In the world of education there are many different tools to promote instructional design. Richard Culatta, a leader in the field of educational innovation, describes instructional design as “the process by which instruction is improved through the analysis of learning needs and systematic development of learning materials” (2011). Technology and multimedia tools often accompany instructional design in order to help improve instruction. The three models that will be discussed further in this paper are the cognitivism instructional design model, the prescriptive instructional design model, and the constructivist instructional design model.

Influencers of the cognitive approach believe that learners actively construct knowledge in a social context. Therefore cognitivism instructional design models are active. One concept from the cognitivism ID model that was of particular interest was concept mapping. The concept mapping technique was developed by Joseph Novak at Cornell University in the 1960’s. Novak and Canas state that “concept maps are graphical tools for organizing and representing knowledge. They include concepts, usually enclosed in circles or boxes of some type, and relationships between concepts indicated by a connecting line linking two concepts” (2008). Concept mapping is useful because it can be applied to any topic or content area. Concept mapping helps students understand relationships so they can better comprehend new information. Students can show relationships between book characters, events in history, or science concepts. Concept maps also work well if you want your students to work with a partner or a small group. The district where I work currently uses the Thinking Maps program in all of our classrooms in all areas of teaching and I feel that concept mapping fits well with this program. The great thing about concept maps is that you can continually add more arrows and
boxes as the unit grows and student knowledge increases. Students could use concept mapping in the media center when they go to the computer lab to begin a unit on internet research. They could put their chosen topic in the main box and branch from it as they discover new information and facts. They could then use their finished map to create their power point presentations or write their papers.

The next model is the prescriptive instructional design model. Patricia Rogers wrote that “prescriptive behavioral models in learning would seem, at first encounter, to be inappropriate in light of the more constructivist practices of current educators. However, most constructivists would concur that one must have solid building blocks or elements before construction of new knowledge can be achieved” (2003). Prescriptive models provide guidelines to organize and structure the process of creating instructional activities. The ASSURE model is one concept of prescriptive instructional design models. This model would be useful in an everyday work situation. Being the media specialist at the elementary school I work at, I still teach 3 classes a day. I teach media/library classes to one third grade group, one fourth grade group, and one fifth grade group. I plan my lessons and present my standards as if I were a regular classroom teacher. That is why I like this model so much, because its process was designed to be used by regular classroom teachers. The ASSURE model incorporates Robert Gagne’s events of instruction to ensure effective use of media instruction. A- Analyze learners. Before I begin to plan my lessons I think about my students and the skills they have already been taught and should be familiar with. This gives me a place to start planning my instruction. I also take into consideration my special education or EIP populations. S- State standards and objectives. I clearly state the grade level standards and media standards that will be covered during the lesson so students know what knowledge they will have gained when the lesson is complete. S- Select strategies, technology, media & materials. Next, I take into consideration my learners and the materials and strategies that will be most effective for them. This will mean differentiating my lesson and materials so all learners are reached on their level. U- Utilize technology, media & materials. Making sure that technology has been utilized is very
important. Students love technology and are not afraid to jump right in and use the resources we have available. It is important to consider all media resources when implementing the lesson. R- Require learner participation. In order for students to acquire new knowledge they must become active learners. It is important that the lesson is hands on. E- Evaluate and revise. When the lesson is over I evaluate its effectiveness. Was the lesson effective? What could I do next time to make it better? Were the materials, technology, and media appropriate for the lesson? Did my students gain knowledge of the standards?

The constructivist instructional design model is the last model that will be explored. Wesley Hoover states that “constructivism's central idea is that human learning is constructed, that learners build new knowledge upon the foundation of previous learning. This view of learning sharply contrasts with one in which learning is the passive transmission of information from one individual to another, a view in which reception, not construction, is key” (1996). The concept that I believe is most effective is problem-based learning. Problem-based learning uses real world situations for investigation. Student engagement begins with a problem or puzzle that needs to be solved. In the problem-based learning model the first step is to read and analyze the scenario and situation. Next, you would list your personal ideas or perspectives. After this step you list, first, what is known, and second, what is unknown. You then plan your investigation by thinking about what needs to be done. You would then develop a problem statement that identifies what you are trying to solve. Then you would gather your information and exchange ideas with others and present your findings. These steps can be completed a numerous amount of times before the problem is actually solved. This particular model is becoming very popular for use in modern day classrooms because the focus has shifted to student centered learning without a lot of lecturing from the teacher. Dr. De Gallow at the University of California, Irvine determines that “this does not mean that the teacher abdicates her authority for making judgments regarding what might be important for students to learn; rather, this feature places partial and explicit
responsibility on the students’ shoulders for their own learning. Creating assignments and activities that require student input presumably also increases the likelihood of students being motivated to learn” (De Gallow).

After reviewing the three models, there are many other ways in which we think about instructional design. Reiser and Dempsey (2012), in their text book, define instructional design as

The field of instructional design and technology (also known as instructional technology) encompasses the analysis of learning and performance problems, and the design, development, implementation, evaluation, and management of instructional and non-instructional processes and resources intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace.

Professionals in the field of instructional design and technology often use systematic instructional design procedures and employ instructional media to accomplish their goals. Moreover, in recent years, they have paid increasing attention to non-instructional solutions to some performance problems. Research and theory related to each of the aforementioned areas is also an important part of the field. (p. 5)

In my own words I would define instructional design as using a variety of media tools and resources to design and implement instructional processes that positively affect learning. I believe meeting the needs of my learners could be accomplished by combining two of the previously mentioned concepts. I would combine concept mapping and the ASSURE model in order to most effectively put instructional design into action. I would do this by inserting concept mapping into the R step of the ASSURE model. During the R step you require learner participation. The learners could become active by organizing their knowledge onto a concept map.
One of the main values of using an instructional design model for planning instruction is that it allows you to customize your lessons. You are able to take into consideration your learners and design and implement lessons and activities that are most beneficial for those particular students. In the same sense, using instructional design models for planning allows you to be flexible. You have your choice of many design models or you can combine two models that you feel would be the most effective. Using an instructional design model for planning instruction can also save teachers time by aiding them in the planning process. It can assist them in brainstorming lesson ideas and goals and objectives.

The optimal role that any teacher can play in the instructional design process is being able to recognize where their students are when they begin planning for instruction. Teachers must also be able to understand what goals they would like for their students to reach by the end of the process. Taking both of these things into consideration, the teacher should then be able to plan what it will take to get their students from beginning to reaching their goal. This is the ideal situation for the role of teachers in the instructional design process. However, this role greatly differs from our current reality in the classroom. At the beginning of the year teachers are given curriculum maps and timelines. These things must be followed closely so everyone can stay together. We do not have the luxury of, ultimately, setting our own goals for each of our students. They are all expected to be on the same level so they can meet the learning standards on state standardized tests.

As the media specialist at my elementary school I work collaboratively with teachers to plan for instruction. I see each student in my school one day a week for a 50 minute class in the media center. I attend grade level meetings with the classroom teachers so I am aware of what standards they will be covering in the upcoming weeks, so I can plan lessons that will reinforce those standards.
References


http://www.sedl.org/pubs/sedletter/v09n03/practice.html

De Gallow. What is problem-based learning? Retrieved July 1, 2013 from

http://www.pbl.uci.edu/whatispbl.html


Boston: Pearson.