

The Ecology of Education:
Understanding and Transporting Learning as a Social Practice

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The concept of education can be defined in many ways and descriptions of the function, ends, and meaning of education will vary depending on the definition. We will be using a definition of education that emerged in the 20th century out of the disciplines of philosophy, social psychology, sociology, and ecology. These academic fields helped to shift social scientific understanding away from a positivistic individualism and toward an environmental, historical, social, and process oriented view of human behavior. In order to understand and evaluate the *means* and *ends* of individual human action we must understand the physical, historical, and social *processes* of which they are a part. We will utilize this foundation so that we can more specifically conceptualize the *process* of education, how it is *practiced*, and how educational practices should be studied, evaluated, and transported.

Human beings dwell in and are largely constituted by complexly interwoven social and physical environments (Heidegger, 1954/1971). All parts of an environment are connected, interrelated, and dependent upon each other. This dense, interrelated network of mutually dependent living beings is called ecology (Capra, 1996; Leopold, 1949/1970; Merchant, 1992).¹ Human activities, ideas, and values are shaped by surrounding ecological networks, especially by institutionalized social structures, social practices, and ideas. Humans are culturally conditioned to behave according to various

¹ The concept of ecology was first developed Aldo Leopold, a social scientist at the University of Wisconsin. Leopold described an ecological system in terms of what has now become the familiar biota pyramid: “The pyramid is a tangle of chains so complex as to seem disorderly, yet the stability of the system proves it to be a highly organized structure. Its functioning depends on the co-operation and competition of its diverse parts” (252-53). Leopold also included humans in these ecological chains: “all individuals are interdependent members of a community, be it human or non-human, and thus all members of an ecological system must understand their connection and responsibility to the communities they inhabit” (239).

social norms, value certain ideas, and engage in particular social practices. Humans have the freedom to act and think in new ways, but all human action and thought is constrained by existing social structures, conditioned by existing social practices, and shaped by existing ideas. Humans have the potential to transform existing social structures, practices, and ideas, but this potential is mediated by the historically determined social ecology of which the individual is a part. The ecology of human being is constituted by individuals participating in physically, culturally, and historically situated social practices (Bronfenbrenner, 1979; Geertz, 1973/2000; Geertz, 1983/2000; Kaspersen, 1995/2000; Mead, 1934/1965; Mead, 1938/1965; Nasir & Hand, 2006; Vygotsky, 1960/1978; Wenger, 1998). Participation in social practices brings identity and meaning as individuals negotiate, transmit, and co-construct existing social structures, practices, and ideas (Geertz, 1973/2000; Geertz, 1983/2000; Kaspersen, 1995/2000; Wenger, 1998).

According to the philosopher Alasdair MacIntyre (1981), a social “practice” is

any coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realized in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended (p. 175).

In reading this passage by MacIntyre, David Bridges argues that there are three conditions that must be met in order to define a particular activity as “practice:” (1) the activity must be “socially established, cooperative, coherent, and complex;” (2) there are “goods internal to that form of activity which are realized through standards of excellence that are partially definitive of that activity;” (3) the activity must involve human standards of excellence defined in terms of “human goodness or virtue” embodied in the ends or goods of the practice (Bridges, 2006, p. 371-72). Recognizing the centrality of

social practices in human development and education, Paul Smeyers and Nicholas C. Burbules (2006) argue that “human life begins in doing, not in thinking.” Humans are trained in rule-governed and normative practices, but individuals negotiate and transform those practices through an individualized experience (“doing”) of the practice (Smeyers & Burbules p. 440-42; Winch, 2006). Smeyers and Burbules suggest that conceptually separating how one learns a practice from how one enacts a practice might foreground the bounded freedom that individuals have in negotiating and reformulating normative social practices. They argue that “interpretation and adaptation is always a potential” within the “doing” or enacting of a social practice (Smeyers & Burbules, 2006, p. 447).

But is there a clear difference between learning and enacting a practice? Wenger (1998) argues that learning is the process by which individuals participate more fully in social practices by negotiating the boundaries of the practice and internalizing it. Learning is an emerging and continuous activity that is a byproduct of participation. Wenger argues that leaning is socially situated and constituted in several ways: through community (learning as belonging), through identity (learning as becoming), through meaning (learning as experience), and through practice (learning as doing). The end of *learning* is not a disembodied collection of knowledge or information. Learning produces social interactions and experiences, which constitute the identity of an individual and brings meaning to life (p. 141, 226; Nasir & Hand, 2006).

Education is a formalized social process, whereby, the traditions, activities, relationships, knowledge, and values of a society are communicated and conveyed to students in experientially relevant ways through a conducive milieu. Education is the situated meeting of a student, peers, teacher, curriculum, and a structured milieu whereby

learning is enacted and co-produced by all participants. In understanding education as part of the larger process of socialization, students both experience and transform inherited social practices in a process of co-constructing the society of which they are a part (Dewey, 1916/1966; Dewey, 1938/1997; Nasir & Hand, 2006). Learning is an experience mediated by engaging in a social practice, and as such learning cannot be “designed:” “Learning happens, design or no design...it can only be designed *for* – that is, facilitated or frustrated” (Wenger, 1998, p. 225, 229). If one wants to consciously and deliberately initiate learning, one must “design social infrastructures that foster learning” (p. 225).²

Smeyers and Burbules (2006) argue that all practices have justifying reasons, “but these reasons can also be reexamined and questioned” (p. 449). Grubb (1999) reexamined and questioned the practice of teaching in community colleges and found that many current curricular and teaching practices “have the power to change teaching substantially.” But Grubb pointed out that innovative practices have not transformed the larger practices of teaching because they have not been widely disseminated (p. 274). A focus on “promising practices,” however, should not be analyzed simply or too quickly. Effective social practices are built upon on a dense ecology and even the best practice can fail miserably if the participants, materials or conditions are not conducive. The complex practice of educating students must be analyzed in its entirety as a *social process* if any conceptualizations of best practices are to be valid. This means any evaluation of either

² Wenger encourages educators to question the assumption that teaching “causes learning.” Instead, Wenger argues, “learning happens in “response to the pedagogical intentions of the setting:” “Instruction does not cause learning; it creates a context in which learning takes place, as do other contexts” (p. 266). And because learning through practice is so important to Wenger, he conceptualizes the role of educators as more than the deliverers of information or the creators of educational infrastructures. He points out that educators “constitute learning resources” through their “own membership in relevant communities of practice” (p. 276).

the effectiveness of educational programs or the salience of student achievement must be contextualized within the larger educational ecology of which it is a part.

Understanding the effects of teaching on student learning and achievement are important (Good & Grouws, 1977; Grubb, 1999; Wentzel, 2002), but this is only one part of the ecology of education. Bronfenbrenner's model for the ecology of human development (1979) can also be applied to the ecology of education (Zimmer-Gembeck & Mortimer, 2006, p. 537). Larger social structures outside the classroom as well as social factors inside the classroom will affect a student's learning and achievement. Research on the larger context of schooling, especially at the primary level in relation to human development, has demonstrated the importance of socioeconomic status (McLoyd, 1998), ethnicity and culture (Nasir & Hand, 2006; Steinberg, Dornbusch, & Brown, 1992), gender (Harter, Waters, & Whitesell, 1997; Pomerantz, Rydell, & Saxon, 2002), the social environments of schools (Eccles et. al., 1993; Harter, Waters, & Whitesell, 1997), the social and curricular structure of the classroom (Ryan, Gheen, & Midgley, 1998), the social networking of peer groups (Grills & Ollendick, 2002; Hudley & Graham, 1993), and vocational education and adolescent development (Zimmer-Gembeck & Mortimer, 2006). Ryan and Stiller (1991) have argued that the subtler social contexts and "affective lessons" of schooling often get neglected by researchers and policy makers in their rush to focus on one aspect of the educational ecology – often student achievement. Ryan and Stiller argue that educational experiences and the learning of students cannot be controlled from without by standards or precepts. Learning is subtly "emanated from within" the social-psychology of the student. Education is internalized by students who experience and engage with an educational

ecology, and researchers studying the process of education must be mindful of the less visible psychological and social processes affecting more visible markers like student achievement.

Understanding the complexity of the ecology of education has consequences not only for research, but also for the transferability of particular promising practices. Badway and Laanan (2007) explained that while many funding agencies have their own expectations about transportability, researchers should try and structure alternative measures in order to develop more complex models. Badway and Laanan introduced the concept of “divisibility” as an alternative paradigm to “dissemination.” Dissemination is simply packing a *product* and transporting it to new environments. However, divisibility focuses on a *process*, and conceptualizes instrumental parts or modules. These conceptual parts can be utilized in piecemeal fashion as new contexts might need or use only certain parts of a successful practice. Divisibility also encourages “reinvention” strategies for host sites instead of a simple adoption in full model. Badway and Laanan stressed that there are really no “best practices,” only “promising practices” that are situated in specific and complex contexts.

In order to successfully “transfer” a promising practice, researchers must develop a nuanced understanding of the complexity, situatedness, and social aspects of the practice at hand in order to make recommendations about how the practice in whole or in part might be effectively transferred. Researchers also must be aware of and try to predict how certain promising practices might substantially change given the constraints and possibilities of new educational ecologies. Promising practices must be *transplanted*, not just transported, and that entails situating transplanted promising practices in

promising host cites that will approximate a compatible educational ecology. And even then, a promising host cite is not enough to guarantee student learning or student achievement. As Constance Weaver (1996/2007) noted in relation to the teaching of composition, an educational environment demands “ongoing experimentation” from an actively engaged teacher: “Adaptations will usually be necessary as well as desirable” because “we must all to some extent reinvent the wheel of effective instruction in our own classrooms, even while we share our efforts with each other, collaborate with one another, and benefit from others’ experiences” (154-55).

Work Cited

- Badway, N. N. and Laanan, F. S. (2007, April). *Evaluating transportability of instructional innovation in vocational education: Moving beyond the principle of entirety*. Paper presented at the meeting of the Council for the Study of Community Colleges, Tampa, FL.
- Bridges, D. (2006). The practice of higher education: In pursuit of excellence and of equity," *Educational Theory*, 56(4), 371-86.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge: Harvard University Press.
- Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor Books.
- Dewey, J. (1966). *Democracy and Education: An Introduction to the Philosophy of Education*. New York: The Free Press. (Original work published 1916).
- . (1997). *Experience & Education*. New York: Touchstone. (Original work published 1938).
- Eccles, J. S., Midgley, C., Wigfield, A., Miller-Buchanan, C., Reuman, D., Flanagan, C., & MacIver, D. (1993, Feb). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48(2), 90-101.
- Geertz, C. (2000). *The interpretation of cultures: Selected essays by Clifford Geertz*. New York: Basic Books. (Original work published 1973).
- . (2000). *Local knowledge: Further essays in interpretive anthropology*. New York: Basic Books. (Original work published 1983).
- Good, T. L. & Grouws, D. A. (1977, May-June). Teaching effects: A process-product study in fourth-grade mathematics classrooms. *Journal of Teacher Education*, 28(3), 49-54.
- Grills, A. E. & Ollendick, T. H. (2002). Peer victimization, global self-worth, & anxiety in middle school children. *Journal of Clinical Child and Adolescent Psychology*, 31(1), 59-68.
- Grubb, W. N. (1999). *Honored But Invisible: An Inside Look at Teaching in Community Colleges*. New York: Routledge.

- Harter, S., Waters, P. L., & Whitesell, N. (1997). Lack of voice as a manifestation of false self-behavior among adolescents: The school setting as a stage upon which the drama of authenticity is enacted. *Educational Psychologist*, 32(3), 153-173.
- Heidegger, M. (1971). Building dwelling thinking. In *Poetry, language, thought* (pp. 143-59). New York: HarperCollins. (Original work published 1954)
- Hudley, C. & Graham, S. (1993). An attributional intervention to reduce peer-directed aggression among African-American boys. *Child Development*, 64, 124-38.
- Kaspersen, L. B. (2000). *Anthony Giddens: An introduction to a social theorist* (S. Sampson, Trans.). Oxford: Blackwell Publishers. (Original work published 1995)
- Leopold, A. (1970). *A sand county almanac*. New York: Oxford University Press & Ballantine Books. (Original work published 1949).
- MacIntyre, A. (1981). *After virtue*. London: Duckworth.
- McLoyd, V. C. (1998, Feb). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204.
- Mead, G. H. (1965). Mind. In A. Strauss (Ed.). *George Herbert Mead on Social Psychology*. (pp. 115-196). Chicago, University of Chicago Press. (Original work published 1934).
- . (1965). The process of mind in nature. In A. Strauss (Ed.). *George Herbert Mead on Social Psychology*. (pp. 85-111). Chicago, University of Chicago Press. (Original work published 1938).
- Merchant, C. (1992). *Radical ecology: The search for a livable world*. New York: Routledge.
- Nasir, N. S. & Hand, V. M. (2006, Winter). Exploring sociocultural perspectives on race, culture, and learning. *Review of Educational Research*, 76(4), 449-75.
- Pomerantz, E. M., Altermatt, E. R., & Saxon, J. L. (2002). Making the grade but feeling distressed: Gender differences in academic performance and internal distress. *Journal of Educational Psychology*. 94(2), 396-404.
- Ryan, A. M., Gheen, M. H., & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social-emotional role, and the classroom goal structure. *Journal of Educational Psychology*, 90(3), 528-35.

- Ryan, R. M. & Stiller, J. (1991). The social contexts of internalization: Parent and teacher influences on autonomy, motivation, and learning. *Advances in Motivation and Achievement*, 7, 115-149.
- Smeyers, P. & Burbules, N. C. (2006). Education as initiation into practices, *Educational Theory*, 56(4), 439-49.
- Steinberg, L., Dornbusch, S. M., & Brown, B. B. (1992, June). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, 47(6), 723-29.
- Vygotsky, L. S. (1978). Problems of method. In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.). *Mind in society: The development of higher psychological processes* (pp. 58-75). Cambridge: Harvard University Press. (Original work published 1960).
- Weaver, C. (2007). *Teaching Grammar in Context*. In S. N. Bernstein (Ed.). *Teaching Developmental Writing: Background Readings*, 3rd ed. (pp. 153-161). Boston: Bedford/St. Martin's. (Original work published 1996).
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
- Wentzel, K. R. (2002, Jan/Feb). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development*, 73(1), 287-301.
- Winch, C. (2006). Rules, technique, and practical knowledge: A Wittgensteinian exploration of vocational learning, *Educational Theory*, 56(4), 407-21.
- Zimmer-Gembeck, M. J. & Mortimer, J. T. (2006, Winter). Adolescent work, vocational development, and education. *Review of Educational Research*, 76(4), 537-66.