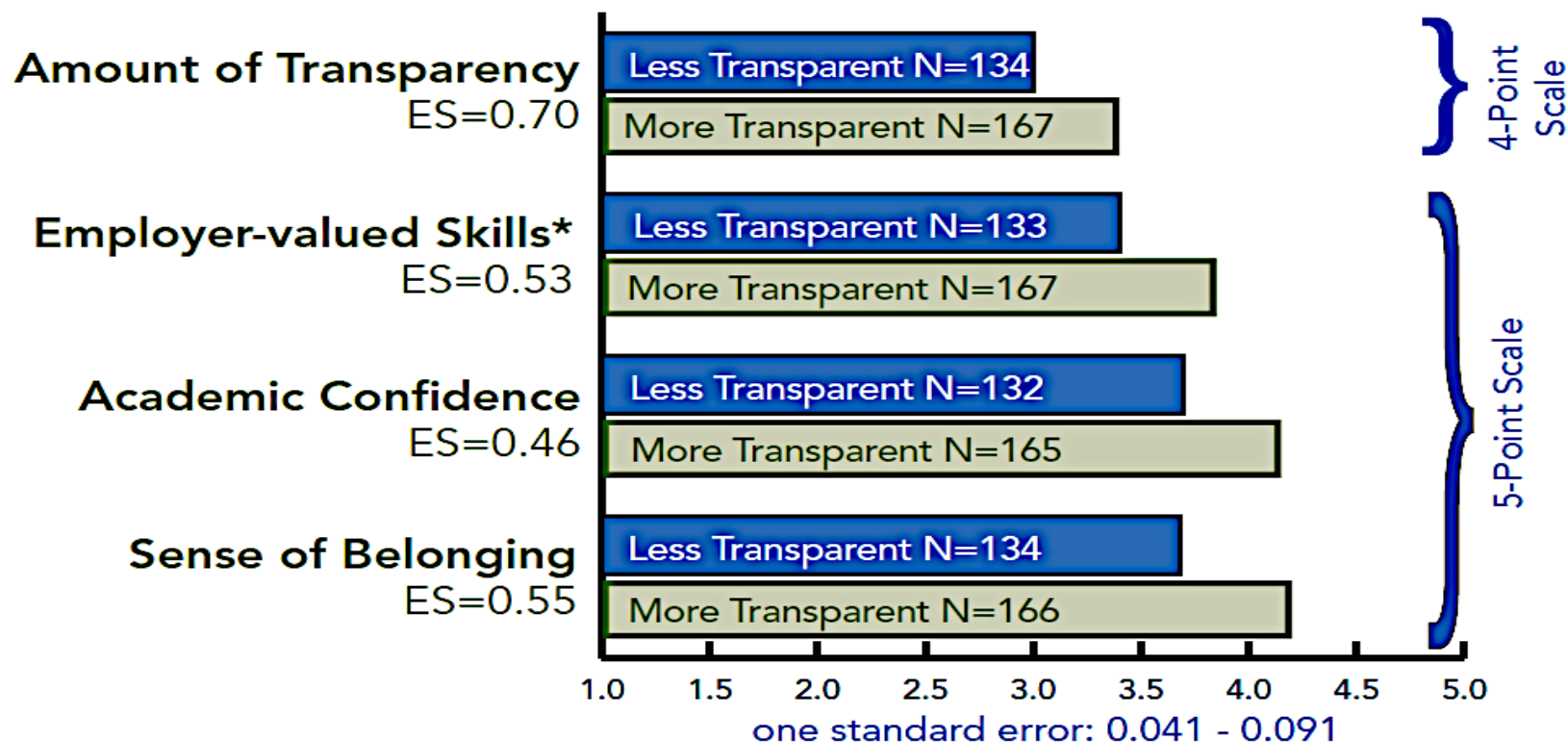
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*Hart Associates 2015, 2013

Multiracial Students, End of Term



KEY: N: number of students responding

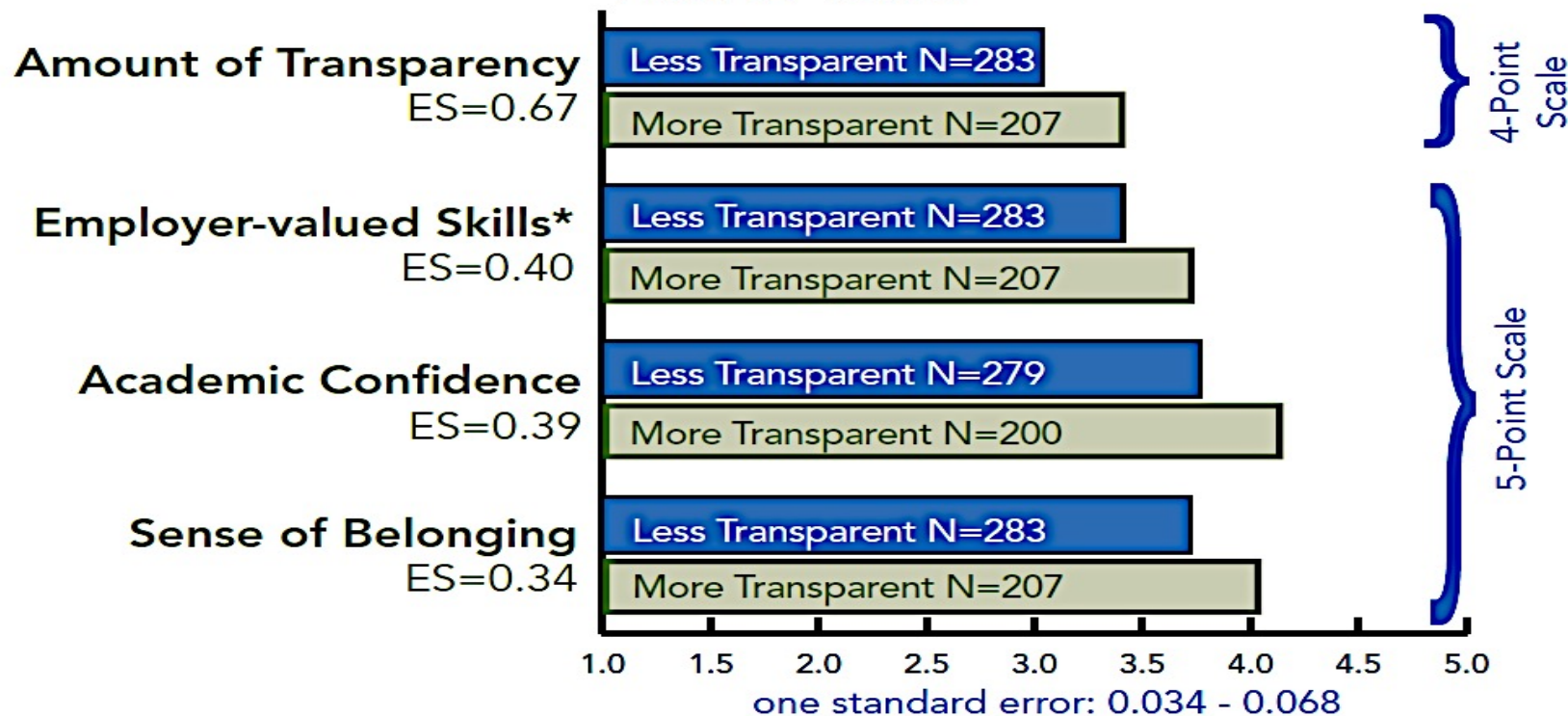
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Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

*Hart Associates 2015, 2013

Low Socioeconomic Status Students (Bottom Quartile), End of Term



KEY: N: number of students responding

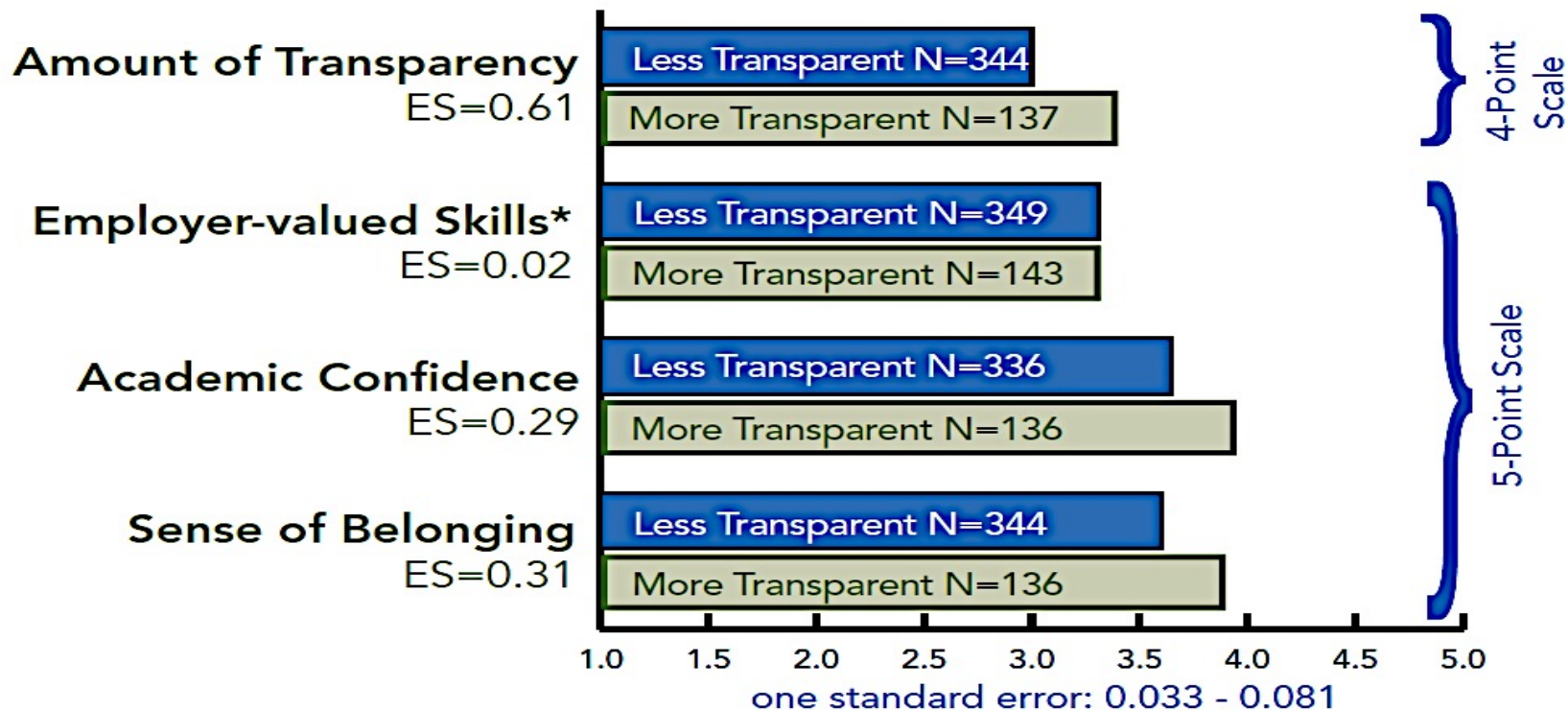
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Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

*Hart Associates 2015, 2013

STEM and Life Sciences Students, End of Term



KEY: N: number of students responding

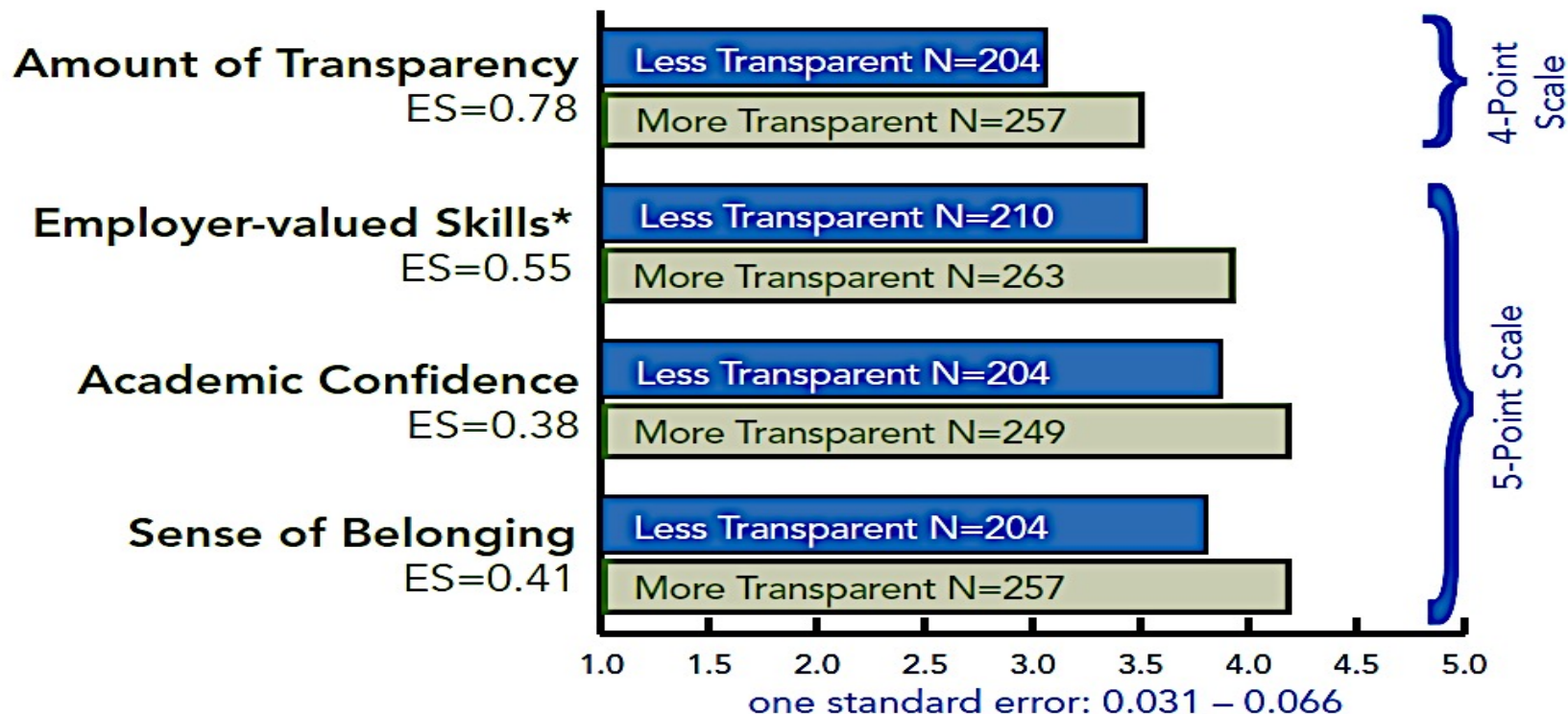
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Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

*Hart Associates 2015, 2013

Humanities, Arts, and Social Sciences, End of Term



KEY: N: number of students responding

ES: effect size (Hedges' G). Effect sizes of 0.25 standard deviations or larger are "substantively important" (US Dept of Education WWC, 2014, p. 23).

Less Transparent: mean perceived transparency < 3.3/4

More Transparent: mean perceived transparency ≥ 3.3/4

*Hart Associates 2015, 2013

Perceived Transparency in the Course

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 assignment included a detailed set of instructions 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 instructor 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.

Never, Sometimes, Often, Always

Learning Outcomes that at Least Four in Five Employers Rate as Very Important

*Proportions of employers rating each skill/knowledge area as very important for recent college graduates to have**

Students:
very important
for success
in workplace*



*8, 9, 10 ratings on zero-to-10 scale, 10 = very important

Awareness of Improvement of Employer-valued skills

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?
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?
Not at all, A little, A moderate amount, A lot, A great deal
22. As a result of taking this course are you a better or worse judge of the strengths and weaknesses of ideas, or has the course made no difference?
24. As a result of taking this course are you a better or worse judge of the reliability of information from various sources, or has the course made no difference?
Much worse, Somewhat worse, No difference, Somewhat Better, Much Better
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

New STEM-focused skills questions:

How much has this course helped you in designing experiments or processes to address a problem?

How much has this course helped you in analyzing and interpreting data and/or problems?

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

Skills: Beginning and End of Course

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

I can express my ideas effectively when I write.

I can communicate effectively when I speak.

I collaborate well with others on academic work.

I am good at breaking down theories, ideas and experiences into pieces so I can consider them.

When I am given information from multiple sources, I have an easy time making connections between them.

I am able to apply the things I have learned to new problems and situations.

I tend to consider the ethical implications of my actions.

I am capable of learning on my own.

Response options: Never, Sometimes, Often, Always

Please rate your confidence about your ability to succeed in school.

Please rate your confidence about your ability to succeed in this field.

Response options: Low, Moderate, High

Academic Confidence & Sense of Belonging

Confidence

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.

Low, Moderate, High

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 result 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?

Much less confident, Somewhat less confident, No difference,
Somewhat more confident, Much more confident

Belonging

34. How much did class meetings incorporate the students' suggestions and interests?

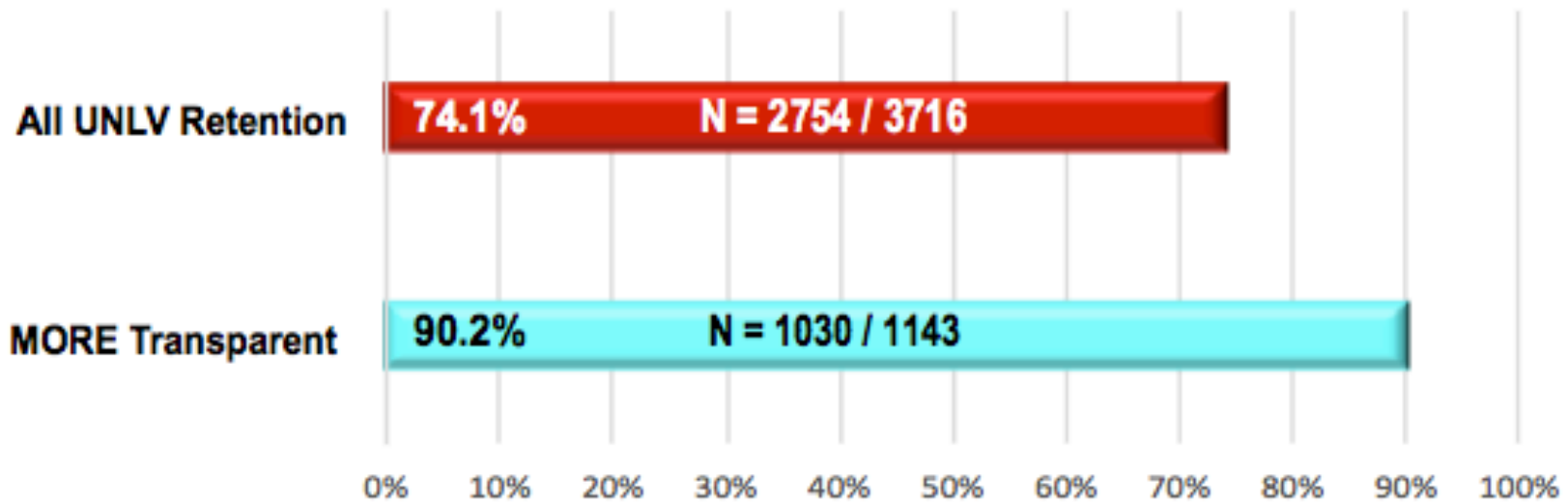
35. How much did the instructor value you as a student?

New: How much did this course help you feel that you are a member of your school's community?

Not at all, A little, A moderate amount, A lot, A great deal

New: I feel that I am a member of my school's community. Never, Sometimes, Often, Always

Impact: UNLV Retention Rates 1st year to 2nd year, 2014-2015

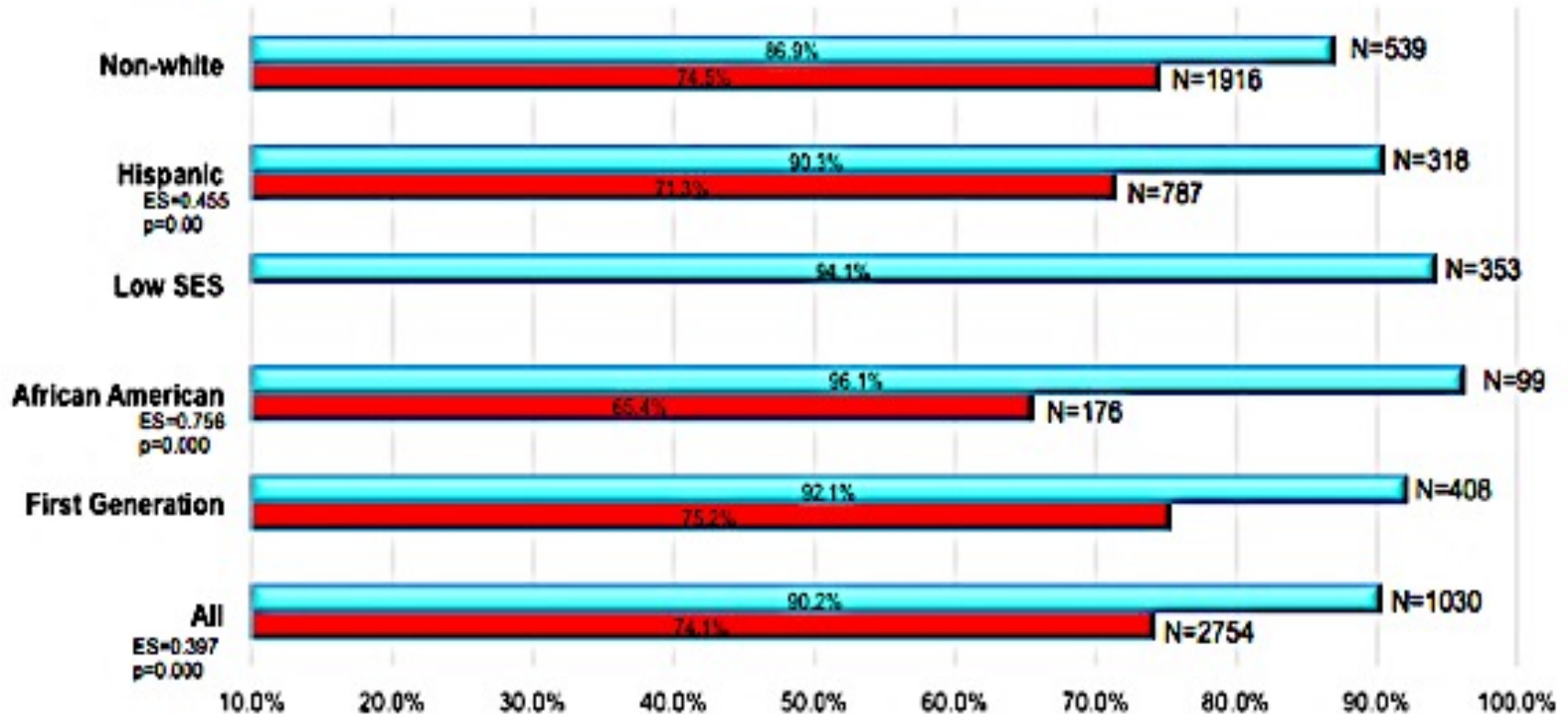


red: UNLV first-time full-time freshman students in all courses AY 2014-2015, including "more transparent" courses, retained in October 2015

blue: UNLV students enrolled in 100-level or lower "more transparent" courses Spring 2015, who completed the Fall 2015 term

Sources: UNLV Data Warehouse / MyUNLV Analytics, 5/5/2016;
UNLV Registrar; TILT Higher Ed Survey

Impact: UNLV Retention, 2014-2015



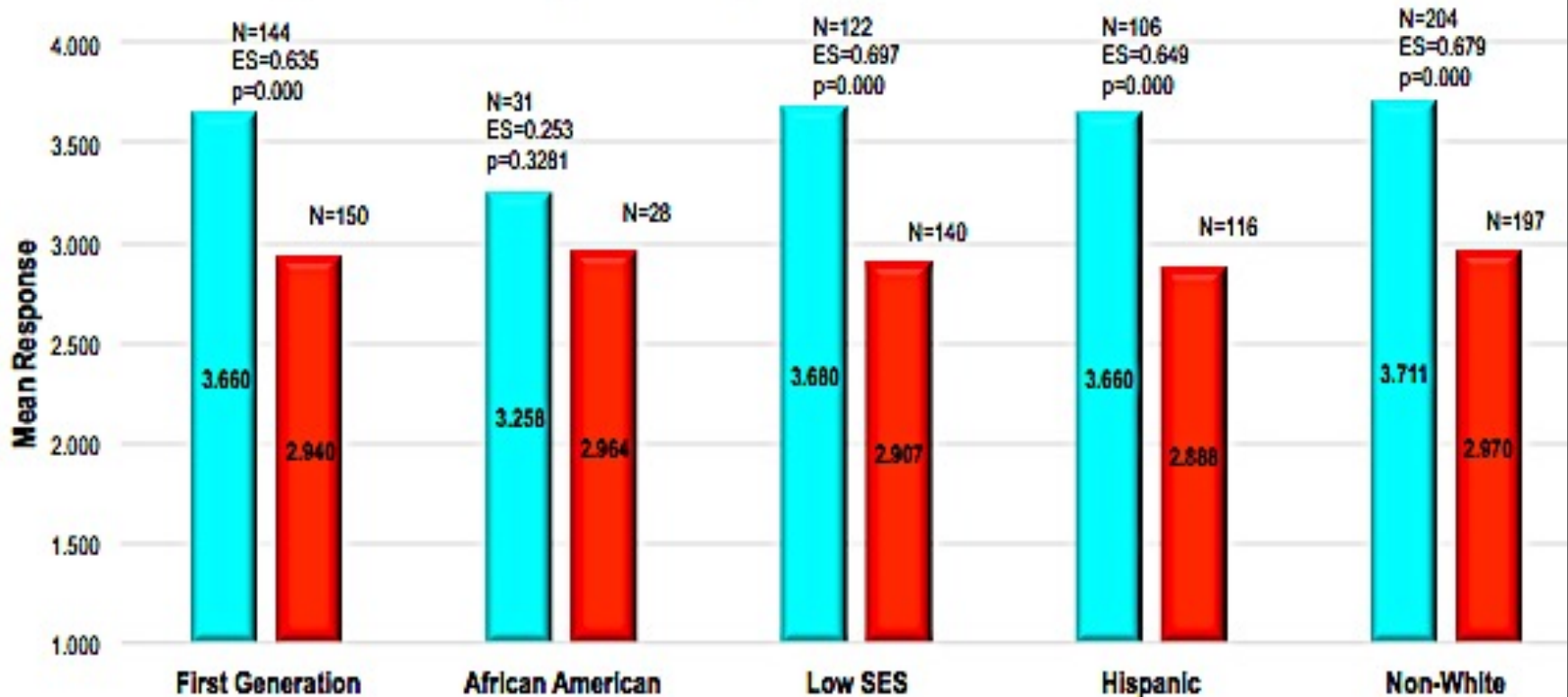
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(Source: UNLV Data Warehouse / MyUNLV Analytics, 5/5/2016)

blue: UNLV students enrolled in 100-level or lower "more transparent" courses in Spring 2015, who completed the Fall 2015 term
(Sources: UNLV Registrar and TILT Higher Ed Survey)

* Differences between the two groups will be greater when "more transparent" group is removed from the (red bars) group of UNLV first-time full-time freshman students in all courses.

Impact on UNLV students' views of learning

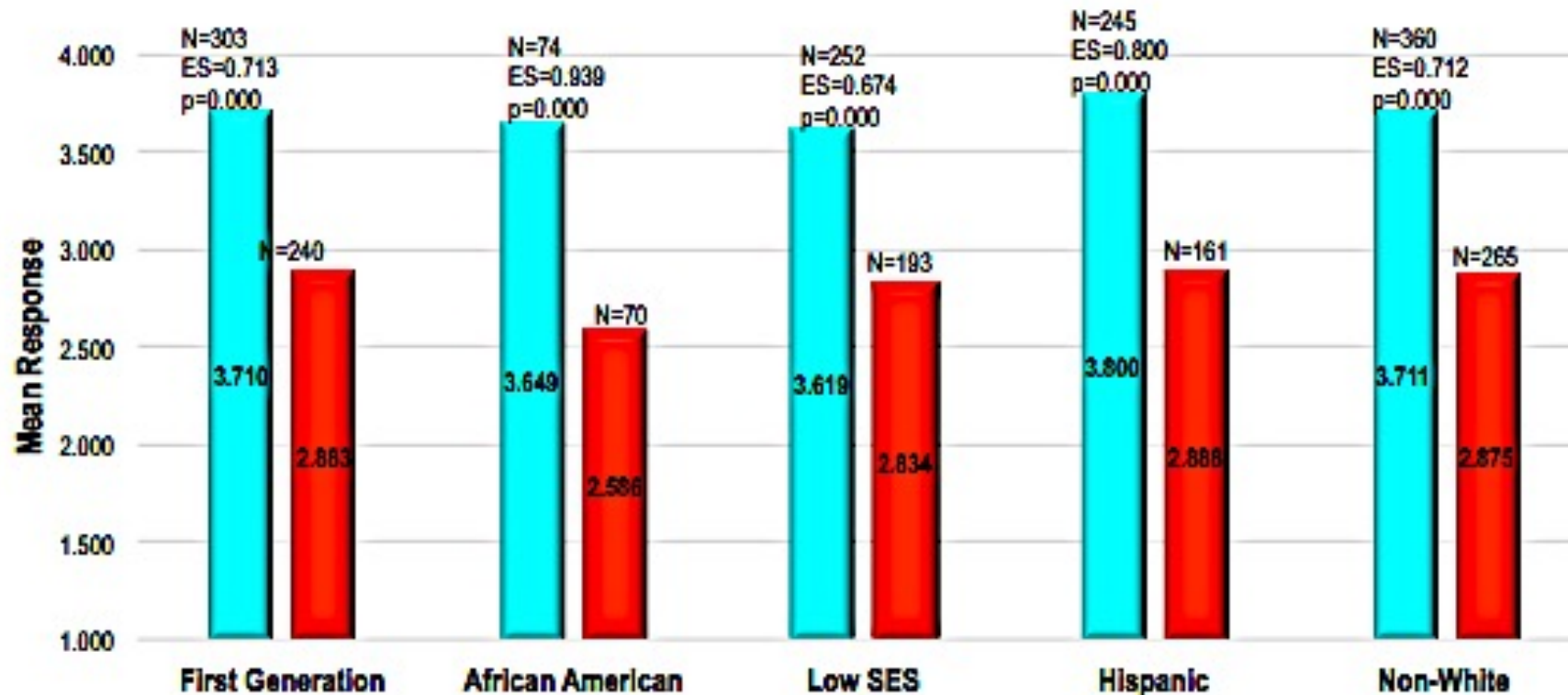
Helped Collaborating Effectively: STEM & Life Sciences



red: UNLV students enrolled in 100-level or below "less transparent" courses Spring 2015-Fall 2015
blue: UNLV students enrolled in 100-level or lower "more transparent" courses Spring 2015-Fall 2015

Impact on UNLV students' views of learning

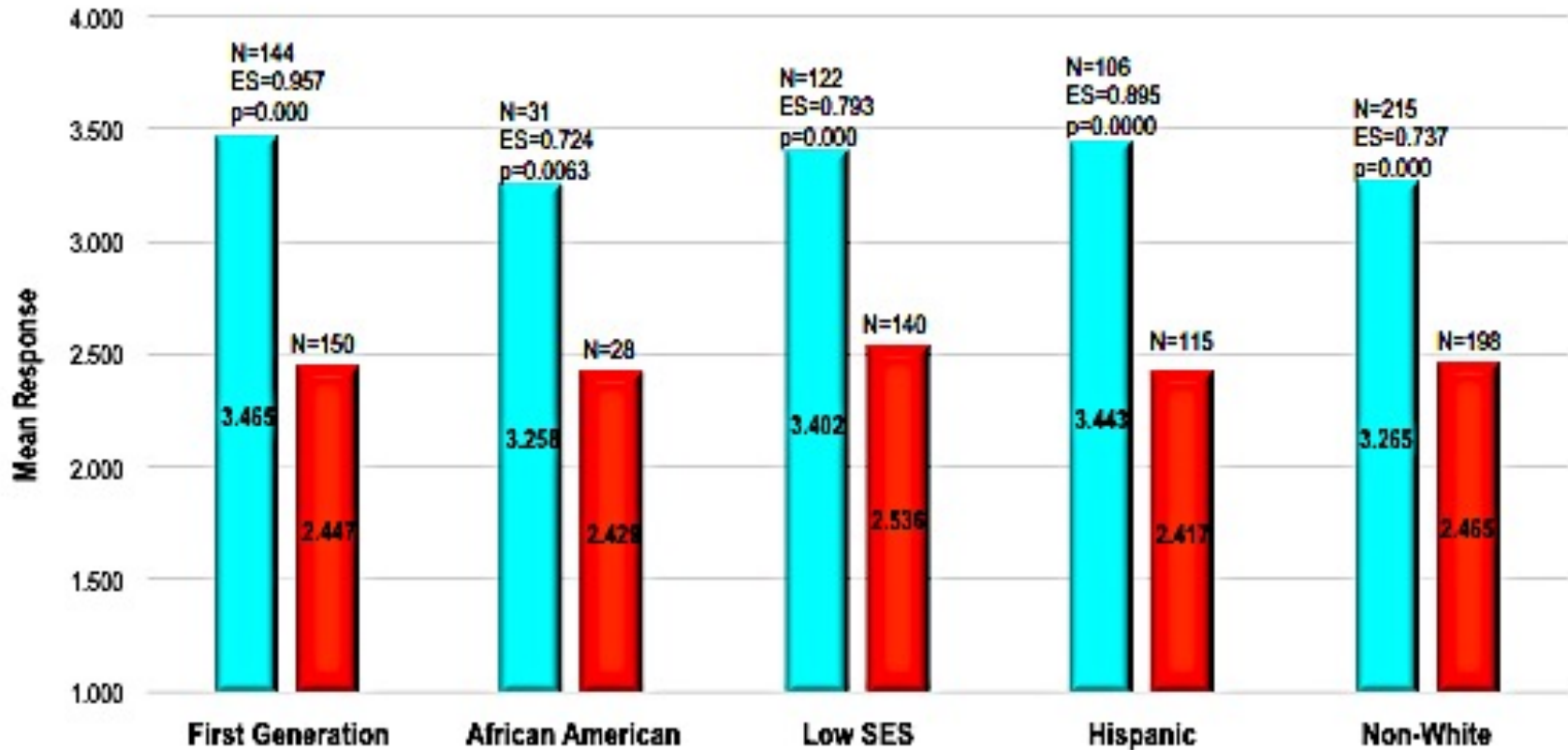
Helped Collaborating Effectively: Humanities & Social Sciences



red: UNLV students enrolled in 100-level or below "less transparent" courses Spring 2015-Fall 2015
blue: UNLV students enrolled in 100-level or lower "more transparent" courses Spring 2015-Fall 2015

Impact on UNLV students' views of learning

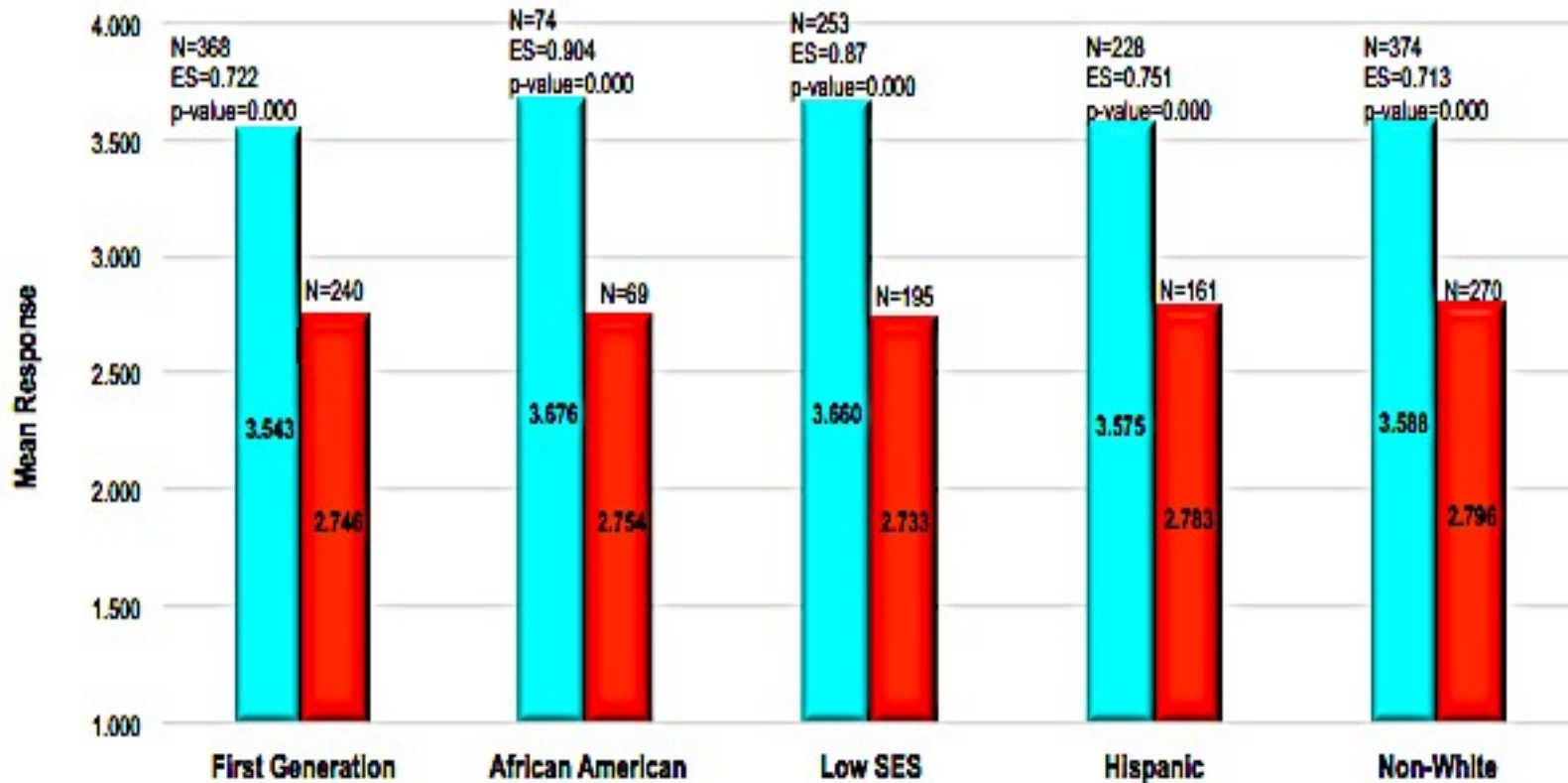
Helped Communicating: Writing, STEM & Life Sciences



red: UNLV students enrolled in 100-level or below "less transparent" courses Spring 2015-Fall 2015
blue: UNLV students enrolled in 100-level or lower "more transparent" courses Spring 2015-Fall 2015

Impact on UNLV students' views of learning

Helped Communicating: Writing, Humanities & Social Sciences




red: UNLV students enrolled in 100-level or below "less transparent" courses Spring 2015-Fall 2015

blue: UNLV students enrolled in 100-level or lower "more transparent" courses Spring 2015- Fall 2015

What does Transparent Assignment Design look like?

Transparent Assignment Design Template

 2014 Winkelmes

Purpose

- Skills practiced
 - Knowledge gained
- } long-term relevance to students' lives
connection to learning outcomes

Problem-centered

• Task

- What students will do
- How to do it (steps to follow, avoid)

• Criteria for success

- Checklist or rubric in advance so students can self-evaluate
- What excellence looks like (annotated examples where students/faculty apply those criteria)

Winkelmes et al, Peer Review (Winter/Spring, 2016)

Where does Transparent Assignment Design Come From?

Research on Learning

Implications for Transparent Design

Elbow, Jaschik/Davidson, Mazur Ambrose, Bergstahler Gregorc, Kolb	PURPOSE: Low stakes for greater creativity / risk Varied and/or flexible formats appeal equitably to students' strengths; inclusive 1
AAC&U HIPs, Bass, Bloom, Colomb, Felder, Perry	PURPOSE: Build critical thinking skills in sequence. Target feedback to phase, don't overwhelm 2
Doyle, Felder, Tanner, Winkelmes	PURPOSE: Specify knowledge/skills, criteria and encourage self-monitoring. 3
Fisk/Light, Tanner	TASK: Provide annotated examples of successful work w/criteria applied, before students begin work 4
Aronson, Dweck, Fisk, Light, Schnabel, Spitzer, Steele, Treisman, Yeager/Walton, Vygosky	TASK: Structure and require peer instruction, feedback; positive attribution activities. 5
Finley/McNair Winkelmes et al Yeager, Walton	CRITERIA: Explicate purposes, tasks, criteria in advance. Give students a compass, set expectations; Explicate applicability, relevance; Engage students in applying shared criteria to increase belonging. 6

Example Assignments

Sample Assignments

Sample A

Purpose

- Skills practiced
 - Knowledge gained
- } long-term (problem-centered) relevance to students' lives
connection to learning outcomes

Task: What to do

How to do it (steps to follow, avoid)

Criteria

- Checklist or rubric in advance to help students to self-evaluate
- What excellence looks like (multiple annotated examples)

Sample Assignments

Sample B

Purpose

- Skills practiced
 - Knowledge gained
- } relevance to students
connection to LOs

Problem-centered

Task: What to do
How to do it

Criteria

- What excellence looks like (annotated)
- Criteria in advance to help students to self-evaluate

Sample Assignments

Sample C

Purpose

- Skills practiced
 - Knowledge gained
- } relevance to students
connection to LOs

Task: What to do; How to do it

Criteria

- What excellence looks like (annotated)
- Criteria in advance to help students to self-evaluate

Problem-centered
It's A, revised

Sample Assignments

Sample D

Purpose

- Skills practiced
 - Knowledge gained
- } relevance to students
connection to LOs

Problem-centered

Compare to B

Task (problem-based, relevant)

- What to do; How to do it

Criteria

- What excellence looks like (annotated)
- Criteria in advance to help students to self-evaluate

Your Assignments

Gather Feedback on Your Own Assignment

Why are we doing this now?

Purpose

- Knowledge: share feedback, insights; promote student success
- Skills: apply transparency; engage community of practice

Task

- Four steps, 2-4 min each, in pairs / 3s

Criteria

- draft you can use in your course
- helpful insights from colleagues *as novices*

Apply Transparency to Assignment: Set up

1. Volunteers: Who has an assignment for an upcoming course – from 1st half of term?
2. Sit with a **disciplinary stranger** who has an assignment

Choose an Assignment from Your Course

- from 1st half of the term
- after students are acquainted with basic tools and terminology the course uses
- when students are starting to apply those and try them out

***Describe this assignment to your partners
(2 min each)***

Feedback on Your Assignments, part 1 of 3

handout: page 6

As a novice student, offer feedback on the **Purpose**
(3 min per assignment)

Five years after taking your course,

- What essential **knowledge** should students retain from doing this assignment?
- What **skills** should students be able to perform from doing this assignment? *(p. 2 may help)*
- Why are these important to students?

Feedback on Your Assignments, part 2 of 3

handout page 6

As a novice student, offer feedback on the **Task**
In groups, discuss and define (2 min)

As a novice, list the steps you'd take to do the assignment.

Feedback on Your Assignments, part 3 of 3

handout page 6

As a novice student, offer feedback on the **Criteria**
In groups, discuss and define (3 min)

As a novice:

- Are you confident you are doing the task effectively?
- Are you confident you are doing excellent work?
- Do you have annotated good examples?

To answer yes, what would you need?

Additional Research-based Strategies

handout page 1

Offer feedback in groups, (2 min)

- Which additional research-based methods could be used? *(charts, pp. 1-2)*

Transparent Assignment Template for Students

WHAT STUDENTS CAN DO:

Before you begin working on an assignment or class activity, ask the instructor to help you understand the following. (Bring this document to help frame the conversation.)

Purpose

- Skills you'll practice by doing this assignment
- Content knowledge you'll gain from doing this assignment
- How you can use these in your life beyond the context of this course, in and beyond college

Task

- What to do
- How to do it (Are there recommended steps? What roadblocks/mistakes should you avoid?)

Criteria

- **Checklist** (Are you on the right track? How to know you're doing what's expected?)
- **Annotated examples of successful work**
(What's good about these examples? Use the checklist to identify the successful parts.)

Strategies for Impact

Individual Instructors: course-level

- What resources do instructors need to implement transparently designed assignments at your own discretion in your own courses?
- Where can instructors find those resources?
 - What can TILT provide?
 - What can your institution provide?

Programs

What kinds of programs would help to achieve the greatest impact?

- intro (large, small); freshman seminars; remedial/bridge;
- High DFW; Gen Ed; Pathways through major; Gateway, OTHER

Institutions and Campus Collaborators

Goals / metrics:

- retention rates, graduation rates
- increased diversity of students, and/or faculty and staff
- increased student satisfaction, faculty/staff satisfaction
- community engagement
- research productivity, SoTL

What kinds of campus collaborators might make strong partners?

- Student success units
- Colleges/schools
- Libraries, Registrars, other staff

Networks

What kinds of networks could benefit and spread the impact for students' success?

- Institutions and feeder schools
- Consortia: regional, national
- Institutional types (MSIs, small, community college, large, research)
- Discipline-based professional organizations
- Higher Ed interest groups

How did we do?

PURPOSE:

- Understand how transparently designed assignments can offer equitable opportunities for all college students to succeed; and consider applications

TASKS:

- Review: summary of research findings
- Apply: to sample assignments

CRITERIA:

You'll leave with

- Understanding of our research
- Strategies for applying transparency in assignments
- Draft ideas for your teaching practice



Please join us!

<http://www.unlv.edu/provost/teachingandlearning>

<http://tinyurl.com/jsqykkh>

Resources

Materials and resources (online)

- NILOA assignment library <http://www.assignmentlibrary.org/>
- TILT materials <http://www.unlv.edu/provost/teachingandlearning>

Research and publication opportunities:

- TILT: email request to mary-ann.winkelmes@unlv.edu
- NILOA Assignment Library submission:
<http://www.assignmentlibrary.org/submitAssignment>

