The Unwritten Rules of College: Creating Transparent Assignments that Increase Students’ Success Equitably

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Founder and Principal Investigator, TILT Higher Ed

Transparency in Learning and Teaching
Overview

PURPOSE:
• Understand how transparently designed assignments can offer equitable opportunities for all college students to succeed; consider applications

TASKS:
• (me) Review: summary of research findings, cases
• (you) Apply: to sample assignments

CRITERIA:
You’ll leave with
• Understanding of research
• Strategies for applying Transparent Framework to your contexts
What is Transparent Instruction?

Transparent teaching and learning methods explicitly focus on:

- *how* students are learning course content,
- *why* we manipulate their learning experiences in particular ways, and
- *how* students will use this learning in their lives after college.
Gaining attention: 3 main reasons
Two Research Studies

• National Study: Association of American Colleges & Universities and TILT
• University of Nevada, Las Vegas, Student Retention Study
Equity Crisis: Access ≠ Equity

- Underrepresented, first generation, low income: half as likely to complete college in 4 years as white/Asian peers
- Gatekeepers stunt research
- High-achievement in HS can frustrate college success
- Well-prepared novices don’t think like experts
<table>
<thead>
<tr>
<th>Challenges</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation</strong></td>
<td>Class time to work w/coaching</td>
</tr>
<tr>
<td>Unclear re:</td>
<td>Discuss clear instructions in advance</td>
</tr>
<tr>
<td>expectations</td>
<td>Students analyze examples in class;</td>
</tr>
<tr>
<td>Underprepared:</td>
<td>what’s good and how/why</td>
</tr>
<tr>
<td>writing, math,</td>
<td>Online office hours</td>
</tr>
<tr>
<td>research, collab,</td>
<td></td>
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<tr>
<td>study skills</td>
<td></td>
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<tr>
<td>Don’t connect to</td>
<td></td>
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<tr>
<td>prior/current</td>
<td></td>
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<tr>
<td>knowledge</td>
<td></td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td>Find relevance to their lives, examples</td>
</tr>
<tr>
<td>Lack of exemplars</td>
<td>Offer real world authentic examples</td>
</tr>
<tr>
<td>Anxiety, Low</td>
<td>Low stakes work to practice skills, metacog.</td>
</tr>
<tr>
<td>self-confidence</td>
<td>Roles and rubrics/checklists for groups</td>
</tr>
<tr>
<td>Don’t see relevance</td>
<td>Opportunity to recover after mistakes</td>
</tr>
<tr>
<td>to course, world</td>
<td></td>
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<tr>
<td>Don’t know the steps</td>
<td></td>
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<tr>
<td>to take (partners)</td>
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<tr>
<td>Reluctant to ask</td>
<td></td>
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<tr>
<td>for help</td>
<td></td>
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<tr>
<td><strong>Time management</strong></td>
<td>Provide scaffolding with feedback between drafts</td>
</tr>
<tr>
<td>Procrastination,</td>
<td>(multiple per project)</td>
</tr>
<tr>
<td>Poor planning</td>
<td>Reminders, check-ins, checklists, timelines</td>
</tr>
<tr>
<td>Underestimate time</td>
<td>Offer time estimates for tasks</td>
</tr>
<tr>
<td>required</td>
<td></td>
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<tr>
<td>Competing</td>
<td></td>
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<tr>
<td>commitments, family</td>
<td></td>
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<tr>
<td><strong>Access to Resources</strong></td>
<td>Study teams strategize resources</td>
</tr>
<tr>
<td>Financial, Mental</td>
<td>Support providers visit during class</td>
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<tr>
<td>Health, Transportation</td>
<td>Work/downloads happen during class</td>
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<tr>
<td>Don't know how/when</td>
<td>Practice good study habits in class</td>
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<tr>
<td>to get help</td>
<td></td>
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<tr>
<td>No out-of-class</td>
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<tr>
<td>time to seek help</td>
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<tr>
<td>Limited computer/</td>
<td></td>
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<tr>
<td>internet off campus</td>
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</tbody>
</table>
1st Study: AAC&U T&G Philanthropy

Co-PIs: Tia Brown McNair, Ashley Finley, AAC&U
Mary-Ann Winkelmes, 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)
1st Study: Implementation

2014-2016 AAC&U study funded by “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

Purpose
- Skills practiced → long-term relevance to students’ lives
- Knowledge gained → relation to stated 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 (real world examples where students/faculty apply those criteria)
Results, 2 Studies:

Boosted students’ learning in 3 important ways (medium-large effect for underserved students):

- Academic confidence
- Sense of belonging
- Metacognitive awareness of skill development (employer-valued skills, Hart Research Assoc.)
- Retention rates into 2nd year, 3rd year
1st Study: AAC&U

Impact: Boosted Success Predictors for ALL

All Disciplines/All Students, End of Term

<table>
<thead>
<tr>
<th>Amount of Transparency</th>
<th>Less Transparent N=596</th>
<th>More Transparent N=587</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES=0.70</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Employer-valued Skills*</th>
<th>Less Transparent N=610</th>
<th>More Transparent N=617</th>
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</thead>
<tbody>
<tr>
<td>ES=0.43</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Academic Confidence</th>
<th>Less Transparent N=590</th>
<th>More Transparent N=584</th>
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</thead>
<tbody>
<tr>
<td>ES=0.35</td>
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</table>

<table>
<thead>
<tr>
<th>Sense of Belonging</th>
<th>Less Transparent N=596</th>
<th>More Transparent N=587</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES=0.43</td>
<td></td>
<td></td>
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</tbody>
</table>

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
Baseline Equivalence

1st Study: AAC&U

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)

*Hart Associates 2015, 2013

Winkelmes, M.A., 2009-2019
1st Study: AAC&U
Greater Gains for Underserved Students

First-Generation College Students, End of Term

- **Amount of Transparency**
  - ES = 0.80
  - Less Transparent N = 246
  - More Transparent N = 188

- **Employer-valued Skills**
  - ES = 0.58
  - Less Transparent N = 245
  - More Transparent N = 188

- **Academic Confidence**
  - ES = 0.50
  - Less Transparent N = 242
  - More Transparent N = 183

- **Sense of Belonging**
  - ES = 0.64
  - Less Transparent N = 246
  - More Transparent N = 188

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
2nd Study UNLV: 1-year Retention Rates Increase

- **Primarily Transparent**: 85.5% N = 744/870
- **Cohort 2158**: 77.10% N = 2821/3658
- **Cohort 2158 w/o PT**: 69.98% N = 1951/2788

*Blue:* UNLV first-time, full-time 1st year students in 2015-2016 enrolled in "primarily transparent" courses in Fall 2015 or Spring 2016, retained 10/2016

*Red:* All UNLV first-time, full-time 1st year students in 2015-2016, including those in "primarily transparent" courses, retained 10/2016

*Purple:* UNLV first-time, full-time 1st year students in 2015-2016, excluding those in "primarily transparent" courses, retained 10/2016

(Source: TILT Survey; UNLV Data Warehouse/Office of Decision Support, 10/23/2017)
2nd Study UNLV: 2-year Retention Rates Increase

- **Primarily Transparent**: 77.80% N = 677/870
- **Cohort 2158**: 67.20% N = 2458/3658
- **Cohort 2158 w/o PT**: 63.88% N = 1781/2788

Blue: UNLV first-time, full-time 1st year students in 2015-2016 enrolled in "primarily transparent" courses in Fall 2015 or Spring 2016, retained 10/2017

Red: All UNLV first-time, full-time 1st year students in 2015-2016, including those in 2015-2016 "primarily transparent" courses, retained 10/2017

Purple: UNLV first-time, full-time 1st year students in 2015-2016, excluding those in 2015-2016 "primarily transparent" courses, retained 10/2017

(Sources: TILT Survey; UNLV Data Warehouse/Office of Decision Support, 10/23/2017 and 03/02/2018)
2nd Study UNLV: Students See Increased Skill Development

**Helped Collaborating Effectively: STEM & Life Sciences**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Response</th>
<th>ES</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Generation</td>
<td>150</td>
<td>3.660</td>
<td>0.635</td>
<td>0.000</td>
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<tr>
<td>African American</td>
<td>31</td>
<td>2.940</td>
<td>0.253</td>
<td>0.3281</td>
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<tr>
<td>Low SES</td>
<td>28</td>
<td>3.660</td>
<td>0.697</td>
<td>0.000</td>
</tr>
<tr>
<td>Hispanic</td>
<td>140</td>
<td>2.907</td>
<td>0.649</td>
<td>0.000</td>
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<tr>
<td>Non-White</td>
<td>197</td>
<td>2.971</td>
<td>0.679</td>
<td>0.000</td>
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</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

Winkelmes, M.A., 2009-2019
2nd Study UNLV: Students See Increased Skill Development
2nd Study UNLV: Students See Increased Skill Development

Helped Communicating: Writing, STEM & Life Sciences

- First Generation: N=144, ES=0.957, p=0.000
- African American: N=31, ES=0.724, p=0.0063
- Low SES: N=122, ES=0.793, p=0.000
- Hispanic: N=106, ES=0.895, p=0.000
- Non-White: N=215, ES=0.737, p=0.000

Legend:
- 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
Two Studies: The TILT Intervention

**Purpose**
- Skills practiced
- Knowledge gained
  
  long-term relevance to students’ lives

**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 (real world examples where students/faculty apply those criteria)
OPTIONAL

Questions / Comments
_multiracial students, end of term

**Amount of Transparency**
- Less Transparent N=134
- More Transparent N=167

ES=0.70

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

ES=0.53

**Academic Confidence**
- Less Transparent N=132
- More Transparent N=165

ES=0.46

**Sense of Belonging**
- Less Transparent N=134
- More Transparent N=166

ES=0.55

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 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

Amount of Transparency
ES = 0.78
- Less Transparent N=204
- More Transparent N=257

Employer-valued Skills*
ES = 0.55
- Less Transparent N=210
- More Transparent N=263

Academic Confidence
ES = 0.38
- Less Transparent N=204
- More Transparent N=249

Sense of Belonging
ES = 0.41
- Less Transparent N=204
- More Transparent N=257

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 WWCC, 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.

-------------------------------------------------------------------------------------------------------------------
36. In this course, I knew the steps required to complete my assignments.
37. Each assignment included a detailed set of instructions for completing it.
38. My instructor provided detailed directions for each learning activity that was assigned.

-------------------------------------------------------------------------------------------------------------------
36. In this course, I knew how my work would be evaluated.
37. My instructor provided students with annotated examples of past students’ work.
38. My instructor provided tools I could use to assess the quality of my and others’ work.

----Never, Sometimes, Often, Always
Learning Outcomes that at Least Four in Five Employers Rate as Very Important

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

- Oral communication: 85% (78%)
- Working effectively with others in teams: 83% (77%)
- Written communication: 82% (75%)
- Ethical judgment and decision-making: 81% (74%)
- Critical/analytical thinking: 81% (79%)
- Applying knowledge/skills to real world: 80% (79%)
- Analyzing/solving complex problems: 70% (73%)

*5, 3, *0 ratings on zero-to-10 scale, 10 = very important
Awareness of Improvement of Employer-valued Skills

4. How much has this course helped you in writing effectively?
5. How much has this course helped you in communicating your ideas effectively in your spoken statements?
6. How much has this course helped you in collaborating effectively with others?
8. How much has this course helped you in improving your ability to separate and examine the pieces of an idea, experience, or theory?
9. How much has this course helped you in learning how to connect information from a variety of sources?
10. How much has this course helped you in learning how to apply concepts to practical problems or in new situations?
11. How much has this course helped you in considering the ethical implications of your actions?
   Not at all, A little, A moderate amount, A lot, A great deal
22. As a result of taking this course are you a better or worse judge of the strengths and weaknesses of ideas, or has the course made no difference?
24. As a result of taking this course are you a better or worse judge of the reliability of information from various sources, or has the course made no difference?
   Much worse, Somewhat worse, No difference, Somewhat Better, Much Better
32. Are you likely to apply knowledge and skills you gained from this course in contexts outside of this course?
   Not likely, Slightly likely, Moderately likely, Very likely, Extremely likely

New STEM-focused skills questions:
How much has this course helped you in designing experiments or processes to address a problem?
How much has this course helped you in analyzing and interpreting data and/or problems?
How much has this course helped you in choosing methods appropriate to solving a problem?
Response options: Not at all, A little, A moderate amount, A lot, A great deal
Skills: Beginning and End of Course

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

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

**Confidence**
30. Please rate your confidence about your ability to succeed in school.
31. Please rate your confidence about your ability to succeed in this field. Low, Moderate, High
25. As a result of taking this course are you more or less confident about your ability to succeed in school, or has the course made no difference?
26. As a result of taking this course are you more or less confident about your ability to succeed in this field, or has the course made no difference?
   Much less confident, Somewhat less, 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
New: When things go wrong
Examples from Foundational Research

How to Offer Transparency in Assignments
<table>
<thead>
<tr>
<th>Research on Learning</th>
<th>Implications for Transparent Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow, Jascik/Davidson, Mazur Ambrose, Bergeastahl 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 Winkelmes et al</td>
<td><strong>CRITERIA:</strong> Explicate purposes, tasks, criteria in advance. Give students a compass, set expectations; Explicate applicability, relevance; Engage students in self-monitoring of personal progress; Plan self-reflection strategies.</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: story, spectacle, characters’ success mainly comes from orchestration

2) Critics of Andre Lloyd Webber’s music
   a. What reviewers criticize
   b. Why they 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

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.
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 a sequence
2. Show students your plan for building their skills in a 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>
</tr>
<tr>
<td></td>
<td>• knowledge of dates, events, places</td>
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<tr>
<td></td>
<td>• knowledge of major ideas</td>
<td></td>
</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>
<td></td>
</tr>
<tr>
<td></td>
<td>• translate knowledge into new context</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• interpret facts, compare, contrast</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• order, group, infer causes</td>
<td></td>
</tr>
<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>
</tr>
<tr>
<td></td>
<td>• use methods, concepts, theories in new situations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• solve problems using required skills or knowledge</td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>• seeing patterns</td>
<td>analyze, separate, order</td>
</tr>
</tbody>
</table>
2. Show students your plan for building their skills in a 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 self-monitoring

Core assessment criteria for essays

1. **Addressing the question**
   - 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

*Using assessment criteria to support student learning HEFCE funded consortium project*  http://www/assessmentplus.net
3. Specify criteria and encourage 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

---

**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.
5. Structure Peer Practice and Feedback Activities

Teach a concept

• Ask a multiple choice question to test students’ understanding
• Students answer the question; indicate confidence
• Students discuss for 1 minute
• Students answer the question again: greater accuracy and confidence

Eric Mazur, Harvard University
5. Structure Peer Practice and Feedback Activities

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. Students know purpose, tasks, criteria in advance

**Purpose**
- Skills practiced
- Knowledge gained

long-term relevance to students’ lives
relation to stated 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 (real world examples where students/faculty apply those criteria)
6. Students know purpose, tasks, criteria in advance

**Purpose**
- Skills you’ll practice by doing this assignment
- Content knowledge you’ll gain
- How you can use these in your life beyond this course/college

**Task**
- What to do
- How to do it (steps to follow, mistakes to avoid)

**Criteria** for success:
- Checklist or rubric in advance so you can self-evaluate
- What excellence looks like (real world examples where you and professor apply those criteria)
6. Students know purpose, tasks, criteria in advance

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.)

Winkelmes, M.A., 2009-2019
Sample Assignments to Discuss
1) Read the assignment and look for:

**Purpose**
- Skills practiced
- Knowledge gained  
  } relevance to students

2) Wave when you locate the purpose.
1) Read the assignment and look for:

**Purpose**
- Skills practiced
- Knowledge gained

(relevance to students)

2) Wave when you locate the purpose.

3) (2 min) Talk to your colleagues: Do you agree?
1) Read the assignment and look for:

**Purpose**
- Skills practiced
- Knowledge gained

} relevance to students

2) Wave when you locate the purpose.

3) (2 min) Talk to your colleagues: Do you agree?

4) Report back
1) Read the assignment and look for:

- How is it different from Sample A?
- How is it similar to Sample A?
1) Read the assignment and look for:
   • How is it different from Sample A?
   • How is it similar to Sample A?

2) Discuss with your colleagues: Do you agree?
Sample C, p. 8

1) Read the assignment and look for:
   • How is it different from Sample A?
   • How is it similar to Sample A?

2) Discuss with your colleagues: Do you agree?

3) Report back
How did we do?

PURPOSE:
• Understand how transparently designed assignments can offer equitable opportunities for all college students to succeed; consider applications

TASKS:
• (me) Review: summary of research findings, cases
• (you) Apply: to sample assignments

CRITERIA:
You leave with
• Understanding of research
• Strategies for applying Transparent Framework to your contexts
PLEASE JOIN US!

TILTHigherEd.com
YOUR ASSIGNMENTS
Sit with a disciplinary stranger

*show of hands:*
Arts and Humanities
Social Sciences
STEM
Workshop Overview

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

Task
• 5 steps, 3-4 min each, in pairs

Criteria
• draft you can use in your course or context (center/office)
• helpful insights from colleagues as novices
Think / Write (3 min) 1 of 6

Think about the purpose of your assignment.

Write your purpose in 1-2 sentences for a student audience (or colleague/mentee/employee audience).
Partners: Share purpose; describe assignments

(2 min each)
Five years after completing the assignment,

1. What essential **knowledge** should students/colleagues retain from doing this assignment?

2. What **skills** should they still be able to perform from this?

3. Why/How are these knowledge/skills important 5 years later?
Revise your purpose statement (for an audience of students or colleagues):

1. Overall summary statement
2. What essential **knowledge** should students/colleagues retain from doing this assignment (5 years later)?
3. What **skills** should they still be able to perform?
4. Why/How are these knowledge/skills important 5 years later?
Share, Offer Feedback on the **TASK**

(2 min each)

• List out loud all the steps you’d take (as a novice) to do your partner’s assignment.
Make Any Final Revisions to Your TASK (1 min)

(1 min each)

Bloom’s taxonomy verbs (p. 2) may help.
What would a novice student or colleague NEED to answer yes:

(3 minutes each)

- Are you confident you are doing the task effectively?
- Are you confident you are doing excellent work?
- Have you discussed multiple good examples of real-world work in this discipline and how they meet/approach the criteria?
Make Any Final Revisions to Your CRITERIA

(2 min each)
How did we do?

PURPOSE:
• Understand how transparently designed assignments can offer equitable opportunities for all college students to succeed; consider applications

TASKS:
• (me) Review: summary of research findings, cases
• (you) Apply: to sample assignments

CRITERIA:
You leave with
• Understanding of research
• Strategies for applying Transparent Framework to your contexts
PLEASE JOIN US!

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