The scholarship of cockfighting¹

Sally Fincher and Josh Tenenberg University of Kent, UK; University of Washington, Tacoma USA

Abstract

Why do teachers need a scholarly literature in teaching and learning? In the first part of this paper, we look at the SoTL scholarly forms, arguing that they emerge from a rhetoric of SoTL that is more focused on legitimisation than improvement. In the second part, we argue that teaching is different and that different representational forms are required. We discuss the distinctly *non*-scholarly representation of teaching practice, the course portfolio, and the novel way in which we have used it as a means for practitioners teaching the same disciplinary subject to make their work visible to one another.

Questioning a Scholarship of Practice

Ever since Clifford Geertz (1973) first published "Deep Play: Notes on the Balinese Cockfight", the paper has been one of the canons of anthropological literature. In it he describes the highly situated and specific practices of cockfighting: the care of the birds, the (semi-illicit) preparations for a fight, the elaborate ringside betting rituals. But he goes beyond the merely descriptive, providing an interpretive frame of this cultural practice in its context, whereby cockfighting symbolises Balinese constructions of maleness and cultural loyalties. The audience for this work is Geertz' anthropological colleagues and, ultimately, a wider readership from the Western World. Against this background, it strikes us as absurd that cockfighters themselves might hungrily read Geertz to gain competitive advantage over their rivals.

This absurdity is not confined to cockfighting. It is equally hard to imagine this sort of literature being appropriate in other areas of practical activity, hard to imagine that the practice-based communities of photocopier repairmen, taxi drivers or handymen would consider the "scholarship of X" helpful with regard to the practice of X. Rather, photocopier repairmen construct detailed diagnostic narratives that provide "a coherent account of the problematic state of the machine" (Orr, 1996), taxi drivers develop skill in recognizing "reliable signs of trust- or distrust-warranting properties" (Gambetta and Hamill, 2005) for screening customers, and handymen develop encyclopaedic knowledge of materials and their properties through *bricolage* with materials to hand (Harper, 1987). It is noteworthy that none of these communities has a scholarly journal associated with the practice.

Why, then, do teachers need a scholarly literature in teaching and learning? A literature that they not only might read, but one to which they might contribute? In posing these questions, we do not wish to claim that practitioners (whether mechanics, cooks or teachers) do not want to improve their practice, nor that they don't make aspects of their practice public and shared within their communities (Bobrow and Whalen, 2002). For

¹ This paper appears in the proceedings of the London Scholarship of Teaching and Learning Conference, London, UK, May 2010.

example, cockfighters share ways of tying spurs to their birds, special details of diet, and regimes of ceremonial preparation for fighting; photocopier repairmen regale one another with war stories about difficult machine problems that they have encountered in the past (Orr, 1996). What we do want to claim, is that the Scholarship of Teaching and learning (SoTL) *forms* of choice—the journal paper, the conference presentation, the monograph—are inappropriate ways to represent and share qualities of teaching practice for practitioners. We instead need new ways to represent teaching practice to make it available to others.

The balance of this paper reflects the two parts of this thesis. In the first part, we look at the SoTL scholarly forms, arguing that they emerge from a rhetoric of SoTL that scientises teaching. By appropriating research forms that have been successful in the research enterprise, the intent appears to be to similarly legitimize the teaching enterprise in higher education. The syllogism seems to run:

Teaching is undervalued. Research is a valuable activity. Treating teaching as if it were research will give it value.

For SoTL proponents, it is therefore an uncontested good that teaching is considered to be the same as research.

In the second part of this paper, we argue that the practice of teaching is different and that different representational forms are required. We then present a representation of teaching with which we are familiar, and the context in which we have used it for teacher improvement: course portfolios. Though non-scholarly, this representation serves both as a means for self-reflection as well as for mediating interaction between teaching practitioners.

The Rhetoric of SoTL

The use of scholarly representations of teaching does not simply spring *ex nihilo* from those practitioners interested in "going public" with their practice. It emerges from an international discourse about what defines and constitutes SoTL (e.g. Boyer, 1990, Huber and Hutchings, 2005, Kreber, 2002, Richlan, 2001, Shulman, 1993). We will not survey this literature here, recognising both the quantity and diversity of viewpoints. We will instead make explicit a chain of reasoning that is threaded through some of the key writings on SoTL, following the outlines of the history of this discussion, and quoting from some of the often-cited authors. We call this "the rhetoric of SoTL" to draw attention to the importance of the linguistic and argumentative work required to establish SoTL as a "movement".

The argument begins with a stretching of the "traditional" definition of scholarship so as to compass more than good-old-fashioned-research: "We believe the time has come to move beyond the tired old 'teaching versus research' debate and give the familiar and honourable term 'scholarship' a broader, more capacious meaning" (Boyer, 1990). It comprises "a big tent [...] under which a wide range of work can thrive" (Huber and Hutchings, 2005). What now fits under this tent is what Boyer (1990) termed "the

scholarship of teaching" and what has come to be known as the Scholarship of Teaching and Learning; we treat these terms synonymously.

The question that now arises (and historically *did* arise soon after Boyer's initial coining of this term) is whether scholarship inheres in teaching, or is it something that only some teaching achieves. If the latter, is "scholarly teaching" the same as "good teaching" or is it something distinct? There was a twofold resolution to this definitional challenge. First, a consensus emerged that not all teaching is the scholarship of teaching, since this would render the new term meaningless. Second, teaching could be arranged in a quality gradient, with what we call "just plain teaching" at the bottom, *good* teaching—characterised by satisfying certain criteria—somewhere in the middle, and the scholarship of teaching—characterised by adding additional criteria to good teaching—at the top. There are two subtleties to mention. First, a diversity of terms and criteria were coined to represent "good teaching", e.g. *scholarly* teaching (Richlan, 2001) and *excellent teaching* (Kreber, 2002), and second, some consider that good teaching is itself subdivided along the quality gradient, e.g. "just plain teaching" exists on a plane below "*excellent* teaching" below "*expert* teaching" below the "scholarship of teaching" (Kreber, 2002).

A strategic rhetorical move that occurred at this point was to reduce the problem of defining criteria for the scholarship of teaching to the problem of defining criteria for *all* scholarships (of which the scholarship) of teaching is one among several). "Could we sharpen that definition [of scholarship]? Yes, serious intellectual work in discovery, integration, application, or teaching is marked by clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique (including peer review)" (Huber, 2002 summarizing Glassick et al. 1997). Alternatively, "For an activity to be designated as scholarship, it should manifest at least three key characteristics: It should be *public*, susceptible to *critical review and evaluation*, and accessible for *exchange and use* by other members of one's scholarly community" (Shulman, 1998) [emphasis in original]. Effectively this meant that the definition of scholarship was stretched (to include teaching done a certain way), but not to the breaking point, since the scholarship of teaching could now be seen as something familiar, since it "... represents little more than a refinement of a process every teacher goes through as he tries to improve" (Corey, 1953).

The argument continues by elaborating the importance of the *"making public"* criteria of scholarship. "If there is any reality about scholarship, it is that it is a communal act. ... The test of scholarship is whether someone else can make sense of what you are doing" (Boyer, 1996) "We don't judge each other's research on the basis of casual conversations in the hall; we say to our colleagues, 'That's a lovely idea! You really must write it up.' It may, in fact, take two years to write it up. But we accept this because it's clear that scholarship entails an artefact, a product, some form of community property that can be shared, discussed, critiqued, exchanged, built upon" (Shulman, 1993).

At this point, there is a subtle shift in the argument from *making public* to *publication*. This shift trades on the multiple meanings of the word "publication" based on its etymological roots (OED, 2010). One meaning of *publication* is the "action of making

something publicly known", which stems from Anglo-Norman and Middle French of the 1200's. An additional sense of the word developed after the invention of movable type, and is one often implied by SoTL writers: publishing in a persistent medium, such as in print or electronically. Thus "making scholarship public" requires not only sharing it with an appropriate audience, but publishing it, "writing it up," reifying it in a non-ephemeral form. There is a further etymological sense of *publication* that is often implied by "making public", and that is the act of making an object *res publica*, i.e. public property (Rose, 2003). "And if we wish to see greater recognition and reward attached to teaching, we must change the status of teaching from private to community property" (Shulman, 1993).

For some commentators, however, publication in SoTL takes particular forms. Given the claimed equivalence of the scholarship of teaching to other scholarships—the scholarship of discovery (traditional research), the scholarship of integration (cross-disciplinary work), the scholarship of application (work with clients, often in the local community)—then the form of publication must necessarily be the same. "Tenure isn't awarded for research alone, but for research *and publication*" [emphasis in original] (Boyer, 1996). "Intellectual work in teaching is scholarship if it is shared with peers in journals, in formal presentations at professional meetings, or in comparable peer evaluated forms" (Oregon State University, 2000, reported in Huber 2002). "So, if pedagogy is to become an important part of scholarship, we have to provide it with *this same kind of documentation*" [emphasis added] (Shulman, 1993). "[T]he scholarship of teaching results in a formal, peer-reviewed communication in the appropriate media or venue" (Richlan, 2001).

We should pause a moment to reiterate that the discourse on the definition of SoTL is multi-voiced, and controversial. Not everyone who believes in (or practices) SoTL would go along with each step in this argument, and many would stop before they reached our endpoint.

What we do wish to say is that there are influential speakers contributing to this discourse that follow many if not all of the argument steps we outline:

- That the definition of scholarship needs to be expanded to include the activity of teaching,
- That all scholarships share the same characteristics when viewed at the right level of abstraction
- That a key shared characteristic is that scholarship is made public and that making public means not only making publicly known, but publishing in a persistent form, and that this form be journals and conference papers.

We call this rhetorical argument the *scholarisation* of teaching. It rests on a foundation of treating teaching of a certain sort (the *scholarship* of teaching) to be the *same thing* as research.

We believe that this rhetoric has come about for two purposes. The first is the belief that teaching (and by definition learning) will improve as a result. There is "just plain" teaching; then "scholarly" (or "evidence-based" or "research-informed") teaching, that is,

teaching informed by others' scholarship; then there is SoTL, that is writing up your own work and presenting it to others: good-better-best.

The second purpose is the added recognition, the *legitimisation* that will accrue to teaching through its scholarisation. "Scholarship is a prestigious concept after all, and universities are known to recognize scholarship" (Kreber, 2002). "We believe the time has come to [...] give the familiar and honourable term 'scholarship' a broader, more capacious meaning, *one that brings legitimacy to the full scope of academic work*" [emphasis added] (Boyer, 1990). "Members of the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) [...] examine teaching and learning issues in their fields in order [...] to [...] 3) bring to teaching the recognition afforded to other forms of scholarly work" (Hutchings and Shulman, 1999). "And if we wish to see *greater recognition and reward* attached to teaching, we must change the status of teaching from private to community property" [emphasis added] (Shulman, 1993). Note in these last three quotes, the burnish that comes to SoTL from its scholarisation will spread to *all* of teaching, including the just plain and good varieties: the rising tide of scholarisation will float all teaching boats.

Thus the "improvement" hierarchy has been overlaid with a "legitimating" argument. This discourse conflates the (desirable) characteristics of making teaching practice public and visible to others with the forms of abstracted, research-focussed exchange (presentations and publications). As a recent report in the *Times Higher Education* newspaper says: "Based on her research, Annette Cashmore is developing a set of criteria for the evaluation of learning and teaching to form a national framework" (Attwood, 2010). The proposed criteria for each category are:

LECTURER/EQUIVALENT

- Input to delivering or leading teaching
- Organisation of courses/modules
- Student feedback
- Peer observation
- Peer feedback/review
- Evidence of evaluation of teaching approaches

SENIOR LECTURER/EQUIVALENT

- Evidence of scholarship of teaching and learning, such as awareness of relevant literature, teaching informed by research (own and others'), and writing and contributions to textbooks
- Institutional awards
- Own research in teaching and learning
- Input into institutional policies

CHAIR

• Presentations and publications

- National awards
- Evidence of national/international impact
- Input into national/international policy and strategy

What it is clear from this framework is that the more research-like an activity is, the higher weighting it has: good-better-best.

Treating Teaching as Teaching

Our main critique here is that if the goal is to improve teaching then treating teaching as research by scholarising may be the long way round. We question whether teaching will in fact be legitimised when only a small proportion of it is scholarised. We question as well the use of research forms for disseminating teaching knowledge, since this assumes that changes to practice will occur simply by increasing the common stock of scholarship. A century of educational research in K-12 education suggests that the gap from scholarship to practice is much larger than this assumption presupposes. And our own empirical research suggests that this is not how changes to practice occur in teaching in higher education (Fincher et al., 2001, Fincher and Tenenberg, 2007). As Tikunoff & Mergendoller observe: "The implicit assumption is that if educators are exposed to carefully presented and understandable research findings, they will recognize the wisdom of the results and immediately employ them in their daily practice. We disagree" (1983). We disagree too.

In treating teaching as teaching, we view teaching as a *practice*, "embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" (Schatzki, 2001). Or, as Packer succinctly states "Each of us is thrown into a world that predates our existence, that offers certain ways to be, and that is inherently social. Our primary way of understanding both ourselves and the entities we deal with is a hands-on grasp of their possibilities in practical activity" (Packer, 2010). In order for practical understanding to be shared among teachers, there must be places and forms for this sharing to occur. In this regard, we agree with the SoTL writers cited above, about the importance of making teaching public. But "making public" must be appropriate to the activity. The danger of the rhetoric of legitimisation is in mistaking the form for the reality. In a related domain Richard Feynman has called this *Cargo Cult Science*:

In the Solomon Islands, as many people know, the natives didn't understand the airplanes which came down during the war and brought all kinds of goodies for the soldiers. So now they have airplane cults. They make artificial landing strips and they make fires along the landing strips to imitate the lights and this poor native sits in a wooden box he's built with wooden earphones with bamboo sticks turning up to represent the antenna and turning his head back and forth, and they have radar domes make out of wood and all kinds of things hoping to lure the airplanes to give goods to them. They're imitating the action.

It's a lot of work. It takes a lot of work to carve those things out, those wooden airplanes. But it doesn't mean they are actually finding out something. (Feynman and Robbins, 1999)

The notion that one can only become a good teacher by scholarising—scientising—the practice of teaching is to similarly misapprehend the nature of teaching and the nature of research, and to confuse the source of their power.

Our belief in the importance of public visibility is influenced by the work of researchers looking at the ways in which cognition is distributed among people who are engaged in joint activity (Chaiklin and Lave, 1993, Salomon, 1993). Learning how to be competent in new practices is often not a matter of book study, but of gaining experience in dynamic interaction with the people, tools, and materials in particular settings. In a detailed study about how quartermasters learn how to navigate large ocean-going ships, Hutchins (1996) observed that learning is both social, and representationally mediated. It is social in three ways. First, novice quartermasters engage in what Rogoff (Rogoff, 2003) calls *intent participation*, involving "keen observation, initiative, and responsive assistance". Second, they perform their actions under the watchful eyes of those with more experience. And third, their activity is structured in a human and material setting in which the novice can both contribute to the ongoing pattern of activity as well as observe the activities of those with more experience. Thus, they learn from their *horizon of observation*, "the outer boundary of the portion of the task that can be seen or heard" (Hutchins, 1996).

The other thing that Hutchins emphasises is how shared representations of the task (for him, the main one being the *nautical chart*) mediate the completion of the task. This use of shared representations is characteristic of a number of settings, and has been written about extensively by cultural and developmental psychologists in extending the work of Vygotsky (Cole, 1996, Rogoff, 2003, Vygotsky and Cole, 1978, Wertsch, 1991). These representations are important for three main reasons. First, they establish common ground among participants carrying out (or discussing) joint tasks. They also serve as externalisations of thought for individuals, which are then re-perceived, reflectively critiqued, changed and refined. And finally, the specific forms of representation preserve knowledge for cross-generational transmission.

It is for all of these reasons that we consider representations of teaching practice to be important, and at the same time, that the scholarised representations chosen historically by the SoTL community to be inappropriate to the task. In the balance of this paper, we examine a representation of practice that we have used to facilitate individual and social reflection on teaching.

Disciplinary Commons Course Portfolios

To harness the power of situation, to let teachers exchange information in meaningful ways, unmediated by the conceptualisations and abstractions associated with research, was one our goals in designing the *Disciplinary Commons*. The "work" of a *Commons*, is not to replace the practice of teaching. Nor is it to make it something else—it doesn't require the acquisition or application of new ways of working (scholarly or scholarising). The practice within a *Commons* is the act of professionalism described by Schön's models of reflective practice and reflective practitioners (Schön, 1983).

A *Disciplinary Commons* is constituted from 10-20 practitioners sharing the same disciplinary background, teaching the same subject—sometimes the same module—but

in different institutions. They come together for monthly meetings over the course of an academic year. During these meetings, aspects of teaching practice are shared, peer-reviewed and ultimately documented in course portfolios. (This is not a total description of what a *Disciplinary Commons* is, or what it can achieve—a topic more completely treated in Tenenberg & Fincher, 2007). To date, we have lead (or are currently leading) 7 *Disciplinary Commons*.

We deliberately chose course portfolios as the representation that *Commons* participants use for making their teaching public. A course portfolio is a set of documents that "focuses on the unfolding of a single course, from conception to results" (Hutchings, 1998) and is an established method for advancing teaching practice and improving student learning. The purpose of the course portfolio "is in revealing how teaching practice and student performance are connected with each other". Portfolios (especially of the *benchmark* variety (Bernstein et al., 2006)) typically include a course's learning objectives, its contents and structure, a rationale for how this course design meets its objectives, and the course's role in a larger degree program. Importantly, course portfolios also include evaluations of student work throughout the term, indicating the extent to which students are meeting course objectives and the type and quantity of feedback they are receiving.

There are several collections of course portfolios (Peer Review of Teaching Project, University of Indiana) but they share limitations. The first is that they are scattered across disciplines, so that even if there are ideas in a mathematics portfolio from a prestigious university that would benefit my teaching, I am unlikely to access it if I teach drawing in a college of further education: there is little to match my subject or situation. The second limitation is that they are, in general, created by individuals for individual purposes ("benchmarking" a module or for promotion, or personal development) so they are individualistic in form, and rarely reference a wider context.

Course portfolio documentation within the *Disciplinary Commons* overcomes these limitations by being produced within a disciplinary context (not only all Computer Science, but all introductory programming, for example) and by sharing a common form. The form was devised so that each portfolio should contain six sections: Context, Content, Instructional Design, Delivery, Assessment and Evaluation and that each of those sections should contain an artefact from the course being taught and an accompanying commentary. The common form of *Commons* course portfolios allows comparability of practice across instances, allows for different sorts of practice (with different emphases) to be documented in the same form, and is produced within a community that provides a wider context than any individual view. During the course of a *Commons* community. Thus, by sharing common disciplinary knowledge, working together over common material using a common form, participants create portfolios that are enhanced by being part of the larger archive.

Finding appropriate documentation for situated practices may be important not only to represent teaching appropriately, but also for the transfer of teaching ideas. If practitioners make choices about what to adopt and adapt based on "what I know will work" then providing a comprehensive representation of the originating context of those

ideas may provide a rich source of clues and hooks to bridge between someone else's practice and my own. The thicker the description, the more detailed the commentary, the better. The value of documenting teaching practice lies in its detail "in a society that attaches particular value to 'abstract knowledge,' the details of practice have come to be seen as nonessential, unimportant, and easily developed once the relevant abstractions have been grasped" (Brown and Duguid, 1991).

Closing

We have examined the rhetorical moves by which SoTL has become a legitimising activity for teachers rather than an improvement process for teaching, where the form of the knowledge produced is seemingly more important than the subject and purpose of the work. Research forms reflect appropriate practices for growing the body of knowledge associated with a field of research. But we contend these same forms are inappropriate for teachers interested in improving their practice. Our response has been to construct a community of teachers, bound by disciplinary identity and knowledge, who work to make their teaching visible and intelligible to one another. The representation of knowledge produced is intimately related to the subject and purpose of the work, showing the work of teachers *as teachers*. Using course portfolios with a common form allows individuals teaching the same subject to set their work in a collegial context without losing the richness of situation.

To return to our original analogy of situated practice, cockfighters want to raise the best birds they can, and to win consistently; they want to read material about what they do in their daily work, about the detail and minutiae of rearing fighting birds; they want other cockfighters to know that they're good; they need no further legitimacy. They do not need a "scholarship of cockfighting". Is teaching so very different?

Acknowledgements

This material is based upon work supported by the National Science Foundation of the U.S.A. under Grant No. DUE-0817577, and by an award from the National Teaching Fellowship Scheme of the U.K. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation or the National Teaching Fellowship Scheme.

References

ATTWOOD, R. (2010) Credit where it's overdue. *Times Higher Education.* London.

- BERNSTEIN, D., BURNETT, A. N., GOODBURN, A. & SAVORY, P. (2006) Making Teaching and Learning Visible: Course Portfolios and the Peer Review of Teaching, Anker Publishing.
- BOBROW, D. & WHALEN, J. (2002) Community Knowledge Sharing in Practice: The Eureka Story. *Reflections*, 4, 47-59.
- BOYER, E. (1990) Scholarship reconsidered : priorities of the professoriate, Princeton, N.J., Carnegie Foundation for the Advancement of Teaching.
- BOYER, E. (1996) From Scholarship Reconsidered to Scholarship Assessed. Quest, 48, 129-139.

- BROWN, J. S. & DUGUID, P. (1991) Organizational learning and communities-ofpractice: Toward a unified view of working, learning and innovation. *Organizational Science*, 2, 40-57.
- CHAIKLIN, S. & LAVE, J. (1993) Understanding practice : perspectives on activity and context, Cambridge ; New York, Cambridge University Press.
- COLE, M. (1996) *Cultural psychology : a once and future discipline,* Cambridge, Mass. ; London, Belknap Press of Harvard University Press.
- COREY, S. M. (1953) Action Research to Improve School Practices, New York, Teachers College Press.
- FEYNMAN, R. P. & ROBBINS, J. (1999) The pleasure of finding things out : the best short works of Richard P. Feynman, London, Allen Lane, 2000.
- FINCHER, S., PETRE, M. & CLARK, M. (Eds.) (2001) Computer science project work: principles and pragmatics, London, Springer-Verlag.
- FINCHER, S. & TENENBERG, J. (2007) Warren's Question. *Proceedings of the third international workshop on Computing education research (ICER).* Atlanta, Georgia USA, ACM Special Interest Group on Computer Science Education
- GAMBETTA, D. & HAMILL, H. (2005) Streetwise : how taxi drivers establish their customers' trustworthiness, New York, N.Y., Russell Sage.
- GEERTZ, C. (1973) Notes on the Balinese Cockfight. *The Interpretation of Cultures.* Basic Books.
- HARPER, D. A. (1987) *Working knowledge : skill and community in a small shop,* Berkley ; Oxford, University of California Press, 1992.
- HUBER, M. T. (2002) Faculty evaluation and the development of academic careers. *New Directions for Institutional Research*, 114, 73-84.
- HUBER, M. T. & HUTCHINGS, P. (2005) *The advancement of learning : building the teaching commons,* San Francisco, Calif., Jossey-Bass ; Chichester : John Wiley [distributor].
- HUTCHINGS, P. (1998) *Making teaching community property : a menu for peer collaboration and peer review,* Washington, D.C., AAHE Teaching Initiative, American Association for Higher Education.
- HUTCHINGS, P. & SHULMAN, L. (1999) The Scholarship of Teaching: New Elaborations, New Developments. *Change,* September/October, 10-15.
- HUTCHINS, E. (1996) Learning to Navigate. IN CHAIKLIN, S. & LAVE, J. (Eds.) Understanding Practice: Perspectives on Activity and Context. Cambridge University Press.
- KREBER, C. (2002) Teaching Excellence, Teaching Expertise, and the Scholarship of Teaching". *Innovative Higher Education*, 27, 5-23.
- OED (2010) Oxford English Dictionary.
- OREGON STATE UNIVERSITY (2000) OSU Promotion and Tenure Guidelines (Approved 1995, revised 2000).
- ORR, J. (1996) *Talking About Machines: An Ethnography of a Modern Job*, Cornell University Press.
- PACKER, M. (2010) Educational Research as a Reflexive Science of Constitution. IN PENUEL, W. R. & O'CONNOR, K. (Eds.) *Learning Research as a Human Science.* New York, National Society for the Study of Education.

- PEER REVIEW OF TEACHING PROJECT Peer Review of Teaching Project: Making the Intellectual Work of Teaching Visible.
- RICHLAN, L. (2001) Scholarly Teaching and the Scholarship of Teaching. *New Directions for Teaching and Learning*, 86, 57-68.
- ROGOFF, B. (2003) *The cultural nature of human development,* Oxford, Oxford University Press.
- ROSE, C. (2003) Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age. *Law and Contemporary Problems*, 66, 89-110.
- SALOMON, G. (1993) Distributed cognitions : psychological and educational considerations, Cambridge, Cambridge University Press.
- SCHATZKI, T. R. (2001) Introduction: Practice Theory. IN SCHATZKI, T. R., KNORR-CETINA, K. D. & SAVIGNY, E. V. (Eds.) *The practice turn in contemporary theory.* London, Routledge.
- SCHÖN, D. (1983) The Reflective Practitioner: How Professionals Think in Action, London, Temple Smith.
- SHULMAN, L. (1993) Teaching as community property; putting an end to pedagogical solitude. *Change*, 25, 6-8.
- SHULMAN, L. (1998) Course Anatomy: The Dissection and Analysis of Knowledge Through Teaching. IN HUTCHINGS, P. (Ed.) *The Course Portfolio: How Faculty Can Examine Their Teaching to Advance Practice and Improve Student Learning.* American Association for Higher Education.
- TIKUNOFF, W. & MERGENDOLLER, J. (1983) Inquiry as a Means to Professional Growth: The Teacher as Researcher. IN REHAGE, K. J. & GRIFFIN, G. A. (Eds.) *Staff Development.* National Society for the Study of Education.

UNIVERSITY OF INDIANA Course Portfolio Initiative.

- VYGOTSKY, L. S. & COLE, M. (1978) *Mind in society : the development of higher psychological processes,* Cambridge, Mass. ; London, Harvard University Press.
- WERTSCH, J. V. (1991) Voices of the mind : a sociocultural approach to mediated action, Cambridge, Mass., Harvard University Press.