A Conversation with David Jonassen

Daniel F. Oswald

This the seventh in a series of conversations with educational technology leaders, initiated by ***Daniel F. Oswald****, a doctoral candidate in Instructional Systems Technology at Indiana University, Bloomington (e-mail: doswald@indiana.edu).*

Dr. David Jonassen[1] is currently Distinguished Professor of Learning Technologies and Educational Psychology at the University of Missouri, Columbia. He has been a faculty member at several American universities, including the University of North Carolina, Syracuse University, University of Colorado at Denver, and Penn State. Dr. Jonassen has also served as a visiting faculty member at a number of international institutions including the Institut fur Informationverarbeitung (Institute for Information Processing) at the Universiteit Graz in Graz, Austria; University of Twente in The Netherlands; and the Institute for Computer Based Learning at Heriot Watt University in Edinburgh, Scotland. He has many research interests, including designing constructivist learning environments (CLEs), cognitive tools for learning, cognitive modeling, systems dynamics, and problem solving. During his career, Dr. Jonassen has been a tirelessly productive contributor to the study of how to help people learn and develop. He has delivered numerous conference presentations and has published nearly 150 articles, over 35 book chapters, and 30 books, including *Handbook of Research for Educational Communications and Technology.*[2]

Q: Can you provide a brief overview of your background as a student in higher education and how it led you into the field?

DJ: Getting into the field was almost accidental. During my undergrad work at the University of Delaware, I responded to a job advertisement for a television cameraman and began in educational television for the university. I started as a camera operator, then I did audio, technical directing, floor directing, lighting, and so on. Eventually, I became involved in a repertory television workshop, and also worked for the university radio station. I became a "media head" early on and decided that it was something that I really wanted to pursue. Consequently, after college, I set about getting the experience that I needed to get into educational media and technology. I earned a master's degree in elementary education from the University of Delaware and taught for a couple of years. I also began studying psychology on my own because I never had the opportunity to study it as an undergrad, although it was a great interest of mine. After finishing my master's, I knew I would be going on for the doctorate. I completed an Ed.D. at Temple University in educational media and experimental educational psychology.

Q: Did you have any mentors during graduate school?

DJ: I didn't have any good mentors, although I really could have used some guidance. For example, when I was a graduate student at Temple, I submitted a paper for publication to *Review of Educational Research* on color as an instructional variable. It was reviewed and returned to me with a number of comments. I mistook this to be a rejection. In reality they had only asked for a number of changes. If I had a mentor to help me through the publication process, I would have had a really good research piece before I graduated. That would have been fairly significant for a young professor.

Q: What practical work do you have in the field, and what has been the connection between your practical experience and your research?

DJ: Most of my experience has been in instructional design work as a consultant or for different university partners. Also, at all of the universities where I've worked, I've engaged in a number of design projects. Most of my research has been in areas other than my practical experience, with the exception of some text design work that I did early on in my career. I did some consultation with people doing text design work. For the most part, however, my research has arisen more from my curiosity and interests than my work experiences.

Q: What are a few books or papers that you have written which you feel are most necessary reading?

DJ: I would first suggest the *Handbook of Research for Educational Communications and Technology.* That book is a huge compilation addressing different areas of our field. The other is *Task Analysis for Instructional Design.*[3] This is one of the books for which I've received the least attention. However, I believe that it represents a significant but poorly understood part of our field. It elucidates 25 or 30 different methods to do task analysis, irrespective of the type of instruction you are developing—constructivist learning environments, direct instruction, or other types of instruction.

Q: Which of your contributions to the field do you believe to be most significant?

DJ: In 1991, I published the article "Objectivism vs. Constructivism: Do We Need a New Paradigm?" in *Educational Technology Research and Development.*[4] Also in 1991, *Educational Technology* published two full special issues on constructivism, which I co-edited with Tom Duffy of Indiana University. During that period, our field began moving in a different direction. It was a watershed for instructional technology, and I like to think that this article and these special issues helped to stimulate the processes of discussion and change.

Q: Who has had the greatest impact on your career?

DJ: Early on in my career, Bob Heinich, former professor at Indiana University, gave me a big boost. Bob was gracious enough to do some editing of a philosophical analysis piece that I published back in 1984. He would provide me with lengthy reflections concerning certain points I was trying to make. I owe him a debt of gratitude for that work. Another person who has had a significant impact on my work is Dave Merrill. I have always regarded him as a mentor, although he has never known that. While I've moved on a different tangent intellectually and philosophically, I've always regarded Dave's work as being the most coherent model of traditional instructional design. Finally, I've clearly been influenced by a number of other people whose work I've read over the years, including Gaby Salomon.

Q: Can you describe your research agenda?

DJ: As I've written in a number of pieces, the field of instructional technology has largely ignored problem solving as a phenomenon. Bob Gagné used to talk about it in his earlier versions of *Conditions of Learning*, then sort of gave up on it, and moved toward simple kinds of problem solving. There are virtually no prescriptions, models, or analysis for design of instruction for different kinds of problem solving. About 80 percent of the research on problem solving is focused on story problems in math and science. While there is reasonably good guidance about how to solve some of those problems, those types of relatively prescriptive problems are different than the types of problems that people naturally tend to deal with in professional kinds of contexts—the real world. No one in the real world gets paid for memorizing things or solving canned problems. The problems people are rewarded for solving in everyday professional contexts are typically ill-structured problems. There is fairly little advice for how to design instruction for that. In my work, I've identified 11 or 12 different kinds of problem solving outcomes. The goal is to try to elucidate models of how those problems are solved and relatively good models for how to design instruction to support those kinds of outcomes. That is a fairly engaging agenda that's going to take a while to complete. Also, I continue to work with Mindtools. I've always regarded technology as a far more effective *tool* than teacher. Technology tends to be a lousy teacher, and whenever we ask technology to teach students, we're making the wrong distribution of responsibility in that kind of learning system. Finally, at Missouri, we are doing a lot of work with case-based reasoning and learning.

Q: What do you believe is the current direction of the field?

DJ: There really isn't one current direction of the field. There are multiple directions; there is no unified theory of instructional design or instructional technology. Now, I don't think the field is chaotic, or anarchistic, but rather we're modeling a much more mature level of epistemic beliefs. We in the field are beginning to realize that there are multiple perspectives on the world. Instructional design as a process is contextually bound and therefore the belief systems that you bring to any project have to be somewhat complementary to the design process you're doing. However, in public education—and to a degree in higher education—we are still immersed unfortunately in a fairly dualist, almost absolutist, framework. Whenever you comment on contextually dependent models, you're branded as a wishy-washy wimp. But to argue that there is any instructional theory or model that is going to be effective in every situation is ludicrous.

Q: What is the future of the field?

DJ: Overall, we're moving away from massive systems, as we've developed in the past, and are moving to a more distributed architecture both for technology and instruction. What I see happening is the impact of social factors on the learning process, the distribution of functionality, and responsibility and diversity of different perspectives that we're using to conceptualize technology.

Q: What advice do you have for current doctoral students?

DJ: First, question everything. This may annoy some people, but they'll get over it. Avoid crowds, intellectually. Avoid bandwagons, which is a phenomenon that ruled our field for so long. There really is no one best model. No one method or theory can begin to conceptualize the complexity of the human learning process. Anybody who tells you they have found it is full of it. Other than that, it's a matter of intellectual curiosity. If you don't have that type of intellectual curiosity about the field, I don't know how effective a scholar you're going to be.

Second, you can assemble a dissertation committee comprised of experts in areas that you want to research. They will be able to support you well, but they will scrutinize what you do. Or, you can research a topic that your committee knows nothing about. In that case, you won't get the scrutiny, but you won't get the same support, either. I followed this second route and therefore had to be a lot more independent in terms of the support systems. But I don't regret it. I knew what I wanted to do my dissertation on when I started the program. I had a burning question that I wanted to reconcile through my study.

Finally, you never know exactly where you want to be, so it is imperative that you publish prior to getting your degree. Currently, it's the rule. A number of students emerge from programs with well-established research agendas. If you want to be competitive for academic positions, doing research is almost imperative. Don't segregate teaching and research. If you don't do research you probably won't be as good a teacher as you could be because you won't be open to new ideas—it's the nature of the professorate. □

Notes

1. To learn more about Dr. David Jonassen and his research, visit his Website at the following URL: *http://tiger.coe.missouri.edu/~jonassen/*
2. Jonassen, D. H. (Ed.). (In Press). *Handbook of research for educational communications and technologies* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
3. Jonassen, D. H., Tessmer, M., & Hannum, W. H. (1999). *Task analysis methods for instructional design.* Mahwah, NJ: Lawrence Erlbaum Associates.
4. Jonassen, D. H. (1991). Objectivism vs. constructivism: Do we need a new paradigm? *Educational Technology Research and Development, 39*(3), 5–14.