Please sit with at least one *disciplinary stranger*
THE UNWRITTEN RULES OF COLLEGE:

CREATING TRANSPARENT ASSIGNMENTS THAT INCREASE UNDERSERVED COLLEGE STUDENTS’ SUCCESS

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Senior Fellow, Association of American Colleges & Universities
Nevada Humanities Board of Directors member
Founder and Principal Investigator,
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, including yours

CRITERIA:
You’ll leave with
- Understanding of our research
- Strategies for applying transparency to your own assignments
2014-2016 AAC&U Study, Funded by TEL Philanthropy

- Co-PIs: Tia Brown McNair, Ashley Finley, AAC&U
  Mary-Ann Winklemes, UNLV (TILT Higher Ed)

- Schools:
  - Community College of Philadelphia
  - Queensborough Community College, Bayside, NY
  - 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)
TILT Higher Ed Research Team:

Matthew Bernacki, Ph.D. (consultant)
Jeffrey Butler, Ph.D. (research, analysis)
David Copeland (consultant)
Jennifer Golanics, J.D., M. Ed. (analysis)
Sherry Marks (budget)
MaryKay Orgill (consultant)
Kati Harriss Weavil Ph.D. candidate (analysis)
Michelle Zochowski, M. Ed. candidate (analysis)
CONTEXT
Equity of Access

Underrepresented, 1st Gen, Low Income: Half as likely to complete in 4 years

Equity of Experience

Gatekeepers unsustainable; stunt research

High-achievement in HS can frustrate college success

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 (Winklemes 2013)

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

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

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

Purpose

- Skills practiced
- Knowledge gained

long-term relevance to students’ lives
connection to learning outcomes

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

Amount of Transparency
ES=0.70
Less Transparent N=596
More Transparent N=587

Employer-valued Skills*
ES=0.43
Less Transparent N=610
More Transparent N=617

Academic Confidence
ES=0.35
Less Transparent N=590
More Transparent N=584

Sense of Belonging
ES=0.43
Less Transparent N=596
More Transparent N=587

one standard error: 0.021 – 0.041

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)

one standard error: 0.003 - 0.036

*Hart Associates 2015, 2013
First-Generation College Students, End of Term

<table>
<thead>
<tr>
<th>Variable</th>
<th>Less Transparent (N=246)</th>
<th>More Transparent (N=188)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Transparency</td>
<td>ES=0.80</td>
<td></td>
</tr>
<tr>
<td>Employer-valued Skills*</td>
<td>ES=0.58</td>
<td></td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>ES=0.50</td>
<td></td>
</tr>
<tr>
<td>Sense of Belonging</td>
<td>ES=0.64</td>
<td></td>
</tr>
</tbody>
</table>

4-Point Scale

5-Point Scale

one standard error: 0.038 - 0.071

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
Impact: UNLV Retention Rates 1st year to 2nd year, 2015-2016

- Primarily Transparent: 85.50% N = 744/870
- Cohort 2158: 77.10% N = 2,821/3,658
- Cohort 2158 w/o PT: 69.98% N = 1,951/2,788

50.00% 55.00% 60.00% 65.00% 70.00% 75.00% 80.00% 85.00% 90.00%

Full-time 1st year students in 2015-2016 enrolled in "primarily transparent" courses in Fall 2015 or Spring 2016, retained 10/2016.

Full-time 1st year students in 2015-2016, including those in "primarily transparent" courses, retained 10/2016.

Full-time 1st year students in 2015-2016, excluding those in "primarily transparent" courses, retained 10/2016.

Sources: TILT Survey; UNLV Data Warehouse/Office of Decision Support, 10/23/2017
**Impact: UNLV Retention, 2015-2016**

- **All**
  - Red: 87.76% N = 251/286 (UNLV first-time, full-time 1st year students in 2015-2016, retained in October 2016)
  - Purple: 77.10% N = 2,821/3,658 (UNLV first-time, full-time 1st year students in 2015-2016, excluding those in "primarily transparent" courses, retained in October 2016)
  - Blue: 69.98% N = 1,951/2,788 (All UNLV first-time, full-time 1st year students in 2015-2016, retained in October 2016)

- **Hispanic**
  - Red: 77.50% N = 842/1,086
  - Purple: 73.88% N = 591/800
  - Blue: 69.98% N = 1,951/2,788

- **African American**
  - Red: 64.50% N = 182/282
  - Purple: 58.38% N = 115/197
  - Blue: 78.82% N = 67/85

- **Native Hawaiian/Pacific Islander**
  - Red: 48.15% N = 13/27
  - Purple: 58.38% N = 115/197
  - Blue: 69.80% N = 37/53

- **Low SES***
  - Red: 76.37% N = 989/1,295
  - Purple: 67.24% N = 628/934
  - Blue: 86.98% N = 314/361

- **First Generation**
  - Red: 76.30% N = 1,439/1,887
  - Purple: 70.72% N = 1,082/1,530
  - Blue: 84.87% N = 303/357

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**Notes:**
- **Blue:** UNLV first-time, full-time 1st year students in 2015-2016 enrolled in "primarily transparent" courses in Fall 2015 or Spring 2016, who were retained in October 2016
- **Red:** All UNLV first-time, full-time 1st year students in 2015-2016, retained in October 2016
- **Purple:** All UNLV first-time, full-time 1st year students in 2015-2016, excluding those in "primarily transparent" courses, retained in October 2016

*Low SES* - received a Pell Grant and/or self-identified by income level on TILT survey

(Source: TILT Survey; UNLV Data Warehouse/Office of Decision Support, 10/23/2017)
Impact: UNLV Retention Rates 1st year to 3rd year, 2015-2017

- Primarily Transparent: 77.80% N = 677/870
- Cohort 2158: 67.20% N = 2,458/3,658
- Cohort 2158 w/o PT: 63.88% N = 1,781/2,788

\* first-time, full-time 1st year students in 2015-2016 enrolled in "primarily transparent" courses in Fall 2015 or Spring 2016, ned 10/2017
\*LV first-time, full-time 1st year students in 2015-2016, including those in 2015-2016 "primarily transparent" courses, ned 10/2017
LV first-time, full-time 1st year students in 2015-2016, excluding those in 2015-2016 "primarily transparent" courses, ned 10/2017

(Sources: TILT Survey; UNLV Data Warehouse/Office of Decision Support, 10/23/2017 and 03/02/2018)
Impact on UNLV students’ views of learning

Helped Collaborating Effectively: STEM & Life Sciences

- First Generation: N=144, ES=0.635, p=0.000
- African American: N=31, ES=0.253, p=0.328
- Low SES: N=122, ES=0.697, p=0.000
- Hispanic: N=106, ES=0.649, p=0.000
- Non-White: N=204, ES=0.679, p=0.000

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

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Impact on UNLV students’ views of learning

Helped Collaborating Effectively: Humanities & Social Sciences

<table>
<thead>
<tr>
<th></th>
<th>First Generation</th>
<th>African American</th>
<th>Low SES</th>
<th>Hispanic</th>
<th>Non-White</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>303</td>
<td>74</td>
<td>252</td>
<td>245</td>
<td>360</td>
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<tr>
<td>Mean Response</td>
<td>3.710</td>
<td>3.649</td>
<td>3.619</td>
<td>3.600</td>
<td>3.711</td>
</tr>
<tr>
<td>ES</td>
<td>0.713</td>
<td>0.939</td>
<td>0.874</td>
<td>0.800</td>
<td>0.712</td>
</tr>
<tr>
<td>p</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

- **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

- First Generation: N=150, Mean=3.465
- African American: N=28, Mean=3.258
- Low SES: N=140, Mean=3.402
- Hispanic: N=115, Mean=3.443
- Non-White: N=198, Mean=3.265

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

- **First Generation**
  - N=240
  - Mean Response: 3.543
  - ES=0.722
  - p-value=0.000

- **African American**
  - N=69
  - Mean Response: 2.746
  - ES=0.904
  - p-value=0.000

- **Low SES**
  - N=195
  - Mean Response: 3.676
  - ES=0.87
  - p-value=0.000

- **Hispanic**
  - N=161
  - Mean Response: 3.660
  - ES=0.751
  - p-value=0.000

- **Non-White**
  - N=270
  - Mean Response: 3.588
  - ES=0.713
  - p-value=0.000

*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*
Transparent Assignment Design Template

Purpose

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

• 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)
Questions / Comments
Multiracial Students, End of Term

Amount of Transparency
ES=0.70
- Less Transparent N=134
- More Transparent N=167

Employer-valued Skills*
ES=0.53
- Less Transparent N=133
- More Transparent N=167

Academic Confidence
ES=0.46
- Less Transparent N=132
- More Transparent N=165

Sense of Belonging
ES=0.55
- Less Transparent N=134
- More Transparent N=166

one standard error: 0.041 - 0.091

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

Amount of Transparency
ES=0.67
Less Transparent N=283
More Transparent N=207

Employer-valued Skills*
ES=0.40
Less Transparent N=283
More Transparent N=207

Academic Confidence
ES=0.39
Less Transparent N=279
More Transparent N=200

Sense of Belonging
ES=0.34
Less Transparent N=283
More Transparent N=207

one standard error: 0.034 - 0.068

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
STEM and Life Sciences Students, End of Term

Amount of Transparency
ES = 0.61
- Less Transparent N = 344
- More Transparent N = 137

Employer-valued Skills*
ES = 0.02
- Less Transparent N = 349
- More Transparent N = 143

Academic Confidence
ES = 0.29
- Less Transparent N = 336
- More Transparent N = 136

Sense of Belonging
ES = 0.31
- Less Transparent N = 344
- More Transparent N = 136

one standard error: 0.033 - 0.081

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
Humanities, Arts, and Social Sciences, End of Term

<table>
<thead>
<tr>
<th>Amount of Transparency</th>
<th>Less Transparent N=204</th>
<th>More Transparent N=257</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES=0.78</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Employer-valued Skills*</th>
<th>Less Transparent N=210</th>
<th>More Transparent N=263</th>
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<tbody>
<tr>
<td>ES=0.55</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Academic Confidence</th>
<th>Less Transparent N=204</th>
<th>More Transparent N=249</th>
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</thead>
<tbody>
<tr>
<td>ES=0.38</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sense of Belonging</th>
<th>Less Transparent N=204</th>
<th>More Transparent N=257</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES=0.41</td>
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<td></td>
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</tbody>
</table>

one standard error: 0.031 – 0.066

4-Point Scale

5-Point Scale

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

<table>
<thead>
<tr>
<th>Skill/Knowledge Area</th>
<th>Employers Rating</th>
<th>Students Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral communication</td>
<td>85%</td>
<td>78%</td>
</tr>
<tr>
<td>Working effectively with others in teams</td>
<td>83%</td>
<td>77%</td>
</tr>
<tr>
<td>Written communication</td>
<td>82%</td>
<td>75%</td>
</tr>
<tr>
<td>Ethical judgment and decision-making</td>
<td>81%</td>
<td>74%</td>
</tr>
<tr>
<td>Critical/analytical thinking</td>
<td>81%</td>
<td>79%</td>
</tr>
<tr>
<td>Applying knowledge/skills to real world</td>
<td>80%</td>
<td>79%</td>
</tr>
<tr>
<td>Analyzing/solving complex problems</td>
<td>70%</td>
<td>73%</td>
</tr>
</tbody>
</table>

*8, 9, 10 ratings on zero-to-10 scale, 10 = very important*
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, No difference, Somewhat more, 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
Review of Transparent Principles in Past Literature
### Where does Transparent Assignment Design Come From?

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

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: storv, spectacle,
      characters’ success mainly comes from
      orchestration

2) Critics 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 tendencies 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 memories
      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
1. Varied and/or flexible formats appeal equitably

• What is your topic? What position will you take?
• 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?
2. Show students your plan for building their skills in sequence

### 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>DUE DATE</th>
<th>Use of information technology</th>
<th>Communication skills (oral and written)</th>
<th>Teamwork</th>
<th>Understanding group and individual dynamics in organizations</th>
<th>Understanding of domestic and global economic environments</th>
<th>Multicultural and diversity understanding</th>
<th>Analytic skills</th>
<th>Applying learned concepts to practical situations</th>
<th>Understanding of profession, including ethical reasoning, regarding self, organization, society</th>
<th>Research, locating, evaluating, and selecting useful information and resources</th>
<th>Reflective, self-evaluation</th>
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<tbody>
<tr>
<td>1.</td>
<td>8/23/18</td>
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</table>

* 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.
2. Show students your plan for building their skills in sequence

<table>
<thead>
<tr>
<th>Competence</th>
<th>Skills</th>
<th>Assignment Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>• observation and recall of information</td>
<td>list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.</td>
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<tr>
<td></td>
<td>• knowledge of dates, events, places</td>
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<td></td>
<td>• knowledge of major ideas</td>
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</tr>
<tr>
<td></td>
<td>• mastery of subject matter</td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>• understanding information</td>
<td>summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend</td>
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<tr>
<td></td>
<td>• grasp meaning</td>
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<td></td>
<td>• translate knowledge into new context</td>
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<tr>
<td></td>
<td>• interpret facts, compare, contrast</td>
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<tr>
<td></td>
<td>• order, group, infer causes</td>
<td></td>
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<tr>
<td></td>
<td>• predict consequences</td>
<td></td>
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<tr>
<td>Application</td>
<td>• use information</td>
<td>apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover</td>
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<tr>
<td></td>
<td>• use methods, concepts, theories in new situations</td>
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<td></td>
<td>• solve problems using required skills or knowledge</td>
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<tr>
<td>Analysis</td>
<td>• seeing patterns</td>
<td>analyze, separate, order, compare, contrast, relate, change, classify, experiment, discover</td>
</tr>
</tbody>
</table>
2. Show students your plan for building their skills in sequence

INTRODUCTION TO HISTORICAL METHODS / SPECIAL TOPICS IN ART HISTORY:

Art and Politics in Renaissance Italy

This course focuses on strengthening the intellectual skills that are essential to History and Art History, as well as successful professional careers. In the four units of this course, we will consciously practice these skills:

UNIT 1) Understanding the frameworks: contexts, techniques, terms, artifacts as history,
UNIT 2) Analysis and Synthesis: using artifacts, primary and secondary sources to construct the story,
UNIT 3) Evaluating reliability of artifacts and sources, perceptions of value and achievement, evolving contexts,
UNIT 4) Creating new contexts for examining Renaissance artifacts and events.

As we hone these skills, we’ll study painting, sculpture and architecture in the context of various political and social environments in Renaissance Italy: the city-state, the church, the noble court, the neighborhood. We have come to think of Renaissance sculptures, paintings and decorative objects as artworks. Yet the creators and original users of these works saw them primarily as religious or domestic furnishings, indicators of power or civic pride, gifts or aids to spiritual meditation -- many with strong political messages. Artists and patrons we will examine include Michelangelo, Raphael, Leonardo, the Medici, Pope Julius II, Isabella d’Este, and other influential artists and patrons.

SCHEDULE OF CLASS MEETINGS AND REQUIRED READINGS

UNIT 1 SKILLS) Understanding the frameworks: contexts, techniques, terms, art as history

Jan 20: Michelangelo’s David and its meanings over time
Focus questions: Who made it and how? Who commissioned it and why? Who saw it, used it, and how? How does it involve or appeal to viewers? How has its context and meaning changed? What happened to it over time? What does it mean to us now?
2. Show students your plan for building their skills in sequence

UNIT 1 SKILLS) Understanding the frameworks: contexts, techniques, terms, art as history

Jan 20: Michelangelo’s David and its meanings over time
Focus questions: Who made it and how? Who commissioned it and why? Who saw it, used it, and how? How does it involve or appeal to viewers? How has its context and meaning changed? What happened to it over time? What does it mean to us now?

Jan 22: Places and purposes of art in daily life in Renaissance Italy
Reading: Paoletti 12-15, 43
Focus questions:
- What are some examples of religious art and architecture in contemporary cultures?
- How might examples of religious art and architecture in Renaissance culture be similar/different?
- How do we define “religious” and “Renaissance” and “art,” and how do our definitions affect the ways we study and understand the history, art and artifacts of Renaissance Italy?

Jan 27: Materials, Techniques and Conditions of Artistic production …

UNIT 2 SKILLS) Analysis and Synthesis: using artifacts, primary and secondary sources to construct the story

Feb 19: Formal Visual Analysis practice in class …

Feb 26: Analysis of primary sources: Michelangelo’s Last Judgment
Reading: primary sources in class
Focus questions:
- Are primary sources more reliable than secondary sources?
- What makes a source reliable?
- When primary sources contradict each other, how to judge?
- When secondary sources contradict each other, how to judge?
3. Specify criteria and encourage students’ self-monitoring

### Core assessment criteria for essays

<table>
<thead>
<tr>
<th>1. Addressing the question</th>
<th>The relevance of the content of the essay to the question or title set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Good essays</strong></td>
<td>select relevant material (knowledge, concepts, interpretation, theoretical models, others’ perspectives).</td>
</tr>
<tr>
<td><strong>Better essays</strong></td>
<td>make it clear throughout how the material is relevant to the question.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Using evidence</th>
<th>The use of externally sourced material, such as research findings, facts, quotations, or other forms of information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Good essays</strong></td>
<td>include information from outside sources that backs up the points made in the essay.</td>
</tr>
<tr>
<td><strong>Better essays</strong></td>
<td>explicitly highlight or interpret the evidence to support a more general claim or idea or point being made in the essay.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Developing argument</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Good essays</strong></td>
<td>contain expressions of positions on the issues raised by the essay.</td>
</tr>
<tr>
<td><strong>Better essays</strong></td>
<td>develop arguments throughout the essay, with each element building on the last.</td>
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</tbody>
</table>

| 4. Critical evaluation/analysis | Determining the value, significance, strengths and/or |

*Using assessment criteria to support student learning HEFCE funded consortium project  http://www/assessmentplus.net
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, temperature, cooling time, 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.
4. Discuss multiple examples 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.

**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.
4. Discuss multiple examples of successful work, before students begin working

Sample Glossary Entry:

apse:

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

STEP 2) Insert an image that illustrates the term.

STEP 3) Insert a label for your image.

Example:

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]

UNLV, History 251/Art 495, Mary-Ann Winkelmes

© 2014 Mary-Ann Winkelmes
5. Structure Peer Instruction Activities and Peer Feedback

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

1) EXAMPLE CONCEPTTEST

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.
5. Structure Peer Instruction Activities and Peer Feedback

Peer Response Sheet (Derek Bok Center for Teaching and Learning, Harvard U)

Read the paper through once, rather quickly, without pausing to write comments. Then put the paper aside and answer …

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?
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? …
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. … "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
Example Assignments for Discussion
Sample Assignments  

Sample A, p. 7

Purpose

• Skills practiced  
  long-term (problem-centered) relevance to students’ lives
• Knowledge gained  
  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

Purpose

• Skills practiced \quad \text{relevance to students}
• Knowledge gained \quad \text{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
Sample Assignments

Purpose
• Skills practiced } relevance to students
• Knowledge gained } 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
Sample Assignments

Purpose

• Skills practiced
• Knowledge gained

relevance to students
connection to LOs

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:
Talk with a disciplinary stranger
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
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 partner
(2 min each)
Feedback on Your Assignments, part 1 of 3

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

As a novice student, offer feedback on the Task

(2 min per assignment)

As a novice, list the steps you’d take to do the assignment.
Feedback on Your Assignments, part 3 of 3

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

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?
### Your in-class Activities

<table>
<thead>
<tr>
<th>Years Out</th>
<th>Knowledge &amp; Skills</th>
<th>Purpose</th>
<th>Task</th>
<th>Task Cues</th>
<th>Criteria</th>
<th>Stakes % High/Low</th>
<th>Assessed by Peers/Teacher</th>
<th>6 Transparent Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Knowledge, disciplinary methods/tools content</td>
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<td>2)</td>
<td>Analysis/ Application</td>
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<td>3)</td>
<td>Evaluation</td>
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<td>4)</td>
<td>Creative Contribution</td>
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[-----You just did this part in pairs. ---------------------medium---------------------]

This is where an in-class activity can prepare students to excel on next assgt.

-----Are students now ready to excel on *this* graded assignment?------
## Your in-class Activities

<table>
<thead>
<tr>
<th>Knowledge &amp; Skills</th>
<th>Purpose</th>
<th>Task</th>
<th>Task Cues</th>
<th>Criteria</th>
<th>Stakes %</th>
<th>Assessed by</th>
<th>6 Transparent Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Knowledge, disciplinary • methods/tools • content</td>
<td>In-class activity for practice <em>before</em> students do it for a grade (low stakes)</td>
<td>Take-home assignment</td>
<td>med/hi stakes</td>
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<tr>
<td>2) Analysis / Application</td>
<td></td>
<td>Take-home assignment</td>
<td>med/hi stakes</td>
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<tr>
<td>3) Evaluation</td>
<td></td>
<td>Take-home assignment</td>
<td>med/hi stakes</td>
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<td>4) Creative Contribution</td>
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<td>Take-home assignment</td>
<td>med/hi stakes</td>
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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 to your own assignments
Please join us!
http://www.unlv.edu/provost/teachingandlearning

Use our TILT Higher Ed Survey

goo.gl/Rd4ge4
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.winkelmanes@unlv.edu
- NILOA Assignment Library submission:  http://www.assignmentlibrary.org/submitAssignment