HANOVER RESEARCH

BEST PRACTICES ANALYSIS

Transparent and Inclusive Teaching

February 2023

In the following report, Hanover Research presents the results of a best practices analysis of transparent and inclusive teaching methods in higher education, primarily focusing on the Transparency in Learning and Teaching (TILT) project.

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EXECUTIVE SUMMARY

RECOMMENDATIONS

Based on an analysis of trends and best practices in transparent and inclusive teaching, Hanover recommends that the institution:

Select a sample of four to five instructors and courses to implement TILT methods.

Overall, the Transparency in Learning and Teaching (TILT) project methods have proved successful across a range of institutions that vary in size, Carnegie classification, and other institutional characteristics. Notably, research reports these methods have achieved the most success among underserved and non-traditional student populations. As a first step, the institution should pilot TILT methods in a small but varied set of courses to determine the extent to which these methods lead to more successful outcomes for its students. Institutions that have implemented TILT note that these methods were difficult to implement in some courses; as such, this pilot could help determine which courses are suitable to TILT methods. In addition, selected courses should represent a range of disciplines, satisfy general education requirements, and be at an introductory- to mid-level. Finally, the institution may consider formally participating in the TILT project, as this is ongoing research that institutions can voluntarily engage in.

Ensure there are resources and training that support the implementation of new teaching methods across the institution.

Regardless of which teaching methods the institution adopts, it should ensure there is a centralized hub of information through which faculty and staff can access resources and training on newly adopted methods. Similar to Cal State LA, it could develop assignment templates that use transparent methods, in addition to providing ongoing workshops that support faculty and staff as they transition to new methods.

KEY FINDINGS

According to the TILT project, a transparent assignment should outline the assignment's purpose, task, and criteria. Before distributing an assignment, instructors should address what skills and knowledge students should practice in the assignment, what tasks they are expected to do and how to do those tasks, and finally, the expected outcomes of the assignment with examples of exemplary work.

TILT methods have been proven to lead to more successful student outcomes, with the greatest benefits for first-generation, low-income, and underrepresented students, according to research conducted on TILT methods implemented at seven varying institutions. As a result of using TILT methods, participating institutions reported higher retention rates, increases in students' motivation in class, and gains in three areas that are important predictors of student success: academic confidence, sense of belonging, and mastery of skills that employers value. These gains are particularly important to supporting non-traditional students, who may feel that their experiences are not welcomed in the classroom.

Central tenets for teaching adult learners prioritize transparency and inclusivity in the classroom. Classroom experiences should focus on lifelong learning and how skills and strategies will apply to students in their careers. When teaching adult learners, instructors should consider the learners' need to know, self-concept, prior experience, readiness to learn, orientation to learning, and motivation to learn.

Teaching approaches that cater to non-traditional students include active learning, constructivism, concept-based learning, and team-based learning. See pages 15-16 for more information on these approaches. These teaching approaches may translate to instructional techniques such as the use of case studies and debates in class and assigning students pre-assessments to better understand their prior experiences and knowledge.

RESEARCH QUESTIONS AND METHODOLOGY

METHODOLOGY

To assist the institution as it seeks to incorporate pedagogical techniques that lead to increased student retention and graduation rates, Hanover conducted an analysis of trends and best practices in inclusive and transparent teaching methods. Specifically, the research aims to provide insight on transparent methods that support diverse and non-traditional students, especially adult learners. One of the tools available to higher education institutions is the Transparency in Learning and Teaching (TILT) project. The institution is interested in learning more about this and other related methods to create a more inclusive and transparent educational environment for its students.

The following analysis is based on a review of academic research published by TILT Higher Ed researchers, as well as research published in related academic journals.

RESEARCH QUESTIONS

- What trends exist in inclusive and transparent teaching in higher education?
- What strategies should the institution consider or leverage when adopting an inclusive/transparent teaching program?

SUMMARY: TILT AND OTHER TRANSPARENT TEACHING METHODS

SUMMARY

The Transparency in Learning and Teaching (TILT) project appears to be the most widely used teaching model among higher education institutions that is renowned for inclusive and transparent teaching. There are several other instructional approaches that cater to non-traditional learners and that emphasize inclusive and transparent teaching, though these are not explicitly branded as such in the literature. **In considering how to apply this research to its own transparent and inclusive teaching endeavors, the institution might prioritize the research's suggestions as outlined below.**

1. First, recruit a small group of instructors that are academically diverse and representative of the institution to implement TILT methods in their courses, and track how student progress and outcomes might differ across course types.

2. Develop and provide assignment templates, workshops, and resources that use TILT methods. Then, these resources can be used by instructors across the institution.

3. Provide training on other transparent teaching approaches and techniques that specifically cater to non-traditional students. As these are wide-ranging, instructors can then choose which approaches and techniques will best fit their courses.

TILT METHODS: TRENDS AND CASE STUDIES

THE TRANSPARENCY IN LEARNING AND TEACHING (TILT) PROJECT

OVERVIEW

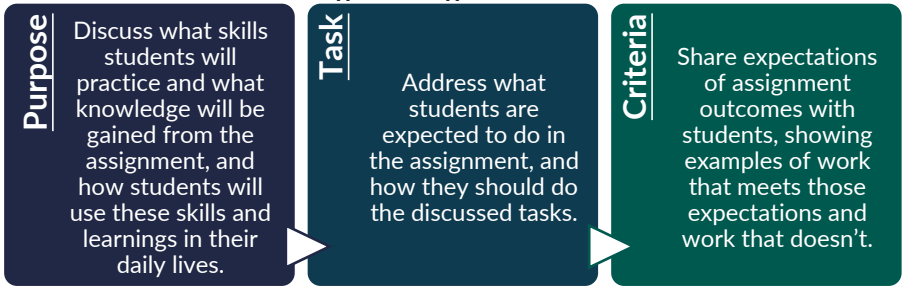
The Transparency in Learning and Teaching (TILT) project, first developed in 2009, "...aims to advance equitable teaching and learning practices that reduce systemic inequities in higher education through two main activities:

1. Promoting students' conscious understanding of how they learn
2. Enabling faculty to gather, share and promptly benefit from current data about students' learning by coordinating their efforts across disciplines, institutions and countries."

TILT is an ongoing research project that faculty can voluntarily join at any time by signing up online. The project's main activities include:

- **workshops** for faculty and students that promote student's conscious understanding of how they learn
- **online surveys** through which faculty collect and share current data about students' learning, coordinating their efforts across disciplines, institutions, and countries
- confidential **reporting of survey results** to faculty
- **collaborative research** on students' learning experiences

A transparent assignment outlines three aspects that faculty discuss with students before distributing the assignment:



TILT TRANSPARENT TEACHING METHODS

TILT maintains a living repository of its transparent teaching methods, which faculty adapt frequently to improve teaching practices. **Faculty participants usually employ one option from the list of seven methods (listed below), and students indicate the extent to which this small change impacted their learning** when they complete an online survey at the end of the course.

1. Discuss assignments' learning goals and design rationale before students begin each assignment
2. Invite students to participate in class planning and agenda construction
3. Gauge students' understanding of class via peer work on questions that require students to apply course concepts
4. Explicitly connect "how people learn" data with course activities when students struggle at difficult transition points
5. Engage students in applying the grading criteria that you'll use on their work
6. Debrief graded tests and assignments in class
7. Offer running commentary on class discussions, to indicate what modes of thought are in use

Source: Content summarized from TILT Higher Ed

OUTCOMES OF USING TILT METHODS

ANALYSIS

Research on the effects of implementing TILT methods suggest successful outcomes. In a sample of 1,800 students, 35 faculty, and seven participating institutions, researchers (Winkelmes et al., 2016) explored the extent to which TILT methods contribute to student success and persistence. Participating faculty were trained on how to make two take-home assignments in a course more transparent and problem-centered, and students in both the control (non-transparent methods) and experimental (transparent methods) groups were surveyed on their experiences. **Overall, the benefits for students in the experimental group were statistically significant, and the benefits were even larger for first-generation, low-income, and underrepresented students. Outcomes include:**

Transparent teaching about problem-centered learning can be an easily replicable teaching intervention that produces learning benefits linked to student success. Retention rates in transparent-taught course were higher than in the control group.

Specifically, students who received more transparency reported gains in three areas that are important predictors of students' success: **academic confidence, sense of belonging, and mastery of the skills that employers value most when hiring.**

Transparent teaching can result in **significant benefits for first-generation, low-income, and underrepresented students.**

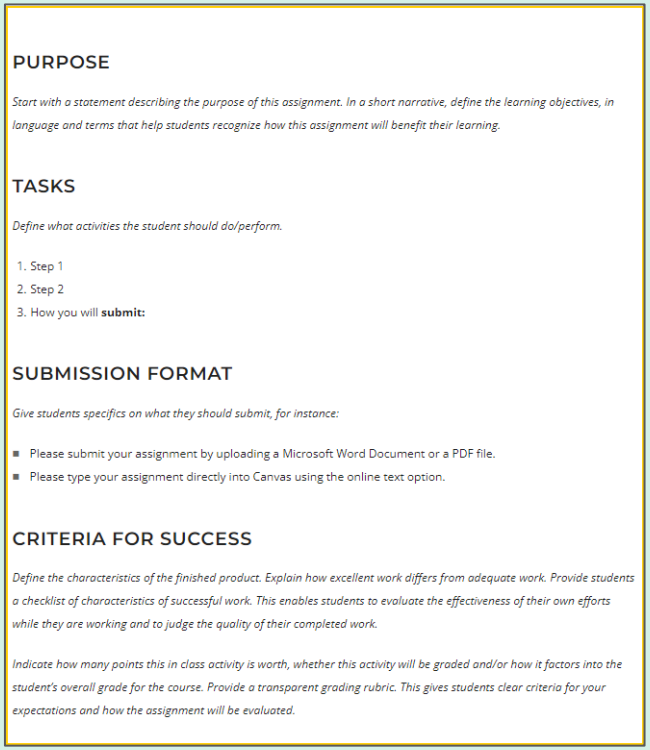
Faculty noticed **increases in students' motivation** in class, higher-level class discussions with sharper focus, more on-time completion of assignments, and fewer disputes about grades.

Source: Content summarized from Winkelmes et al. (2016)

SPOTLIGHT: TILT AT CAL STATE LA

The Center for Effective Teaching and Learning (CETL) at California State University Los Angeles (Cal State LA) was one of seven participants in the Winkelmes et al. (2016) study. Currently, CETL offers several TILT-style templates to faculty that utilize the TILT assignment framework (see below). These templates are offered in both Microsoft Word and Canvas. In addition, CETL offers a Transparent Design Workshop to faculty. **If the institution seeks to promote TILT methods, it should offer similar resources to faculty to ensure these methods are easy to implement.**

TILT Assignment Template at Cal State LA



PURPOSE

Start with a statement describing the purpose of this assignment. In a short narrative, define the learning objectives, in language and terms that help students recognize how this assignment will benefit their learning.

TASKS

Define what activities the student should do/perform.

1. Step 1
2. Step 2
3. How you will **submit:**

SUBMISSION FORMAT

Give students specifics on what they should submit, for instance:

- Please submit your assignment by uploading a Microsoft Word Document or a PDF file.
- Please type your assignment directly into Canvas using the online text option.

CRITERIA FOR SUCCESS

Define the characteristics of the finished product. Explain how excellent work differs from adequate work. Provide students a checklist of characteristics of successful work. This enables students to evaluate the effectiveness of their own efforts while they are working and to judge the quality of their completed work.

Indicate how many points this in class activity is worth, whether this activity will be graded and/or how it factors into the student's overall grade for the course. Provide a transparent grading rubric. This gives students clear criteria for your expectations and how the assignment will be evaluated.

Source: Cal State LA

CASE STUDY: ST. EDWARD'S UNIVERSITY

ANALYSIS

St. Edward's University (SEU) participated in the TILT project in the 2014-2015 academic year. SEU's goal was to examine how faculty intentionality and transparency affects student learning in a problem-centered environment. Faculty participants redesigned assignments to include problem-based components and applied greater transparency to intervention sections of courses. Instructors were chosen to reflect a variety of disciplines, and the courses involved were introductory to mid-level and satisfied general education requirements at SEU.

ASSIGNMENT REDESIGN

Each instructor redesigned two assignments to reflect problem-based learning and transparency. A common issue shared among instructors was a lack of existing practical models to redesign based on their unique courses and disciplines; thus, the team deliberately shared adaptations that were specific to the courses involved. See page nine for examples of how assignments were redesigned in participating courses.

COURSE INTERVENTION

Instructors conducted one intervention course with heightened intentionality and transparency. While many instructors were able to use the same or similar transparency-based approaches shared by the TILT project, some courses required instructors to adapt some of these practices. Shared practices among participating instructors include:

- Practice of providing detailed assignment instructions and rubrics for grading.
- Adoption of peer review and self-evaluation with the opportunity for revision.
- Increased informal feedback and check-ins for progress before assignments were due.
- Circulation of exemplary work as models. One instructor also included an annotated example offering comments on why the work was exemplary.

Source: Content summarized from Musselman et al. (2016)

CHALLENGES AND BENEFITS OF IMPLEMENTING TILT

CHALLENGES

Many instructors struggled with getting started due a lack of assignment examples specific to their discipline.

Developing problem-based assignments that did not conflict with or come at the expense of other existing course outcomes sometimes proved challenging.

For some instructors, it was difficult to translate rubrics to their fields in cases where the organization of their course did not lend itself to every aspect of the rubric. This was particularly true for courses in which individual assignments were components of a larger assignment.

BENEFITS

The primary benefit of implementing TILT methods was instructors' heighted sense of awareness in the process of assignment and course design. While some instructors already had existing transparency practices, many participants found the new interventions to be helpful for increasing course transparency.

CASE STUDY: ST. EDWARD'S UNIVERSITY

ASSIGNMENT AND COURSE REDESIGN USING TILT METHODS BY PARTICIPATING COURSE

Course	Course Description	Course and Assignment Redesign using TILT
Literature and Human Experience	Introductory-level literature course that focuses on racially and culturally diverse writers of texts of multiple genres.	1. In the first week of the redesigned course, students selected "threads" of American identity upon which the course would focus for the semester. The instructor adapted readings and discussion prompts to address these threads. For the first assignment, students examined how a historic literary text engaged with a social problem from either the text's own time period or in contemporary society. 2. Students were asked to take a stand on contemporary debates related to the literature.
American Dilemmas	Interdisciplinary sophomore-level course that uses social science concepts and methodologies to analyze social problems in the United States	1. Students were asked to select a contemporary social problem and analyze it over the course of the semester in the form of two research papers. In previous iterations of the class, students chose their research paper topic from a predetermined list of social problems provided by the instructor. 2. In previous semesters, students presented arguments for and against a specific policy solution, but this time, students were encouraged to generate a variety of possible policy alternatives.
Understanding and Appreciating the Arts	Introductory-level arts course in which instructors focus on one art form but provide a brief introduction to two other art forms.	1. Assignments were approached as problems to solve. E.g., one assignment required student partners to create and perform a scene using the nine acting ingredients. This was framed as the problem of "how to create a good scenario." The assignment also included a "strategies" section, asking students to consider where to find information to achieve this. The students then had to generate three potential solutions (or scenarios) and evaluate strengths and weaknesses.
Ethics	Covers major ethical theories, principles, and strategies and examines a number of contemporary issues.	1. Students were asked to consider how an ethical principle or policy applies to the resolution of a problem. Specifically, the assignments required students to anticipate real world challenges in resolving the problem and to minimize the unworkable or impractical aspects of implementing the policy.
Mathematics for the Liberal Arts-	Course on general quantitative literacy with an aim to develop the ability to recognize, appreciate, and confidently participate in the mathematics of daily life.	1. Essay portion was modified to ask students to suggest solutions to hypothetical problem scenarios. E.g., one asked to student to act as life consultants, and determine an optimal city to which the client could move based on parameters important to the client. 2. In the other assignment, students were directed to suggest approaches to the problem of gender inequality in a particular country using a bank of statistical information about gender policies specific to their assigned country.

Source: Content summarized from Musselman et al. (2016), sometimes verbatim.

CASE STUDY: UNIVERSITY OF HOUSTON-DOWNTOWN

ANALYSIS

As a result of its participation in the TILT project, the University of Houston-Downtown (UHD) sought to move its focus toward the need to explicate all assignments, course objections, and project design based on the types of learners present in the institution's classes. This goal is underlined by the institution's belief that transparent techniques will improve student learning and retention. Like SEU, UHD conducted its study using courses and faculty that were academically diverse and representative of the institution (see page 11 for detailed results by participating course). Overall, UHD's research illustrates the purpose and structure of transparency practices and how they can enhance student experience in courses.

KEY INSIGHTS

After reviewing the results of transparent teaching implementation across participating courses, UHD determined:

1. It is essential to use a backward design approach to course assignments to ensure proper alignment to the assignment's rubric.
2. Course characteristics such as delivery mode, student classification, and size should be taken into consideration when determining how effective transparent techniques may be.
3. Detailed faculty training and continued support is vital to successful implementation.

PLAN FOR INSTITUTION-WIDE IMPLEMENTATION OF TRANSPARENT TEACHING

- Provide faculty training on transparency and intentionality. To do this, UHD planned to provide training modules and workshops through collaboration with the UHD Center for Teaching and Learning Excellence.
- In addition, UDH identified stakeholders throughout the university who were committed to ensuring university-, college-, and department-level dissemination of transparency implementation techniques. In partnership with these stakeholders, the university sought to recruit new faculty members to apply transparency to their courses and engage in an active dialogue on best practices.

Source: Content summarized from Kelly et al. (2016)

CASE STUDY: UNIVERSITY OF HOUSTON-DOWNTOWN

ASSIGNMENT AND COURSE REDESIGN USING TILT METHODS BY PARTICIPATING COURSE

Course	Implementation of TILT	Results	Lessons Learned
General Genetics	A problem-solving rubric was used to create an assignment titled "Why Is There a Divided Opinion on GMO Food," which was content-related but not specific to the course curriculum. Students could focus on an open-ended problem that is relevant and highly publicized. The assignments were built progressively and the initial sample aimed to assess only the first three initial rubric dimensions. The final assignment assessed all or most of the rubric dimensions.	1. Students in the transparent methods course showed a marked increase as compared to the control when the average scores across rubric dimensions were compared. 2. Additionally, 100 percent of students in the experimental section improved their score in at least one rubric dimension, compared to 89 percent of control section students.	The encouraging results can be attributed to the careful planning of the assignment based on the rubric and the experimental design. The relevance of the assignment to students' daily lives aroused their interest and enhanced learning. Their final assignment was to generate a survey on GMOs and administer it to their family and friends. There was strong evidence of learning according to the analysis of the survey results and student reflection.
General Biology	This course used a set of six assignments to make connections across biology while focusing on insulin and diabetes. The assignments were created to progressively strengthen students' critical-thinking and problem-solving skills.	1. For both courses there was a small improvement when the average scores across rubric dimensions were compared. 2. Additionally, 70 percent of students in the experimental section improved their score in at least one dimension as compared to 50 percent of control section students.	There was a marked change in how students in the intervention course interacted with the instructor and reflected on their performance. Rather than asking why they lost points, students asked what they could do to improve. This change was apparent in course evaluations, where students focused more on what and how they learned from the course than on likes or dislikes about the course/instructor, as was seen previously and in control course.
Introduction to Special Populations	For problem-solving, there were six assignments that were content-specific and required students to differentiate instruction for six different disability groups. Each assignment asked students to develop one accommodation in five different domains to foster a positive learning environment for students with that disability.	1. Comparing rubric scores, 90 percent of students in the experimental section improved their score in at least one dimension as compared to 55 percent of the control section.	Students could be more engaged in the problem-solving process based on all dimensions of the rubric. This led to adopting a backward design that would provide a more mindful approach to the activities specified in the problem-solving process.

Source: Content summarized from Kelly et al. (2016), sometimes verbatim.

TRANSPARENCY-BASED INSTRUCTION FOR NON-TRADITIONAL STUDENTS

TEACHING NON-TRADITIONAL STUDENTS – OVERVIEW

IMPLICATIONS FOR TEACHING NON-TRADITIONAL STUDENTS

A survey of roughly 1,000 non-traditional students explored how respondents feel about collegiate inclusion and how faculty and staff can improve the classroom experience for this population (Witkowsky et al., 2016). **These findings may be of use to improve teaching practices for and meet the needs of its non-traditional students.**

Implications of the survey include:

Nontraditional students felt their experiences and perspectives were not honored or welcomed in and out of the classroom by faculty, staff, or peers. **Institutional agents must validate the academic and social experiences of adult learners through programs and curricula** focused on affirming and developing student's confidence, learning abilities, and personal worth.

Nontraditional students were more likely to participate in the classroom, but typically did not participate in support services or social activities; **as such, classroom experiences are critical to development and success.**

Universities must address the realities of nontraditional students' lives outside of campus. **This might translate to after-hours student support services and more flexible options for course scheduling.**

Source: Witkowsky et al. (2016)

CENTRAL TENETS FOR TEACHING ADULT LEARNERS

Central tenets for teaching adult learners emphasize transparency and inclusivity in the classroom. These tenets lend to a focus on learning rather than teaching, and specifically focus on lifelong learning, where students are taught skills and strategies they can apply to their careers. According to McCall et al., adult learners learn best when they can determine their own goals for the course and take responsibility for learning.

Sources: Lewis et al., (2021) and McCall et al. (2018)

TEACHING NON-TRADITIONAL STUDENTS – APPROACHES

TEACHING APPROACHES THAT CATER TO NON-TRADITIONAL STUDENTS

1 Active Learning

An active learning approach prioritizes effective learning engagement through interactive teaching, thus facilitating a deeper understanding of course material.

Benefits

Interactive activities increase the morale of the classroom, improve students' attitudes toward the course, and increases student's self-confidence and judgment skills.

These are crucial to the development of critical thinking, communication techniques, and problem-solving, and help ensure students are well-prepared for challenging work environments.

Challenges

Students' fear of the unknown if this is a shift away from previous known methods of learning. Students may exhibit negative reactions or anxiety.

2 Constructivism

Assumes individuals connect new information and ideas to current and previously known knowledge through interactive and engaging practices.

Benefits

By placing an emphasis on reflection and relating value to experiences, learners become responsible and in control of developing their own knowledge.

This helps facilitate critical thinking by allowing learners to build on existing learning and creating additional comprehension regarding previous experiences.

Challenges

This approach has been criticized for minimizing the importance of the educator as the expert. Faculty who are accustomed to traditional teaching methods might benefit from workshops that introduce them to constructivist approaches.

Sources: Lewis et al., (2021) and Allen et al., (2016)

TEACHING NON-TRADITIONAL STUDENTS – APPROACHES

TEACHING APPROACHES THAT CATER TO NON-TRADITIONAL STUDENTS

3 Concept-Based Learning

Concept-based learning teaches students relevant concepts that are important to the subject material and relates these to facts and examples that coincide with the concept.

Benefits

This approach has the potential to increase classroom engagement, inspire students, and positively impact student's practice of the material.

It can also promote lasting memorization and understanding of the concepts.

Challenges

Disadvantages include the time required for this learning technique, which may be more time-consuming than traditional teaching methods.

4 Team-Based Learning

Assumes there are no individualistic components in the learning model, and concepts are broken into small incremental assignments over a two to three-week period. The phases of this process are identified as **knowledge,** which occurs in the preparation stage, **competency**, which is developed during the readiness assessment process, and the **ability to collaborate**, which occurs during the application process.

Benefits

Builds strong bonds between team members.

Individual students are adamant that others are committed to the success of the team.

Decreases the amount of time faculty would spend on preparing and grading individual assignments.

Challenges

Research does not list challenges, but students may struggle with moving from a model based on individual learning to a team-based approach if accustomed to the former method.

Sources: Lewis et al., (2021) and Allen et al., (2016)

TEACHING NON-TRADITIONAL STUDENTS – TECHNIQUES

TECHNIQUES FOR TEACHING NON-TRADITIONAL STUDENTS

Implement information literacy in library instruction to help adult learners navigate high-tech surroundings and resources; adult learners will inevitably need to know how to use these resources to facilitate their learning.

Get to know students' prior experiences and knowledge through pre-assessments and connect these with new instructional topics. Skills taught should be shown to be immediately relevant to students when connected to their career goals and lifelong learning.

Focus on practical, big-picture information literacy to enable students to be **life-long learners**, including activities focusing on inquiry, discovery, and problem-based learning.

Create supplementary instructional resources such as handouts or online guides **that show the connections between topics and tasks in class**, and also **help prevent information overload**. Sources should be used as a jumping-off point that do not replace learner discovery.

Ensure learning environment is well-structured, practical, and collaborative, and that students are informed of this. Share lesson plans with adult learners so they know how the class will be organized, the connections between separate tasks, and how the course or objectives will be met.

Use scaffolding in instruction, where complicated tasks or skills are broken down into small components that can be completed one at a time.

Learning can be collaborative through **lesson plans that provide opportunities for peer-to-peer learning**, in-depth discussions, and experiences where adult learners and younger classmates can share knowledge with one another.

Depending on the course, **use case studies that allow students to apply learned knowledge to various scenarios.** Case studies promote knowledge retention, critical thinking, and decision-making. However, these are hard to implement if students do not properly engage.

Try "flipping" the classroom so that information that is typically taught in class is assigned as pre-class work for students to complete. Then, active teaching techniques such as role-play, concept maps, and discussions are used in the classroom to enhance and construct knowledge. Gradually introduce this technique in case students have initial feelings of anxiety about this method and ensure pre-class work is not overbearing/too time-consuming for students.

Use debates to generate dialogue among students and foster active engagement. These can also help students challenge their ethics and morals and give students an opportunity to conduct research on a topic.

Sources: Content summarized from Lewis et al., (2021) and McCall et al. (2018)

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