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Using Computers as MindTools: A Look at David H. Jonassen

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USING COMPUTERS AS MINDTOOLS: A LOOK AT DAVID H. JONASSEN

David H. Jonassen is a well-known leader in the field of instructional technology. Using computers, he has transformed the constructivism theory to include technology in ways previously unimagined. This paper will cover just one area of his many areas of interest which include: designing constructivist learning environments, cognitive tools for learning, cognitive modeling/cognitive task analysis, systems dynamics/systems modeling, and problem solving (Jonassen, 2005).

Using computers as mindtools in the classroom is a relatively new idea in the theory of constructivism. Constructivism uses the learner's past knowledge and experiences and builds upon that knowledge using a variety of ways (Bruner, 1966). Jonassen specializes in taking knowledge in unrelated fields and using technology to apply it to the information that is being learned. In his book, *Computers in the Classroom: Mindtools for Critical Thinking (1996)*, he discusses ways that mindtools will encourage learning in a constructivist way and engage the learner so they will be willing to build on their knowledge (Jonassen, 1996).

One method he proposes is using databases (Jonassen, 1996). The instructor would give the student information that will go into a database and ask the student to build the tables in the database so they are easily searchable, but also easy to enter the information in. When the student has applied their database-building skills to the project, the instructor can then give them examples of information they need to get out of the database and allow the student to build queries. The student is able not only to apply language skills in completing this task, but also problem-solving skills and math skills. The student's project also builds on each decision the student makes in the process. If one decision is wrong, the student will not have a workable

project. The student learns from experiences inside the project, not just from previous experience before beginning the project.

Jonassen is an active leader and promoter of the constructivist theory on his website and is continually publishing new studies and works as he completes them.

References

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