

Langer/Knefelkamp Technology Arc Model II: Faculty in Higher Education

Dimension Variable	Functional and Perceptual Knowledge	Multi-Tasking	Synthetic Awareness	Competence	Multi-Dimensional
Technology Literacy	<p>Fundamental understanding of computer basics. How computers function. Limitations and capabilities. How to get online and conduct searches.</p> <p>Identification of major operating systems and understanding how to overcome common problems. Has a mastery over vocabulary of computer hardware and software terms.</p> <p>Computer presentation skills Knowledge of Word, Excel, Browsers.</p> <p>Can install software and do troubleshooting.</p> <p>Utilizes email as a fundamental component of communicating with students and is aware of common netiquette.</p> <p>Has used technology to as part of course design and requires students to develop assignments that challenge students to address technology variables in all assignments and papers. Uses technology as part of everyday activities at work and home.</p>	<p>Has used the Internet as a means to gather information for research or course development. Has discovered methods of how to determine usefulness of information and how to utilize time appropriately.</p> <p>Regularly uses the Internet as a component of all projects and tasks and has invested time to learn about pragmatic benefits as a result of effort.</p>	<p>Experienced at relating the integration of both automated and manual concepts of learning. Provide syllabus that challenges students to provide both technical and non-technical exercises. Exercises involve theory-to-practice-to-theory.</p>	<p>Teacher as source of technology knowledge and provides support for student development towards stability. Exercises challenge technology cognitive skill set.</p>	<p>Teacher as advocate for creative applications of multi-dimensional knowledge. Student exercises emphasize creative applications to deal with traditional problems.</p>

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Interactions Literacy	Uses email as the majority of communication with other faculty, students, and colleagues. Has built or designed a Web page and uses Web technologies as part of pedagogical approaches in courses. Knowledgeable of experiential learning theories and methods.	Understands that the use of technology is crucial for better understanding of multiple cultures and mindsets of students. Seeks to convert a portion of curriculum to include expanded views of issues via the Internet and email with students and others. Can support students that need varying levels of technology assistance.	Integration of multiple dimensions of student evaluations. Create multiple methods of feedback including verbal, email, chat-room, and written. Assignments allow for students to do comparisons using group activities.	Teacher as example of faithful to cyberspace relations with students. Must be open to certain criticisms from students and colleagues. Exercises allow students to create their own cyberspace community to apply theory.	Teacher facilitates research of how to operate within multiple environments (cyberspace, traditional, alone, group, etc.). Students receive exercises that test their abilities in each environment
Values Literacy	Understanding of how technology is used in the workplace. Knowledge of cultural relativity, multicultural theory and historical cultural facts. Has knowledge of different perspectives on technology biases and explores all perspectives of what technologies are being used and their advantages and disadvantages.	Accepts and appreciates the need to obtain ongoing feedback from students and others. Accepts the existence of multiple views on course content and outcomes.	Ability to provide situations that are consistent with value systems. Students are provided multiple problems that require them to determine what technological and manual events are consistent with value systems. Stratification of priorities required.	Teacher as facilitator for testing student value systems using technology as new variables that threaten long-term student goals.	Students are required to build new ideas and principles based on pre-conceived values. Teacher as facilitator of allowing students to develop new knowledge based on grounded principles formed in earlier stages.

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Ethical Literacy	Is familiar with ethical dilemmas facing students and educators. Has current perspective on Internet ethics, copyright and intellectual property rights.	Understands that students may not have the same technology sources. Compassion for views that are developed from varying levels of technology knowledge and access to information. Can provide a learning community where levels of knowledge can be shared using Web technologies.	Teacher as representative of integrity. Provide examples of importance of authenticity of both manual and technology systems.	Provide multiple commitments to learning that includes technical and non-technical commitments. Teacher as advocate for managing multiple commitments and remaining open to new knowledge.	Teacher as leader and advocate to application of technology to challenge existing traditions or new ventures
Reflective Literacy	Understands how to present concepts of self, and instruct on how technology creates multiple dimensions of the self.	Understands the basic concept of multiplicities of self, and wants to provide a learning environment that can help students relate to multiple perspectives conveyed from traditional classroom settings and online environments. This should also include the need to find and use multiple sources of self-evaluations	Teacher as advocate of complexity of self-perceptions. Exercises provide examples of multiple selves from manual and technological sources.	Teacher as example of stability of self in multi-dimension world. Exercises use technology and manual processes to enforce student confidence.	Teacher and student operate as a community that has ongoing dialogue that focuses on the multiplicity and relativism of all knowledge application in technology and manual systems.