The Unwritten Rules of College:
Transparency and Its Impact on Learning, Parts 1 and 2

Transparent teaching/learning practices make learning processes explicit while offering opportunities to foster students' metacognition, confidence, and their sense of belonging in college in an effort to promote student success equitably. A 2016 AAC&U study identifies transparent assignment design as a replicable teaching intervention that significantly enhances students' success, with greater gains for historically underserved students, including first-generation students, students of color and low-income students [Winkelmes et al, Peer Review, Spring 2016]. A keynote session reviews the findings, examines some sample assignments, and considers implementation strategies in different contexts where transparent instruction can boost students' success. A subsequent workshop engages participants in designing/revising assignments to make them more transparent, relevant and accessible for students. Participants will leave the workshop session with a draft assignment or activity for one of their courses, and a concise set of strategies for designing transparent assignments that promote students' learning equitably.

Research on Learning		Implications for Assignments red numbers correspond to handout pages	Possible Applications
Elbow, Jaschik/Davidson, Mazur, Ambrose, Bergstahler Gregorc, Kolb	**PURPOSE**	**1** • Varied / flexible formats are inclusive appeal equitably to student strengths • Low stakes for greater creativity / risk	
AAC&U HIPs, Bass, Bloom, Colomb, Felder, Perry		**2** • Build critical thinking skills in intentional sequence • Provide a compass, set expectations • Target feedback to phase, don't overwhelm	
Doyle, Felder, Tanner, Winkelmes		**3** • Specify relevant knowledge/skills, criteria • Encourage self-monitoring	
Fiske/Light, Tanner	**TASK**	**4** • Provide annotated examples of successful work w/ criteria applied, before students begin work.	
Aronson, Dweck, Fisk, Light, Schnabel, Spitzer, Steele,Treisman Yeager/Walton, Vygosky		**5** • Structure and require peer instruction, feedback; positive attribution activities	
Finley/McNair, Winkelmes et al., Yeager, Walton	**CRITERIA**	**6** • Explicate purpose, task, criteria before • Explicate applicability, relevance; • Engage students in applying shared criteria to increase belonging.	

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1. Varied and/or flexible formats appeal equitably to students' strengths

Music in Andrew Lloyd Webber's
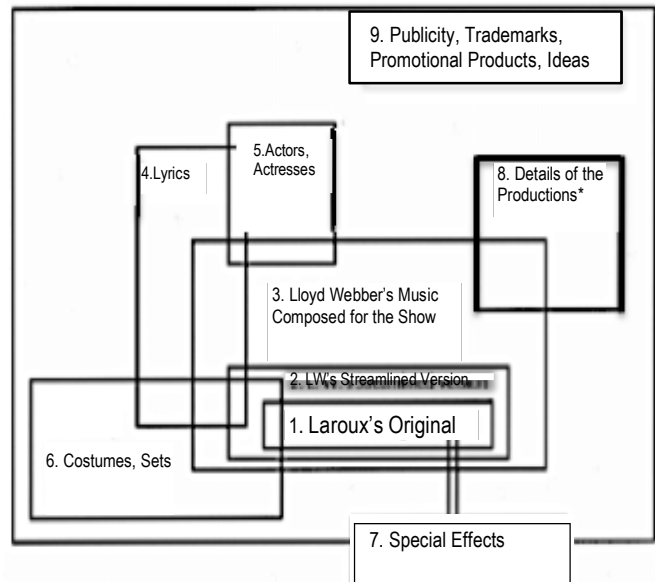***The Phantom of the Opera***

Argument: Andrew Lloyd Webber's orchestration relies on conventional Western styles of musical phrasing and instrumentation. It exploits the natural tendencies of music to correspond with the ebb and flow of emotions, and allows the music to reflect the mood and/or tone of a scene, thereby making the musical accessible to a large general audience.

1) Introduction
   a. The popularity of Phantom and its music
   b. Possible reasons: story, spectacle, characters' success mainly comes from orchestration

2) Criticis of Andre Lloyd Webber's music
   a. What reviewers criticize
   b. Why the are wrong

3) Why the music does deserve praise
   a. Tactics of Western music that Lloyd Webber uses
   b. Exploits the natural tendencis of musical phrasing
   c. Orchestrates the numbers with instruments commonly associated with different moods
   d. Relies on recurring themes, bringing back melodies associate in audience's memoris with certain character roles and types.
   e. In scenes with romatic implications, couples orchestration with rhythm of the lyrics to amplify sensuous overtones and transmit amatory expectations.

   [outine continues]

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This map shows how I visualize that Lloyd Webber's Phantom production came into existence. Before I could come up with an outline for my argument, I had to pin down all the ideas that I wanted to use in a compact form. Most of my ideas were still fuzzy, and refused to come into focus until I constructed this visual aid to guide the development of my ideas.

9. Publicity, Trademarks, Promotional Products, Ideas

5. Actors, Actresses

4. Lyrics

8. Details of the Productions*

3. Lloyd Webber's Music Composed for the Show

2. LW's Streamlined Version

1. Laroux's Original

6. Costumes, Sets

7. Special Effects

*Cues, making sure they have all costumes, props, etc.

Source: Miley Nakamura, Mind Map of Lloyd Webber's production, reprinted by permission of Miley Nakamura. All rights reserved.

Guide for Preparing Your Paper

What is your topic?   What position will you take on that topic?

What are the major primary and secondary sources essential to this topic? List full ciations
What main pieces of evidence will support your idea(s) about the topic?

What are possible counterarguments? What evidence might support these?
What are some possible ways to refute counterarguments? What evidence can be used?

What problems or questions do you have?

2. Build students' critical thinking skills in an intentional sequence

Bloom's Taxonomy of Educational Objectives

Competence	Skills	Assignment Cues
Knowledge	• observation and recall of information • knowledge of dates, events, places • knowledge of major ideas • mastery of subject matter	list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
Comprehension	• understanding information • grasp meaning • translate knowledge into new context • interpret facts, compare, contrast • order, group, infer causes • predict consequences	summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
Application	• use information • use methods, concepts, theories in new situations • solve problems using required skills or knowledge	apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
Analysis	• seeing patterns • organization of parts • recognition of hidden meanings • identification of components	analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
Synthesis	• use old ideas to create new ones • generalize from given facts • relate knowledge from several areas • predict, draw conclusions	combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite
Evaluation	• compare and discriminate between ideas • assess value of theories, presentations • make choices based on reasoned argument • verify value of evidence • recognize subjectivity	assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

Assignments for a sample business course

This chart indicates how each required assignment for the course helps you practice the disciplinary skills needed for passing the course.

ASSIGNMENT	DUE DATE	Use of information technology^	Communication abilities: oral and/or written^	Teamwork; Understanding group and individual dynamics in organizations^*	Understanding of domestic and global economic environments*	Multicultural and diversity understanding*	Analytic skills*#	Applying learned concepts to practical situations#	Understanding of professional responsibility, including ethical reasoning regarding self, organizations, society*^#	Research: locating, evaluating and selecting useful information and resources#	Reflective, [self-evaluative] thinking skills*#
1.	8/31 NOON		+								
2.	9/1		+								
3.	9/11	+	+	+							
4.	9/11	+			+						
5.	9/25				+						
6.	10/9						+		+		
7.	10/23						+		+		
8.	11/6					+			+		+
9.	11/13							+	+	+	
10.	12/4							+	+	+	+
11.	12/10							+	+	+	+

* from American Association of Colleges and Schools of Business "Assurance of Learning Standards," in *Eligibility Procedures and Accreditation Standards…*
# from Benjamin Bloom, *Taxonomy of Educational Objectives*
^ from Hart Research Associates, *It Takes More than a Major: Employer Priorities for College Learning and Student Success*, April 2013.

http://www.unlv.edu/provost/teachingandlearning
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3. Specify criteria and encourage students' self-monitoring

CHEM 223 - Analytical Chemistry Lab
Kasia Kudzilo, University of Illinois

This document is an attempt to clarify the lab report organizational summary found in the online CHEM 223 Lab Manual.

I. Title of Experiment

II. Introduction
This section should concisely state the purpose of the experiment and the general means of accomplishing that purpose i.e., the method or instrumentation used. This includes stating your unknown (ex. Unknown A) and what you were trying to find out about it.

III. Procedure
This section should only reference the procedure in the online manual and any deviations from it. The procedure is not meant to be repeated. A deviation example would be if there were different solution concentrations used than what was given in the manual or any necessary added steps. Other important information includes drying time, cooling time, temperature, reagent amounts and not just what was given in the manual but what you actually did). For example, if the manual said to weigh out 1.0 g NaCl, write what you actually got on the balance – 1.2 g, 0.9 g etc.

IV. Results
This section should contain data obtained in the experiment in the form of correctly formatted tables and/or graphs as well as text describing the trends, observations and answering the often italicized questions posed within the procedure. There are spreadsheets (found online) of the necessary tables for each lab that should be filled out and added as a page(s) in the report. For the graphs, label axes, give units and name below the actual graph (Figure 1, 2, 3... and with an informative title). The graphs may be embedded in the report or stapled to the back. If embedded they should be large enough to read easily (half a page).

V. Discussion/Conclusion
This section should show thinking about the meaning of the results. The questions at the end of the experiment are good thought-provokers and guides for this. These questions should be answered within this section as smooth prose, not as numbered questions and answers.

VI. Questions
This section should answer all the questions found at the end of the experiment including ones that were left out of the discussion because they did not easily flow in the text as well as ones already in the discussion. However, for the ones already in the discussion all that is needed is to copy and paste your previous explanation with a preface stating this (Ex. "As already noted on P. 5,... ").

VII. Calculations/Error Analysis
This section should include one detailed sample of each type of calculation in the appropriate units. For any other trials, only the results of the calculations need to be given. Always report the mean, standard deviation and confidence intervals for a set of trials. Include "IN YOUR LAB REPORT" items from each experiment.

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Core assessment criteria for essays

1. Addressing the question	The relevance of the content of the essay to the question or title set • The relevance of the content of the essay to the question or title set • **Good essays** select relevant material (knowledge, concepts, interpretation, theoretical models, others' perspectives). • **Better essays** make it clear throughout how the material is relevant to the question.
2. Using evidence	The use of externally sourced material, such as research findings, facts, quotations, or other forms of information • **Good essays** include information from outside sources that backs up the points made in the essay. • **Better essays** explicitly highlight or interpret the evidence to support a more general claim or idea or point being made in the essay.
3. Developing argument	The construction of a coherent and convincing set of reasons for holding a particular point of view; the following of an analytical path leading from a starting point to a concluding point • **Good essays** contain expressions of positions on the issues raised by the essay. • **Better essays** develop arguments throughout the essay, with each element building on the last.
4. Critical evaluation/analysis	Determining the value, significance, strengths and/or weaknesses of something (e.g., research findings, theory, methodological approach, policy, another's argument or interpretation) • **Good essays** contain evaluative assertions or descriptive points about the strengths and weaknesses of elements referred to in the essay. • **Better essays** contain systematic, reasoned explanations for the evaluative points being made.
5. Structuring	The formal arrangement of the essay content into paragraphs. • **Good essays** have clearly recognisable introductory and concluding paragraphs, and paragraphs in the main body of the essay each have a clear, single concept or point as its main focus. • **Better essays** have a paragraph structure that supports the development of ideas within the essay, so that the structure of the essay is linked to the developing argument.
6. Use of language	The use of words, grammar, and punctuation to formulate an utterance appropriate to the purpose and context • **Good essays** are free from errors in spelling, punctuation and grammar, and would be acceptable pieces of writing in the wider world. • **Better essays** adopt academic styles and conventions, and approximate to the appropriate academic 'register'.

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4. Provide annotated example of successful work, before students begin working

Carol Augspurger, School of Integrative Biology, University of Illinois at Urbana-Champaign
Used by permission of Carol Augspurger.

Use "invented triangle" to organize introduction. First, give big picture/context.

Topic sentence of paragraph; all sentences in paragraph relate to this topic.

Background information.

Key references included.

No direct quotations — only paraphrases with sources. Proper literature format used.

Importance of study highlighted (Why should reader care?)

Prior studies/observations (data) relevant to specific study.

INTRODUCTION (4-5 paragraphs)

Both extrinsic and intrinsic factors affect the relative population size of species of small mammals in local habitats. Extrinsic factors may include the amount of food availability (Bell 1989), presence of competing species (Holt et al. 1995), and the presence of predators (Batzli and Lin 2001). Intrinsic factors may relate to their diet and food preferences (Heskie 2004), competitive ability (Holt et al. 1995), and body shape (Hoffmeister 1989) that affects their speed and agility in escaping predators. Differences in these factors are expected to result in varying population sizes of species of small mammals among local habitats. Understanding the factors that affect a species' population size is important because it allows us to predict how changes in the environment will affect its population dynamics and the community structure.

Augspurger et al. (2007) found that the relative population sizes of small mammals differed in successional old fields of contrasting age. Specifically, their four years of live trapping showed that voles have a large population in a field abandoned one year ago, while shrews have a larger population size in a field

Sample Glossary Entry:

UNLV History 251/ Art 495, Mary-Ann Winkelmes

apse:

in a Christian church, semicircular area at the end of the **nave** beyond the transept or choir

1

STEP 1) Locate a term in the glossary that lacks an illustration

2

STEP 2) Insert an image that illustrates the term.

3

STEP 3) Insert a label for your image.

Insert image here

Transept
Apse
Aisle
Choir
Nave
Aisle
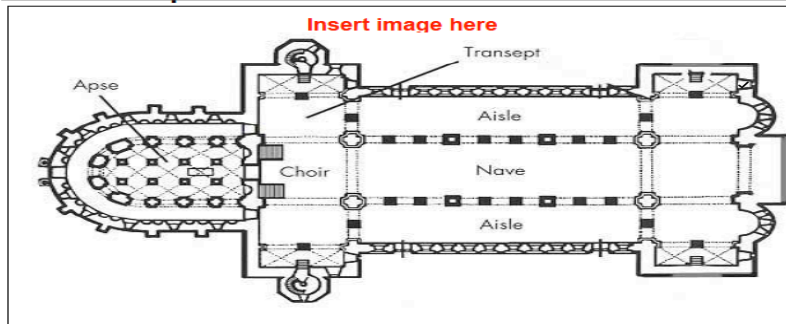
Insert label here:
Artist's or architect's name, title of work, materials used in the work, original location of the work, current location of the work, URL, date accessed [your first and last name]
EXAMPLE:
Plan of a cathedral.
http://www.cbcurtis.net/benedict/Humanities%20Site/cathedral_design.html, accessed January 20, 2015 [Mary-Ann Winkelmes]

5. Structure Peer Instruction Activities and Peer Feedback

ConcepTests are conceptual multiple-choice questions that were originally designed by Eric Mazur at Harvard University for students in large physics classes (Mazur, 1997; NSF, 1996). They are generally short, and as they are multiple-choice, they are useful for immediate quantitative assessment of student understanding. It may be useful to the instructor to know how many correct responses there are to a question both before and after peer instruction to better gauge student understanding.

http://serc.carleton.edu/introgeo/interactive/conctest.html

Mazur Group: improving education through research: www.mazur.harvard.edu

1) EXAMPLE CONCEPTEST

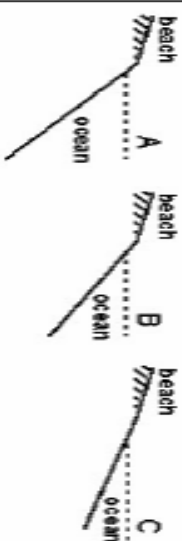Consider a rectangular metal plate with a circular hole in it.

When the plate is uniformly heated, the diameter of the hole

1. increases.
2. stays the same.
3. decreases.

2) EXAMPLE CONCEPTEST

At which location in the diagram below would the waves break closer to the beach?

beach   beach   beach
A   B   C
ocean   ocean   ocean

A. A
B. B
C. C

Peer Response Sheet

Writer: _____ Reader: _____

RECORD YOUR RESPONSES TO THE FOLLOWING QUESTIONS EITHER IN THE SPACES BELOW OR ON SEPARATE SHEET(S) OF PAPER.

Read the paper through once, rather quickly, without pausing to write comments. Then put the paper aside and answer the following questions without looking back. (If you can't answer the question, write "I don't know.")

1. What single feature of the paper stands out to you as a reader?

2. What do you think is the writer's main point?

3. Was there anything in the paper that seemed confusing to you? (If so, explain briefly).

Now reread the paper, making any comments in the margins you feel would be helpful. Try to comment on development and organization of ideas: Do you understand the points the writer is trying to make? Do ideas seem well-connected? **Remember, you are not being asked to evaluate the paper; you are being asked to respond to it with an eye toward helping the writer improve it.**

4. Underline the thesis statement. Is it clearly stated? If not, what seems confusing?

5. Is there any place where the writer needs to support an idea with more concrete detail or explanation? If so, where?

6. How well does the writer make transitions between his/her main ideas? Identify places that need better transitions.

7. List at least two ways in which the essay could be improved.

8. List at least two things you like about the paper.

9. What would you like to know more about? What questions do you still have?

10. Ask of the essay "so what?" after you finish reading. Write a sentence or two paraphrasing the point of the paper, answering the question, "in what way(s) is this interesting, surprising, intriguing, etc.?" If the paper lacks a "so what," point that out and discuss the possibilities.

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http://bokcenter.harvard.edu/peer-response-sheet

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6. Explicate purpose, task(s), and criteria for students' work in advance

Transparent Assignment Template*
© 2013 Mary-Ann Winkelmes

This template can be used as a guide for developing, explaining, and discussing class activities and out-of-class assignments. Making these aspects of each course activity or assignment explicitly clear to students has demonstrably enhanced students' learning in a national study.[1]

Assignment Name
Due date:

Purpose: *Define the learning objectives, in language and terms that help students recognize how this assignment will benefit their learning. Ideally, indicate how these are connected with institutional learning outcomes, and how the specific knowledge and skills involved in this assignment will be important in students' lives beyond the contexts of this assignment, this course, and this college.*

<u>Skills:</u>   The purpose of this assignment is to help you practice the following skills that are essential to your success in this course / in school / in this field / in professional life beyond school:

Terms from Bloom's Taxonomy of Educational Objectives may help you explain these skills in language students will understand. Listed from cognitively simple to most complex, these skills are:

o   *understanding basic disciplinary knowledge and methods/tools*
o   *applying basic disciplinary knowledge/tools to problem-solving in a similar but unfamiliar context*
o   *analyzing*
o   *synthesizing*
o   *judging/evaluating and selecting best solutions*
o   *creating/inventing a new interpretation, product, theory*

<u>Knowledge:</u> This assignment will also help you to become familiar with the following important content knowledge in this discipline:

1.
2.

Task: *Define what activities the student should do/perform.* "Question cues" *from this chart might be helpful:* http://www.asainstitute.org/conference2013/handouts/20-Bloom-Question-Cues-Chart.pdf. *List any steps or guidelines, or a recommended sequence for the students' efforts. Specify any extraneous mistakes to be avoided.*

Criteria for Success:
Define the characteristics of the finished product. Provide multiple, annotated examples of what these characteristics look like in practice, to encourage students' creativity and reduce their incentive to copy any one example too closely. With students, collaboratively analyze examples of work before the students begin working. Explain how excellent work differs from adequate work. It is often useful to provide or compile with students a checklist of characteristics of successful work. This enables students to evaluate the effectiveness of their own efforts while they are working, and to judge the quality of their completed work. Students can also use the checklist to provide feedback on peers' coursework. Indicate whether this task/product will be graded and/or how it factors into the student's overall grade for the course. Later, asking students to reflect and comment on their completed, graded work allows them to focus on changes to their learning strategies that might improve their future work.

*The author developed and earlier version of this template at the the University of Illinois, Urbana-Champaign.

[1] Winkelmes, Mary-Ann. "Transparency in Teaching: Faculty Share Data and Improve Students' Learning." *Liberal Education* 99.2 (Spring 2013); Winkelmes et al. "A Teaching Intervention that Increases Underserved College Students' Success." *Peer Review* (Winter/Spring 2016).

Transparent Assignment Template
BLANK

Due Date:

Purpose:
Skills:

Knowledge:

Task:

Criteria for Success:

EXAMPLES: Less Transparent

Sample A

1. Select a professional in your prospective academic discipline and/or career field that is considered an expert in an area in which you are interested.

2. Secure an interview with the professional for a date and time that is convenient for both of you.

3. Prepare 8-10 questions to ask the professional about their knowledge of a particular academic discipline/career/field

4. Conduct a 20-30 minute, face-to-face interview to gather knowledge that will help you make an informed decision about the major/career you are considering. You will want to audio/video record the interview with the interviewee's permission

5. Prepare a typed transcript of the questions and answers using the audio/video recording.

6. Write a 400-500 word reflection paper in which you address the following items:

    a. Who you selected and why?

    b. What you learned from them that is most interesting?

    c. What this assignment helped you learn about your major/career decision?

    d. What questions you still have?

7. Submit the typed transcript and reflection paper to your instructor.

MATH 181

Sample B

For the given function $y(x) = x^{5/3} - 3x^{2/3}$

Find and simplify the first derivative

Identify any critical points

Find and simplify the 2nd derivative

Identify any inflection points

Indicate where the function is increasing/decreasing, concave up/down (ie. Make a sign diagram)

Make a rough sketch of the shape of the graph, and label the critical points and inflection points (x value only)

EXAMPLES: More Transparent

Sample C

COLA100E Interview Assignment, UNLV
Katharine Johnson

Due dates:

- Draft interview questions – September 30, 2014
- Transcript of interviews – October 15, 2014
- Report – November 17, 2014

Purpose: The purpose of this assignment is to help you make an informed decision about the major/career you are considering.

Skills: The purpose of this assignment is to help you practice the following skills that are essential to your success in school and your professional life beyond school. In this assignment you will:

- Access and collect needed information from appropriate primary and secondary sources.
- Synthesize information to develop informed views.
- Compose a well-organized, clear, concise, report to expand your knowledge on a subject in your major.

Knowledge: This assignment will also help you to become familiar with the following important content knowledge in this discipline:

- Issues facing professionals in a field
- Scholarly research formats for documenting in-text sources and creating reference pages (i.e., bibliographies).

Task: To complete this assignment you should:

1. Select two professionals in your prospective academic discipline and/or career field that are considered experts in an area in which you are interested.
2. Secure an interview with the professionals for a date and time that is convenient for both of you.
3. Prepare 8-10 questions to ask the professionals about their expertise in a particular academic discipline/career field. The questions must be based on a review of the field using 5 credible sources as defined by the librarian in our research module. Sources should be cited using APA formatting.
4. Conduct a 20–30 minute, face-to-face interview with each professional to gather knowledge that will help you make an informed decision about the major/career you are considering. You will want to audio/video record the interview with the interviewee's permission.
5. Prepare a typed transcript of the interviews
6. Compare and contrast the information provided by both professionals in an **8 page (1.5 spaced, 1 inch margins) report** that documents the advantages and disadvantages of a career in the selected field.

Criteria for success: Please see the attached rubric.

Used by permission of Katharine Johnson.

Sample D

Science 101
Exercise 3: Scientific Evidence
Alison Sloat

Purpose: The purpose of this assignment is to analyze a past poster to help you research, design, and create your own effective poster with sufficient scientific evidence that supports your conclusion.

Skills/Knowledge: As a result of completing this assignment, you will be able to identify and judge the success of the important parts of a scientific poster:

- the sources of scientific information,
- the interpretation of the results, and
- the scientific merit of the conclusion.

Task: Read through your example scientific poster and answer the following questions. You will be graded based on how completely you address the following:

1. Identify the ethical question that is being asked.
2. List the evidence the authors provide in support of **and** in opposition of their question.
3. Examine the pieces of evidence listed in #2 above. Identify whether they are from popular (Pop), scientific peer-reviewed (SPR), or non-scientific peer-reviewed (NSPR) sources, and note each statement above as (Pop), (SPR), or (NSPR). Do you think there is enough scientific evidence from peer-reviewed articles? Why or why not?
4. Describe how the pieces of evidence are presented (e.g., numbers, graphs, tables, figures).
5. Explain how the pieces of evidence are analyzed in the Discussion section.
6. Identify the ethical conclusion.
7. After analyzing the content of the poster, do the pieces of evidence support their conclusion? Explain why or why not.
8. After assessing the scientific merit of their evidence, are you convinced of their ethical conclusion? Explain why or why not.
9. List the questions you still have after reading this poster. What could they have done better?

Criteria for success:
Your responses should be as complete as possible. After completing this assignment, you will have increased your understanding of how to identify the essential parts of a scientific poster and how to evaluate its use of evidence.

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Recent Findings: Transparency in Learning and Teaching in Higher Education
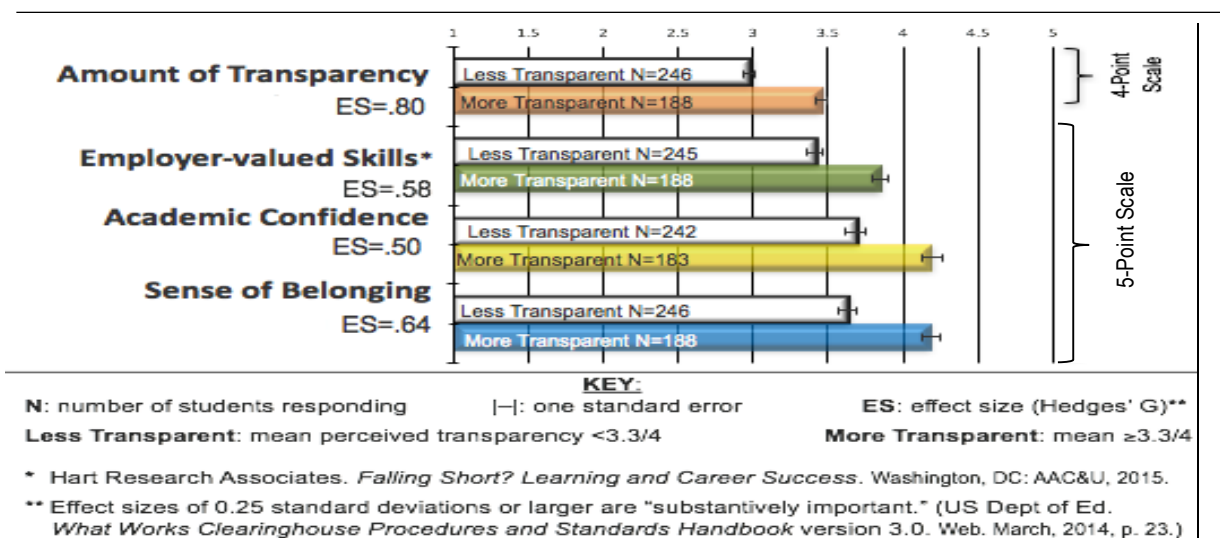
A 2015 AAC&U study funded by TG Philanthropy (Winkelmes, et al., (Peer Review, Winter 2016) identified transparent teaching about problem-centered learning as an easily replicable teaching method that produces learning benefits already linked with students' success. This simple, replicable teaching intervention demonstrably enhanced the success of first-generation, low-income and underrepresented college students in multiple ways at statistically significant levels, with a medium-to-large sized magnitude of effect. The results offer implications for how faculty and educational developers can help their institutions to right the inequities in college students' educational experiences across the country by contributing to efforts to increase underserved students' success, especially in their first year of college (when the greatest numbers drop out).

The AAC&U project funded by TG Philanthropy included 1180 students and 35 faculty. Tia McNair and Ashley Finley at the Association of American Colleges & Universities (AAC&U) led the project in partnership with Mary-Ann Winkelmes at the University of Nevada, Las Vegas' Transparency in Learning and Teaching in Higher Education Project (*TILT* Higher Ed). The main research goal was to study how faculty transparency about the design and problem-centered nature of student assignments would affect students' learning experiences and the quality of students' work. Faculty received training on how to make two take-home assignments in a course more transparent (accessible) and problem-centered (relevant) for students, and each instructor taught a control group and an intervention group of the same course in the same term. Results were measured via online surveys about students' learning experiences before and after each course, and direct assessment of students' work. Students who received more transparency reported 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. While the benefits for all students in the aggregate who received more transparency were statistically significant, the benefits for first-generation, low-income and underrepresented students were greater, with a medium-to-large sized magnitude of effect. Important studies have already connected academic confidence and sense of belonging with students' greater persistence and higher grades (Walton and Cohen 2011, Aronson et al 2002, Paunesku et al 2015), and recent national surveys identify the skills that employers value most when hiring new employees (Hart 2015 and 2013).

A simultaneous study of 1,143 University of Nevada, Las Vegas (UNLV) students' retention rates indicated that increases to academic confidence, sense of belonging and perceived mastery of employer-valued skills were indeed followed by greater persistence: 90.2% of UNLV undergraduates who reported receiving transparent instruction in introductory-level courses returned to complete the fall term of the subsequent academic year, in contrast to the average retention rate of 74.1% for first-time, full-time, first-year students.

TILT Higher Ed and the AAC&U continue to promote transparency and problem-centered learning. *TILT* Higher Ed participants include more than 25,000 students in hundreds of courses at 40 higher education institutions in the U.S. and five other countries.

End of Term: Skills, Confidence, and Belonging - Less vs. More Transparent Courses, First Generation Students

KEY:
N: number of students responding |—|: one standard error   ES: effect size (Hedges' G)**
Less Transparent: mean perceived transparency <3.3/4   **More Transparent**: mean ≥3.3/4

* Hart Research Associates. *Falling Short? Learning and Career Success*. Washington, DC: AAC&U, 2015.

** Effect sizes of 0.25 standard deviations or larger are "substantively important." (US Dept of Ed.
What Works Clearinghouse Procedures and Standards Handbook version 3.0. Web. March, 2014, p. 23.)

Publications and information about the Transparency in Learning and Teaching Project are at: **www.unlv.edu/provost/teachingandlearning**

The Unwritten Rules:

Decode Your Assignments and
Decipher What's Expected of You

Did you know?

- UNLV researchers demonstrated in a national study that transparency around academic assignments 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]
- When faculty make the purpose, tasks and criteria of an academic assignment clear before students begin to work on it, students are more likely to experience greater academic success with that assignment, developing the knowledge, disposition, and skills necessary to succeed both at school and in life (in comparison to when students experience less clarity around purpose, tasks and criteria for their academic work). [Winkelmes et al., *Peer Review* 2016]
- For UNLV students, benefits also included a significantly higher rate of returning to college the following year. [Gianoutsos and Winkelmes, *PADE Proceedings* 2016].
- An inclusive learning environment benefits all students and offers more equitable learning opportunities for underserved students. Research on student learning links college students' academic confidence and sense of belonging with higher GPAs, persistence and retention rates [Walton and Cohen, *Science,* 18 March, 2011].
- 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, *Journal of Experimental Social Psychology,* 38, 2 (2002)].

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.)

Aronson, J., Fried, C., & Good, C. "Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence." *Journal of Experimental Social Psychology* 38 (2002): 113–125.

Gianoutsos, Daniel and Mary-Ann Winkelmes. "Navigating with Transparency." *Proceedings of the Pennsylvania Association of Developmental Educators* (Spring, 2016).

Walton, G. M., & Cohen, G. L.. "A brief social-belonging intervention improves academic and health outcomes among minority students." *Science* 331 (2011)*:* 1447–51.

Winkelmes, Mary-Ann, Matthew Bernacki, Jeffrey Butler, Michelle Zochowski, Jennifer Golanics, Kati Harriss Weavil. "A Teaching Intervention that Increases Underserved College Students' Success." *Peer Review* (Winter/Spring 2016).

DRAFT Checklist for Designing a Transparent Assignment
Thank you for helping to test this DRAFT checklist. Please send your suggestions and feedback to mary-ann.winkelmes@unlv.edu

PURPOSE:

Skills
- o Does your purpose statement specify a skill or skill set that students will gain from doing this assignment?
- o Does your purpose statement link that particular skill to the larger context of:
    - ▪ recent topics of class sessions?
    - ▪ this part of the course?
    - ▪ the whole course?
    - ▪ the major?
    - ▪ the discipline?
    - ▪ your institution's main learning outcomes?
- o Does your purpose statement indicate the relevance and/or usefulness of this knowledge to the students' lives:
    - ▪ beyond the course?   beyond the major?   beyond college?

Knowledge
- o Does your purpose statement specify particular content knowledge students will practice while doing the assignment?
- o Does your purpose statement link that particular knowledge to examples/contexts where this skill was important in the context of:
    - ▪ recent class sessions?
    - ▪ this part of the course?
    - ▪ the whole course?
    - ▪ the major?   the discipline?   your institution's main learning outcomes?
- o Does your statement indicate the relevance and/or usefulness of this knowledge to the students' lives:
    - ▪ beyond the course? beyond the major? beyond college

- ▪ Would this assignment benefit from segmenting it into several assignments, each one focused on a discrete set of skills that should be mastered to insure students' successful completion of the next assignment in the sequence?

TASK:
- o Does your description of the task:
    - ▪ Identify the very first thing students should do when they begin working on the assignment?
    - ▪ The very next thing they should do?
    - ▪ The next, etc.
- o Does your description of the task help students to avoid wasting their time on unnecessary steps, unproductive time expenditure?
- o Does your description help students to focus their time efficiently on producing the highest quality work possible in the time given?
- o Would students benefit from some practice exercises (in the form of a pre-task) in class to prepare them to perform the task outside of class on the graded assignment?

CRITERIA:
- o Can students use the criteria while they are working on the assignment to determine whether they are completing the assignment efficiently and effectively?
- o Do the criteria take the form of a checklist students can use to evaluate the quality of their efforts while they are working on the assignment?
- o Does the checklist specify characteristics of high quality work for this assignment?
- o Can you help students apply the checklist to evaluating some sample work in class, so they understand how each criterion would look in practice?
- o With your guidance, can the students collaboratively annotate several examples of work to indicate where/how the work satisfies the criteria? (These annotated examples may then be shared as a reference for students to use while they work on their own assignments.)
- o Would a rubric (AAC&U VALUE examples) be helpful to students for this assignment?
- o Does the rubric provide an amount of information that helps students at this phase in their learning?
- o Does the rubric provide an overwhelming or counterproductive amount of information for students at this phase in their learning?
- o Did you provide examples of good work, annotated to identify exactly where and how this work satisfies your criteria?
- o Can you provide students with examples in class so they and you can test outyour criteria checklist or rubric to be sure students know how to apply the criteria to multiple examples of work, and eventually their own work?