**Transparent Assignments Promote Equitable Opportunities for Student Success**

Mary-Ann Winkelmes

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 publication identifies transparent assignment design as a replicable teaching intervention that enhances students’ success equitably [Winkelmes et al, *Peer Review*]. We’ll review the findings as well as educational research behind the concept of transparent teaching/learning in this session. Then we’ll apply that research to the design of class activities and course assignments. Participants will leave 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.

<table>
<thead>
<tr>
<th>Research on Learning</th>
<th>Implications for Assignments</th>
<th>Possible Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow, Jaschik/Davidson, Mazur, Ambrose, Bergstahler Gregorc, Kolb</td>
<td>• Low stakes for greater creativity / risk • Varied / flexible formats are inclusive appeal equitably to student strengths</td>
<td>1</td>
</tr>
<tr>
<td>Bass, Bloom, Colomb, Felder, Perry</td>
<td>• Build critical thinking skills in intentional sequence • Target feedback to phase, don’t overwhelm</td>
<td>2</td>
</tr>
<tr>
<td>Doyle, Felder, Tanner, Winkelmes</td>
<td>• Specify relevant knowledge/skills, criteria • Encourage self-monitoring</td>
<td>3</td>
</tr>
<tr>
<td>Fisk/Light, Tanner</td>
<td>• Provide annotated examples of successful work w/ criteria applied, before students begin work.</td>
<td>4</td>
</tr>
<tr>
<td>Aronson, Dweck, Fisk, Light, Schnabel, Spitzer, Steele,Treisman Yeager/Walton, Vygosky</td>
<td>• Structure and require peer instruction, feedback; positive attribution activities</td>
<td>5</td>
</tr>
<tr>
<td>AACU Finley/McNair (HIP, Prob-Centered) Winkelmes et al., Yeager, Walton</td>
<td>• Explicate purpose, task, criteria before • Provide a compass, set expectations; • Explicate applicability, relevance; • Engage students in applying shared criteria to increase belonging.</td>
<td>6</td>
</tr>
</tbody>
</table>

http://www.unlv.edu/provost/teachingandlearning
mary-ann.winkelmes@unlv.edu

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Bibliography:


Elbow, Peter. “High Stakes and Low Stakes in Assigning and Responding to Writing.” *New Directions for Teaching and Learning,* no. 69, (Spring 1997).


Spitzer, Brian and Aronson, J. “Minding and Mending the Gap: Social Psychological Interventions to Reduce Educational Disparities.” *British Journal of Educational Psychology* 85/1 (March 2015).


Tanner, Kimberly B. “Promoting Student Metacognition.” *CBE Life Sciences Education* 11, 2 (June 4, 2012): 113-120.


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) Critics of Andrew 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 tendencies of musical phrasing
   c. Orchestrates the numbers with instruments commonly associated with different moods
   d. Relies on recurring themes, bringing back melodies associated in audience’s memories with certain character roles and types.
   e. In scenes with romantic implications, couples orchestration with rhythm of the lyrics to amplify sensuous overtones and transmit amatory expectations.

[Outline continues]

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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 citations
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?

Source: Miley Nakamura, Mind Map of Lloyd Webber’s Production. Reprinted by permission of Miley Nakamura. All rights reserved.
## 2. Build students’ critical thinking skills in an intentional sequence

<table>
<thead>
<tr>
<th>Bloom’s Taxonomy of Educational Objectives</th>
<th>Assignment Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td>Understand knowledge and new information, summarize, describe, interpret, contrast, predict, etc.</td>
</tr>
<tr>
<td>Application</td>
<td>Use information, methods, concepts, principles, techniques, new strategies, apply, demonstrate, illustrate, construct, develop, produce, accomplish, complete, design, invent, select, explain, integrate, apply, evaluate, analyze, divide, classify, recognize, identify, list, define, tell, describe, etc.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Recognize parts, identify components, maintain, arrange, divide, classify, compare, explain, dissolve, compare, contrast, organize, sort, arrange, interpret, estimate, examine, classify, etc.</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Use old ideas to create new ones, develop, design, invent, establish, create, modify, substitute, reinvent, rearrange, substitute, develop, reassemble, change, correct, adapt, improve, etc.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Compare and discriminate, evaluate, assess, decide, rank, grade, support, conclude, compare, justify, explore, discriminate, evaluate, conclude, support, etc.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Evaluate, analyze, assess, decide, rank, grade, evaluate, assess, decide, rank, grade, etc.</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Use of Information</th>
<th>Construct, Produce</th>
<th>Analyze, Evaluate</th>
<th>Evaluate, Analyze</th>
<th>Evaluate, Analyze, Construct</th>
<th>Evaluate, Analyze, Construct, Produce, Analyze, Evaluate</th>
<th>Evaluate, Analyze, Construct, Produce, Analyze, Evaluate, Analyze, Evaluate</th>
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</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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</tr>
<tr>
<td>Assignment 2</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Assignment 3</td>
<td>Use of Information</td>
<td>+</td>
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</tr>
<tr>
<td>Assignment 4</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Assignment 5</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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</tr>
<tr>
<td>Assignment 6</td>
<td>Use of Information</td>
<td>+</td>
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</tr>
<tr>
<td>Assignment 7</td>
<td>Use of Information</td>
<td>+</td>
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<tr>
<td>Assignment 8</td>
<td>Use of Information</td>
<td>+</td>
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<tr>
<td>Assignment 9</td>
<td>Use of Information</td>
<td>+</td>
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</tr>
<tr>
<td>Assignment 10</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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<tr>
<td>Assignment 11</td>
<td>Use of Information</td>
<td>+</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*From American Association of Colleges and Schools of Business, "Assurance of Learning Standards.© 2014 Mary-Ann Winkelmes, Principal Investigator
mary-ann.winkelmes@unlv.edu
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3. Specify criteria and encourage students' self-monitoring.

3.3. Specify criteria and encourage students' self-monitoring.

- Develop a plan for self-monitoring and encourage students to use it.
- Provide opportunities for students to reflect on their progress.
- Use rubrics to help students understand expectations.
- Provide regular feedback on students' progress.

2. Win evidence

- Collect evidence of student learning and progress.
- Use evidence to inform instruction and adjust teaching strategies.
- Use evidence to assess student learning and provide feedback.

1. Addressing the question

- Ensure that the question is clear and focused.
- Provide specific guidance on how to address the question.
- Use effective questioning techniques to engage students.

4. Choosing the right essay

- Select the appropriate essay for the task.
- Use a variety of essay formats to meet different needs.
- Use rubrics to help students understand expectations.

5. Shaping

- Develop a plan for shaping the essay.
- Use effective shaping techniques to guide students.
- Use rubrics to help students understand expectations.

6. Length of language

- Develop a plan for the length of language.
- Use effective techniques to help students understand expectations.
- Use rubrics to help students understand expectations.

7. Achieving the right result

- Develop a plan for achieving the right result.
- Use effective techniques to help students understand expectations.
- Use rubrics to help students understand expectations.
4. Provide annotated example of successful work, before students begin working

Carol Augspurger, School of Integrative Biology, University of Illinois at Urbana-Champaign

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

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

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: in a Christian church, semicircular area at the end of the nave beyond the transept or choir
Peer Response Sheet

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?

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 her/his main ideas? Are the transitions clear and smooth?
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.
6. Explicate purpose, task(s), and criteria for students' work in advance.

**Criteria for Success:**

- Clearly define the purpose, task(s), and criteria for students' work in advance.
- Students should understand the expectations and requirements for their work.

**Task:**

- Knowledge: The assignment will help you become better with the following:
  - Conducting a new experiment/procedure
  - Analyzing data
  - Writing and editing draft documents

**Knowledge: Important concepts/writing in this discipline:

- The purpose of the assignment is to help you practice the following skills:
  - Knowledge
  - Writing a formal letter
  - Understanding and applying concepts

**Due Date:**

- Students are expected to submit their work on time.
- Late submissions may result in a penalty or failing grade.

**Assignment Name:**

- This assignment is designed to help students develop their critical thinking and writing skills.
- Students are encouraged to work collaboratively and provide constructive feedback to their peers.

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EXAMPLES: Less Transparent

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

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

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

3. 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.

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

5. Write a 400-500 word reflection paper in which you address the following items:
   a. What you learned from them that is most interesting?
   b. What you learned from them that is most surprising?
   c. What this assignment helped you learn about your major/career decision?
   d. What questions you still have?
   e. Who you selected and why?

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

7. Make a rough sketch of the shape of the graph, and label the critical points and inflection points.

Indicate where the function is increasing/decreasing, concave up/down, and make a sign diagram.

Find and simplify the 1st derivative.

Find and simplify the 2nd derivative.

Find any critical points.

Identify any critical points.

Identify any inflection points.

Identify any inflection points.

For the given function $f(x) = x^2 - 3x$...

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mary-ann.winkelmes@unlv.edu

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### Sequecing Worksheet for Assignments and In-Class Activities

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>TASKS: ACTIVITY OR ASSIGNMENT CUES</th>
<th>PURPOSE: CONTENT KNOWLEDGE</th>
<th>TASKS: SKILLS, 5 years out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback from peers and teacher</td>
<td>- Feedback on drafts, using in-class instruction of skills in use</td>
<td>- Build skills in sequence</td>
<td>- Apply tools, terms, methods, measures, frameworks</td>
</tr>
<tr>
<td>Reflection on performance of artifacts</td>
<td>- Annotation of examples, provided in class</td>
<td>- Identify, describe, analyze, summarize sources of primary, secondary evidence</td>
<td>- Develop annotated bibliography explaining how each source supports the story</td>
</tr>
<tr>
<td>Additional Research-based products</td>
<td>- Additional research-based products</td>
<td>- In-class, build awareness of primary, secondary evidence</td>
<td>- Annotate examples, using the checklist</td>
</tr>
<tr>
<td>Feedback from peers and teacher</td>
<td>- Feedback on drafts, using in-class instruction of skills in use</td>
<td>- Build skills in sequence</td>
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<td>- Annotate examples, using the checklist</td>
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</table>
Recent Findings: Transparency in Learning and Teaching in Higher Education

A 2015 study (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).

In 2014-2015 a group of 7 Minority Serving Institutions launched a pilot project that 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), with funding from TG Philanthropy. 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).

Subsequent tracking of 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 as seen in retention rates. Preliminary results suggest UNLV intro-level students who received more transparency around their academic assignments completed their subsequent fall semester at a rate 16% higher than the freshman-to-sophomore retention rate for UNLV’s first-time, full-time freshmen, while retention gains for underserved students were often greater (Gianoutsos and Winkelmes 2016).

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**

<table>
<thead>
<tr>
<th>Amount of Transparency</th>
<th>Employer-valued Skills*</th>
<th>Academic Confidence</th>
<th>Sense of Belonging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ES=.80</strong></td>
<td><strong>ES=.58</strong></td>
<td><strong>ES=.50</strong></td>
<td><strong>ES=.64</strong></td>
</tr>
<tr>
<td>Less Transparent N=246</td>
<td>More Transparent N=188</td>
<td>Less Transparent N=245</td>
<td>More Transparent N=168</td>
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<tr>
<td>Less Transparent N=168</td>
<td>More Transparent N=183</td>
<td>Less Transparent N=242</td>
<td>More Transparent N=183</td>
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<tr>
<td>Less Transparent N=246</td>
<td>More Transparent N=188</td>
<td>Less Transparent N=245</td>
<td>More Transparent N=168</td>
</tr>
</tbody>
</table>

**KEY:**
- Less Transparent: mean perceived transparency <3.3/4
- More Transparent: mean ≥3.3/4


Publications and information about the Transparency in Learning and Teaching Project are at: [www.unlv.edu/provost/teachingandlearning](http://www.unlv.edu/provost/teachingandlearning)

mary-ann.winkelmes@unlv.edu

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