

Turning Good Intentions into Good Teaching: Five Common Principles for Inclusive Pedagogy

1. Instructor Awareness of Epistemology

Nueman (2011) speaks to the definition of epistemology as, “how we know the world around us or what makes a claim about it true. How we can learn about or know the world is rooted in our ontological assumptions. Epistemology includes what we need to do to produce knowledge” (p. 93). Particularly in the field of social sciences, fields that study society, social issues and relationships, it is pertinent to be not only aware, but responsive to “our ways of knowing.” Lattuca and Stark (2009) indicate that, “the social sciences [are] more loosely connected structures of concepts, principles, and relationships (p. 91). There are multiple “ways of knowing,” “multiple levels of reality” and that “reality is experienced through subjective cultural and inner-subjectivity” (Nueman, 2011). Our ways of knowing, consciously and unconsciously affect our pedagogy, teaching disposition, learning objectives, and the way view ourselves and others, particularly our students.

2. Inquiry and Integrated Based Instruction

Content is integrated throughout the comprehensive course curriculum (Marginson et al., 2013). In classrooms where this type of pedagogy is used, students are expected to: engage with broad question; evaluate evidence and artifacts to answer broad question; compare alternative explanations; and communicate their findings to peers (Crippen & Archambault, 2012). As a result, qualitative and quantitative data collection methods are integrated into coursework, which allows students to participate more actively in STEM spaces (Rosser, 1993). Utilizing this type of instruction also helps move STEM discourse away from being dualistic and hierarchical to becoming multi-causal and interdependent, a shift helps all students think more critically about the structures and systems they are studying (Rosser, 1993).

3. Acknowledgment of the value and necessity of diverse knowledge systems

Each student contains rich cultural and cognitive resources and that these resources can and should be used in their classroom in order to provide culturally responsive and meaningful lessons that tap students’ prior knowledge (González, Moll & Amanti, 2005). When we come across a perception of some students (e.g. international students, students of color, students with disability, etc.) as inferior in linguistic and academic terms, one way to counter such prejudice is to demonstrate in research and in classroom (e.g. by including reading materials and cases from diverse authors and cultures) that they are competent learners who may add valuable individual experiences and perspectives to a common pool of knowledge (Tange & Kastberg, 2013).

4. Incorporation of Student Choice

Our motivation to learn is directed by what we value, our goals, and our personal expectations for success (Ambrose, et. al., 2010). Allowing students choice in their learning (deciding the topic of an assignment, choosing among a variety of assignments, deciding which methods to use to achieve a learning outcome, etc.) makes learning experiences more relevant and meaningful. Motivation is enhanced when students feel they can be effective in learning something that they personally value (Ginsberg & Wlodkowski, 2009). Universal design principles also stress the benefits of providing options for how students communicate and represent learning (CAST, 2011).

5. Benefiting from Formative Feedback

Formative feedback (used for the purpose of improvement) can occur in terms of both student learning and instructor teaching practice. Providing multiple opportunities for formative feedback allows students to learn underlying structures and better develop mastery. Formative assessment has long been noted to be one of the most influential aspects on learning, (Black & Wiliam, 1998). Formative feedback is most useful to students when it is specific, targeted, and timely (Ambrose, et. al., 2010). Finally, information gained from students acts as feedback to the teacher about instruction and his/her epistemology, bringing us full circle.

***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

REFERENCES

Ambrose, S.A., Bridges M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How Learning Works: Seven Research-Based Principles for Smart Teaching*. San Francisco: Jossey-Bass

Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education* 5(1), 7-74.

CAST (2011). *Universal Design for Learning Guidelines version 2.0*. Wakefield, MA: Author.

Crippen, K. J., & Archambault, L. (2012). Scaffolded inquiry-based instruction with technology: A signature pedagogy for STEM education. *Computers in the Schools*, 29(1-2), 157-173.

Ginsberg, M. B., and R. J. Wlodkowski. (2009). *Diversity and motivation: Culturally responsive teaching in college*. 2nd ed. San Francisco: Jossey-Bass.

González, N., Moll, L. C., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Mahwah, N.J: L. Erlbaum Associates.

Lattuca, L. R., & Stark, J. S. (1997). *Shaping the college curriculum: Academic plans in action*.

Marginson, S., Tytler, R., Freeman, B., & Roberts, K. (2013). *STEM: country comparisons: international comparisons of science, technology, engineering and mathematics (STEM) education. Final report*: Australian Council of Learned Academies.

Neuman, W. L. (2011). *Social research methods: Quantitative and qualitative approaches* (Vol. 13). Boston: Allyn and Bacon.

Rosser, S. V. (1993). Female friendly science: Including women in curricular content and pedagogy in science. *The Journal of General Education*, 191-220.

Salazar, M., Stone Norton, A. & Tuitt, F. (2010). Weaving promising practices for inclusive excellence into higher education classrooms. *To Improve the Academy*, 28, 208-226.

Tange, H & Kastberg, P. (2013). Coming to terms with 'double knowing': an inclusive approach to international education. *International Journal of Inclusive Education*. 17(1). 1-14.

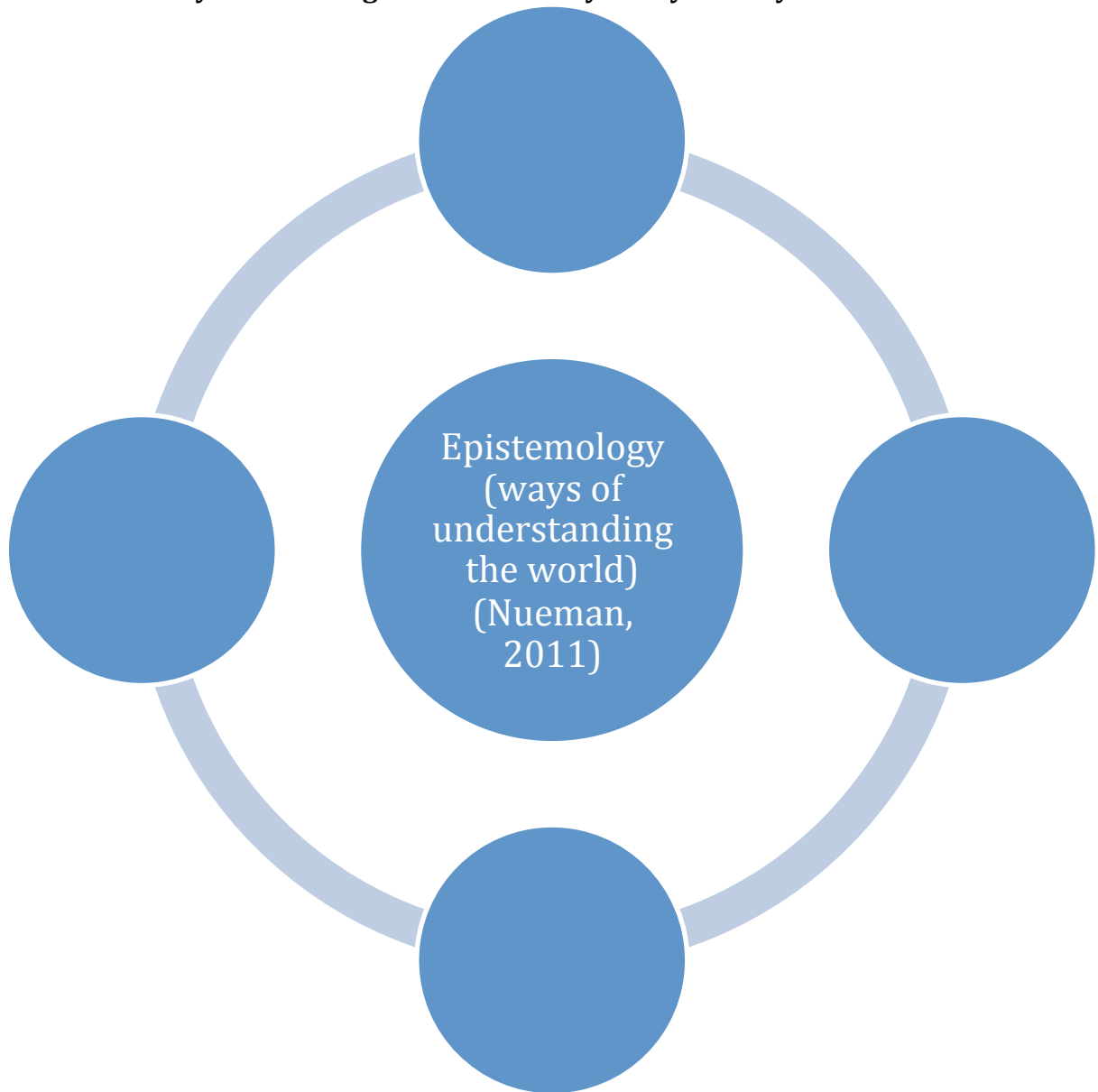
***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

Principle	Why is this important?	Ideas for incorporating this principle
Instructor awareness of epistemology		
Inquiry and integrated based instruction		
Acknowledgment of the value and necessity of diverse knowledge systems		
Incorporation of student choice		
Benefiting from formative feedback		

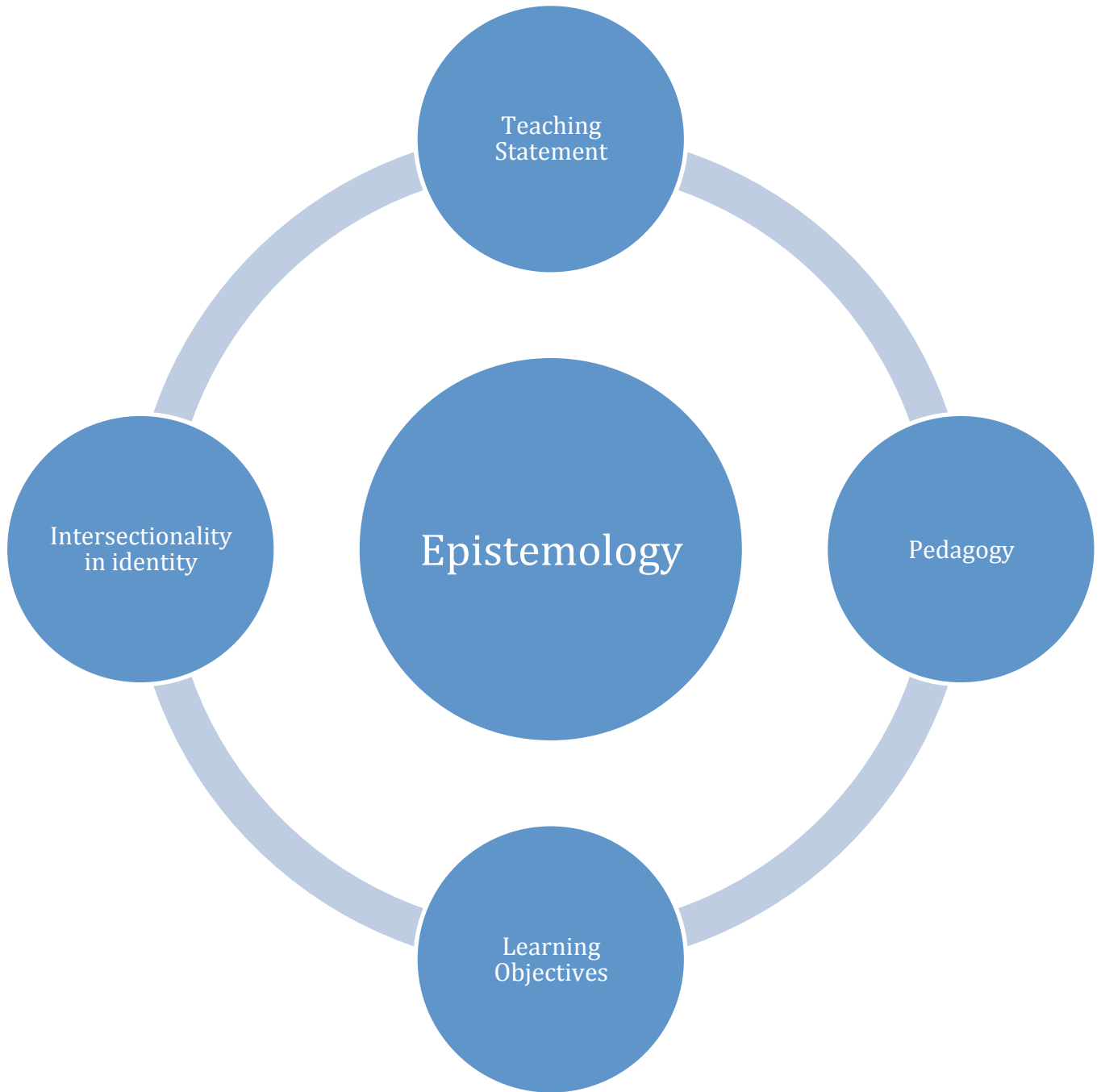
*Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy*

Prompt:

Teachers: How has your teaching been affected by how you see yourself and the world?



***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***



***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

**Scenario 1
Frank and Classmates**

Frank entered his chemistry lecture with his ASL (American Sign Language) interpreter, Jane. Frank was a bright undergraduate student, but was frustrated by his lack of communication with other students. Today, Professor Reilly announced that the first group to solve the challenge problem would get 5 points of extra credit added to their midterm scores. The classmates seated around Frank quickly turned to each other and discussed ways to solve the problem, ignoring Frank.

Jane, who didn't know the signs for acetylene or poly(acetylene), began spelling out the names of the polymers. In frustration, Frank walked back to his seat and opened his own textbook. He took out a pen and paper, and looked closely at the textbook description and worked through the problem on his own. The solution became obvious. As Frank and Jane walked back to the group, there was a commotion at the front of the lecture hall. Another group had won.

In the future, what could Professor Reilly do to incorporate the principles of inclusive pedagogy in her classroom?

**Scenario 2
Josiah in Curriculum Instruction and Counseling Psychology**

Josiah, an African American graduate student in a Counseling Psychology program, is excited to step out of his comfort zone and take a course in a Curriculum and Instruction (C&I) department. He has classes back to back in order to accommodate his personal and professional obligations outside of school. He is happy to discover that the C&I classroom is very diverse, not just in demographics, but also in mindsets.

The professor for this C&I course is an educator of color who has a critical pedagogical lens. In this particular class, Josiah is very talkative and eager to share his experiences with colleagues. Another one of Josiah's courses, however, is not as diverse: it consists of primarily White women, one Asian student, and him. The professor in this class discussed an intelligence instrument that is supposed to assess the intellect of a child during a counseling session. One of Josiah's classmates suggests that it is an instrument that helps to diagnose ADHD. The professor agrees and begins to read questions from a sheet of paper. As the professor reads each question, he also states the grade level that these questions correspond to. After he finishes reading these questions, he asks the class to see who knew the answers to these questions.

While the professor is talking, Josiah has become disengaged and starts to remember his miseducative experiences from his time as a student in public K-12 education because he was misdiagnosed with ADHD.

What are some ways to improve this instructional experience using principles of inclusive pedagogy?

***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

Scenario 3

“Contemporary Issues in American Politics”

Professor Chin teaches an undergraduate Political Science course to 40 students titled “Contemporary Issues in American Politics.” Many of the topics taught in this class are sensitive in nature, and include: immigration reform, gun control, healthcare, etc.. Among other content and theoretical knowledge learning goals, he wants his students to explore how personal experiences and situations influence a person's views on larger political issues.

He explains, “I want them to acknowledge other perspectives and think more deeply, and possibly differently, about these issues.”

Professor Chin lectures about these topics, and often brings in his own points of view or the views of other scholars on the topic that he knows. Students are also given periodic assignments to allow them show an understanding of the issues. However, he is constantly frustrated that students don't seem to change their views during his class.

What could Professor Chin do better incorporate the principles of inclusive pedagogy in his class? In what ways might those changes make a difference?

Scenario 4

Dr. Stephen's Statistics Lecture

Dr. Stephen's is an associate professor at an institution where she has spent many years. One of her courses, Introductory Statistics, is a required class for most natural science and mathematics majors in her department. Mohammed, an international student from Indonesia, is in this required course. A gifted student, Mohammed is enrolled at the institution with the support of a full academic scholarship from his home government. Like many other Chemistry majors, he is taking Dr. Stephen's course with some trepidation and anxiety.

During the second week of class, Dr. Stephens teaches the class about probability sampling. In previous years, she has found that the easiest way to help students grasp the dense material is by utilizing examples from student's “everyday lives.” So, when Dr. Stephens presents students with an example problem about probability, she references the proportion in a deck of cards. While listening, Mohammed is confused by the terms she utilizes in this context, like “spade” and “queen.”

“Why are cards named queen?” he wonders to himself.

After class, Mohammed looks up the different types of cards in a standard deck, including the suits and different colors. While preparing for the midterm exam for Dr. Stephen's class, he spends a significant amount of time quizzing himself on the different card types in a deck.

Was this the best use of Mohammed's time? What could have Dr. Stephen done differently to make sure that Mohammed understood the underlying concepts about probability?

***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

Scenario 5

A Political Science Undergraduate Classroom

It is an undergraduate student's first semester in college, and she has decided to double major in Political Science and Criminology. One of her courses is a public policy class. The course takes place in a lecture hall setting, in which students look at the back of each other's heads and can sit as far up in the seats as they'd like or as close to the front as they'd like. This is the third time that the professor and students have met for class.

The assigned readings for today's discussion were concerning affirmative action. Because class was lecture room style and discussion based, students could freely pose questions and/or statements as a part of the discourse of the day. One student, a White male, raises his hand and says that he disagrees with affirmative action because the purpose of it is to help people who don't work hard. Another student expresses that his dad is a lawyer, and that he has worked with a lot of people who do not work hard yet expect the same career success as him.

There are a handful of students of color in the classroom, but they have not spoken yet.

Another student says that affirmative action is negatively impacting students who deserve to go to college because their slots are being taken by students who didn't work hard to go to college.

Finally, one student of color speaks up and says that her classmates are speaking based on assumptions. At this point, the instructor pauses the discussion and takes a poll of the classroom to see who agrees with the student of color or the White voices. Most of the students raised their hand in agreement with the White students. The professor then states that the class discussion is reflective of the game of politics and public policy.

In what ways has the professor demonstrated (or failed to demonstrate) the principles of inclusive pedagogy?

Scenario 6

Students' Worldviews in Psychology Class

Let's say you are teaching an introduction to Psychology course. One of your course objectives is for students to "become familiar with the theories concerning human behavior in a social context." In order to accomplish this, you hope to create an activity for students that asks them to apply theories about human behavior to their own lives, rather than just reading about them in the course readings. You notice that you have an ethnically diverse classroom, and you want to recognize the different worldviews and life experiences of students. At the same time, you are concerned about singling students out.

What are some ways you could create and structure an activity that would be in line with the principles of inclusive pedagogy?

***Turning Good Intentions into Good Teaching:
Five Common Principles for Inclusive Pedagogy***

**Scenario 7
Hewan and Jay in Microbiology Lab**

Jay, a PhD student and graduate teaching assistant, is the principal instructor for a section of Medical Microbiology lab. Jay has been teaching this lab since his very first year of graduate school, and feels like he has mastered the content and found ways to build rapport with students. This week in lab, students are expected to inoculate Petri dishes with harmless bacteria and leave them in the incubator for a week. The following week, students will remove their dishes from the incubator and interpret the growth they see on the surface of the agar.

One of Jay's students, Hewan, is a second-generation immigrant from Somalia. Hewan was born and raised in the suburbs of Littleton, Colorado. While she has not gone to Somalia recently, she and the rest of her immediate family made trips to Mogadishu every summer while she was still in high school. She hopes to study abroad in Kenya during her junior year of college. Hewan also plans on applying to medical school, and anticipates doing her 4th year medical rotations in developing nations.

While providing instructions and an overview of aseptic technique, Jay makes a remark that students should be careful but not too anxious about handling the bacteria because "this isn't Africa, so no one is going to die from an infection." As soon as Jay makes this comment, Hewan's lab partner and roommate glances towards her and gauges the discomfort and hurt on Hewan's face.

What are some ways to improve this instructional experience using principles of inclusive pedagogy?

**Scenario 8
Mike Ross' Strategic Management Classroom**

Mike Ross always rolls up his sleeves when he enters his business strategy classroom. A highly motivated and active professor in his late thirties, Mike is committed to improving the educational experience of the next generation. Mike is teaching Strategic Management this quarter, and he enjoys involving his students in engaging activities, such as discussions of real-world applications and ethical and environmental issues in this internationalized economy. His teaching is founded on principles of collaborative learning, and he is a firm believer that technology can be very disruptive to classroom interaction. Consequently, he minimizes PowerPoint use and discourages students from laptops during his class.

One student in his class, who had recently come to the United States for undergraduate studies, seemed particularly reserved and even uncomfortable. This student has refrained from participating in group discussions. Mike is a little concerned about the issue, but has not yet talked with the student. Halfway through this quarter, Mike gives his students the first big project: an individual assignment to develop a strategic marketing plan for a corporation. Many students begin to generate ideas immediately, and mention companies like Dawn (P&G) and Domino's. After class, the international student (who did not talk during group discussions) approaches Mike cautiously as Mike is gathering up his books. Addressing Mike formally, the student says, "Professor Ross, I am sorry but can you explain the project again?"

What are some ways to improve this instructional experience using principles of inclusive pedagogy?