



# Writing Course-Level Learning Objectives: Bringing Taxonomies into Action

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# Session Outcomes

- Learn about Syracuse University's context and need for an integrated learning model.
- Comprehend the need for a holistic approach to shaping course learning objectives.
- Use Syracuse University Framework to write course learning objectives addressing the Bloom's levels and Fink's domains of learning.



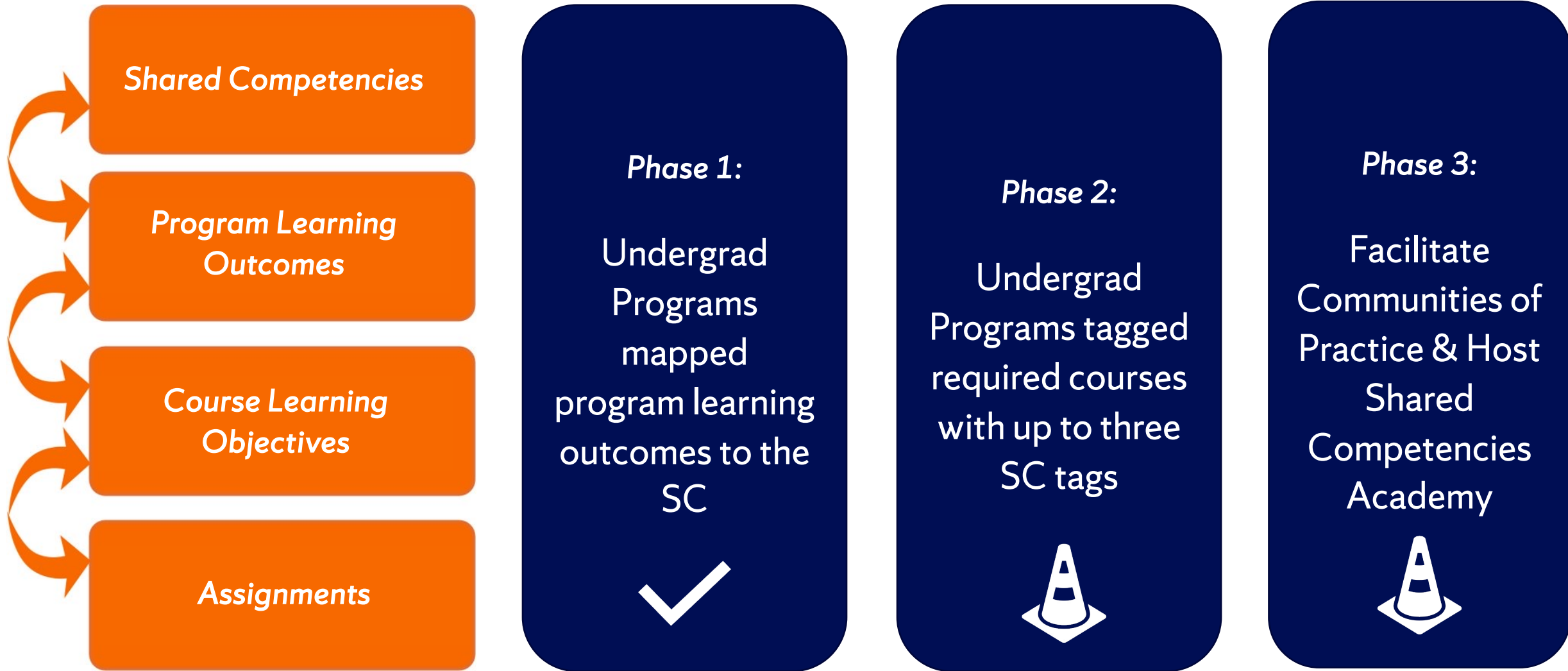
# The Shared Competencies

## Syracuse University's Integrative Learning Goals

### SHARED COMPETENCIES

- 1 Ethics, Integrity, and Commitment to Diversity and Inclusion
- 2 Critical and Creative Thinking
- 3 Scientific Inquiry and Research Skills
- 4 Civic and Global Responsibility
- 5 Communication Skills
- 6 Information Literacy and Technological Agility

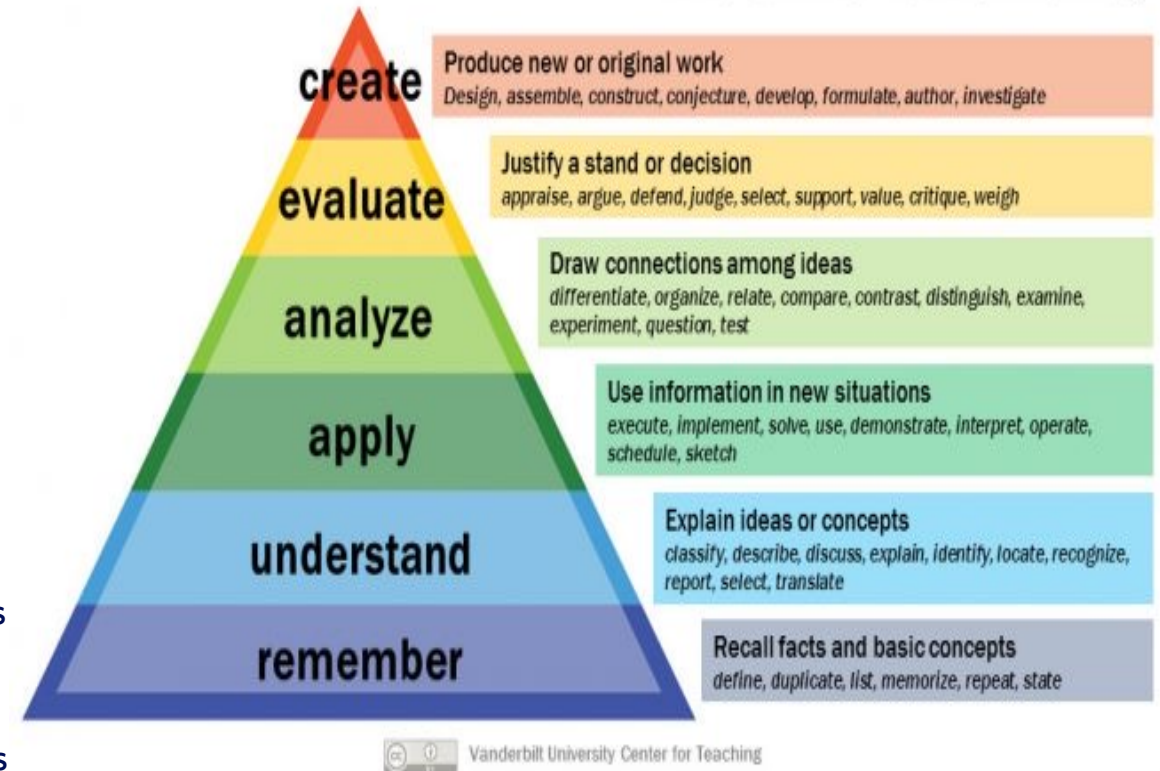
# Integrative Alignment Process



# Bloom's Taxonomy and Critique

- Learning is described as change in behavior.
- Objectives describe student behavior (e.g., to read, to interpret, to distinguish).
- Bloom's taxonomy of cognitive learning is the most commonly used by the faculty.
- Bloom's taxonomy provides a shared language to classify objectives so that faculty can discuss, communicate, and evaluate students' performance.
- Critique:
  - Bloom's taxonomy assumes that the cognitive and affective domains are separate - however, in reality, these two are intricately related in how one acquires knowledge.
  - Important learning experiences does not emerge easily from Bloom's taxonomy such as learning how to learn, leadership and interpersonal skills, ethics, communication skills, character, tolerance, and the ability to adapt to change.

## Bloom's Taxonomy

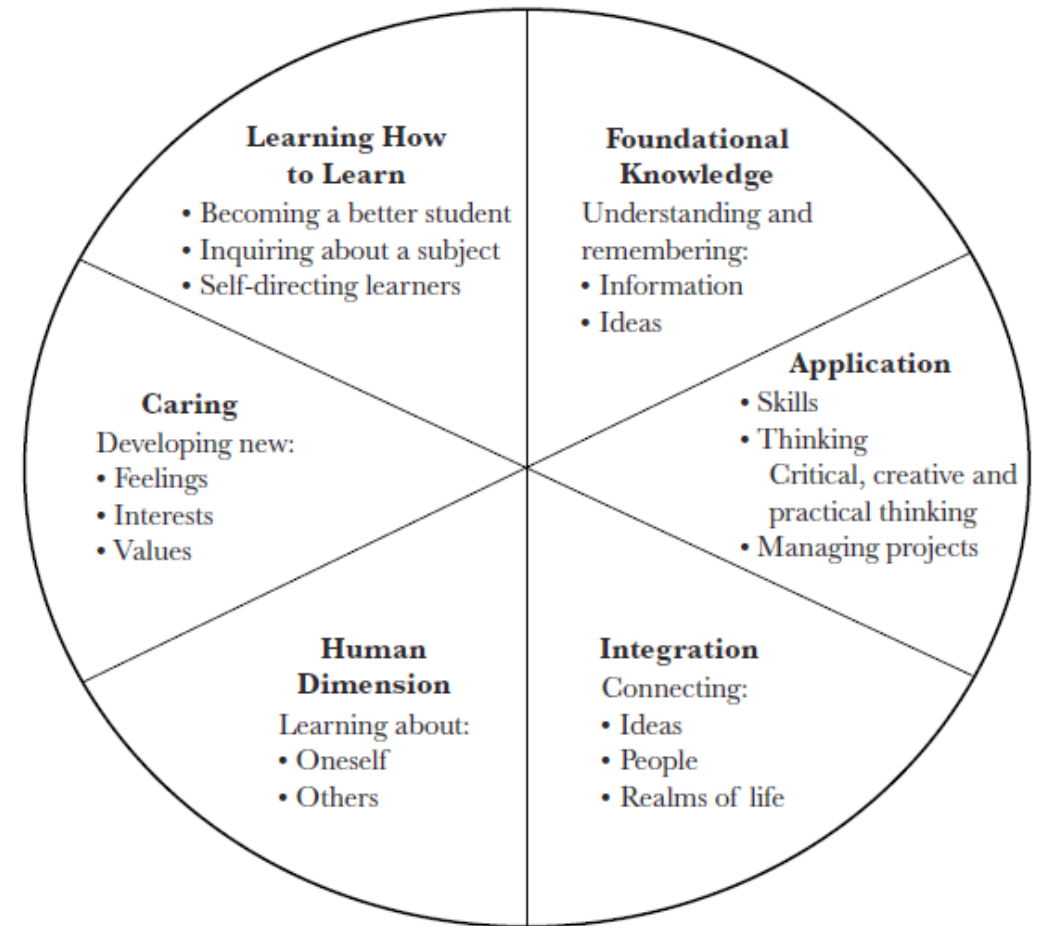


(Anderson & Krathwohl, 2001; Pring, 1971)

# Fink's Taxonomy and Why Use It

- Learning is defined as change in the learner.
- Fink's taxonomy caters to the types of learning that goes beyond cognitive learning and includes affective and meta-cognitive aspects of learning.
- Not a hierarchical taxonomy because it explains the interactive nature of learning.
- Emphasize the use of action-verbs, condition, and criteria for generating evidence of learning.

FIGURE 2.1. TAXONOMY OF SIGNIFICANT LEARNING.



(Fink, 2013)

## Learning Outcomes/Objectives Framework - A Crossroad between Bloom's and Fink's Taxonomies

Bloom's Levels of Learning		Fink's Domains of Learning					
		Foundational Knowledge Understanding and remembering information and ideas	Human Dimension Learning about oneself and others	Caring Develop new feelings, interests, and values	Application Apply critical, creative, and practical skills to solve problems and manage projects	Integration Connect ideas, people, and realms	Learning How to Learn Become a better student, and self-directed learner. Inquire about a subject
Intellectual Skills	<b>Create</b> Generate new idea or concept	Conduct, Compile, Predict, Animate, Develop, Align, Perform, Discuss, Exhibit	Advocate, Propose, Produce, Initiate, Invent, Instruct, Decide, Collaborate, Role play	Generate, Improve, Restructure, Coordinate, Combine, Synthesize, Cultivate, Theorize, Commit	Design, Develop, Create, Combine, Produce, Organize, Pledge, Propose, Form	Construct, Predict, Modify, Assemble, Adapt, Display, Integrate, Participate, Manage	Set Goals, Plan, Experiment, Dramatize, Structure, Campaign, Reflect
	<b>Evaluate</b> Justify a decision or course of action	Rate, Validate, Estimate, Measure, Prove, Select, Appraise, Support, Critique, Reflect	Evaluate, Give Feedback, Clarify, Resolve, Setup, Determine, Support, Advocate, Exemplify	Assess, Judge, Diagnose, Balance, Adapt, Reconcile, Value, Recommend, Promote	Critique, Justify, Contrast, Amend, Reframe, Respond, Review, Defend, Decide	Conclude, Associate, Test, Check, Compare, Determine, Grade, Modify	Justify, Predict, Resolve, Formulate, Measure, Determine, Verify, Internalize
	<b>Analyze</b> Break information into parts	Identify, Contrast, Illustrate, Calibrate, Classify, Organize, Choose, Delay, Identify	Characterize, Distinguish, Analyze, Categorize, Collaborate, Illustrate, Mediate, Detail, Discover	Explore, Correlate, Demonstrate, Associate, Dispense, Configure, Empathize, Practice, Assemble	Outline, Deduce, Compare and Contrast, Handle, Infer, Map out, Report, Examine, Investigate, Survey	Question, Relate, Formulate, Tabulate, Graph, Dismantle, Link, Integrate, Comply	Self-Assess, Self-Regulate, Frame questions, Categorize, Arrange, Diagram, Scrutinize, Map, Categorize
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	<b>Remember</b> Recall information	Define, Name, Indicate, List, Identify, Collect, Choose, Ask, Follow, Comply with	Specify, Recognize, Label, Follow, React, Map, Listen, Accept, Seek	Quote, Recognize, Recall, Read, Copy, Mimic, Recollect, Adhere, Attend	Enumerate, State, Reproduce, Replicate, Sequence, Browse, Read, Explore, Imagine	Indicate, Recite, Blend, Merge, Imitate, Exercise, Collect, Trace, Follow, Describe	Recall, Monitor, Self-Monitor, Write, Underline, Search, Recite, Listen

# Writing Sound Learning Objectives

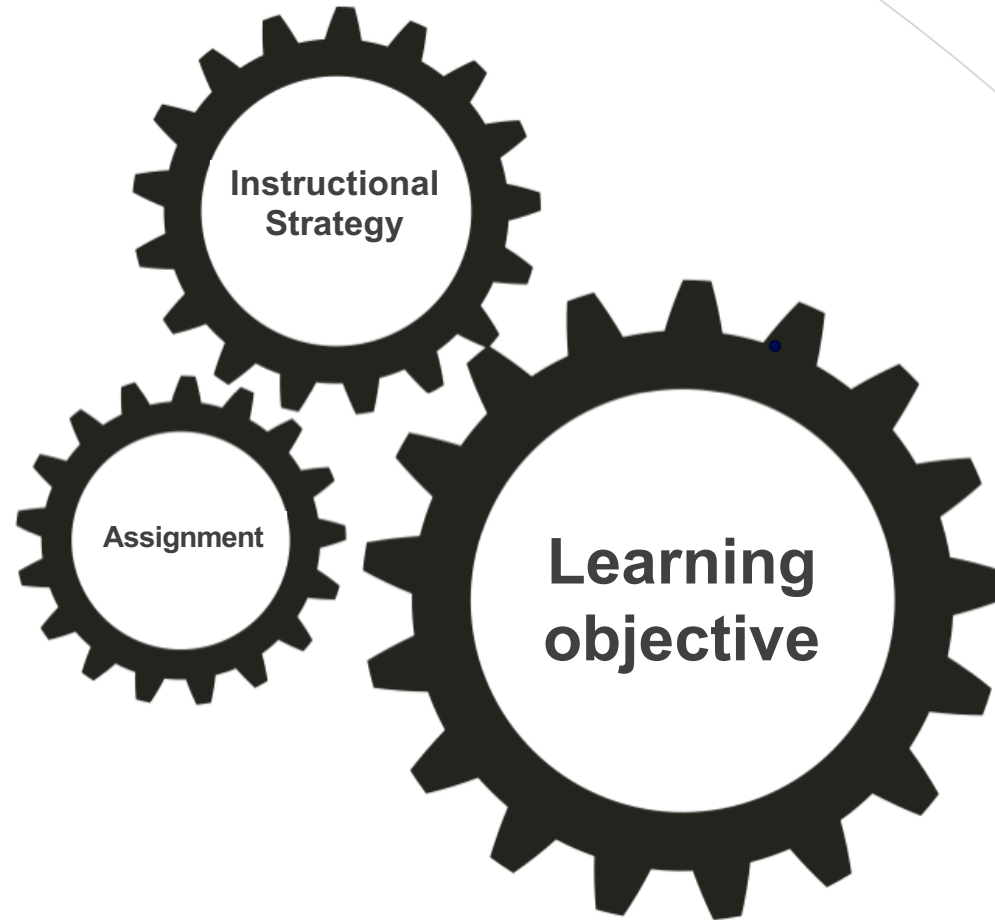
- What is a learning objective?
  - A statement that tells learners what they should be able to DO, in measurable terms, AFTER instruction
- How should a learning objective be written?
  - the **terminal performance** or actions that will demonstrate learning
  - the **condition** of demonstration of that action
  - the **standard** or criterion for demonstrated learning



# Information Literacy & Technological Agility Example

- Objective: <sup>terminal performance</sup> **Build a digital tool.**
- Better Objective: <sup>terminal performance</sup> **Build a digital tool** <sup>condition</sup> **to identify biases in information systems.**
- Objective: <sup>standard or criteria</sup> **Build an accessible** <sup>terminal performance</sup> **digital tool** <sup>condition</sup> **to identify biases in information systems.**

# Constructive Alignment



# Instruction for Group Activity

- Individually, think about a course that you are currently teaching.
- Refer to Learning Outcomes/Objectives Framework - A Crossroad between Bloom's and Fink's Taxonomies
  - Identify the type and level of knowledge
  - Identify the domain of learning
  - Use verbs to generate course learning objectives
- Consider Performance-Condition-Criteria criteria to create a course learning objective.
- Align the course learning objective with assignments and instructional strategies.
- Discuss your work in small groups with peers.

Objective: <sup>standard or criteria</sup> **Build** <sup>terminal performance</sup> **an accessible digital tool** <sup>condition</sup> **to identify biases**  
**in information systems.**

# Questions & Discussion





# Thank you!

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**Information Literacy and Technological Agility - Action Verbs and Learning Outcome/Objective Examples**

**Information Literacy and Technological Agility**

Identification, collection, evaluation, and responsible use of information. Effective, ethical, and critical application of various technologies and media in academic, creative, personal, and professional endeavors.

**Description**

The document utilizes Bloom’s Taxonomy of Cognitive Learning and Fink’s Taxonomy of Significant Learning to guide faculty in developing institutional learning goals, program learning outcomes and course learning objectives. Instruction is purposefully designed to develop learners’ attitudes, skills, and knowledge. Bloom’s and Fink’s are two taxonomies faculty can use to organize instruction to facilitate students’ learning. The intersection of Bloom’s and Fink’s provide examples of action verbs and/or goals/outcomes/objectives suited for instructional and/or student levels.

<p><b>Bloom’s Revised Levels of Learning:</b> Focuses on cognitive development of intellectual abilities and skills. The cognitive learning domain can be classified in declarative and intellectual skills.</p> <p><b>Intellectual Skills - Concepts, principles, procedures, and/or problem solving:</b> Application of concepts, principles, and rules applied in instances beyond instruction.</p> <ul style="list-style-type: none"> <li>• <b>Create</b> - Organize or re-organize elements together to make a new pattern or structure.</li> <li>• <b>Evaluate</b> - Make judgements based on criteria and standards.</li> <li>• <b>Analyze</b> - Break material into its subcomponents and determine how the parts relate to one another and overall structure and purpose.</li> <li>• <b>Apply</b> - Use a process or idea in a given situation.</li> </ul> <p><b>Declarative Knowledge - Facts and information:</b> Recall, recognize, state, paraphrase or summarize the facts and information collected.</p> <ul style="list-style-type: none"> <li>• <b>Understand</b> - Make meaning of the information.</li> <li>• <b>Remember</b> - Recall knowledge from the long-term memory.</li> </ul>	<p><b>Fink’s Domains of Learning:</b> Fink describes learning as the change in the learner. The Fink’s taxonomy is a holistic taxonomy that describes various ways in which learning can make lasting change in multiple dimensions of life.</p> <p><b>Foundational Knowledge</b> - Remember and identify specific information and ideas.  <b>Human Dimension</b> - Learn about self and others to function and interact effectively.  <b>Caring</b> - Develop new feelings, interests, and values to be driven to learn.  <b>Application</b> - Apply the ideas to engage in physical, intellectual, or social action.  <b>Integration</b> - Identify connections between different ideas, experiences, and realms of life (work, school, leisure).  <b>Learning How to Learn</b> - Learn about the process of learning to become a self-directed learner.</p>
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## Information Literacy and Technological Agility - Course Learning Objective Examples

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Intellectual Skills	<b>Create</b> Generate new idea or concept	Create an infographic illustrating key components of a research proposal.	Build an accessible digital tool to identify biases in information systems.	Propose a policy addressing access to information and technology for all stakeholders.	Design an accessible website for researchers to identify news deserts.	Host a campus community conversation on improving information literacy in communities.	Generate new strategies to manage information overload to meet an information need.
	<b>Evaluate</b> Justify a decision or course of action	Evaluate the authenticity of data available to solve a given problem.	Critique information privilege in contexts to identify information biases.	Compare the authenticity of information sources using appropriate criteria.	Discern power and justice dynamics within information systems.	Determine the means of information transfer between two different stakeholders.	Discern and adapt ways to develop credibility in a discipline.
	<b>Analyze</b> Break information into parts	Analyze information to reach valid conclusions using appropriate technological tools.	Examine scholarship from non-traditional and other media sources.	Analyze the differences between public, proprietary, and confidential knowledge.	Compare the strengths and weaknesses of multiple technologies to select the appropriate tool.	Compare and contrast policies of different trade associations to guide decision-making.	Interpret how a source of information influences communication perception.
	<b>Apply</b> Use information in given situations	Apply strategies to access information from diverse sources to solve a problem.	Organize information collected from multiple sources.	Interview professionals to determine the skills, time, and effort needed to produce new knowledge.	Use information and/or technologies in an ethical manner to solve problems.	Use technology to connect scholars from different regions around common research interests.	Compose a digital story explaining the implications of the digital divide across populations.
Declarative Knowledge	<b>Understand</b> Explain ideas or concepts	Map search strategies to access information from resources.	Discuss access limitations in information systems.	Select information sources that meets the needs of the stakeholders.	Identify scope of information to satisfy information need.	Communicate information using a range of formats and modalities.	Specify multiple search strategies employed to investigate an area of inquiry.
	<b>Remember</b> Recall information	Identify an information need in the community.	Identify the legal elements regarding intellectual property rights.	Describe inequities inherent in information and/or data systems.	Credit ideas gathered from sources using relevant citation style.	Document the process to create an accessible website.	List criteria to determine the quality of information.



## Constructive Alignment between Course Learning Objectives, Assignments, and Instructional Strategies

Course Learning Objectives	Assignments	Instructional Strategies
Build an accessible digital tool to identify biases in information systems.	<ul style="list-style-type: none"> <li>• Concept Map (20%): Create a concept map outlining the overall framework (purpose, how does it function, accessibility standards) of the digital tool.</li> <li>• Coding (20%): Write the code and build the tool.</li> <li>• Accessibility Test (10%): Use JAWS to test the accessibility of tool.</li> <li>• Presentation (10%): Present the tool to the class.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty uploads an instructional video on biases in information systems for students to watch prior to the session.</li> <li>• Faculty holds a discussion on biases in information systems.</li> <li>• Faculty models how to test accessibility of a digital tool using JAWS.</li> <li>• Faculty divides the students into groups and asks each group to select a different digital tool and identify the inherent biases and evaluate its accessibility.</li> </ul>
Create an infographic illustrating key components of a research proposal.	<ul style="list-style-type: none"> <li>• Proposal Outline (10%): Work in pairs to write a two-page proposal illustrating research problem, question, method, and context.</li> <li>• Infographic (20%): Pairs create an infographic after incorporating feedback from the faculty on their proposal outline.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty invites a librarian to facilitate a session on how to craft a research question.</li> <li>• Faculty models the process of designing a research proposal identifying the research problem, research question, methods, participants, and context.</li> <li>• Faculty uploads a tutorial on how to design an infographic.</li> </ul>
Propose a policy addressing access to information and technology for all stakeholders.	<ul style="list-style-type: none"> <li>• Policy Brief (20%): Work in groups to develop a policy brief outlining the problem, facts, solution, and references using APA style.</li> <li>• Presentation of Policy Brief (15%): Groups present their proposed policy. Each member of the group presents a different section in the proposal.</li> <li>• Responsibility chart (5%): Each member of the group provides a description outlining how the group worked together and outlines the contribution of each group member.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty lectures on the process for proposing a policy and shares methods to investigate needs of the stakeholders.</li> <li>• Faculty provides a case study to the students and highlights the methods used to investigate the problem, describes the problem, present facts, identifies the solution, and discusses proper citation formats.</li> </ul>
Design an accessible website for researchers to identify news deserts.	<ul style="list-style-type: none"> <li>• Website Template (10%): Work individually to prepare a draft of the website framework including visual design, menus, and navigation.</li> <li>• Website Content (20%): Incorporate the content into the website template. Address accessibility issues on the website.</li> <li>• Live Demonstration (15%): Students present their website to the class. Peers test the functionality to identify news deserts and provide feedback using a rubric.</li> <li>• Final Website Submission (5%): Incorporate the feedback from the live demonstration and submit the link via Blackboard.</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty shows a documentary on news deserts in the session followed by a discussion.</li> <li>• Faculty models tools to identify news deserts and engages students in finding news deserts in a geographic location.</li> <li>• Faculty uploads a tutorial on using a free website builder for students to watch prior to the session.</li> </ul>

**Constructive Alignment between Course Learning Objectives, Assignments, and Instructional Strategies**

Course Learning Objectives	Assignments	Instructional Strategies