***Building Higher Ordered Thinking Skills***

This unit explores how to increase student learning and student engagement with course learning content via the development of higher-ordered thinking skills.  At the end of this unit, faculty will be able to:

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| **Objectives** | 1. Identify higher-ordered thinking skills and explain how inclusion of these skills will help students build a passion for lifelong learning. 2. Connect teaching efforts and student learning efforts to the development of critical thinking skills in students. 3. Produce course-relevant examples of assignments and activities that require higher-ordered thinking skills from students. |
| **Assessments** | Mastery level: post-teaching reflection |

**Resources**

***What are Higher-Ordered Thinking Skills?***

Higher order thinking skills refer to mental tasks that require more cognitive processing than others, with the expectation that focusing on these skills will expose students to deeper levels of understanding that will have an impact on their ability to use what is learned in the classroom. Some common higher ordered thinking skills include:

* Connecting knowledge to prior experiences via the [cognitive wrapper](http://josebowen.com/cognitive-wrappers-using-metacognition-and-reflection-to-improve-learning/)
* [Metacognition](https://cft.vanderbilt.edu/guides-sub-pages/metacognition/) (being able to recognize what one does and does not know or understand)
  + For more info on this very important learning skill [please review this article](http://theelearningcoach.com/learning/metacognition-and-learning/)
* Critical evaluation of a resource or argument
* Forming judgments
* Applying course knowledge to novel situations or scenarios

***What impact does the focus on these skills have on student learning?***

By focusing on the skills associated with better learning overall we make acquisition of all future learning easier for students by highlighting how to approach learning and evaluation of what we know or don’t know. Doing so will help students identify gaps in their own understanding earlier in a course and also help them make course relevant connections earlier as well. By being more critical consumers of course information students will improve their application and evaluation and skills and more equipped to tackle novel problems professionals in their field of study are facing.

Building higher ordered thinking skills can contribute to student’s lifelong learning and improve their classroom productivity.

* Some [*actionable* critical thinking skills](http://www.rasmussen.edu/student-life/blogs/main/critical-thinking-skills-you-need-to-master-now/) (i.e. ones we can build assignments around!)
* [How thinking works](https://www.youtube.com/watch?v=dUqRTWCdXt4)-video clip explaining how we as educators should be approaching student learning skills

***Can you provide an example?***

Example illustration of Depth of Knowledge:  ***How can we as faculty play our part in teaching at Wilmington University?***

Note how as we move down the list of potential applications/ depths of knowledge on display in the example activities-our contributions to the field of teaching are increased. Ask yourself-would you be more passionate about personal performance on a multiple choice quiz; or a project that improves career-relevance of curricula for all students moving forward?

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| **Depth of Knowledge** | **Definition** | **Example Activity** |
| Recall & Recognition | Rote application of simple procedures | Give faculty a multiple choice test on the mission/value statements at the university |
| Skills & Concepts | Student must make a decision, such as comparing, organizing, or predicting | Give faculty case studies and have them predict which students would be most likely to attend Wilmington University and to compare their needs to those not likely to attend here |
| Strategic Thinking | Student must use planning and evidence; thinking starts to become abstract | Ask faculty to provide documentation of evidence of lesson planning with adult learners in accelerated courses in mind and be a |
| Extended Thinking | At the most complex level students synthesize information from multiple sources or transfer knowledge from one domain to solve problems in another | Ask faculty to coordinate their course resources and assessments with others in the program to assess where gaps in student career needs might be |

* Additional examples of [activities that promote](http://teaching.uncc.edu/instructional-methods/promote-higher-thinking) higher order thinking

***How should I approach adding Higher-Ordered Thinking Skills to my classes?***

For this module we encourage faculty to take a look at an upcoming class agenda, and try to convert a previously used activity or assessment into one that requires students to operate at a higher level of understanding as outlined above.

If you would like to discuss this topic, or to forward your planned activity or assessment to the CTE for feedback please feel free to send us an email at [facultydevelopment@wilmu.edu](mailto:facultydevelopment@wilmu.edu).

***How do I earn credit for this learning unit on my Pathway to Instructional Excellence?***

Our building higher ordered thinking skills module is designated as a CTE (Center for Teaching Excellence) Mastery Level Elective. At this level, the CTE is looking to see faculty reflection on your usage of this particular instructional technique recently in the classroom. Of particular interest is how usage of this teaching skill contributed to student learning. Please address the following in your reflection:

* First-identify the action taken. Discuss the previous teaching experience that led to your decision to try this new instructional technique, assessment method, or approach to communication in the classroom. Discuss how what you learned in this unit was applied in the classroom.
* Second-reflect on the new teaching experience and its outcome. What did you observe from students? Did student understanding of learning outcomes or your expectations improve? Did the experience contribute to more engaging class sessions or student motivation? Did the experience provide students with more practical application of course learning content? Please note, whether the answers are yes or no to these questions, we can learn and grow as faculty members-so please be as honest as possible in your reflection.
* Finally-please provide a follow-up on this reflection. What might you do moving forward to help to continue to improve student learning outcomes? How might this activity be refined to anticipate learner needs? How might communication of your expectations been improved moved forward? Etc.

**CTE-Pathways to Instructional Excellence-Mastery Level Evaluation**

Faculty reflections will be reviewed during reading week of each block and will be assessed as either “Complete” or “Incomplete.” Complete reflections:

* Analyze why the instructional update would be predicted to help facilitate student learning
* Demonstrate understanding of learner-centered instruction through reflection of the student experience
* Assess how this technique can be used in the future to improve student learning

Faculty members whose reflections are rated “Complete” will earn a *Mastery Level* certificate for this learning unit. Reflections rated as incomplete will be provided feedback by members of the CTE and faculty will be provided the opportunity to consult with the CTE prior to resubmission. Submissions will be reviewed during reading week each block.