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Pedagogical Approaches for Online Teaching

Active Learning

Active learning is an instructional approach that engages learners in the learning process.

Through active learning, learners participate in meaningful activities that involves them doing things and thinking about the things they are doing.

Active learning prompts students to engage with the materials, with other students and tutors, and with tools and technologies of learning - students will be 'cognitively active'.

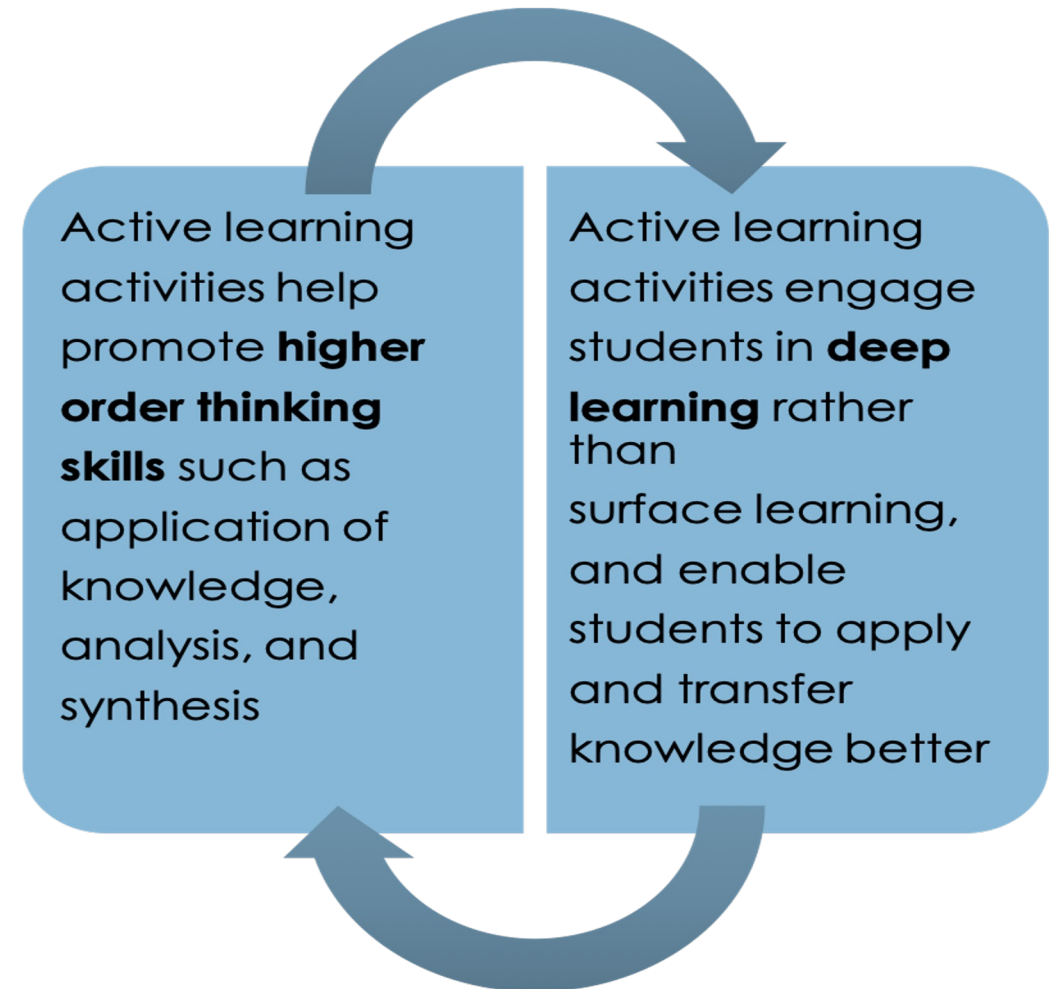
Active learning approaches place a greater degree of responsibility on the learner than passive approaches such as lectures, but instructor guidance is still crucial.

Learners build their own understanding by forming connections between their existing knowledge and new experiences, and by reflecting on how their understanding has changed.

The learning activities incorporate assessment task that enable students to demonstrate that they've achieved the intended learning outcomes.

Active Learning

- Active learning doesn't simply make learning more interesting for students. It also promotes:
 - higher-level thinking (Brown, 2014),
 - independent study skills,
 - communication skills and
 - problem-solving abilities (Sivan et al., 2000).
- These skills are transferable to work, further study and personal and professional life, and will set students up for whatever they choose to do next (OU, n.d.).



Types of Active Learning



reading, thinking and speaking critically

expressing ideas through writing

examining personal attitudes and values

giving and receiving feedback

reflecting on the learning process

Active Learning Activities Can Be Used to:

Get student attention and increase motivation

Assess students' prior knowledge

Promote problem solving and application, and deepen student understanding

Assess whether students understood the material

Help students review materials for an exam

Prepare students for a major assignment

Explore the relevance of the course material in students' professional/everyday lives

Developing Active Learning from the Start

- Active learning is particularly important in online education, where students aren't in the same location as their peers.
- Instructors should start thinking about **active learning** from the moment they start planning their online learning materials and incorporate strategies to encourage active learning, application, interaction, participation, and collaboration in the online environment.
- In an active learning environment learners are immersed in experiences within which they engage in meaning-making inquiry, action, imagination, invention, interaction, hypothesizing and personal reflection (Cranton, 2012).

Developing Active Learning from the Start

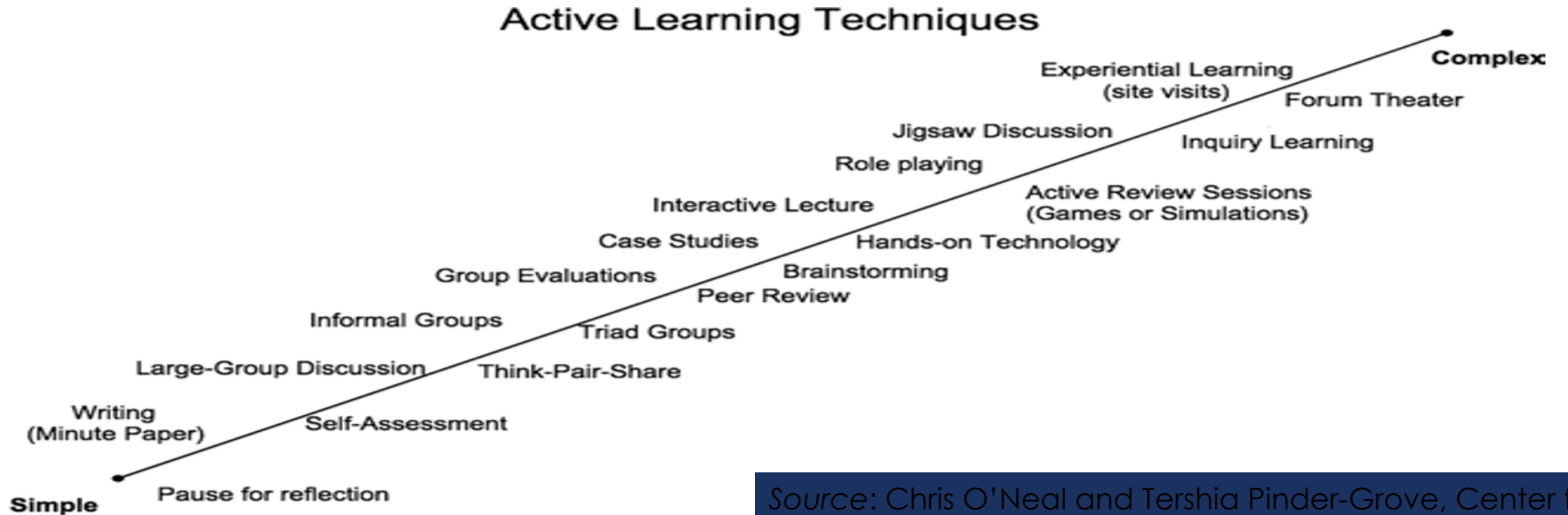
- Active learning is about what the student does rather than what the teacher does (OU, n.d.).
- Most of the activities should be designed to prompt students not simply to read, see or listen to information but to search for it, process it, discuss it, present it, reflect on it, and apply it in real or simulated scenarios to which they can relate.
- Incorporating active learning in online learning environments is crucial because it includes collaboration, exchanging ideas, and fostering an inclusive environment.

Active Learning Strategies

- There are a variety of active learning strategies described in the literature.
- Many university websites provide lists, guides, and resources for active learning strategies.
- Iowa State University Center for Excellence in Learning and Teaching presents [226 Active Learning Strategies](#);
- Purdue University offers [Active Learning Strategies and Resources](#)
- University of Leicester [active learning strategies](#)

Active Learning Techniques

There are a broad range of active learning techniques that can be integrated into online courses.



Source: Chris O'Neal and Terشيا Pinder-Grove, Center for Learning and Teaching, University of Michigan

Principles of Active Learning

Purposive: the relevance of the task to the students' concerns.

Reflective: students' reflection on the meaning of what is learned.

Negotiated: negotiation of goals and methods of learning between students and teachers.

Critical: students appreciate different ways and means of learning the content.

Complex: students compare learning tasks with complexities existing in real life and making reflective analysis.

Situation-driven: the need of the situation is considered in order to establish learning tasks.

Engaged: real life tasks are reflected in the activities conducted for learning.

Instructional Design of Online Courses and Active Learning

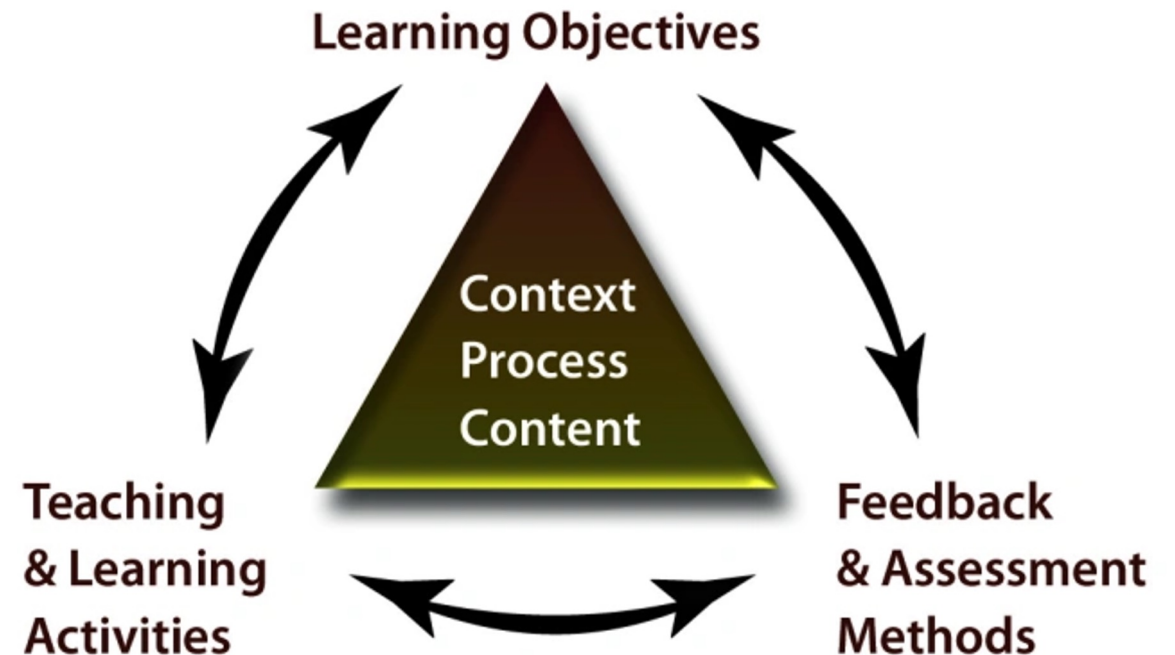
- The instructional design of online courses, taken together with active learning, deals with motivation, challenge, individual learning preferences, and social interaction.
- When instructors incorporate active learning techniques closely tied to desired learning outcomes, they can transform practical experiences into the online classroom environment.

Instructional Design of Online Courses and Active Learning

- Experiential opportunities create authentic opportunities for sharing and transferring knowledge of information to learners in order to meet the required course learning performance goals and standards.
- These examples cultivate learner development, build on learners' previous knowledge, and help learners develop in-depth knowledge and enhance team building, problem-solving, analysis, and critical thinking skills. In this section we shared just a few ways faculty can engage learners by incorporating active and experiential learning activities into online courses.

Constructive Alignment

- Course Units are designed so that the Learning Activities and Assessments are aligned with one another and support and measure students' achievement of the unit's Intended Learning Outcomes (ILOs).



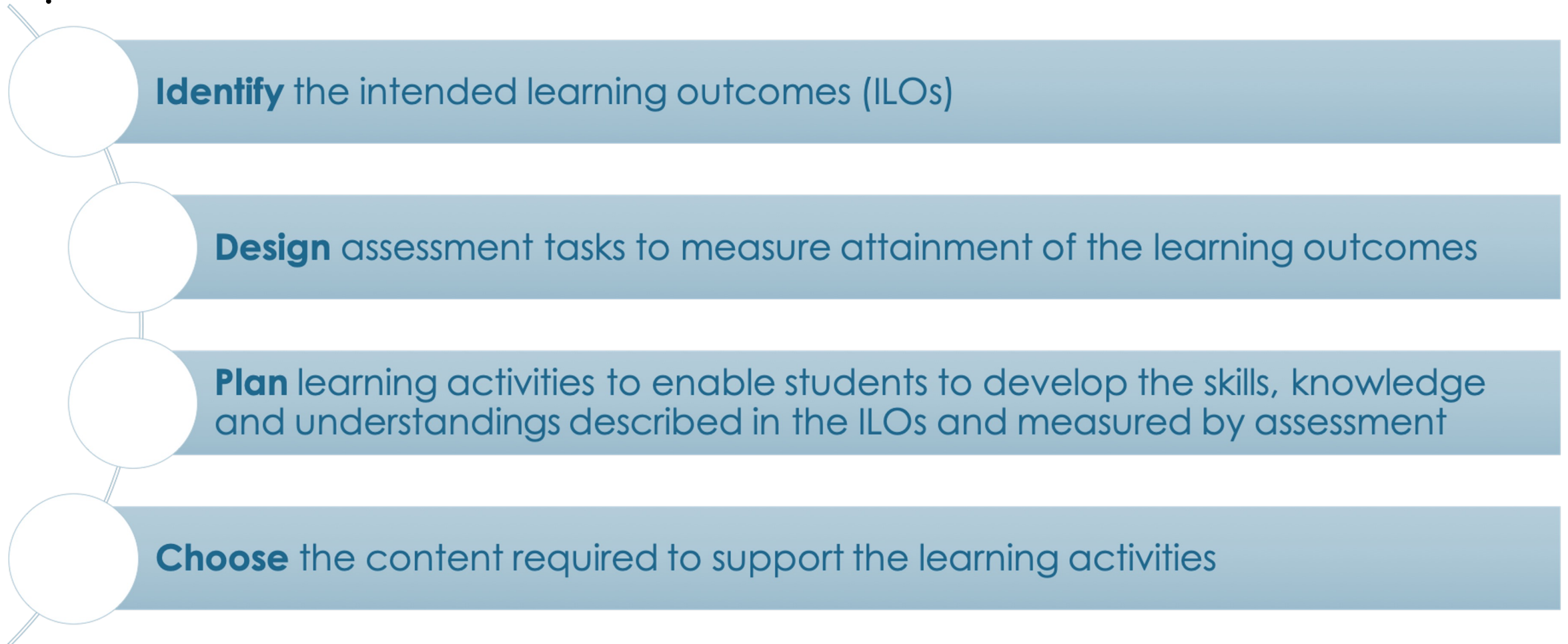
Constructive Alignment

- Course Units are designed so that the Learning Activities and Assessments are aligned with one another and support and measure students' achievement of the unit's Intended Learning Outcomes (ILOs).
- "**Constructive alignment** is a design for teaching in which what it is intended students should learn and how they should express their learning is clearly stated before teaching takes place. Teaching is then designed to engage students in learning activities that optimise their chances of achieving those outcomes, and assessment tasks are designed to enable clear judgments as to how well those outcomes have been attained" (Biggs, 2014, pp. 5-6).

Constructive Alignment

- Alignment occurs when the learning activities that we ask students to engage in help them to develop the knowledge, skills and understandings intended for the unit and measured by our assessment.
- A constructively aligned unit capitalises on the powerful effect of assessment on students' learning experiences.
- If assessment drives students' learning, then students are most likely to achieve our intended outcomes if the assessment is aligned with our intentions.

The Framework of Constructive Alignment



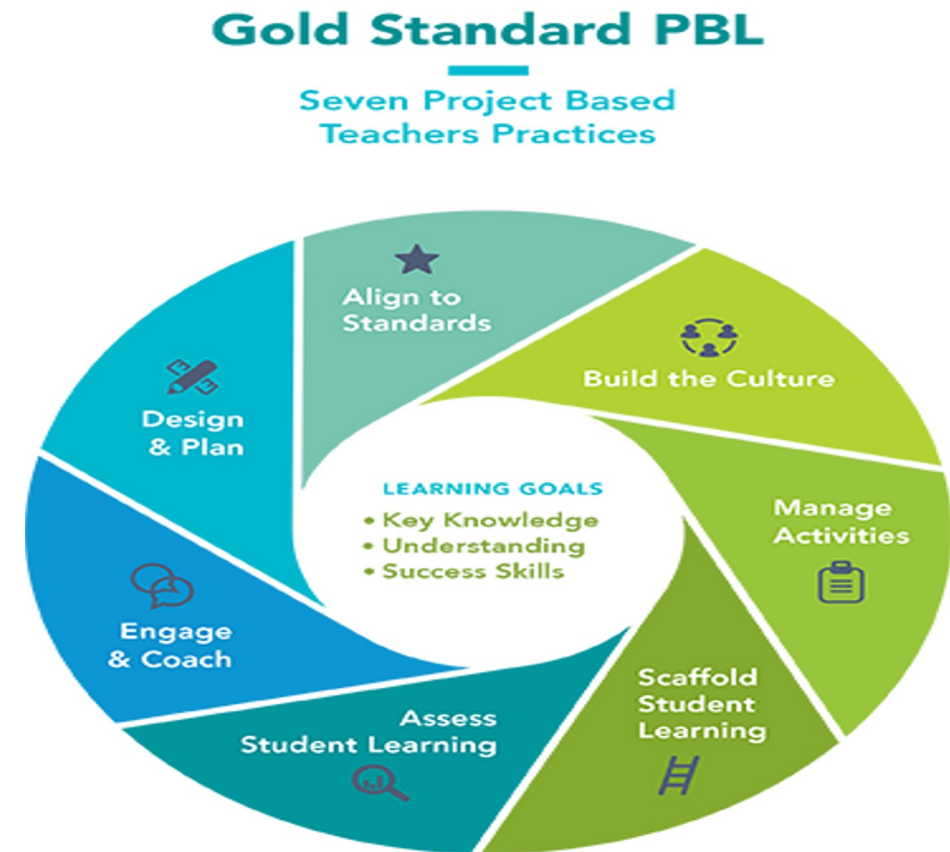
Strategies to Course Design

1. Create an open and safe environment.
2. Set a goal for the activity.
3. Choose the right exercise.
4. Identify preparation for the exercise.
5. Consider links to other class elements.
6. Plan how you will introduce the activity.
7. Plan the logistics.
8. Consider how you will judge success.
9. Just do it.
10. Iterate and expand (Active Learning Cheat Sheet. 10 Steps to getting started).

1. Understand Your Students
2. Set a Clear Objective for the Lesson
3. Incorporate Visuals, Visuals, and More Visuals
4. Keep Your Teaching Modules Short
5. Keep a Clear and Consistent Structure
6. Add Assignments and Homework
7. Evaluate, Reflect and Revise (How to Plan Effective Lessons for Your Online Classroom).

Strategies to Course Design

- Design & Plan
- Align to Standards
- Build the Culture
- Manage Activities
- Scaffold Student Learning
- Assess Student Learning
- Engage & Coach



Source: Buck Institute for Education,
Creative Commons

Metacognition

- Metacognition is the ability to examine how you process thoughts and feelings.
- This ability encourages students to understand how they learn best.
- It also helps them to develop self-awareness skills that become important as they get older.

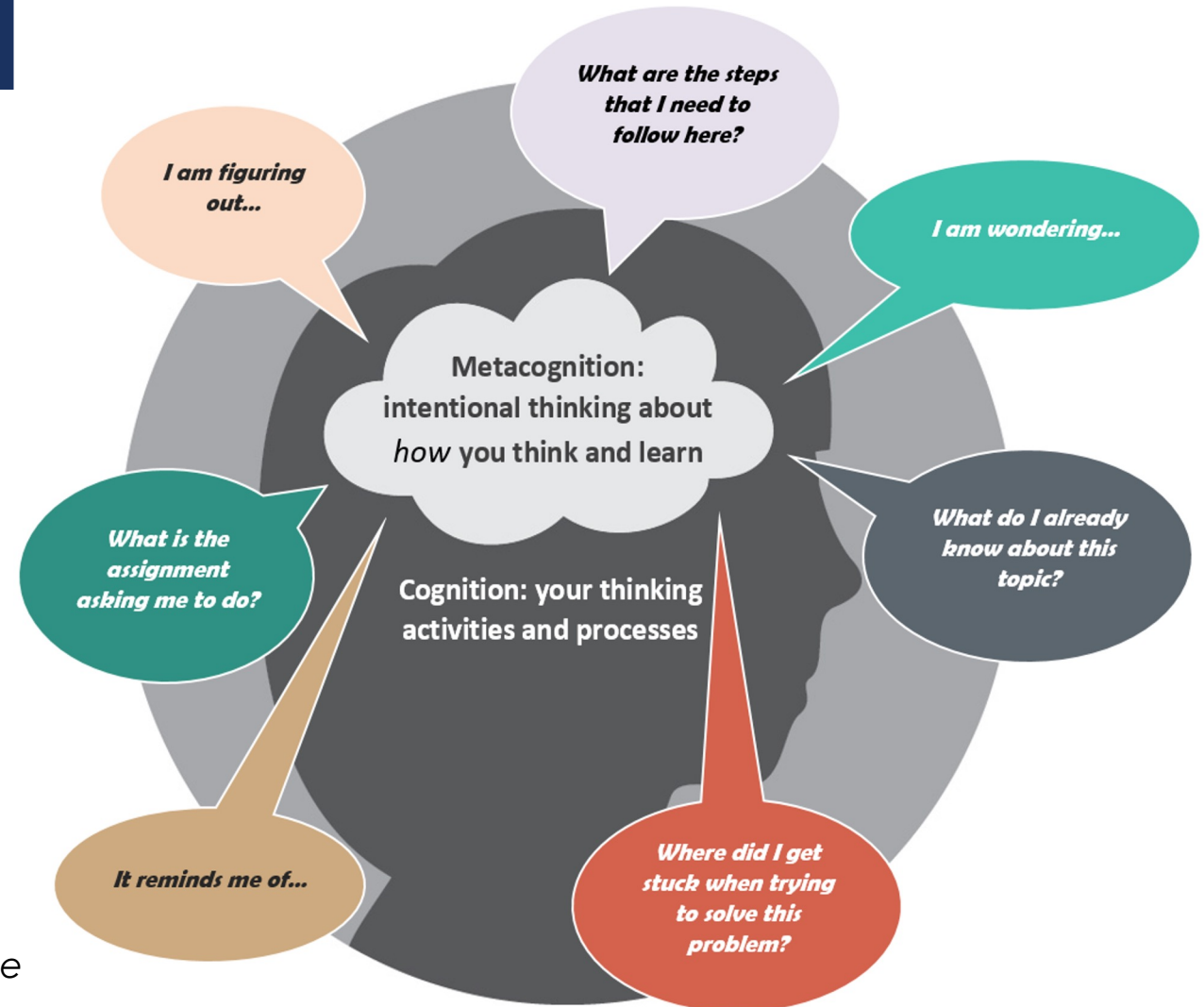
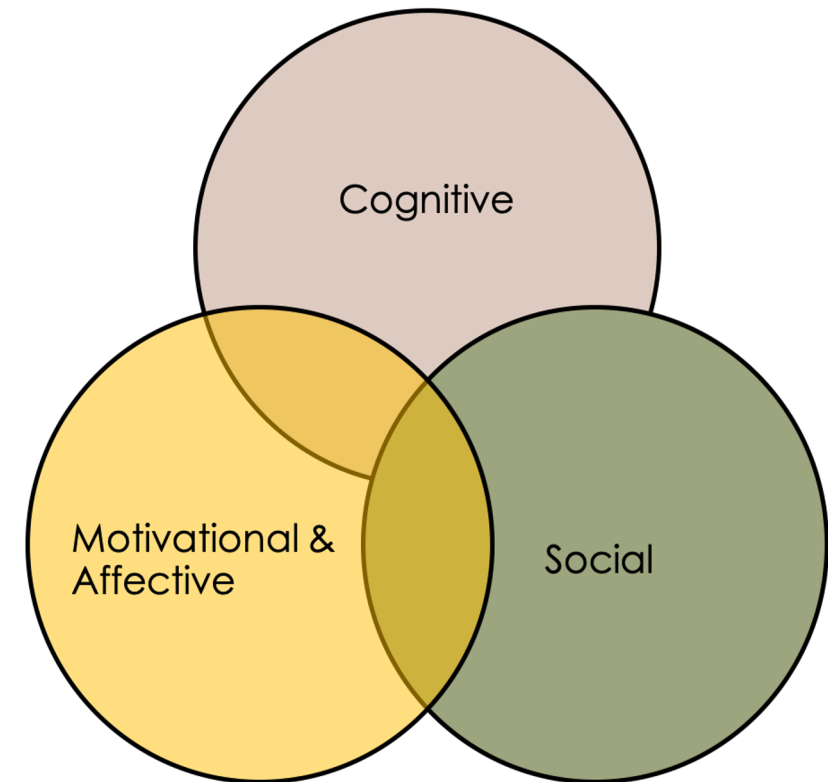


Image Source:
https://www.queensu.ca/teachingandlearning/modules/students/24_metacognition.html

Understand Students' Learning Challenges

- During the process of learning, students may experience a variety of cognitive, motivational or affective challenges that affect their learning.
- The three areas are interrelated, and many challenges students face during learning stem from an interaction of cognitive, motivational/affective and social factors. Students will enter the classroom with prior knowledge/experiences and learning strategies, and this, combined with experiences in the current course/classroom dynamics, may affect their motivation to learn.



Identifying the Problem

- As an instructor, one of the first steps to supporting student learning is identifying the instructional challenges that can arise when students are learning the content and developing intellectual skills needed in their disciplines.
- Keeping the course you identified above in mind, you can complete the Instructional Challenges Inventory.
- You will rate instructional challenges in your class on a scale ranging from “not a problem” to “a big problem”.
- Upon completion of the inventory, take a few moments to identify the “big problems” students experience in your course.



Image Source: <https://www.123rf.com>

Identify Prior Knowledge and Prior Experience

- Students come into our course with a broad range of backgrounds, educational experiences, and prior knowledge and skills.
- Current research on learning suggests that learning is determined by what the learner already knows about the topic or related topics.
- If the pre-existing knowledge is correct and consistent with the new information, the effect on learning is positive. However, if prior knowledge is full of misconceptions, or conflicts with new information, the effect on new learning can be negative.

No 'Best Practice' For Online Course Design

- However, there is no 'best practice' for online course design, because this is **contextual** to each teaching and learning situation and discipline area.

The starting point should be

- understanding student needs,
- developing engaging activities,
- building a sense of community, **no 'best practice' for online course design**
- employing discussion and reflections during presentations,
- providing tips, hints and tools for achieving these goals.



Image Source: <http://clipart-library.com/clipart/504328.htm>

We should consider the **content**, **purposes**, and **instructional strategies** as well as how the instruction is **represented and controlled** through available technology tools.

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Thank you for attention

