

# What is Active Learning at Dixie State University?

Center for Teaching & Learning

Dixie State University

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Recently Dixie State University (DSU) adopted a new tagline: “active learning. active life.” This new tagline has been very well-received and frequently used by people both on and off campus in many different ways, contexts, and with various meanings. Recognizing that this tagline has the potential to significantly drive the teaching and learning efforts and conversations at DSU, the Office of Academic Affairs took a proactive and inclusive approach to define and frame the term “active learning. active life” during the Spring and Summer semesters of 2016.

Using comments, suggestions, and feedback from over 115 faculty members, 80 staff members, and 100 students, the Center for Teaching & Learning (CTL) developed a first-draft definition of the new tagline.

“active learning. active life” is a philosophy of teaching and learning at Dixie State University that encourages and drives a hands-on, applied, personalized learning experience in and out of the classroom and encourages a dynamic, engaged approach to life (civic engagement, lifelong learning, healthy lifestyle, etc.) enabling students to flourish and thrive not only while attending DSU but in their careers, community, personal endeavors, etc.

Active learning is an instructional method that engages learners in the learning process by requiring learners to do meaningful activities and think about what they are doing as opposed to passively listening to an expert. It emphasizes higher-order and critical thinking, application of knowledge, metacognition, and often involves collaborative group work and experiential learning experiences.

The construct of active life encourages learners to not just passively exist but to flourish while attending DSU and after graduation by: a) being actively engaged with others (and give service) in the DSU community, the Washington County community, and our national and global community, b) striving to be leaders in their careers and communities, c) being self-regulated and lifelong learners, d) thinking creatively and critically about complex problems in order to produce, evaluate, and implement innovative solutions, e) maintaining a healthy lifestyle, etc.

The primary purpose of this document is to: a) explain how Academic Affairs has defined the term active learning, b) provide key attributes of the term, and c) provide examples and non-examples of active learning.

## What is Active Learning?

As previously mentioned, leaders in the Office of Academic Affairs conducted focus groups and administered surveys to faculty, staff, and students to obtain suggestions, comments, and recommendations to develop a shared definition of active learning for DSU. After analyzing the data collected, staff members in the Center for Teaching & Learning (CTL) developed the following definition (first draft) of the construct of active learning:

“Active learning is an instructional method that engages learners in the learning process by requiring learners to do meaningful activities and think about what they are doing as opposed to passively listening to an expert. It emphasizes higher-order and critical thinking, application of knowledge, metacognition, and often involves collaborative group work and experiential learning experiences.”

When learning is active, learners do most of the work. It requires the learner's own mental involvement and application of the knowledge they have learned. Learning at DSU should be fast-paced, fun, supportive, personally engaging, and focused on achieving clearly specified desired learning outcomes.

Active learning is not teacher-centered or passive—it is learner-centered, i.e., it involves more than just passively listening to a person lecture on a topic. Learners in an active learning environment are doing things and simultaneously thinking about the work done and the purpose behind it so that they can enhance their higher-order thinking capabilities and skills.

Active learning strategies can vary from very simple strategies such as clarification pauses or large group discussion to quite complex methods, such as experiential learning, problem-based learning, service learning, etc. Some strategies can be as short as a few minutes long while others take an entire semester. Figure 1 below illustrates a continuum from simple to complex active learning techniques.

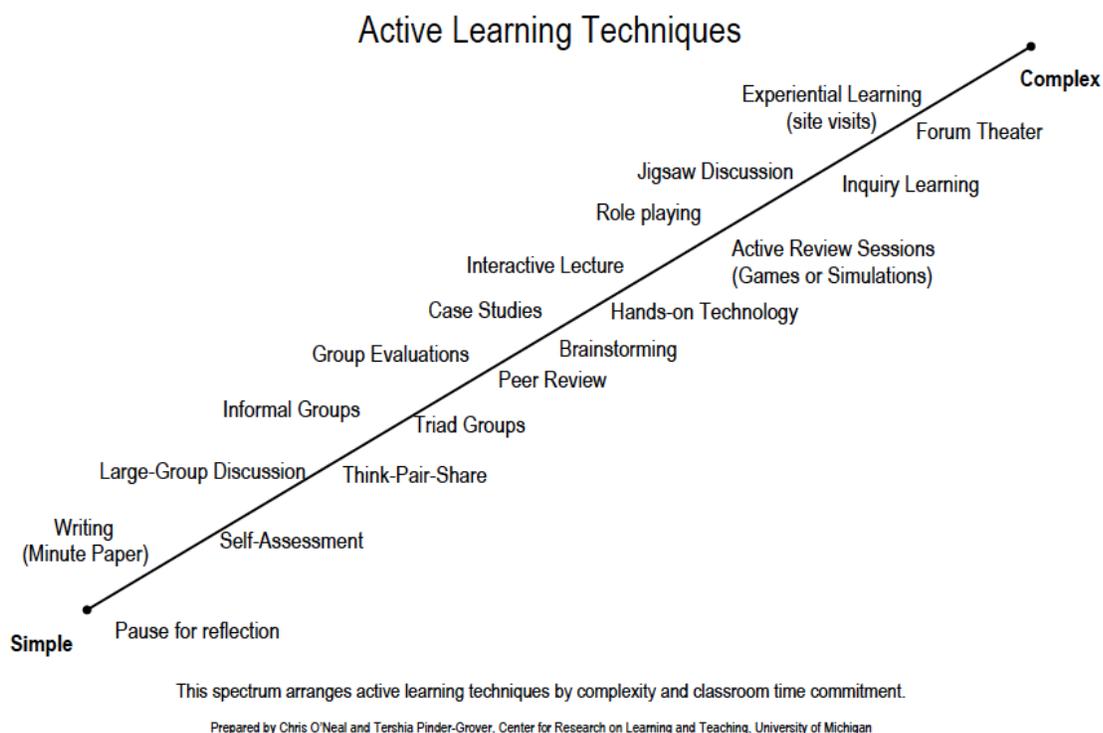


Figure 1. Active Learning Techniques (See <http://tinyurl.com/q4ung7v>)

While faculty members have been encouraged to use all types of active learning strategies in their courses, the Office of Academic Affairs has focused on helping faculty members integrate complex active learning strategies to promote higher-order, critical thinking skills. During the summer of 2015, two DSU faculty and staff committees in collaboration with CTL developed a model as a tool to help faculty integrate higher-order active learning strategies in their courses.

The primary purpose of this model, titled the Personalized Active Learning Model (PALM), is to promote a more learner-centered, active learning approach to teaching and learning on the DSU campus, i.e., to help faculty members develop and deliver instruction to ensure learners are actively and effectively engaged in the learning process.

In a nutshell, PALM is a suggested sequence of instructional and learning events at the unit or lesson level for teaching course topics and achieving learning outcomes using an active, engaged learning approach. The model involves the teacher (and in some learning situations the teacher in collaboration with the learners) selecting a real-world task or problem to solve or complete during the course and at the unit or lesson level. The teacher and the learners follow a simple four-step process in completing the real-world task or solving the problem: a) acquire, b) expand, c) apply, and d) evaluate. This four-step process can be used during a class period or for a unit or module that may last several weeks and is an example of the construct of “Flipping the Classroom.” While completing the four-step process, the teacher and learners are involved in several ongoing principles, activities, and approaches: a) reflecting and making revisions, b) being innovative by trying new ideas or approaches, c) using new learning technologies, and d) being person-centered by making a personal connection between the teacher and learners. Figure 2 provides a graphic and explanation of the teacher processes and student processes involved in the PALM model.

The center of the PALM teaching/learning model (see the graphic in Figure 2) is focused on learners solving a real-world task and/or problem. When learners know that they are solving real-world tasks/problems it increases their motivation to learn. They can see the value in learning the content of the course in order to solve real-world tasks/problems that they will be solving in their future careers and/or life experiences.

Circling the core center (task/problem-centered learning outcomes) of the model is a four-step instructional/learning process that teachers/learners complete: acquire, expand, apply, and evaluate. For each step in the learning process, specific teacher processes and learner processes are described in Figure 2 to explain some of the things that teachers and learners do in this model.

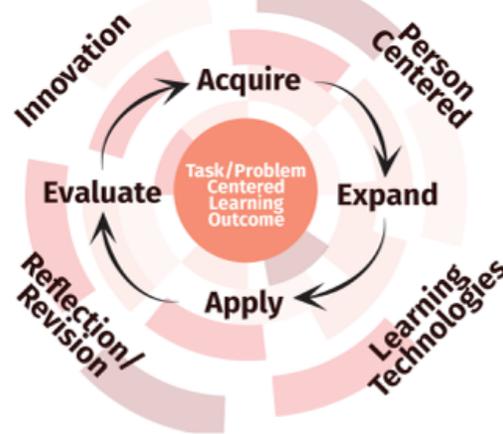
In the acquire step, learners complete course learning activities (readings, self-instructional lessons, lecture captures, etc.) before class to capture (learn) the new knowledge/skills presented in the learning activities. It is critical for the teacher to do several tasks during this phase before the class meets, e.g., to prepare the learning activities; pre-assess learners’ prior knowledge, needs, attitudes; activate prior knowledge; stimulate motivation, etc.

During the expand step, the learners make their new knowledge/skills grow. They ask questions related to things they have learned and conduct further research to answer their questions. The teacher provides opportunities for the learners to elaborate on what they learned in the acquire phase and organizes group discussions for learners to discuss issues and grow their new knowledge.

In the apply step, learners apply the new knowledge/skills they have learned to solving the real-world tasks/problems identified in the core center of the learning model. The teacher uses class time to demonstrate and apply how to use the new knowledge/skills that learners have acquired to solve real-world tasks/problems. The teacher provides opportunities for practice with feedback that may involve experiential and/or service learning opportunities.

In the last step, learners self-evaluate and reflect to determine the degree they achieved the learning objectives and incidental learning outcomes they achieved. The teacher conducts assessments to determine the degree the learners achieved the learning objectives and encourages the learners to integrate their new knowledge/skills into their personal lives and transfer what they have learned to new situations/contexts.

## Personalized Active Learning Model



Acquire	Expand	Apply	Evaluate	Ongoing Tasks/Activities
<p><b>Teacher Process</b></p> <ul style="list-style-type: none"> <li>Write learning goals and objectives that are aligned with program learning outcomes and focused on real-world tasks/problem-centered outcomes</li> <li>Pre-assess learners' prior knowledge, needs, attitudes, values, etc.</li> <li>Activate learners' prior knowledge and stimulate motivation</li> <li>Develop instructional strategies and activities (readings, lessons, demonstrations, quizzes, etc.) that are aligned with objectives that learners will complete before class</li> </ul> <p><b>Learner Process</b></p> <ul style="list-style-type: none"> <li>Prepare for class by completing the course learning activities</li> <li>Be an active learner—capture the new knowledge presented in the course learning activities</li> </ul>	<p><b>Teacher Process</b></p> <ul style="list-style-type: none"> <li>Share ideas and provided resources concerning how course content could be expanded; promote elaboration learning activities</li> <li>Organize learning activities such as collaborative group discussions for learners to discuss issues before class</li> </ul> <p><b>Learner Process</b></p> <ul style="list-style-type: none"> <li>Actively participate in collaborative group discussions and other elaboration learning activities</li> <li>Ask questions based on acquired learning and conduct further research to answer questions</li> <li>Reorganize and personalize acquired learning to develop meaningful structure</li> <li>Confirm/disconfirm whether past truths are valid</li> </ul>	<p><b>Teacher Process</b></p> <ul style="list-style-type: none"> <li>Demonstrate/show new knowledge/skills aligned to learning goals and objectives</li> <li>Integrate course activities that require students to apply/do the new knowledge and skills to complete/solve the real-world tasks/problem-centered outcomes</li> <li>Promote experiential (hands-on) learning</li> <li>Coach/guide and provide feedback</li> </ul> <p><b>Learner Process</b></p> <ul style="list-style-type: none"> <li>Participate in learning communities and teach others</li> <li>Apply knowledge and skills learned to solving real-world tasks/problems</li> </ul>	<p><b>Teacher Process</b></p> <ul style="list-style-type: none"> <li>Evaluate to determine if the learners achieved the learning goals and objectives</li> <li>Review and discuss/show how new knowledge/skills can transfer to other situations</li> <li>Give learners opportunity to reflect, discuss, debate, etc. how new knowledge and skills can be integrated into their personal lives</li> </ul> <p><b>Learner Process</b></p> <ul style="list-style-type: none"> <li>Conduct Self-evaluation/reflection</li> <li>Determine degree personal learning goals and objectives were achieved</li> <li>Try-out new knowledge and skills in new situations and contexts</li> </ul>	<p><b>Teacher Process</b></p> <ul style="list-style-type: none"> <li>Be innovative in trying new teaching methods and learning technologies</li> <li>Conduct frequent CAT's (Classroom Assessment Techniques) during the learning process</li> <li>Reflect and revise course materials and strategies as needed</li> <li>Ensure learners develop autonomy, critical thinking, independence, and lifelong learning skills</li> <li>Ensure there is instructional alignment between objectives, instructional strategies, and evaluation</li> <li>Develop a personal connection with each learner</li> </ul> <p><b>Learner Process</b></p> <ul style="list-style-type: none"> <li>Reflect and constantly improve lifelong learning skills</li> <li>Use self-regulated learning strategies</li> <li>Respect others and apply social intelligence skills</li> <li>Understand one's own identity and values</li> <li>Seek help if necessary</li> <li>Teach and help others</li> <li>Be innovative in trying new learning strategies and technologies</li> </ul>

Figure 2: PALM model

As the teachers/learners complete this learning sequence, several key principles and activities should be ongoing and occurring, such as: being innovative, using effective learning technologies, reflecting and making revisions, and using person-centered strategies. Teachers and learners are encouraged to be innovative in trying new methods, techniques, and strategies in the learning process. They are encouraged to try new learning technologies to make learning more effective, efficient, and engaging. The teaching environment should be person-centered, i.e., enriching learner's lives—one person at a time—and focused on each learner's needs and creating a personal connection with learners on an individual basis. During the learning process, teachers and learners should reflect often on their

progress and make necessary revisions/modifications. For more detailed information about the PALM model, see the following website: <http://bit.ly/DSUPALM>

### **Key Attributes of Active Learning**

- Active learning is an applied approach to instruction that focuses the responsibility of learning on learners. It should transform students from passive listeners to active participants, help the student understand the subject through inquiry, gathering and analyzing data through which solving higher-order cognitive problems; this approach encourages people to be self-regulated learners.
- Active learning is a method of learning in which students are actively or experientially involved in the learning process and where there are different levels of active learning, depending on student involvement.
- In active learning teachers are facilitators rather than one-way providers of information. The presentation of facts, so often introduced through straight lecture, is deemphasized in favor of class discussion, problem solving, cooperative learning, and writing exercises.
- Active learning typically involves: a) developing course learning goals and objectives that are focused on real-world tasks/problem-centered outcomes, b) involves pre-assessing learners' prior knowledge, needs, attitudes, values, etc., c) activating learners' prior knowledge and stimulating motivation, d) integrating course activities that require students to apply/do the new knowledge and skills to complete/solve the real-world tasks/problem-centered outcomes, and e) promoting experiential (hands-on) learning experiences.
- The opposite of active learning (what active learning is not): Student goes to a course and the professor lectures and the student sits passively during the entire class, then leaves. It could well be called passive learning. The student just sits and listens, and perhaps takes verbatim notes (writing down exactly what the instructor places on the PowerPoint slides or blackboard).
- Active learning is the opposite of passive learning; it is learner-centered, not teacher-centered, and requires more than just listening; active participation of each and every student is a necessary aspect in active learning. Instructors try to develop a personal connection with each learner.
- Active learning involves helping students learn knowledge and skills they can apply outside the classroom, learning for the real world, through practical experience, and internship experiences.
- Active life encourages students to develop “a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion” (<http://www.aacu.org/sites/default/files/files/VALUE/CriticalThinking.pdf>).
- Active learning encourages students to develop the capacity “to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking” (<http://www.aacu.org/sites/default/files/files/VALUE/CreativeThinking.pdf>).
- Active learning encourages students to develop effective communicate skills in order to understand diverse philosophies and cultures within and across societies.
- Examples of active learning techniques include role-playing, case studies, group projects, think-pair-share, peer teaching, debates, Just-in-Time Teaching, short demonstrations followed by class discussion, experiential learning, service learning, problem-based learning, project-based learning, etc.
- Active learning techniques can be integrated into a lecture or any other classroom setting relatively easily. Even large classrooms can involve learning activities beyond the traditional lecture format, such as clarification pauses, self-assessment, polling, etc.
- Effective active learning does not equate with just having students work in collaborative groups or other “doing” type of activities in the classroom. All course activities and tasks are focused on achieving the course learning outcomes.

## Examples of Active Learning

### Example 1: Teaching Economics using a Role Play Active Learning Strategy

Role playing is a learning structure that allows students to immediately apply content as they are put in the role of a decision maker who must make a decision regarding a policy, resource allocation, or some other outcome. This technique is an excellent tool for engaging students and allowing them to interact with their peers as they try to complete the task assigned to them in their specific role. This work can be done in cooperative groups and/or students can maintain the persona of their role throughout the class period. Students are more engaged as they try to respond to the material from the perspective of their character.

“For example, in economics we teach that changes in revenue generated by a change in the price of a product are related to the price elasticity of demand for this product. Students are asked to imagine that they are members of a high school soccer team booster club. To make more money for the team, one parent has recommended an increase in ticket prices at the gate for games as a way to make more money. Another parent has suggested that the boosters would make more money if they actually cut ticket prices. While placed in the role of booster club member and parents of soccer players, students are asked to vote for either raising prices at games or lowering admission prices. After each student votes they are asked to convince their neighbor to vote the same way they voted. After a few minutes another vote is taken and then a fuller discussion takes place as students are asked to explain why they voted the way they did. The resulting discussion is usually a comprehensive list of reasons why attendance at high school soccer matches might be price-elastic or price-inelastic even though students might not yet be using those exact terms” (<http://serc.carleton.edu/sp/library/interactive/roleplay.html>).

### Example 2: Pickleball Course Lesson

This example is from a lesson in a course entitled “Beginning Pickleball” and illustrates the four steps of the PALM model approach to active learning. The learning goal for the course is: Given the course materials and the necessary pickleball equipment, the learner will be able to apply the knowledge and skills they acquired in the course to play in a complete Doubles Pickleball Tournament (at the beginners level). This one-credit hour course is taught in a Face-to-Face format using a Learning Management System (Canvas). The course consists of six units and several lessons within in each unit.

In the unit called The Serve, one of the learning objectives is: In a regulation-size pickleball court and using regulation pickleball equipment (e.g., paddle, ball) the learner will be able to demonstrate a proper serve (following United States of America Pickleball Association [USAPA] rules) by serving three out of five serves into the proper service area of the court.

In the acquire step, the teacher first conducts preassessment to determine students’ prior knowledge and their motivation to play in a competitive pickleball tournament. The teacher posts videos of a person demonstrating each of the three types of serves: the high, soft serve, the power serve, and the soft angle serve. Students are required to view these videos on the course website in Canvas before class. The teacher provides practice opportunities in Canvas for the students to identify the three types of serves by showing a video of a person demonstrating a serve and then requiring the student to identify which type of serve was being demonstrated in the video. The course website also includes the USAPA rules for the serve. A practice quiz (with feedback) on the rules for serving is provided for the students. Students must complete a graded quiz on the rules of serving and identifying the three types of serves before the first class period of this lesson.

During the expand step, students are required to research additional tips on serving the ball. Students should write a brief report (at least 500 words) summarizing what they learned from their research that will help them improve their serve.

During the class time, the teacher asks individual students questions about the rules of serving the ball (this is a form of formative evaluation and review). The teacher then demonstrates each of the three types of proper serves, focusing on common errors people often make when serving. Students are then paired together and practice the three types of serves on the court. The paired companions give feedback to each other as they practice. The teacher also gives individual feedback to each person in the class during the practice. Students practice the serve for the remaining time of the class period. During the practice time, the teacher notices that students seem to have a challenge with the soft angle serve. She demonstrates several strategies to help the students successfully master this serve.

For the next two class periods, the teacher spends 15 minutes allowing the students to practice in pairs the serve providing individual feedback to each student. On the fourth class period after introducing the serve, the teacher conducts an individual assessment for each student to determine if she/he can achieve the learning objective. Using a regulation court and pickleball equipment, the student is given five balls and instructed to serve at least three of the five balls into the proper service area of the court following USAPA rules.

The simple example above illustrates some of the key principles and components of the PALM approach to promote active learning interactions with students. For example, the learning goal of the course represents a real-world, problem-centered learning outcome. As a result of completing the pickleball course, students will participate in competitive pickleball tournaments. The specific unit learning objective is also focused on a problem-centered outcome—being able to execute a proper serve. As the teacher and students complete the four steps in the PALM model (acquire, expand, apply, and evaluate), there are several ongoing key principles and activities occurring. For example, the teacher tries to be person-centered by learning the names of each individual student and using their names when providing feedback to the students. The teacher and students are also using innovative learning technologies by posting video demonstrations on Canvas and other learning materials that students complete before coming to class so class time can focus on applying the knowledge they learned from the course materials in Canvas. The teacher and students were actively involved in reflection and making revisions. Students were asked to reflect on what they learned when they researched other tips for serving the ball and then wrote a brief report summarizing what they learned. During this lesson, the teacher also reflected on how well the instruction and learning was progressing and made frequent changes to more effectively accommodate the needs of the students, e.g., the teacher recognized that students were having a hard time mastering the soft angle serve during practice so she demonstrated additional strategies to help the students master this serve.

### **Non-examples of Active Learning**

#### **Non-example 1: Passive Lecture**

In an Introduction to Psychology course, the students quietly come to class and sit in their assigned seats, arranged by rows. The instructor is working on his computer before class begins and never looks up at the students. When it is time to start the class, the instructor informs the class to turn to chapter two of the textbook. He then proceeds to literally read the bullet-point text on a PowerPoint slide to the students in the course. The instructor continues to read the text on the PowerPoint slides for about 20 minutes. He then stops, looks at the students in the class, and tells a personal story that

illustrates the ideas presented on the PowerPoint slides. He resumes to read and at times elaborates on the bulleted text items on the PowerPoint slides. When the class period of 50 minutes is nearly over, the instructor tells the students where to find the assignment in Canvas and tells the students to read chapter three before next class period. Class is dismissed. Most of the students, if not all, never said a word during the class period.

#### Non-example 2: Collaborative Group Work Without a Purpose

At the beginning of a Sociology course, the instructor tells the students that they are going to discuss the topic of “Inclusive Excellence” during the class. She first divides the class into groups of four students. She instructs the students to take 10 minutes to come up with a definition of inclusive excellence in their groups. Many of the groups accomplish the task in two to three minutes and then talk about other topics such as the football game last night, complaining about a course they are taking, etc. After 10 minutes, the instructor asks the students to resume their normal seating positions and turns on the projection unit showing her PowerPoint slides. She reads the first Powerpoint slide which is a definition of the term inclusive excellence and explains that this is the definition that they will use in the class. Many of the students wonder why she had them meet in collaborative groups to come up with a definition if the instructor was going to tell the students the definition she wanted them to use.

#### **Next Steps**

After reading this document, please go to the website below to take a short (seven questions) self-quiz to check your understanding of the information in this document. After the self-quiz, you will be asked to respond to three questions in Section 2: Expand Your New Knowledge. Section 2 provides an opportunity for you to "grow the new knowledge" you obtained by elaborating on what you learned in the document.

Go to the following website: <http://bit.ly/DSUquiz>