Diverse Perspectives: Analyzing Curriculum Mapping Data for Gaps and Opportunities

Learning Outcomes: Evolution of Assessment

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Session Description and Goals

Description

In this hands-on session we will approach learning outcomes within the context of curriculum review. Using a scenario in which National Survey of Student Engagement (NSSE) data reveal a weakness in 'discussions with diverse others' within a fictitious program, we will show how curriculum review could be used as a process for further inquiry into the issue. Mapping learning outcomes relating to diverse perspectives could provide further insight and identify gaps in the program. Three different charts and graphs will be used in the session as examples of how learning outcomes relating to diverse perspectives might be presented. Participants will analyze them individually and in small groups to discuss possible strategies that would strengthen the program in terms of student learning experiences and assessment.

Goals

By the end of the session, you should be able to:

- Interpret data from three curriculum maps used in the session to identify gaps in the area of diverse perspectives
- Gain strategies for mapping and presenting curriculum data to inform specific questions about a curriculum.

Diverse Perspectives: National Survey of Student Engagement (NSSE) Results

National Survey of Student Engagement (NSSE) Snapshot

In the scenario used in this session, a group is analyzing their NSSE results (2014 version of the survey). The data show a weakness *Discussions with Diverse Others and Reflective* and *Integrative Learning*. Their snapshot appeared as follows:

		Your students compared with University of Calgary	
Theme	**Engagement Indicator**	**First-year**	**Senior**
Academic Challenge	Higher-Order Learning	--	▽
	Reflective & Integrative Learning	▼	▼
	Learning Strategies	--	--
	Quantitative Reasoning	▲	▲
Learning with Peers	Collaborative Learning	--	--
	Discussion with Diverse Others	▼	▼
Experiences with Faculty	Student-Faculty Interaction	--	▽
	Effective Teaching Practices	--	--
Campus Environment	Quality of Interactions	--	--
	Supportive Environment	△	--

Key:
▲ Your students' average was significantly higher ($p < .05$) with an effect size at least 3 in magnitude.
△ Your students' average was significantly higher ($p < .05$) with an effect size less than 3 in magnitude.
-- No statistical difference
▽ Your students' average was significantly lower ($p < .05$) with an effect size less than 3 in magnitude.
▼ Your students' average was significantly lower ($p < .05$) with an effect size at least 3 in magnitude.

(Trustees of Indiana University, 2014)

Questions Relating to Engagement Indicators

Each engagement indicator is comprised of two or more student survey questions. It is possible that a group can score higher on some of the questions than others. Therefore, a program might not be lower than its comparators on all student survey questions. Closer analysis of the data was warranted, so the group examined each question in the category to see if they were low across the board, or if there were specific questions that were weaker than others.

A breakdown of the individual questions within the engagement indicators *Reflective & Integrative Learning* and *Discussions with Diverse Others* revealed:

Engagement Indicator	**Items** **During the school year, about how often have you done the following? (never, sometimes, often, very often)**	**Senior**
Reflective & Integrative Learning	Combined ideas from different courses when completing assignments	--
	Connected your learning to societal problems or issues	--
	Included diverse perspectives (political, religious, racial/ ethnic, gender, etc.) in course discussions or assignments	▼
	Examined the strengths and weaknesses of your own views on a topic or issue	--
	Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	▽
	Learned something that changed the way you understand an issue or concept	▽
	Connected ideas from your courses to your prior experiences and knowledge	▽

Engagement Indicator	**Items** **During the school year, about how often have you had discussions with people from the following groups? (never, sometimes, often, very often)**	**Senior**
Discussions with Diverse Others	People of a race or ethnicity other than your own	--
	People from an economic background other than your own	▼
	People with religious beliefs other than your own	▽
	People with political views other than your own	--

(Trustees of Indiana University, 2014)

NSSE Questions Relating to Diverse Perspectives

All of the questions in the engagement indicator *Discussions with Diverse Others* relate to diverse perspectives, and two questions in the engagement indicator *Reflective & Integrative Learning* relate to diverse perspectives:

- Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments
- Tried to better understand someone else's views by imagining how an issue looks from his or her perspective (Trustees of Indiana University, 2014)

From the previous charts we can determine:

- Results in the two categories were not consistently low for every question. The group did as well as their comparators in some of the questions.
- The questions that the program scored lower on in relation to their comparison group were:
    - Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments
    - Tried to better understand someone else's views by imagining how an issue looks from his or her perspective
    - Discussions with people from an economic background other than your own
    - Discussions with people with religious beliefs other than your own (Trustees of Indiana University, 2014)

Definition of *Diverse Perspectives*

After discussion the group surmised that the issue was broader than the engagement indicator, *Discussions with Diverse Others*. Rather, the program had a weakness in including diverse perspectives as indicated by the two questions in *Reflective & Integrative Learning.* They felt that they could be doing a better job of conveying different ways of looking at an issue and helping students to see that multiple perspectives can strengthen approaches to complex problems. The definition of diverse perspectives they decided to use was:

> The ability to analyze an issue from multiple perspectives and to have discussions with diverse others (including people from a different race or ethnicity, economic background, and people with different religious beliefs or political views).

The NSSE results pointed out a weakness in the program, but did not explain:

- Where in the program the gaps were
- How teaching and learning activities were already being used to incorporate diverse perspectives in the program, and how they were assessed
- How to move forward with improvements to the program

The group therefore decided that conducting a curriculum review could help to clarify the program's weaknesses with respect to diverse perspectives.

Using Curriculum Review to Leverage Understanding of *Diverse Perspectives*

Inquiry Question

From discussions based on the NSSE results, our fictitious group will use the curriculum review process to learn more about how diverse perspectives are already incorporated and generate ideas to increase inclusion of diverse perspectives within the program. They decided to use the following as one of the questions to guide inquiry:

> How do we currently incorporate diverse perspectives into the program? What opportunities exist to increase opportunities for students to learn about diverse perspectives at the program level? What strategies might instructors use to incorporate diverse perspectives into their courses?

Data Collection

Next the group decided what sorts of data to collect that would address their inquiry question about diverse perspectives. Several data sources would be most helpful here in illuminating different aspects of the question, including curriculum mapping, student surveys, a literature review, and an instructor town hall. The following chart summarizes their data collection strategy:

Methods	Rationale	Examples
Curriculum mapping	Curriculum maps will show what is currently being done and where the gaps are.	Include a program-level learning outcome (PLO) on diverse perspectives. Map course outcomes, teaching and learning activities and student assessments to it.
Student survey	Students can relate their experiences with diverse perspectives in the program.	Ask students about their impressions of how diverse perspectives are incorporated in their field of study.
Literature review	A lit review can show how to incorporate diverse perspectives into the program.	Hire a research assistant to investigate how similar programs incorporate diverse perspectives.
Instructor 'town hall' or meeting	Instructors will have ideas for activities to incorporate diverse perspectives and what courses they may be appropriately included in.	Instructors examine the curriculum maps and other results to discuss where and how to incorporate more diverse perspectives into the program.

In the session today, we will be focusing on the results from curriculum mapping.

Mapping Diverse Perspectives

In order to better understand how diverse perspectives were already being incorporated into the program, the group incorporated a couple of questions about it into the curriculum mapping process. The group already had a list of program-level learning outcomes (PLOs):

By the end of the program, students will be expected to:

- **Knowledge of theories and concepts:** Develop a knowledge base of theories and concepts within their primary area of study.
- **Problem solving:** Use different approaches to solving problems using well established ideas and techniques within the discipline.
- **Evaluate information:** Locate and critically evaluate qualitative and quantitative information.
- **Communication:** Formulate and communicate orally and in writing arguments based on information, theories, and concepts.
- **Apply knowledge & skills:** Apply knowledge and skills in a variety of contexts, including situations that are new to the student.
- **Research skills:** Conceptualize, design, and implement research for the generation of new knowledge or understanding within the discipline
- **Ethical understanding:** Demonstrate an ethical understanding of the discipline (Adapted from Council of Ministers of Education, 2007).

They added another PLO specifically to capture information about whether or not each course outcome addressed diverse perspectives in the courses that were being mapped. The additional course outcome was:

- **Diverse perspectives:** By the end of the program, students will be expected to examine an issue or concept from multiple perspectives, including political, religious, racial/ ethnic, gender, and methodological.

Curriculum Mapping Decisions

For the purposes of this workshop, we will assume that the group is mapping course outcomes to PLOs for all required courses in the program. They decided to use an online survey tool to do the mapping.

Example Chart of One Course Mapped to PLOs

PLOs	Knowledge of theories & concepts	Approaches to solving problems	Evaluate qualitative and quantitative info	Communicate orally and in writing	Apply knowledge & skills	Research skills	Ethical understanding	Diverse perspectives
Course: 201								
Course outcome #1	I						I	
Course outcome #2	I	I			I			I
Course outcome #3			I					
Course outcome #4	D				D			D
Course outcome #5	D			I				

Course Outcomes

I = Introduced: Key ideas, concepts or skills related to the learning outcome are introduced and demonstrated at an introductory level. Instruction and learning activities focus on basic knowledge, skills and/or competencies and entry-level complexity.
D = Developing: Learning outcome is reinforced with feedback; students demonstrate the outcome at an increasing level of proficiency. Instruction and learning activities concentrate on enhancing and strengthening existing knowledge and skills, as well as expanding complexity
A = Advanced: Students demonstrate the learning outcome with a high level of independence, expertise and sophistication expected upon graduation. Instructional and learning activities focus on and integrate the use of content or skills in multiple levels of complexity.

Adapted from California State University, Long Beach (n.d.) and Veltri, Webb, Matveev & Zapatero (2011).

Description:

This map is a matrix showing the alignment of course outcomes from one course to program-level learning outcomes. The PLOs are listed across the top. Often they are abbreviated or summarized in a few words, as shown in the example. The course outcomes are listed down the left-hand side, and can also be abbreviated and then listed in full below. The instructor for the course has looked at each of the course outcomes and determined which of the program-level learning outcomes (PLOs) they are associated with. Where there is alignment, the instructor has indicated the level of student learning (Introduced, Developing, Advanced). The resulting map shows the alignment of course outcomes to program-level learning outcomes.

Additional Mapping Information

In addition to mapping course outcomes to PLOs, the group wanted to collect data on how diverse perspectives were being taught and assessed. In addition to the mapping, they asked instructors to complete the following questions:

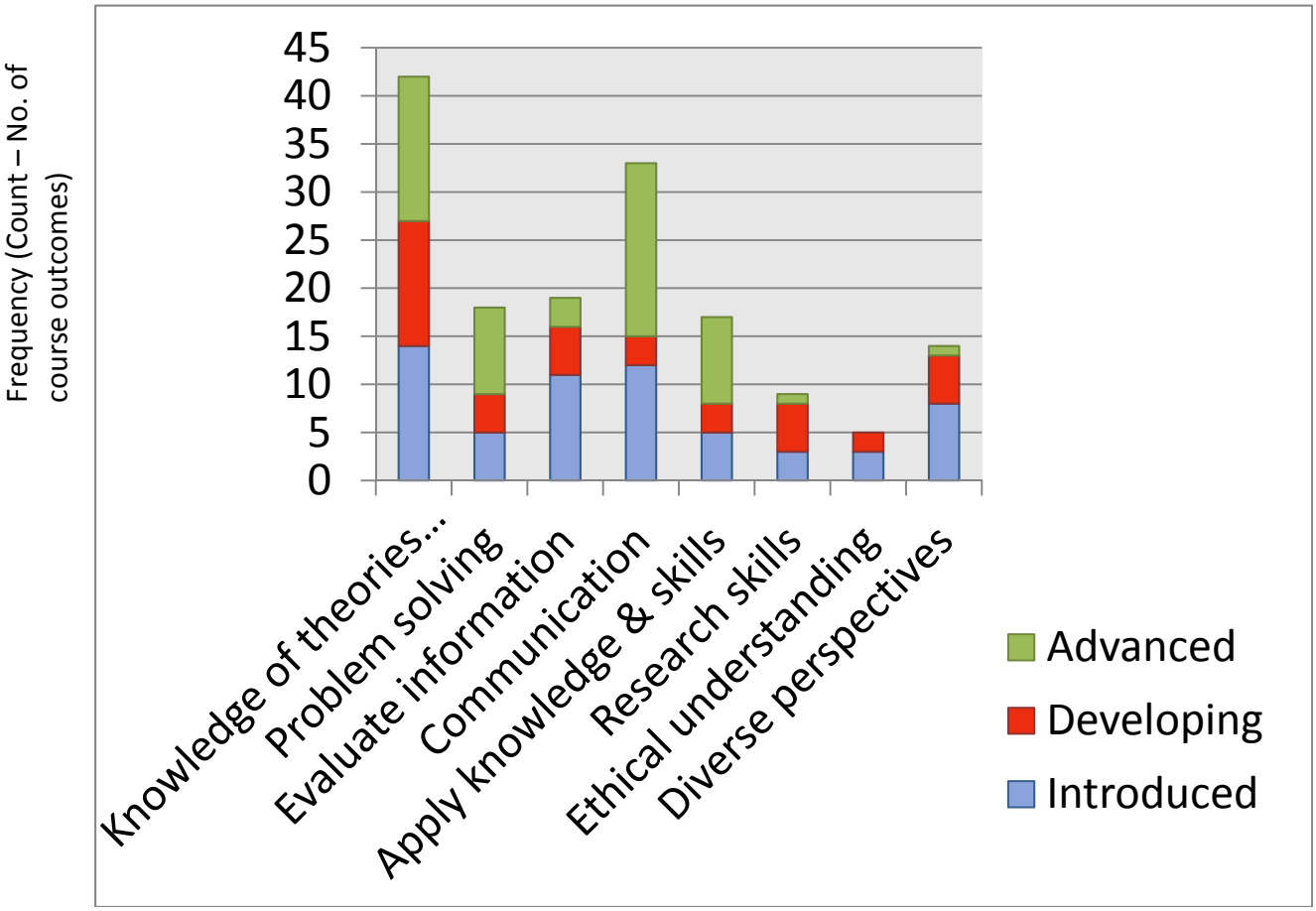
1. What teaching and learning activities do you use in the course to include diverse perspectives? (check all that apply)
    - o Lecture
    - o Discussion
    - o Peer review
    - o Field trip
    - o Readings
    - o Case study
    - o Problem solving
    - o Group project
    - o Writing activities
    - o Debate
    - o Observation
    - o Portfolio
    - o Guest speaker
    - o Reflection
    - o Interviewing
    - o Practicum/ work placement
    - o Service learning
    - o Other (please specify):

2. How do you assess student understanding of diverse perspectives in this course? (check all that apply)
    - o Final exam
    - o Quiz
    - o Project
    - o Essay/ research paper
    - o Discussion
    - o Group project
    - o Debate
    - o Poster
    - o Portfolio
    - o Reflection
    - o Transcript
    - o Practicum/ work placement
    - o Field notes
    - o Authentic assessment
    - o Other (please specify):

3. Please add any additional comments about diverse perspectives in this course (open text box):

Course Outcomes Aligned with Diverse Perspectives

Note: The chart shows the number of course outcomes that relate to each PLO (in required courses), not the number of courses.



Discussion Questions:

1. Which PLOs are being most emphasized? Least emphasized?

2. What are your impressions of the extent to which diverse perspectives are incorporated into the program?

3. What other observations do you have about the data?

Diverse Perspectives in Required Courses

Note: There could be more than one course outcome in a course that relates to each PLO!

COURSE No.	Knowledge of Theories and Concepts	Problem Solving	Evaluate Information	Communication	Apply Knowledge & Skills	Research Skills	Ethical Understanding	Diverse Perspectives
COURSE 101	I		I	I				I
COURSE 103	I	I	I	I	I		I	
COURSE 120	D	I	I	I	I			
COURSE 140	D		I	I				I
COURSE 201	D	A	D	I		I	D	
COURSE 203	I	I	D	I	D			
COURSE 230	No data							
COURSE 240	I	D		D	A			D
COURSE 301	A		I	A		D		
COURSE 330	No data							
COURSE 350	A	A	A	A	A	A		A
COURSE 360	D	D	I	I				D
COURSE 401	A	A		A	A	D		
COURSE 450	A	A	A	A	A			

Mapping Scale:

I = Introduced: Key ideas, concepts or skills related to the learning outcome are introduced and demonstrated at an introductory level. Instruction and learning activities focus on basic knowledge, skills and/or competencies and entry-level complexity.
D = Developing: Learning outcome is reinforced with feedback; students demonstrate the outcome at an increasing level of proficiency. Instruction and learning activities concentrate on enhancing and strengthening existing knowledge and skills, as well as expanding complexity
A = Advanced: Students demonstrate the learning outcome with a high level of independence, expertise and sophistication expected upon graduation. Instructional and learning activities focus on and integrate the use of content or skills in multiple levels of complexity.
Adapted from California State University, Long Beach (n.d.) and Veltri, Webb, Matveev & Zapatero (2011).

Note: For the purposes of this workshop, we will assume that 100-level courses are first-year courses, 200-level are second-year courses, 300-level are third year courses, and 400-level are fourth-year courses.

Description:

This chart has PLOs listed across the top. Required courses in the program are listed down the left-hand side. The most frequently indicated alignment is captured in each cell. For example, in Course 201, course outcomes related to *Knowledge of Theories and Concepts* most frequently at the *Introductory* level. Where course outcomes related equally at two levels (for example, one course outcome aligned at an *Introductory* level and one at a *Developing* level), the higher alignment was indicated on the chart.

Discussion Questions:

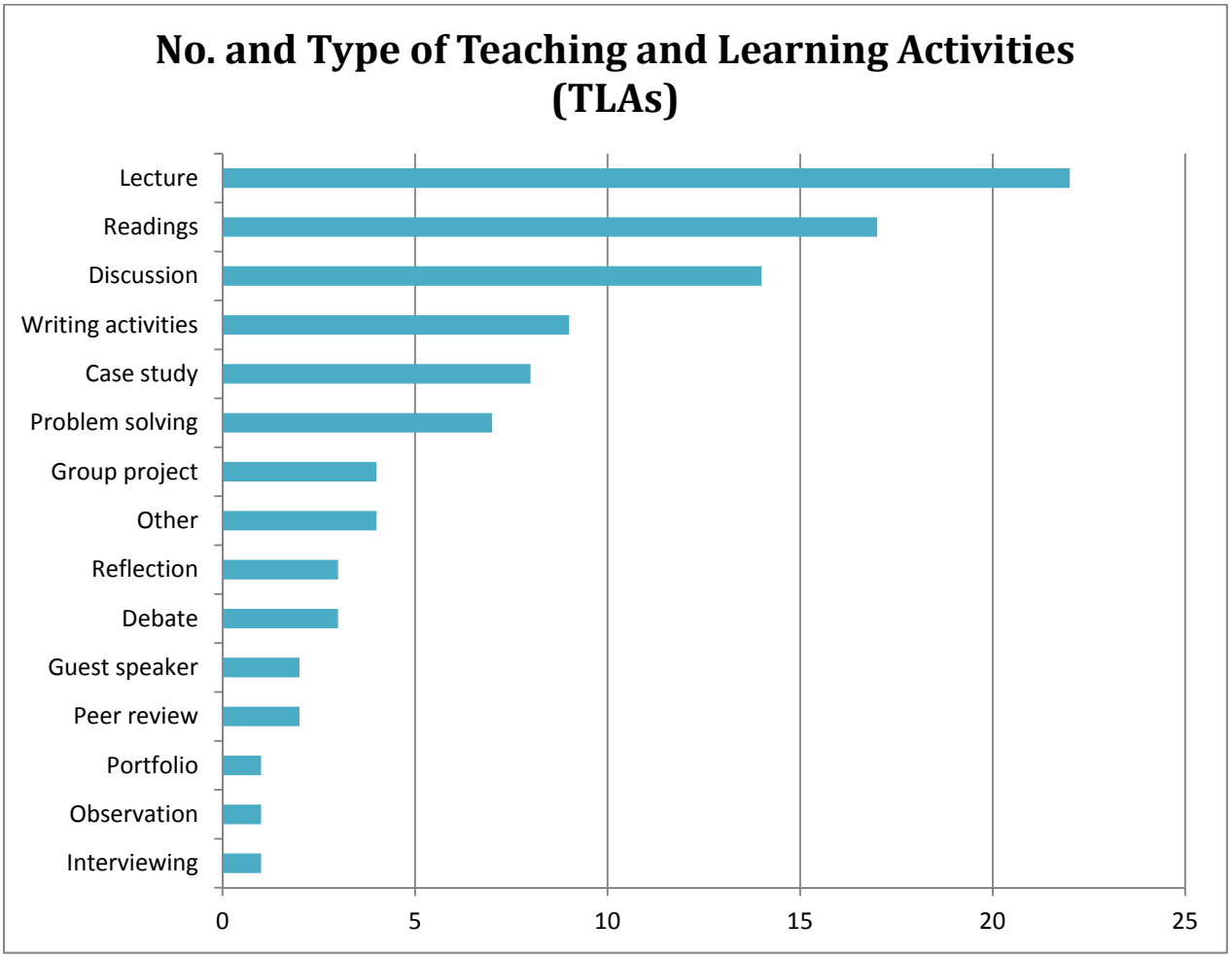
1. What observations do you have about where diverse perspectives are incorporated into the program?

2. What are your impressions of how learning opportunities are sequenced and scaffolded throughout the program in terms of diverse perspectives?

3. If you were going to increase the number of courses that included course outcomes relating to diverse perspectives, how would you work with instructors in the program to address this shift in focus?

Learning Activities and Diverse Perspectives

This chart summarizes the number and types of teaching and learning activities across the program of study in all courses. It shows how learning activities that build understanding of diverse perspectives are incorporated in the program, in broad strokes.



The category *other* includes: minute paper, picture prompt, fishbowl, and perspective inventory.

Discussion Questions:

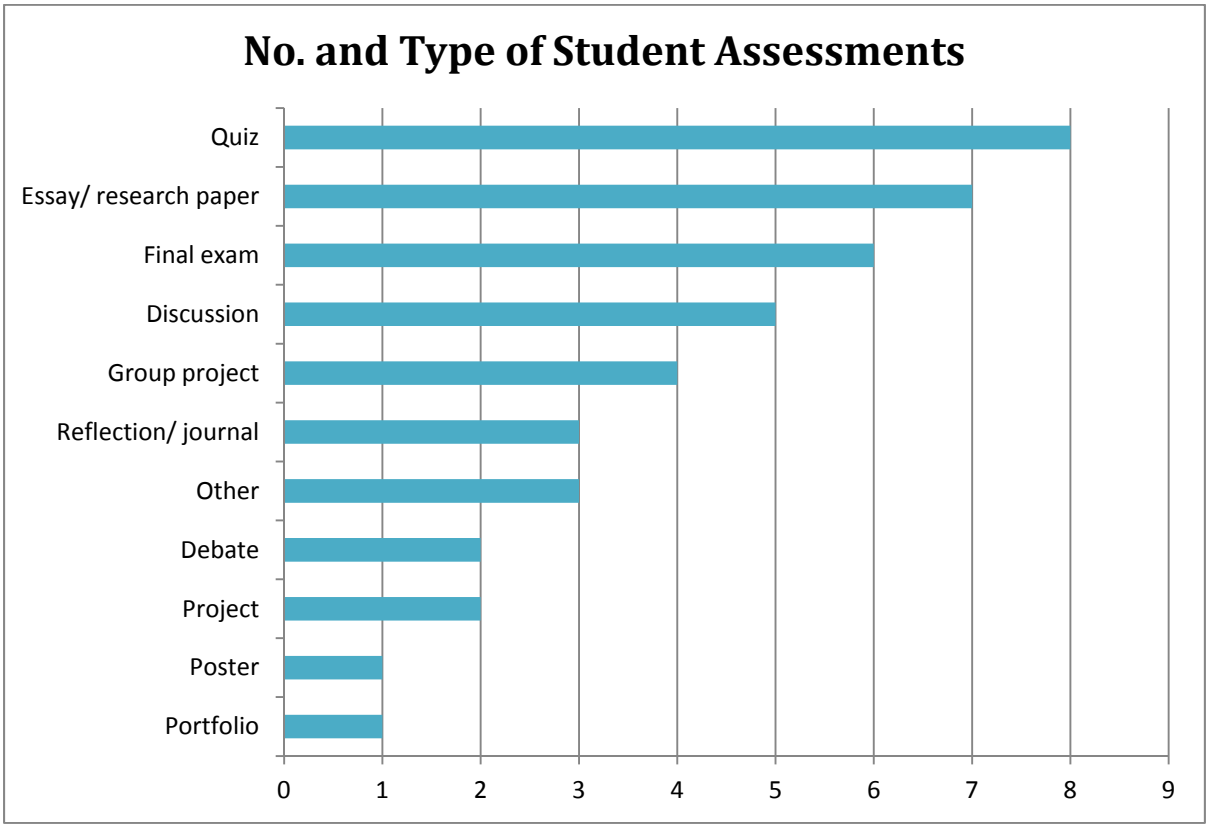
1. What general trends do you see in the data?

2. What TLAs might be added to enhance student understanding of *diverse perspectives*?

3. How might this group improve the alignment between teaching and learning activities and student understanding of *diverse perspectives*?

Student Assessment and Diverse Perspectives

This chart summarizes the number and types of student assessments across the program of study in all courses.



The category *other* includes: oral exam, digital assignment – video, photo essay.

Discussion Questions:

1. What general trends do you see in the data?

2. What student assessments might be added to enhance and evaluate student understanding of *diverse perspectives*?

3. How might you approach a discussion with instructors on this chart? What questions might you ask? What strategies do you have to keep the discussion productive, focused and positive?

Action Planning

Based on the data and discussions you have had in the session, what strategies would you suggest to improve the program with the goal of strengthening student learning experiences in the category of *diverse perspectives*?

Recommendation	Action Item
Example: Increase emphasis on the PLO diverse perspectives at the advanced level	**Examples:** • Incorporate at least one course outcome that relates to diverse perspectives into 401. • Add an interview assignment into 401.

Debrief

What ideas from this workshop would you like to implement in your own practice?

Notes

Thank you for your participation today!

References

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