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ISD Model/Theory:

The ADDIE Design model is a popular starting point for Instructional Systems Designers. There are five easy-to-remember steps in the ADDIE Process: Analysis, Design, Development, Implementation, and Evaluation. The five steps in the ADDIE process are illustrated in a variety of ways, some of which are illustrated below. The various images of ADDIE reflect the fact that while it may be easy to think of ADDIE as a linear process, in effective practice, it is a cycle where you are evaluating, communicating, and adjusting. While there are many other popular models for Instructional Systems Design, such as those explained by Dick and Carey or by Morrison, Kemp, and Ross, most of the popular models reviewed during degree programs seem to have a core that features the steps of ADDIE.
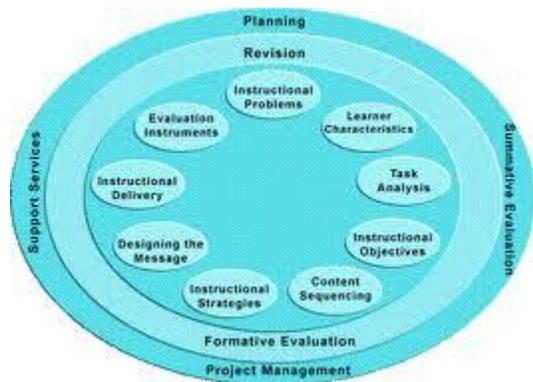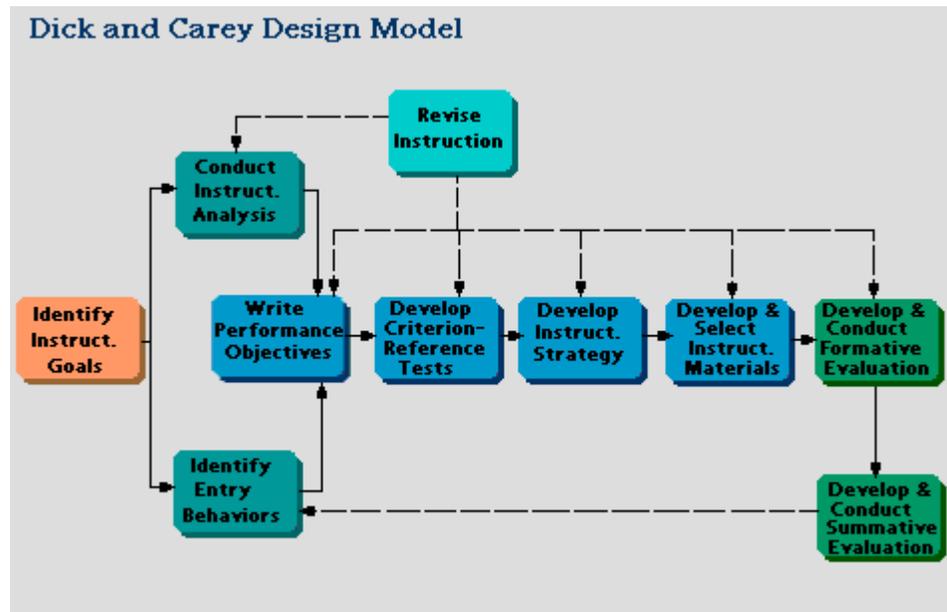
Morrison, Kemp, Ross Model
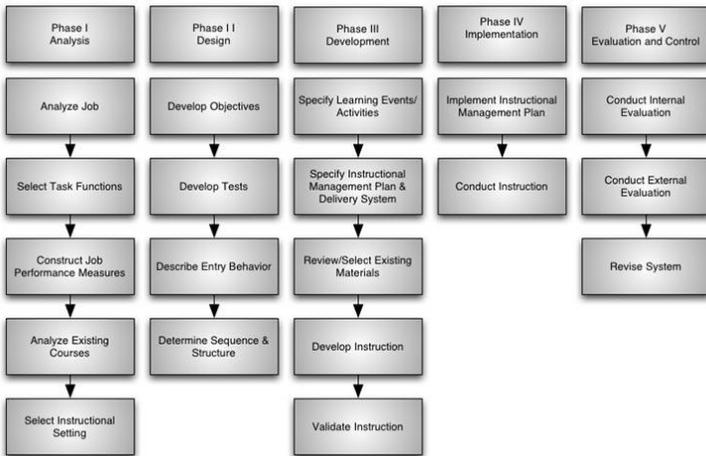
Florida State University Five Phases of ISD (1975)

In the above illustration from Florida State (also used by the U.S. military) ADDIE is illustrated as a process with concrete components. Models, in my opinion, are more useful than processes because the best models adapt easily to various situations.

Across most of the iterations, ADDIE requires the following activities:
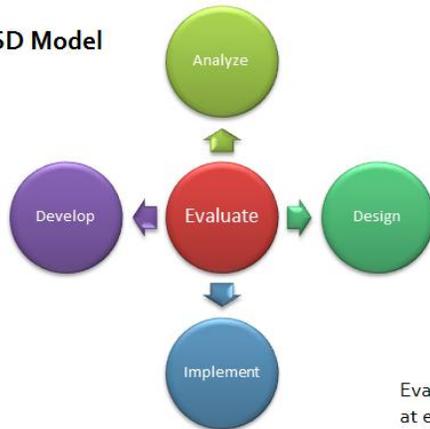
- Analyze: Define and prioritize the objectives of the program or course and the physical, instructional, technological, and interpersonal limitations that apply to implementation of the program and develop a method of evaluating success in meeting the objectives.
- Design: After evaluating the analysis, design and plan content that will provide learning opportunities that utilize effective methodologies while staying within the limitations of the program. Identify appropriate technologies and media for instructional use.
- Develop: Create, identify, or adapt content in/for appropriate media.
- Implement: Using developed content, carry out the instructional plan designed earlier.
- Evaluate: Using the evaluation methodology and criteria created in the analysis phase, assess the success of the program in meeting the initial objectives, and determine areas and revisions to improve.

As long as each of these five elements exists there is an increased likelihood of successful design and implementation of an instructional program. I believe something similar to these phases is necessary for instructional design as typically practiced because the goal of many design processes is to create criteria

to define success in transmission of data or acquisition of skills or both. As noted by Clark (2011), ADDIE, when used inflexibly (as in the illustrated process approach) or in applications where training is inappropriate, may not be successful – ADDIE is not the answer to all ISD problems, however the basic principles of the model are valid for many problem solving or design processes.

In the Clifford/Oakes Case Study, ADDIE is not likely the model Mr. Clifford intended to use in the Instructional Design process. Based on the information presented Mr. Clifford tried to interview Dr. Oakes and define instructional objectives, assessment instruments, and learner characteristics, all steps typically important to the ADDIE model's Analysis phase, but also explicit in the Dick and Carey Model. Because Mr. Clifford seems to be thinking sequentially about his typical process, he feels as if he is unable to move forward until he has completed the "first steps" in the traditional manner.

Instructional Design, as a field and a science, is constantly growing and has been strongly influenced by educational and psychological theories and theorists like Piaget, Gagne, Behaviorism, Cognitivism, and Constructivism use of adaptive models rather than reliance solely on processes reflects the changing nature of knowledge and learning. Because Dr. Oakes is a social cognitivist, her instructional process is based on facilitating students learning how to form understandings that work within their own social contexts, therefore the goal for instruction is to facilitate the process of understanding, not to specifically lead to one conclusion. If Mr. Clifford focuses his research on understanding how to support teachers in learning how to adapt their thinking, release control of their classrooms, and complete activities that help them construct understandings in a manner similar to the way their students will, then the project will be a success.

The materials Dr. Oakes provided Mr. Clifford are suitable for a basic framework within the analysis phase and then as he works with Dr. Oakes on the design and development of learning experiences based on group activities and research the analysis and evaluation phases can be revisited or overlap as necessary. Moreover, review of the videos showing Dr. Oakes and her students communicating can be the basis for research into the characteristics of learners, and the characteristics of successful processes.

Case Study: Constraints and Technologies:

In the case of Mr. Clifford and Dr. Oakes, one of the main problems is the lack of effective communication. Dr. Oakes is likely certain that Mr. Clifford has all of the information he needs to solve the problem she has posed and that he has access to the resources needed to design the instruction. Mr. Clifford feels he does not know enough about constructivism and cannot get Dr. Oakes to contribute or even clearly state her objectives.

In fact, Mr. Clifford most likely does have the required resources once he views the videos and talks to successful past participants – observing them in their classrooms and delving in to their learning communities. As Mr. Clifford has already identified, his major issue is a lack of understanding of the constructivist approach and so part of his analysis and design phase should be gaining a good understanding of that educational philosophy. Speaking with teachers and watching teachers who use the constructivist approach will go a long way to helping Mr. Clifford be able to effectively communicate with Dr. Oakes.

Secondly, Dr. Oakes requested a list of proposed learning materials and delivery methods – the design phase of ADDIE – at their next meeting. After looking at Mr. Clifford's notes, he clearly identified that communication, the building of a safe learning community, and learning how to facilitate instructive community discussions should be key components of the instruction he designs. Moreover, Dr. Oakes desire to have instruction on their own time, at school or home, with occasional direct interaction from Dr. Oakes and support from a learning and working community makes the idea of an online learning community seem a natural component for instruction. The instruction for teachers would model the constructivist approach the would then use with their own students.

Using a model where experts, including Dr. Oakes, can act a resources for a community who develop their own understandings as they design or complete tasks around traditional scientific topics seems to fit the bill. Students can be presented a problem, create their schedule to meet in person or online, create and view videos, chat, post questions and answers, present conclusions, and leave a wealth of content for future learning groups to continue to develop. Perhaps groups of three to seven teachers in the same school or district could form wikis on facilitating specific topics. A key component would be implementing suggestions from the community and the examples from experts in a classroom and evaluating the results. This strategy for lesson delivery would model "instruction" for teachers and create a self-sustaining community for learners as well as take advantage of resources close at hand for most teachers: a classroom of students, a computer, other teachers, and the internet. If the internet was not available a book of case studies, teleconferences, DVDs of past workshops and constructivist science instruction, along with scheduled observations might provide the needed experiences and communication.

Another limitation Mr. Clifford is facing is time, Dr. Oakes wishes to focus on her research and be able to connect one-on-one with teachers using her curriculum and constructivist approach, not hold professional development workshops on a regular basis. Teachers and districts who wish to implement this approach would prefer instruction take place in a few days over the summer or just a few hours each week – not in an internship or full-time student format. The instruction also has to be scalable to work nationally and supplement the curriculum Dr. Oakes designed, an online or distance format would be a great option for a national program.

Design and Delivery Diversity:

Despite Mr. Clifford's fear that he and Dr. Oakes are too different in age, gender, and educational experiences, the fact remains that they are both in the field of education and have the goal of making Dr. Oakes program a success. Recognizing these mutual interests is an excellent starting point and should be the basis for mutual respect. After all, people of all backgrounds become teachers and go to school, and have shared experiences in those environments.

If Mr. Clifford makes an effort to better understand Dr. Oakes instructional perspective through online research and review of the videos she provided to him, he will gain the vocabulary and understandings that will enable him to better communicate with her. Dr. Oakes, could also demonstrate her pervious trainings and ask Mr. Clifford to sit in on one of her classes so he could see how she teaches in person – especially if he has her syllabus and lesson plan in hand. This would show respect for her expertise, his efforts to help her, and give Mr. Clifford a better frame of reference for working with Dr. Oakes, while helping him better understand the content and implicit and explicit objectives of the instruction he is designing.

Taking the opportunity to observe how people act and react in various situations and especially within their comfort zone, helps reduce tension and increase openness, further developing a working relationship. Moreover, when working with someone who seems to evade giving a direct response, rephrasing the question or asking for a response to a scenario might help.

As noted earlier, if Mr. Clifford and Dr. Oakes chose to use an online learning community format for instruction, social networking and multiple forms of communication would be essential in the success of the program. Dr. Oakes, former, and current students would contribute articles, activities, videos, interviews, blogs, comments, tweets, and likes to communicate with each other and future students. This rigorous supportive communication would create space for change in the minds, hearts, and classrooms of teachers.

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