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Simulations, Games, and Experience-Based Learning: The Quest for a New Paradigm for Teaching and Learning

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This article provides an overview of the evolution of experiential instruction theory and practice from its popular emergence in the late 1960s through the present period. Simulations, games, and other experience-based instructional methods have had a substantial impact on teaching concepts and applications during this period. They have also helped to address many of the limitations of traditional instructional methods, seven of which are discussed in the article. In addition to influencing classroom instruction, experiential methods have come to provide a pervasive and largely taken-for-granted foundation for a wide range of endeavors across many fields. Still, many of the limitations of the classic paradigm continue as vital and largely unresolved challenges today, and there remains much important work to be done to translate insights about experience, teaching, and learning into common practice.

KEYWORDS: *simulations; games; experience-based learning; experiential learning; teaching; learning; instruction.*

The Traditional Teaching-and-Learning Paradigm

In the late 1960s, as the manuscripts for *Simulation & Games* (Vol. 1, No. 1) were being written, the idea of designing simulated environments for teaching and learning was novel to say the least. Teaching was then fundamentally thought about in terms of information transfer. The learning process was typically thought to consist of a knowledgeable educator who constructed and transmitted knowledge on a particular topic to learners using the accepted instructional technologies of the day—books, articles, and lectures. When all went well, the intended message was presumably transferred from teacher to learner, and the process was said to be effective. The more the isomorphism between message sent and message received, the better the



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communication, the more complete the learning, the better the education—or so it then seemed to many of us at the time.

Limitations of the Paradigm

However, of course, there were problems with this way of thinking. First, the framework implied that teaching and learning are inseparably linked activities—that teaching is a necessary condition for learning. Clearly, this is not the case (Ruben, 1995). We learn all the time, inside but also outside of classrooms, from books written by scholars but also from conversations with casual strangers, from watching an instructional video but also from watching a wave roll in and out at the beach. Even in structured teaching environments such as those provided by undergraduate education, the learning acquired outside the context of teacher-intended instruction is arguably at least as voluminous and significant as that acquired inside—an insight that seems curiously absent in some current discussions about the merits of distance education (Merisotis & Phipps, 1999).

Second, the ultimate test of the knowledge and skill acquisition is usually not in the knowing but in the ability to use knowledge appropriately—in the translation of knowledge into behavior. Moreover, coming to know, and especially being able to use knowledge and skills generally, requires reinforcement, application, repetition, and often practice in a variety of settings and contexts in order for it to become fully understood, integrated, and accessible in future situations. This is the case with simple bits of information like phone numbers or addresses, and even more so for complex scientific or behavioral concepts, ideas, and skill sets. As we have come to increasingly recognize, cognitive skills and knowledge acquisition alone are seldom sufficient for personal, social, or professional effectiveness.

Third, the traditional school-based teaching-and-learning paradigm tended to emphasize the transmission of knowledge from an acknowledged expert to individuals in isolation. However, teaching and learning outside the classroom are most often social, collaborative, and peer based. This leads to some very paradoxical situations. For example, what is likely to be called cheating—and viewed as a behavior to be extinguished—in a classroom environment might well be called collaborative learning in the workplace—where it would be regarded as behavior to be idealized, reinforced, and nurtured.

Fourth, learning what someone intends is not the only, nor necessarily even the most desirable, outcome in a teaching-and-learning environment. Clinging too closely to the notion that effectiveness in education is realized

when the learner learns what the teacher teaches leads us to think of creativity as error and treat it accordingly.

Fifth, through the structure of classes, the physical layout of classrooms, and traditional approaches to testing, the traditional model conveys a number of metessages about knowledge creation, acquisition, and use. That embedded message essentially is that there are a small number of informed sources possessing the knowledge that should be acquired by large numbers of passive learners. The model does little to promote what we now call active learning or life learning, or the acquisition of critical skills necessary for evaluating and selecting among the wide array of competing information and information sources that one confronts outside the confines of the structured classroom environment.

Sixth, the classic knowledge-transfer model of education had little capacity to accommodate issues of emotion and the theoretical and practical linkages between the cognitive, affective, and behavioral domains.

Seventh, traditional teaching-and-learning environments were often too predictable, static, and unchallenging—in a word, “boring.”

One could go on.

Enter Experience-Based Learning

None of this is to say that these ways of thinking and operationalizing educational practice were universal or without alternative. The theoretical foundations for simulations, games, and other forms of interactive, experience-based learning had been in place at least since the writings of Aristotle and the practices of Socrates, reframed and popularized in the period in the works of Dewey (1938, 1966), Bruner (1961, 1966a, 1966b), Flavell (1968), Goodman (1962), Holt (1967), Mead (1934), Postman and Weingartner (1969), and many others.

Although the concepts and critique had been articulated, what was missing for many were the tools for operationalizing alternative approaches. The case study, long used in law and business education, and role-playing techniques used in therapeutic situations provided one kind of model. Simulations, games, and other structured exercises offered others. Motivated in large measure by one or more of the concerns enumerated above, individuals from various fields and various perspectives became excited about the potential power of instructional simulations (Boocock & Schild, 1968; Gamson, 1969; Greenblat & Duke, 1975; Tansey & Unwin, 1969), games (Abt, 1970; Coleman, 1969; Pfeiffer & Jones, 1969-1977; Ruben, 1978; Ruben & Budd, 1975), and group learning approaches (Bradford, Gibb, & Benne, 1964;

Budd, 1972; Egan, 1970; Rogers, 1967; Schein & Bennis, 1965). Many of these individuals, and many others who contributed books and articles to the pages of *Simulations & Games* and other publications during these years, now in retrospect may be viewed as pioneers in this regard.

The rush to embracement of simulations, games, and other forms of experience learning was quite remarkable in the 1970s and early 1980s. They represented an attractive and novel alternative to traditional classroom lectures and other one-way information-dispensing methods. For these reasons, they were widely and enthusiastically endorsed by teachers and students alike. Experience-based, or experiential, instructional methods had the potential to address many of the limitations of the traditional paradigm. They accommodated more complex and diverse approaches to learning processes and outcomes; allowed for interactivity; promoted collaboration and peer learning; allowed for addressing cognitive as well as affective learning issues; and, perhaps most important, fostered active learning.

The rush to embracement, however, was not matched by a rush to analysis and evaluation. For instance, fundamental distinctions such as whether a simulation was externally parametered (structured largely by design or facilitation) or internally parametered (structured largely by emergent participant roles and interactions) were seldom examined (Ruben, 1977). Missing, generally, was an enthusiasm for attention to the matter of rigor in design and application, and specifically to issues of validity, reliability, and utility that can be as relevant for experiential instructional methods as for research methods (e.g., Lederman & Ruben, 1978; Ruben & Lederman, 1982). Also, unfortunately absent in many cases was systematic attention to the critical role the instructors/facilitators play in experiential instructional methods (Lederman, 1984).

Experience-Based Instruction Today

Notwithstanding the limitations noted above, the impact of contributions in the areas of instructional simulation, gaming, and group methods has been remarkable. Beyond continuing scholarly and practitioner interest, in experience-based instruction, per se, is an evidence of impact that is so pervasive yet subtle that it may easily go unacknowledged. The subtlety comes from the fact that the paradigm has been thoroughly integrated into the fabric of diverse activities in a wide range of fields. The terms of historical significance are seldom preserved, but the influence of experiential learning theory and practice is nonetheless apparent. The following are but a few such examples:

- Service learning, internships, externships, case study, and field study programs in colleges and universities (Stanton, Giles, & Crux, 1999)
- Professional, leadership, and organizational-development training and strategic planning in business, education, health care, and government (e.g., Hunter, Bailey, & Taylor, 1995; Napier, Sidle, & Sanaghan, 1998; Tichy, 1997)
- Personal development, support groups, personal change, and self-help programs (e.g., Alcoholics Anonymous, 1999; Gamblers Anonymous, 1999; O'Brien, 1998)
- Continuous and lifelong learning programs for individuals and organizations (e.g., Pieters & Young, 1999)
- Case study methods designed to capture the richness and complexity of experience for theory generation and testing (Fishman, 1999)
- Growing interest in relationship between IQ and EQ (emotional intelligence), and instructional strategies for enhancing EQ competencies (Goleman, 1995)

The Quest Continues

There remains a critical challenge for scholars and practitioners interested in teaching and learning and the role that experience and experiential instructional methods can play in the process. Seven limitations of the traditional teaching-and-learning paradigm were enumerated earlier in the article. Let me briefly restate them here in the form of assumptions about the learning process.

1. We learn all the time, inside but also outside of classrooms, from books written by scholars but also from conversations with casual strangers, from watching an instructional video but also from watching a wave rolling in and out at the beach.
2. The ultimate test of the knowledge and skills gained is usually not in the knowing but in the ability to use knowledge and skill sets appropriately—in the translation of knowledge into behavior.
3. Whereas traditional school-based teaching and learning emphasize knowledge transmission from an acknowledged expert to individuals in isolation, teaching and learning outside the classroom are most often social, collaborative, and peer based.
4. Learning what the teacher intends is not the only, nor always the most desirable, outcome in a teaching-and-learning environment. Accommodating diverse learning outcomes and applications, and promoting creativity are fundamental.
5. The structure of traditional classes, the physical layout of classrooms, and classic approaches to testing do little to promote active learning or life learning, or the acquisition of the critical skills necessary for evaluating and selecting among the wide array of competing information and information sources that one confronts outside the confines of the structured classroom environment.

6. The classic knowledge-transfer model often does not acknowledge or address the inseparability of the cognitive, behavioral, and affective domains.
7. Traditional teaching-and-learning environments are often too predictable, static, unchallenging, and boring—particularly when compared with television and other “real-world” environments that compete as sources of attention and learning.

It seems to me that many of the limitations of the classic paradigm continue as vital and largely unresolved challenges today. As a society, we have progressed in our understanding of teaching and learning since the late 1960s and the pioneering work in experience-based learning. Nevertheless, there remains much important work to be done to translate these insights into common practice. As much as computers, the Internet, distance learning, and other new teaching and learning technologies and tools have great promise, they are clearly not panaceas. In many respects, the fundamental challenges of teaching and learning persist. If one can fail to learn from a book, one can just as effectively also fail to learn from the Internet, for instance. So the quest must continue, and what better group to guide this effort and to focus society on these critical challenges than those long dedicated to the theoretical and practical connections between experience, teaching, and learning.

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