

Conference Proceedings
Authors: T-Z

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iSSOTL

THE INTERNATIONAL SOCIETY FOR THE SCHOLARSHIP OF TEACHING & LEARNING
3RD ANNUAL CONFERENCE

*making a greater difference:
connecting to transformational agendas*

HYATT REGENCY - CAPITOL HILL
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Note: ISSoTL organizers added the role of the “synthesizer” to this conference, a volunteer conference participant who summarizes the main points of the session. Depending on which syntheses were available, we appended them to the appropriate abstract.

T

Tait, Bill, The Open University

Adding Pedagogy to Reusable Learning Objects

A Reusable Learning Object (RLO) is a self-contained piece of learning material, usually designed for online delivery and for a specific learning objective. It can be reused in different contexts and learning environments generally because it deals with a common learning objective. Technical reusability has been the subject of much development over the last few years and is now well established. There are agreed standards that allow for integration of these learning objects into any compliant learning environment or course management system. Pedagogical reusability, however, is another matter. Pedagogy tends to be a matter of context and individual preference. It does not travel well. With this observation in mind, work has been carried out on the development of an RLO adaptor. This is a piece of software that allows educators to create learning materials that reuse context-free objects and adapt them to their own preferred methods of teaching. The process is analogous to the modern computing strategy of separating content from user interface. It involves generating a set of suitable learning objects and providing the framework within which tutors can organise this content and add their own text and audio material to produce a fully customised learning object. This presentation illustrates the software with a set of tutorials on computing that use the same objects in several different ways. Initial reactions from practising tutors are reported.

Synthesis by Kimberlee Staking

*This presentation occurred under the title: **Digital Learning Objects and Reflective Pedagogy**. The other presenter was Tom Carey, MERLOT.*

The Pedagogical Framework discussed by the presenter depends upon a courses in which components are presented in a particular topic order and clearly bounded. Each topic or component can then be developed through a digital learning object in whatever context seems to serve it best. The student following the tutorial will exit each component with the skills and understanding of concepts needed to enter another course component, even if the second digital learning object teaches the new skill using an entirely different set of contexts. The two objects are not entirely decoupled, but instead they are differently coupled when considered next to traditional, procedurally oriented courses. This is the key difference. Unlike computing, teaching needs variability built into structures at the local level. The author of the study hopes that his flash template tutorial with editable text and adaptable simulations will prove to give instructors enough variability that the digital learning object can be successfully incorporated.

Key points from this session:

- *Traditional Online Courses, procedural in nature, feature integrated learning procedures with strong internal links. Since the parts reflect upon one another, they are hard to update, expensive to update and error-prone, since each part depends so heavily upon the rest of the course trajectory.*
- *By contrast, an object oriented online course features re-usable objects that can be plugged in easily. These objects are highly cohesive internally, but they are able to be loosely coupled with other structures. These objects have clear learning objectives, they are related to a knowledge concept, but they are context independent. Their entry requirements do require them to link to something previously introduced and their exit objective points to something for later use in the course, but they can't depend upon or use the context of other objects in the course to accomplish their objectives.*
- *Reusable Digital Learning objects, once developed and tested are less expensive for online courses. They are powerful, but the challenge is to make them easy to use as well. This present study uses a Javascript tutorial that is constructed in such a way that tutors can modify it extensively, both the text and the simulations, which are both internally editable. In this way, the author hopes to persuade instructors that these digital learning objects be adaptable enough to be truly reusable and useful.*

Taylor, Lynn , Dalhousie University

Making a Greater Difference: Building a Shared Framework to Guide the Scholarship of Teaching and Learning in the Canadian Context

Efforts to develop the scholarship of teaching and learning (SoTL) in many different academic communities reveal that the synergy between the work of individual scholars and the communities in which they do that work is a critical factor (Brew, 1999; Rice, 1996; Shulman, 2002). If the SoTL is to realize its full potential in transforming not only teaching and learning in our classrooms, but also the culture of teaching and learning in our institutions and disciplines, it is essential that we share a framework that defines the parameters of our work. In Canada , the Society for Teaching and Learning in Higher Education has led an initiative to frame a shared understanding of the SoTL in the Canadian context: one that recognizes the need to apply any such framework in diverse disciplinary and institutional contexts. This framework explores the concept of the SoTL, the capacity of the SoTL to change the quality of student learning, and how we can build scholarly community to support the SoTL, including our ability to evaluate this form of scholarship in faculty careers. This working session, will briefly share the elements of our emerging framework and then invite colleagues to critically explore the elements of the framework that have the potential to be transformative; to identify what we need to add; and to provide examples that would illustrate the impact of the SoTL on strategic and leadership action plans. Findings from this session will be recorded and subsequently shared.

Thomas, Alice , University of the District of Columbia David A. Clarke School of Law
Establishing a Framework for Promoting and Collaborating on SoTL in Law Schools

The Carnegie Foundation for the Advancement of Teaching, almost eight or nine years ago, began studying learning in law schools. Under the CASTL program, at least, eight law professors or professors of law subjects in undergraduate institutions, matriculated through the Carnegie program as Carnegie Scholars. Now, the discussion must shift to finding ways of maintaining and building upon this early foundation. SoTL is vitally important in today's law schools, particularly in light of the shifting demographics and increasing demands on law schools to educate for the workplace. The pressure to graduate students who are not only well-prepared for the practice of law, but who are able to pass the bar examination the first time and to hit the ground running in their practice lives is mounting. Many law faculty are beginning to ask the kinds of questions, without little guidance, that SoTL prompts faculty, administrators and deans to ask; however, there is no structure within which these questions can be captured, synthesized and guided forward. This working session will provide an opportunity for stakeholders in this realm of SoTL to meet and discuss the next phase of the work in light of where we have been, where we are now, and where do we go next. This is a very important and timely discussion.

Tims, Michael, University of Maryland

How "Unlearning Begins with Asking a Good Question: Teaching Students Critical Thinking Skills in a Multi-disciplinary Course on Medicinal Plants

As an herbalist my ultimate aim was to have patients learn how to become their own health-care providers, which required knowledge and judgment to make good choices. Teaching a multi-disciplinary course on medicinal plants, where each field of study informs the others only after some mastery, evolved to a similar nexus. Here the early work of cognitive theorist Piaget provided a framework of how our cognitive abilities changed with age. William Perry extrapolated his concepts, stressing that students actively constructed knowledge, and that cognitive development was simple a transition from one resting point to another. The implication then of Perry's work, that the acquisition of critical thinking skills involved incremental and sequential reorganization of how students view knowledge, implied an ongoing process of "unlearning. One of the central pedagogical aims in the medicinal plants class was to help students develop the critical thinking skills necessary for them to become their own teachers. This required "unlearning. Developing the ability to ask informed, penetrating questions accelerated the process. By engaging students with detailed, peer-reviewed research and asking them to evaluate the information they acquired using two contrasting models - western drug discovery vs. traditional medicine, and reductionist vs. synthetic thinking - helped them learn to tell a story of how contemporary scientists think about the problems faced in studying medicinal plant use.

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Ultimately the pedagogical struggle to accomplish that goal was aided by understanding how Nelson and Knefelkamp translated Perry's scheme into the classroom, specifically how to encourage and assess "unlearning."

Trigwell, Keith, University of Oxford

Relations Between Undergraduate Student Learning and Research Active Teaching Departments

This presentation focuses on an investigation of the effects on student learning of contact between undergraduate students and teachers in research-active university departments. A pilot study of university students' experience of interaction with research-active teachers has been conducted quantitatively, as part of a large-scale study of the student learning experience carried out at the University of Oxford in 2001-3 (Trigwell, K. & Ashwin, P. (2003) Undergraduate Students' Experience of Learning at the University of Oxford (University of Oxford)). The study used previously tested questions on student satisfaction, approaches to learning and perceived benefits of contact with research-active teaching staff (Ramsden, P. (1991) A performance indicator of teaching quality in higher education: The Course Experience Questionnaire. *Studies in Higher Education*, 16, 129-150.). The results show that students who feel they benefit most from contact with research-active teaching staff are also the students who adopt more of a deep approach and less of a surface approach to learning, and have a higher quality learning outcome (Trigwell, K. (2005) Teaching-research relations, cross-disciplinary collegiality and student learning. *Higher Education*, 49, 235-254.). These results will be discussed in the seminar. Key questions which follow from these results are whether the same sorts of relations are found in other contexts, including those from less research-intensive universities, and if they are not, what are the policy implications. A follow-up study which addresses these points is currently being conducted. Interim results will also be presented.

Tosey, Paul, School of Management

Enquiry-based Learning: Making a Difference through an Enquiry-based Approach to Change

The "Learning to Learn Project", is a nationally funded project to promote innovation in Higher Education practice in England through supported enquiry-based learning (EBL). The project is based on established postgraduate practices at the University of Surrey, UK and is working with five programmes to embed, and enhance understanding of students' experiences of, EBL. The project seeks not only to support related developments in undergraduate programmes, but also to contribute to an understanding of change processes at the institutional level. This is due to concern in the sector about the limited extent of innovation arising from funded projects such as this; also the PG programme in which the EBL practice is sourced is a Master's programme in 'Change Agent Skills and Strategies', which potentially offers insights into the process of change. The project espouses an enquiry-based approach to change, by working together with course teams to support locally-owned developments. It also supports innovation through incremental change, rather than requiring root and branch reform. In this paper we review the Project's strategy for change' in the light of literature of organisational change, especially from fields such as complexity theory and organisational learning (which inform the substantive content of the MSc CASS). What can be learnt from the Project's enquiry-based approach as a strategy for change? Has the project's theory in use' matched its espoused theory'? To what extent does the scholarship of teaching and learning intersect with the scholarship of change?

Totino, Christina, University of Maryland

Students as SoTL Scholars: Undergraduate Teaching Assistants Explore Teaching and Learning in a Community Service-Learning Course in American Studies

Three presentations by undergraduate teaching assistants in a community service-learning course comprise this panel. All presenters have served as members of a teaching team for an upper-level undergraduate American Studies course in Popular Culture, Youth and Literacy, participating in course planning, facilitation, and assessment, as well as student evaluation and grading. Each brings a unique teaching perspective and learning goals to the team, as well as distinct scholarship to this forum.

Synthesis by Jeffrey Bernstein

This session presented two undergraduate students from the University of Maryland, College Park, who each are doing their own scholarship of teaching and learning projects. These students, Christina Totino and Tasha Williams, are both in an American Studies class titled "Popular Culture, Youth and Literacy," taught by Professors Jo Paoletti and Eden Segal. As part of the class, students have the opportunity to do tutoring of at-risk kids at the Boys and Girls Club at Northwestern High School in Prince George County, Maryland.

Christina Totino's session focused on the development of the student/tutor relationship. Through studying student portfolios and journals, her own observations at the tutoring site, online surveys and her own reflective journal, Totino looked at the benefits of service learning to the tutors. The tutors gained experience dealing with diversity issues and with working with people from different socioeconomic levels, increased their responsibility and leadership skills, and modified their future aspirations (they became more likely to want to pursue careers in teaching and/or stay involved in community issues). The tutors also gained more skill at dealing with complex issues (critical thinking), improved their research skills, and formed lasting bonds with professors.

Williams' work was more autobiographical and reflective than empirical. Her work dealt more with issues of complexity in setting up such a program, including the challenges of retaining tutors and retaining students in the program. It also explored the challenges of doing community service in this area – many areas need improvement, such as increasing college preparatory resources, parental involvement, and diversity training programs. There are also not enough minority teachers. Williams' presentation also got very introspective, exploring career choices (is this something I want to do?) and skills (what can I do better now in this line of work?).

Synthesizing the two projects with each other, and with the overall conference, a big theme to emerge was the usefulness of the student voice in the scholarship of teaching and learning. The undergraduate teaching assistant model is a great resource to the professors who run the course, not only in logistical terms but also as a source of guidance and advice. A dramatic moment in any of these courses arises when faculty find themselves asking advice of the student assistants, and the student assistants begin to feel that it is "their course" as well as the faculty members' course. They move, in essence, from being "employees" to being "partners." I should add that I have seen this happen in my own experience working with students, and it is a powerful moment when it does occur.

The model used in this course is an appealing one that seems somewhat replicable to different educational contexts. These students presented a fine example of how it can move from the drawing board to being a strong and interesting program in reality.

Key points from this session:

- *Student voices have much to contribute within the scholarship of teaching and learning. They have insights into how learning takes place, and how it can be facilitated, that may actually trump the insights of teaching faculty.*
- *Student involvement presents challenges. But one key way to involve students is to ask their advice on the project – it helps make the project belong to both students and faculty.*
- *Service learning is an effective pedagogical tool, and a good way to involve students. It also helps students to develop practices of meaningful reflection.*

Recommended resources from this session:

- *Contact the session leaders - they are very impressive people who would have much to share. Christina Totino's e-mail address is ctotino@mail.umd.edu and Tasha Williams' e-mail address is williams.tasha@gmail.com*
- *Articles in the Journal of Teaching and Learning*

Towers, Stephen , Queensland University of Technology

Creative Industries SOTL Activity and Publication: Status and Opportunity

"Creative Industries" is a relatively new and sometimes controversial field of academic activity that has increasing momentum, particularly in the United Kingdom, Europe, Asia and Australia. Much of the emphasis and research has concentrated on definitions, mapping and macro policy settings relating to the knowledge and creative economies. Implicitly underpinning the rhetoric and potential for creative industries as an economic driver are the contemporary skill sets required of its leaders and participants such as the "core creatives" and "creative professionals" (Florida 2002) that exploit emergent "generational" characteristics. Little research, theory-building or critique has been directed at investigating the capabilities required of creative industries practitioners or how they should be developed. Some may argue that this absence is legitimate because the term is considered a portmanteau that includes disciplines rich in their own literature. While potentially compelling at face value, the argument has at least two flaws: firstly, many of the associated disciplines have a relatively poor refereed publication record. Secondly, discipline specific activity fails to inform debate or curriculum and pedagogical innovation considered essential to building creative industries economic activity – such as multidisciplinary and interdisciplinary practices and leveraging creative and digital capabilities. The purpose of this presentation is to raise the profile of the creative industries as an important topic for the scholarship of teaching and learning agenda - for investigation in its own right as well as promote activity within disciplines. The paper points to potential gaps for consideration and outlines processes to encourage and facilitate greater contribution.

Tremonte, Colleen, Michigan State University

Towards a Theory of Historical Filmic Literacy

In "The Visual Media and Historical Knowledge, historian Robert argues that different types of film (dramatic, documentary, and experimental) make "different assumptions about historical reality (469). He goes on to argue that the significance of this difference lies not in how each uses moving images per se to project historical thinking, but, rather, in how different genres create use the images to construct historical meaning. Certainly Rosenstone's observations have consequences for the teaching history and through film. Building on the work of historians such as Rosenstone and White, educational scholars such as Sexias and Wineburg, and film scholars such as Sobchack, this presentation theorizes historical filmic literacy. It then uses case studies to argue how a rhetorical poetics engenders such literacy. A rhetorical poetics works on both a conceptual level and on a pedagogical level. Students already have an image repertoire, but how they employ this repertoire often remains invisible. A rhetorical poetics provides instructors and students with a generative and elastic frame that makes this repertoire visible at the same time that it complicates it. Students are able to move beyond immediate and generic understandings of aesthetic, historical and cultural texts, contexts, and inter-texts to better appreciate how films can act as primary sites for historical understanding and construction. Students are thus able to (1) negotiate the intellectual and theoretical terrain of H/history and representation; (2) "see" filmic texts as objects of history as well as accounts of history; and, (3) situate films in and across temporal and spatial boundaries.

U

Ugoretz, Joseph, Borough of Manhattan Community College

Complexity and Connections: Learning from Student Learning across Disciplines

What does it mean for community college colleagues in very different disciplines to work together on a Scholarship of Teaching and Learning (SoTL) project? What happens when they join together to take seriously (Shulman, 1999) their students' learning, their learning as individual professors, and their collaborative learning? And what happens when they undertake an electronic publication of that work—a digital gallery? This presentation details the scholarship of teaching and learning work of two colleagues from different disciplines—one (English) in the humanities and the other (Early Childhood Education) in a career discipline. In collecting our students' work with digital storytelling, closely analyzing and organizing it for electronic publication, we discovered four student-learning goals vital to all our students across disciplines. These "Four C's" (Connections, Complexity, Content and Commitment) offer arenas for a fine-grained, collaborative reading of our teaching and our students' learning. Researching teaching across disciplines within these frameworks provides linkages between theory and practice and approaches for using scholarship to affect classroom practice. In the presentation, we will discuss what Complexity and Connections, two of our "four C's, mean in our different disciplines, what this SoTL teaches us about inter-disciplinarity, and how this work influences our respective teaching. We will tour the digital gallery— <http://crossroads.georgetown.edu/vkp/dportfolio> (developed with the support and assistance of the Visible Knowledge Project)—as an example of how collaborative scholarship can be organized and published, with student work at its center.

Synthesis by Dave Eubanks

*This presentation occurred under the title: **Learning from Student Learning: Dialogue Across Disciplines**. The other presenter was Peter Looker, University of New South Wales.*

Ugoretz and Theilheimer have thoughtfully juxtaposed a small catalogue of digital student projects. For Theilheimer's courses in early childhood education, students construct hypertext stories from their own childhoods and begin to complicate those narratives with the theories and models that constitute the discipline in which they are studying. Students in Ugoretz's introductory literature courses build digital works in which they supplement a poem with images and sound. Ugoretz and Theilheimer identify instances of complexity in both sets of projects. The larger VKP project examines four "Cs" in student work, complexity, connections, commitment, and content. The ISSOTL presentation makes clear the promise of identifying and—as much as is possible—making transparent the phenomenon of complexity in student work across disciplines. Each noticed, for example, the ways students began to recognize the limited authority of remembered experience (e.g., Theilheimer's students' tendency to generalize extensively about spanking from their own experiences and Ugoretz's students' affective commitment to bad poetry). While situated in disciplinary work, an informed sense of one's own experience seems an initial sort of complexity to be valued in all student work.

These disciplinary intersections stimulated Peter Looker's presentation, "Who Are We Talking To, and in What Language: Negotiating SoTL Frameworks." Approached by a pediatric neurologist seeking to improve her students' confidence and competence in diagnosing pediatric epileptic seizures, Looker and his colleague Clare Netherton have initiated a series of pre- and post-tests, class observations, student focus groups, and CIQs, all part of what appears to be a rigorous, informed, and careful strategy. Nevertheless, during the consultative process, Looker and Netherton have had to negotiate the instructor's epistemological frames for scholarship, knowledge, and learning in her discipline, and at times, the two developers have had to defend their ability to develop and provide a systematic means to better learning. Against either/or notions of discipline-specific and generalizable SoTL, Looker now suggests that we should draw on our own disciplinary frameworks as we negotiate those of others. This negotiation, he contends, "is a valuable process because it unpacks assumptions."

Both projects stimulate foundational questions about not only the work of SoTL but of the nature of disciplinarity. Complexity in student work and meaningful connection between that work and work for other courses, experience, and a discipline's corpus is a phenomenon we ought to be able to talk about across departments, colleges, and epistemologies. Disciplines, by their nature, will sustain their own criteria, their own languages, and their own models, but the dialogic work that occurs when disciplines teach students has the potential to affect both parties.

Endeavors to engage in SoTL and to improve teaching and learning do not sacrifice their efficacy if they engage in the careful negotiations Looker proposes. At the very least, the potential for transparency (i.e., visible knowledges) strikes me as incredibly promising.

Key points from this session:

- *The Scholarship of Teaching and Learning need not be discipline-exclusive; instances of inter- and cross-disciplinary efforts to study and improve teaching and learning show promising negotiations between disciplines' epistemologies.*
- *"Complexity" is not a static criterion across disciplines, but instances of complexity in student work may be similarly (and simultaneously) detectable by those disciplines.*
- *Those who work in academic/faculty development can make a strong case that their unfamiliarity with a discipline does not preclude their ability to contribute to improved teaching and learning in that discipline.*

Recommended resources from this session:

- <http://crossroads.georgetown.edu/vkp/dportfolio>

Ustick, Neill, Australian Catholic University

Narratives in critical reflection for social justice during field experience

For over two decades, inservice and preservice teacher education programs have emphasised the development of reflective thinking. Some work has addressed the practicum. Paralleling this focus, most teacher education programs, and many recent curriculum reform initiatives, embody a commitment to social justice. In this paper, literature on these contested and variously understood notions of critical reflection and social justice is reviewed. Next, the construction of a new model of "critical reflection for social justice (CRSJ)" which combines the perspectives is described. The CRSJ model is a modification of a framework (Raeburn, 2006) which was designed to scaffold the critical reflection of preservice teachers on practicum. The paper continues with the report of a trial with preservice teachers at Australian Catholic University, Canberra. A small number of preservice teachers used this model to explore "critical incidents on an eight-week practicum in mid-2006. The preservice teachers, who were introduced earlier to the Raeburn model, next received instruction in the use of the CRSJ model. On their practicum, the preservice teachers kept records, met with the author as mentor on several occasions and wrote formal narratives. Those narratives and other information sources are analysed and the results discussed. Of particular interest are four questions. How deeply did the students reflect? How useful for reflection did they find the model? How did they make use of relevant theory and multiple perspectives to understand their experiences? What range of social justice issues did they discuss and what depth of analysis and critique was applied?

Synthesis by George Rehrey

*This presentation occurred under the title: **Service Learning and Integrative Analysis**. The other presenters were Kim Wilson, Purdue University and Neill Ustick, Australian Catholic University.*

This session was a conversation about three service learning programs that all share a common concern for understanding how civic engagement and community involvement influence student learning and foster critical reflection for students and across disciplines. In addition, all three presentations discussed, either explicitly or implicitly, the manner in which reciprocal relationships that the students built with the communities they served

provided a rich learning experience that in many ways exceeded anticipated course outcomes.

According to qualitative data obtained through the use of open ended survey questions, Kim Wilson and Joan Jurich identified reciprocal themes that emerged from their students' involvement in the International Service Learning and Sustainable Village-based Development project, which took place in the Village of Tumbabiro, Ecuador during the Maymester of 2006. The reciprocal themes they discovered in the data were communication, learning, responsibility and respect and were accompanied with subtexts about accepting and appreciating cultural differences, finding common ground across boundaries and most importantly, coming to terms with program ownership and who ultimately gets to determine what community services are provided.

Similar themes of cultural values and the appreciation for cultural identity, effective and open communication between differing cultures, and the need to find commonality across cultural divides surfaced in Chip Bruce's discussion about the Community Informatics Corps (CIC), which offers Saturday and summer courses at the Puerto Rican Cultural Center in Chicago, with additional online courses taught through the Urbana-Champaign campus at the University of Illinois. The aim of the CIC is to recruit and mentor a cohort of Latino, African-American, and other students interested in the experiences of underserved groups in society who are eager for a career that gives them the opportunity to contribute to their communities.

The themes and topics cited above were integrated by the final presenter, Mike Radford, who framed service learning as "emergence" phenomenon cited in complex theory analysis. Based upon his study of service learning as a complex activity, Radford suggested that as we plan and implement service learning programs we recognize their success hinges upon the ability to embrace unpredictable and unfolding events, and that to accomplish that we take into consideration, at the very least, four influencing factors; the need to remain flexible by exploiting the unpredictable, the use of creativity and imagination, the ability to build upon momentum by working with system changes, and the ability to see and understand situations holistically.

Key points from this session:

- *Reciprocity is an important aspect of service learning.*
- *Service learning can be framed and understood through the lens of complex theory analysis.*
- *The service learning experience has the potential to far exceed anticipated course outcomes.*

Recommended resources from this session:

- *Cilliers, P. (1998) Complexity and Postmodernism, London; Routledge*
- *Gleick, J. (1998) Chaos: The amazing science of the unpredictable, London, Farber and Farber*
- *Radford, M (2006) Researching Classrooms; complexity and chaos, British Educational Research Journal 32;2 pp 177-190*

V

Varnhagen, Connie, University of Alberta

Do Problems with Technology Necessarily Lead to Problems with Learning?

We commonly assume that, while information and communication technology has the potential to benefit teaching and learning, technology problems are detrimental to teaching and learning. However, depending on how students are supported, technology problems may not be as negative as we perceive them to be. In this presentation and dialogue, I will present and encourage discussion of a natural experiment of the effects of technology failure on students' perceptions of learning. We developed information literacy tutorials and assignments for introductory psychology students and administer them to 4000 students each year using a course management system. During our first two years, we experienced major disruptions in the course management system. We were in constant communication with the students and provided them with alternative methods to complete the tutorials and submit their assignments. The course management system functioned very well the third year and we provided no supports to students. We have evaluated these tutorials each year. As expected, during the first two years, students who experienced major technological problems responded quite negatively to the course management system. These students were, however, still very positive about their learning of the information in the tutorials and assignments. Interestingly, during this past year, those students who experienced technological difficulties reported poor learning of the material as well as negative affect toward the tutorials and the course management system. I will use this accidental Hawthorne effect example to generate discussion of how we use technology in teaching and learning and how we can support student learning with technology.

Vaughan , Norman , University of Calgary

Inquiry Through Blended Learning (ITBL) Program

The University of Calgary defines blended learning as a blending of campus and online educational experiences for the express purpose of enhancing the quality of the learning experience. Blended learning is seen as an opportunity to fundamentally redesign how we approach teaching and learning in ways that higher education institutions may benefit from increased effectiveness, convenience and efficiency. At the heart of blended learning redesign is the goal to engage students in critical discourse and reflection. The goal is to create dynamic and vital communities of inquiry where students take responsibility to construct meaning and confirm understanding through active participation in the inquiry process. These elements of blended learning are having a profound influence on how we approach teaching and learning in higher education. The University is in its second year of funding inquiry and blended learning course redesigns. To date well over 30 courses have been funded and are in various stages of redesign. Several of the courses have eliminated lectures entirely in favor of more engaged learning processes. Redesign is a very time-intensive process that includes consultation throughout the development process. This is done in the context of a face-to-face and an online community of inquiry, which emphasizes a scholarship of teaching and learning (SoTL) approach to the redesign process. Early evaluation results of these redesigned courses suggest increased student interaction with teachers and peers plus more meaningful engagement and understanding of course concepts.

Venkatachary, Ranga, Simon Fraser University

The Use of Story-vignettes in Teaching Collaborative Problem Solving; A Case from Undergraduate Business Curriculum

Howard Gardner says that stories are the basic human cognitive form. Stories are powerful because they engage the reader/listener at intellectual and emotional levels at the same time; in a learning context, can they function in a way similar to ill structured problems in facilitating inquiry? This presentation explores this questions through the case of an undergraduate Business course in Marketing when the students engaged in self directed, team based learning while using a series of story vignettes to guide their thinking at individual and team levels. The context of the discussion is this: a resource base of real life instances from the lives and work of outstanding, international business leaders in the form of "stories" (narratives in video) was used as a central teaching tool in fourth year course in undergraduate Business curriculum; the instructor used the online resource base in her lecture sessions to raise issues and questions. The team work

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involved the formulation of the problem, resolving the processes for team functions and working towards the final output which was a marketing plan. The stories in effect have been used as triggers for students' self directed learning. The discussion focuses on the perceptions of students and the instructor in how and why the "story triggers" foster critical thinking, the modes of inquiry (the type of questions asked/difficulties faced and learning milestones) fostered by different types of triggers as well as the issue of "authenticity" as a prerequisite for engagement in learning.

Venkatachary, Ranga, Simon Fraser University

Who Benefits from a Learner-centered Classroom? Faculty and Policy Perspectives from South East Asian and Canadian Contexts

This presentation focuses on a comparative analysis of faculty development initiatives to support learner centered methods in teaching such as problem based learning, case learning as well as classroom intervention strategies for student engagement. The argument for learner centered pedagogy has an impact on faculty belief systems, their approach to curriculum and assessment design as well as classroom processes. The actual imperatives in teaching and faculty development however shift depending on whether the learner centered approach is implemented from a top down policy decision or whether it stems from individual faculty wishing to adopt it. Questions arise as to how institutions, faculty and students perceive the benefits of learner centered pedagogy. The planning, content and methods of faculty development initiatives vary widely, depending on the institutional imperatives and academic milieu. How does an intervention strategy become an effective change agent? What questions (that need to be asked) about faculty development are different? What remains the same? The issues from these two perspectives will be demonstrated through comparisons from a pure PBL implementation in South East Asian context and my current work with a specific Faculty in a large Canadian university.

Verner, Jane, Western Washington University

Transformative Strategies: Invoking the & L in SoTL

Using an interactive approach that models processes currently practiced in the facilitators' human services and teacher certification classrooms, participants from multiple disciplines collectively identify and collaboratively explore a variety of transformative strategies to expand the engagement and thoughtful deliberation of everyone involved in the teaching/learning cycle. Four interconnected focus areas are explored. (1) Unlearning -- Moving from a more traditional model with preconceived assumptions that often preclude deep and lasting learning, to a more inclusive model that promotes self-reliance and cultivates enduring dispositions toward learning. (2) Partnership -- Equalizing the power and control dynamics of classroom interaction to embrace more fully all voices and to transform classrooms into more egalitarian learning environments. (3) Choice -- Providing meaningful self-determined choices that make use of differentiated learning styles and individual modes of expression to develop a deeper level of personal engagement. (4) Unanticipated -- Affording opportunities to explore strands of inquiry which are inevitably evoked by discourse and emerge unexpectedly during collective efforts. This workshop offers a place for individuals from multiple academic disciplines to participate in a simulation of empowered dialogue and to collaborate in building a composite of transformative strategies for teaching and learning. Methods demonstrated throughout this 75-minute workshop can be adapted for classes with up to 60 learners. Recording of foundational values, strategic principles, and instructional practices generated by the participants brings closure to this session. **Co-author: William Harrison Lay, Western Washington University.**

Synthesis by Lauren Kaczmar

Presenters Jane Verner and William Lay invoked a learner-oriented teaching strategy by organizing the session as a collaborative workshop that mirrors the processes used in their human services and teacher certification classrooms. After building the learning community of the larger group, participants then dialogued in groups to generate and explore insights on the methods of eliminating preconceptions on four focus areas of pedagogy with the goal of empowering student voice. Finally, the groups reunited to report the values, practices and strategies discussed and reflect on their larger significance.

In collaborating on the process of unlearning, we attempted to discover strategies that would help replace the traditional teaching/learning cycle to a model that encourages self-reliance and an interest in learning. Reflecting on such preconceived notions that the teacher is the ultimate authority, there is only one right answer, and students should not and cannot learn from other students, we uncovered several solutions. For instance, teachers can make themselves more transparent to students by elaborating on their own analytical thought processes and addressing their own errors in thinking. Teachers may also encourage students to question “right” answers by establishing rebuttal policies for their exams or instituting projects where students form multiple opinions on one issue or take different paths toward completing the project’s goal. In this way, students can and will learn to forget the limiting view and develop independent learning strategies sprung from a genuine interest in learning.

The discussion on partnership expanded on ways to move towards an equalization of the power and control dynamics of the classroom. Participants expressed ideas on physically placing the teacher on the same plane as the student, establishing smaller learning communities or online discussion threads where students can take on new roles and be responsible to each other, and exposing the strictures teachers work under so as to enable students to side with the teacher. Finally, asking students what and how they want to learn from a course would grant students agency and encourage identifying the teacher as their partner in learning.

We also developed transformative strategies that would provide for self-determined choices in the classroom and acknowledge various learning strategies and modes of expression. Methods to promote student choice and interest included offering students various options for their projects, both in terms of topics and methods or materials used to complete the projects. All the strategies were proposed as a means to broaden the learning experience to include the personal interests and experiences of students, which would work toward empowering students as learners able to choose how and what they learn.

Our dialogue on the unanticipated drew out strategies to go beyond traditional instructional methodologies and explore unexpected inquiries emerging from discourse and collective learning efforts. We found that to elicit debate and critique, teachers could explore texts or artifacts from the student’s perspective or develop an inquiry based learning paradigm. Reflective papers or online learning communities would also help students relate the course material to their own lives and reveal how the same material appears differently to students based on past experiences. These collaborative methods establish the student as responsible for and capable of instigating inquiry and searching out answers.

By allowing the insights of various scholars to come into the open, this workshop offered a practical and informative exploration that furthered the ongoing discourse on student empowerment against the inherent power relations between teachers and students and between the students themselves. Doctors Verner and Lay portrayed the power of collaborative discourse to generate useful ideas by placing educators in the position of students allowed the voice to express opinions and experiences.

Key points from this session:

- *An exploration of unlearning and the unanticipated in the classroom and how best to free the classroom from preconceptions concerning the instructional paradigm.*
- *How partnerships between teachers and students can encourage student voices and dismantle the traditional teacher/student hierarchy.*
- *The possibility of choice to again establish student power and engagement in learning.*

Recommended resources from this session:

- *A.S. Niell*

- *Paolo Friere*
- *Briggs and Peat*

Volpe, Guglielmo, London Metropolitan University

Embedding PBL in the Economics Curriculum and Evaluating the Development of Critical Skills

The paper presents the results of a two-year project on the introduction of Problem Based Learning (PBL) in the economics curriculum at London Metropolitan University . The approach is implemented in two final year modules and the main focus of the project is on the development and assessment of deeper critical skills with a view of embedding PBL throughout other modules in the curriculum. The paper reflects on the implementation of the approach and on the pedagogical issues and challenges that have emerged in the process. The use of a control group allows for a comparison of the effectiveness of PBL against traditional teaching methods. So far our experience with PBL has raised issues that we think are not fully addressed in the literature and that need to be considered when implementing the approach across the curriculum. While economics is a subject that lends itself well to the implementation of PBL a trade off between a rigorous and a more intuitive learning of the subject possibly exists; institutional and cultural 'barriers' can make it difficult to implement a full PBL approach from the first year; a more gradual implementation throughout the three years of study is advocated; the 'value' of PBL can only emerge through a 'network' system where the approach is embedded across the whole curriculum and not only in some isolated modules; so far the research does not show substantial evidence that PBL leads students to the development of deeper critical skills.

Synthesis by Edith Kennedy

*This presentation occurred under the title: **Problem-Based Learning in Two Different Disciplines**. The other presenter was Rita Kumar, University of Cincinnati , Raymond Walters College.*

Rita Kumar of Raymond Walters College, University of Cincinnati began her presentation with the often heard comment that literature has no practical application. Because of this commonly accepted belief, it might seem that PBL (problem-based learning) has no place in a literature classroom. Kumar spent the rest of her time proving that this concept is absolutely false.

Those who teach literature know that it does have a practical application; the problem arises in convincing students that this is true, that there really is a use for reading those sometimes archaic texts. This use is not simply to be able to claim a well rounded education that includes a smattering of Shakespeare and Hawthorne. The trappings of the issues may change over the years, but the same problems, in one form or another, have plagued humanity since the dawn of time. These archetypical themes that run throughout literature provide the link between students and PBL. If they could be convinced of it, students could gain a great insight into human nature, an insight that is definitely applicable in the actual, problem-riddled world of reality.

PBL can, and in Kumar's class does, bring reality to the lessons of literature. Conversely, the lessons of literature provide answers, or at least a method to arrive at the answers, to many modern-day quandaries. In essence, literature deals with the basic emotions, motivations, and inspirations that drive humanity and society. In the current culture of e-mail, instant messaging, and virtual communication, people are becoming more and more separated from themselves, other people, and the understanding of relationships. Literature can help to re-awaken and re-establish this lost connection.

Of course these concepts and ideas are not easy to probe and understand. It requires a close reading of the literature combined with critical thinking and analytical skills to delve beneath the surface of the text. Ironically, it is in the process of seeking these hidden meanings that students gain the skills of critical thinking and analytical reasoning. Gaining these abilities through the study of literature in a PBL classroom then

encourages students to apply those new skills to other problems and situations in their world. The literature itself had real world application; PBL helps students learn how to unlock these concepts and develop new expertise that will help them to better navigate the world around them.

Kumar's study has both similarities and differences with another PBL session led by Volpe and Sedgwick. Both studies dealt with the implementation of PBL into a classroom. However, while Volpe's and Sedgwick's students wished to return to a more traditional classroom format, Kumar's students seemed happy with the new setting. Further study in this area might help answer the question of why economics students preferred a traditional class style while literature students became more engaged in the PBL classroom. Are the perceptions and expectations of students in a humanities course different than those of students in an economics class? Is a literature class with its "ill-structured problems" more admirably suited for PBL with its own set of "ill-structured problems"? It is possible that a literature class that involves multiple possible and equally relevant answers to one question may actually be more suited for PBL than a class that involves specific answers and skills that must be mastered. Students in knowledge-based courses may be so concerned about acquiring the necessary knowledge to pass the final exam that they cannot fully appreciate the opportunities of PBL. In order for PBL to be more accepted and appreciated by students, it may be necessary to change the expected outcomes for classes to better fit the projected learning curve.*

Key points from this session:

- *Problem based learning focuses learning on the student, making them more involved in their own learning.*
- *PBL increases student ability to think outside the box and the classroom.*
- *The use of PBL in a literature classroom promotes analytical and critical thinking skills*

Recommended resources from this session:

- Chapman, C. and R. King (2003). Differentiated Instructional Strategies for Reading in the Content Areas. Corwin Press.
- Duch, B., Groh, S., and Allen, D. (Eds) (2001) The power of problem-based learning: a practical "how to" for teaching undergraduate courses in any discipline (Sterling, Va., Stylus Publishing)
- Kuh, G. D. et al. Assessing Conditions to Enhance Educational Effectiveness: The Inventory for Student Engagement and Success. Jossey-Bass.

W

Warr, Elizabeth, Writtle College

Effecting Change through an International Collaborative Project - Case Study from Ukraine

A team of Vocational HE Practitioners and Educational Developers from the UK, France, Spain and Germany sought to achieve transformational change in Ukraine through a 3 year project designed to produce graduates of Agronomy equipped for employment in a competitive economic market. The primary purpose was to expose Ukrainian staff and students to European HE systems of curriculum design, student centred learning, industrial involvement and quality assurance and to underlying pedagogic theory. This was achieved through a combination of staff visits between the partner institutions, a student study semester in the UK and an annual conference and interactive summer school in the Ukraine . The secondary purpose was to engender knowledge exchange on an international basis leading to personal and professional development of all participants. The final conference, focussing on innovative assessment attracted a diverse audience of Ukrainian academics and government officials reflecting the growing impact of the project in the national policy context. The power of students as agents of change was clearly evident as was the increased emphasis on the scholarship of teaching and learning that resulted from close collaboration between Educational Developers and Academic Practitioners. The role of different project activities are evaluated in the context of their immediate impact on participants and their potential to influence emerging national policy within Ukraine as it works to become a member of the European Higher Education Area.

Synthesis by Anthony Rosie

*This presentation occurred under the title: **Talking Across Contexts: Inter- and Intra-institutional**. The other presenter was Barbara Brown, University of Central Lancashire.*

The session demonstrated how a specialist UK institution worked with partners in Spain and France with agronomy in the Ukraine. Translation and translators was a key requirement. The project aims focused on enabling the Ukraine university to move towards common European Union requirements. The position on teaching and learning in the Ukraine was substantially different from that in Western Europe.

Points of contrast included: separation of course knowledge from practical experience; formal calculation of hours and assessment model of examinations which militated against student inquiry.

Consequently the three year project focuses on developing a new teaching programme with the creation of new modular programmes with a vocational focus and emphasis on employability.

The project succeeded in terms of moving towards European requirements and was guided by the Bologna agreement.

Reflection on this session includes the following:

this session brought out the need for ongoing cumulative strategies for managing change when the key parties are starting from very different places

The session showed how learning and teaching could be embedded in social learning and how such learning was key.

The session raised a key question for SOTL on what was the nature of research and teaching when the expectations could be very different.

Key points from this session:

- *Working with external partners with different cultures requires a model of cultural change*

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- *Value clarification when working with different partners is essential*
- *National and international collaboration raises similar issues to change within organisations*

Recommended resources from this session: N/A

Weetman, Jacqui, The College of New Jersey

Does Information Literacy Make a Difference within Teaching and Learning?

Much has been written about the importance of information literacy and the benefits that it can bring to students. Sadly, librarians have written most of these articles, which begs the question as to whether the academic staff always shares this enthusiasm. Some writers believe that the reason for information literacy not being part of the mainstream higher educational agenda is because many teaching staff believe that students just acquire these skills, rather than needing to be taught them. Whilst the information skills that students need can vary between disciplines, it cannot be disputed that students need to be able to: •Recognise a need for information and be able to locate it effectively •Retrieve and evaluate information •Think critically •Propose original solutions to problems. Surveys have been conducted within De Montfort University (UK) to obtain academic staff perceptions of information literacy and to ascertain how skills relating to information and research are incorporated into student learning. The main findings have been that, whilst the skills are highly valued by staff, there are lower levels of activity in terms of incorporating them into teaching, learning and assessment. It is proposed that this presentation and dialogue would look at the research findings and their implications for collaborative work, between academic staff and librarians, to re-define curricula to help produce "information literate" students who are better prepared to meet the challenges of the 21st century.

Weis, Tracey, Millersville University

Beyond the Article: Next Steps and New Twists in the the Pedagogical-Visual-Digital Turn

This poster presents and extends the findings presented in "Ways of Seeing: Evidence and Learning in the History Classroom, a collaborative essay by five historians that was published in the " Textbooks and Teaching of the Journal of American History March 2006. The historians, who have worked together since 2000 on the Visible Knowledge Project, used historical research methods to interrogate student work as evidence of learning as they investigated questions posed by three important developments: 1) the pedagogical turn: how do students learn to think historically? 2) the pictorial turn: what is the role of images in the construction of historical understanding? 3) the digital turn: what new forms of historical discourse are scholars and students generating with digital media? Working together to explore the openness and uncertainty of interpreting visual materials in history classrooms, we concluded that our observations of students making meaning with visual and written sources must inform not only our teaching, but also our own scholarly practice. Our collective gaze into our classrooms pushes us to move beyond our opening question: Why do we use visual approaches in our teaching? to ask the disciplinary question: Why are we not using visual evidence and visual modes in the presentation of our own practice and research? How can visual evidence inform, or provide alternative perspectives to, our traditional research practices? What kinds of historical narratives can we visualize, construct, and present within our field and to a larger public?

Synthesis by Anastasia Salter

The question of grading student writing is always bogged down with accusations of subjectivity and problems of fairness and standards. The writing rubric is an attempt to offer standards that everyone can live with—as Tracy Weis recounts of her first attempt to develop a writing rubric, she developed one in response to the student query “Do you have a rubric for that?” A rubric is essentially an authoritative rule or direction, and thus Tracy turned first to an authoritative source for a rubric from the state standards and came away with five main points: focus, content, organization, style, and use of conventions. Tracy Weis was unsatisfied with this traditional rubric, and continued to develop her own, a challenge made even more difficult by the addition of digital media projects. Tracy asks the question today, what happens when we take traditional essays and add multimedia? We are no longer dealing with questions of text and narrative, as new elements have been added to the forefront.

Tracy identifies seven elements to consider in digital storytelling: point of view, dramatic question, emotional content, voice, soundtrack, economy and pacing. Not every project will contain every element, and particularly the question of voice and soundtrack applies more to digital video projects than to a work of hypertext or similar. But these elements lead Tracy to pose different questions: what makes an effective historical narrative? What constitutes effective use of images? What constitutes competence or proficiency in multimedia authoring?

The question of effective use of images is particularly problematic for Tracy because she notes that historians themselves are not effective with images. Images used by historians tend to be merely illustration, but powerful digital storytelling requires images to be more than that. Tracy cites Katherine Martinez's essay "Imagining the Past" for possible guidance on this point, as Martinez notes that image should provide evidence and illumination to change our understanding rather than simply underlining a point.

For the specific illumination of this problem, Tracy turns to the idea of juxtaposition. Juxtaposing images and text or images with other images encourages analysis rather than description, and is thus a pedagogical strategy that models a type of disciplinary analysis. Thus in practical terms when students are making a powerpoint presentation they might be expected to present two pieces of evidence side by side on screen and analyze what is there, thus leading to compare and contrast and effective analysis.

In multimedia it is particularly possible for students to understand and show these sorts of relationships with sophistication. Thus Tracy leaves us with the concept of a three dimensional rubric that should be the next stage of finding a way to understand multimedia student authoring. This rubric for these new projects must take into account some of the requirements for expert learning in traditional analysis context while considering the layering of ideas and juxtapositions and perhaps most importantly how the students see their own learning process.

Key points from this session:

- *Developing a rubric for multimedia projects requires delving beyond the expectations we had for students in the past, but not abandoning them.*
- *Asking students to use images in a meaningful rather than simply illustrative manner begins by making intelligent decisions about image use ourselves.*
- *Multimedia presentations offer a new arena for students to explore ideas in juxtaposition.*
- *In multimedia it is particularly possible for students to understand and show these sorts of relationships with sophistication. Thus Tracy leaves us with the concept of a three dimensional rubric that should be the next stage of finding a way to understand multimedia student authoring. This rubric for these new projects must take into account some of the requirements for expert learning in traditional analysis context while considering the layering of ideas and juxtapositions and perhaps most importantly how the students see their own learning process*

Recommended resources from this session:

- *Katherine Martinez, "Imagining the Past"*

Weiss, Kellie, Howard University

So What are You Doing?: Sharing Work on SoTL at MSIs

One of the most important impacts on the success of any SoTL project is communication with other professionals. Whether it is asking for help when you come to a significant problem in the research, learning the process that one must go through in order to conduct a viable experiment, or even searching for a productive research question, all scholars can benefit from the experience of others. This connection is especially important for professors at Minority Serving Institutions (MSIs), who tend to bear the burden of underfunded institutions with heavy course loads. Having knowledge about previous and current MSI scholars, who are doing the same kinds of research,

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readily available would serve to help decrease the time necessary to develop useful projects. Currently though, there is no formal way for scholars at MSIs to share their SoTL work. Although Clark Atlanta University in Atlanta, Georgia has organized an annual conference for SoTL at MSIs, it would be useful to have a place where scholars can go everyday. This presentation addresses the problem of lack of communication and presents the possibility of a website designed specifically as a place where faculty doing SoTL work at MSIs can share their work, their progress, and connect with other scholars doing work in the same area. The presentation will include a visual model for the website and will consider the impact on future scholars that this kind of medium for mass collaboration will create.

Weissinger, Peggy A, Northern Virginia Community College Making a Difference at the Community College

To help meet the growing demands of students, faculty are being asked to move to online environments. The main challenge is often how to transfer course information into the digital realm while maintaining important course content so online students learn the same concepts as their face-to-face classroom counterparts. The online environment presents opportunities and challenges. The use of technology for technology's sake is almost commonplace. Therefore, the need for purposeful online learning objects, based on sound instructional design principles, is an essential component of the course migration process. The presentation will share the process one community college uses to accelerate critical skill development of faculty teaching in virtual environments by providing essential tools for design and delivery and sustaining the process through scholarship and support. Through reflective practice, guided professional development, and virtual classroom action research, faculty target innovative technology to enhance student learning; and create an overall assessment plan for both project success and student learning. Instructional designers not only as project managers, but as mentors during this time of transition to virtual environments. The goal is to encourage faculty to be reflective in their choices for the online environment; discussions springboard relationships across disciplines and between campuses when faculty gather together in learning communities to discuss ideas in a safe environment, learn from each other, peer review others' projects, and yes, occasionally commiserate. As mainline education slowly accepts distance learning as a viable educational option, conversations centered on the scholarship of teaching and learning must continue.

Wenderoth, Mary Pat, University of Washington Prescribed Active Learning Increases Performance in Introductory Biology.

We tested five course designs that varied in the structure of daily and weekly active learning exercises in an attempt to lower the traditionally high failure rate in a gateway course for Biology majors. Students were given daily multiple-choice questions and answered with electronic response devices (clickers) or cards. Card responses were ungraded; clicker responses were graded for right/wrong answers or participation only. The weekly exercises consisted of exam-type questions done either as an individual or as part of a study group. Compared to previous versions of the same course taught by the same instructor, students in the new course designs performed better: There were significantly lower failure rates, higher total exam points, and higher scores on identical midterms. Students at high risk of failing the course did significantly better on identical exam questions if they used clickers versus cards in class. Attendance was also higher in the clicker versus cards section. All students did better on clicker questions if they were graded for right/wrong answers compared to students who received points for participation only. There was no significant difference in performance on exams if students did practice exams individually or in a study group. In this student population, achievement increases when students get daily practice via prescribed (graded) active learning exercises.

Wensley, Chris, Bournemouth University A Model for Self-Determined Workplace Learning for Post Graduate Students.

The authors have developed a new and innovative MA in the Media School at Bournemouth University UK. The MA Creative Media Practice does not provide subject specific knowledge or training in production skills, but rather works with its students to develop solutions to complex problems, drawing upon their work experiences and working in collaboration with other media professionals. The course is delivered completely online and students negotiate curriculum and assessment with their tutor. The pedagogic principles that inform the degree will be discussed and

the online tools developed to support it will be demonstrated. It is contended that the design and form of the degree can be utilised in most academic disciplines. The course will be evaluated using learners' experiences, which will be examined by trialling narrative investigative methods building upon a growing body of empirical and theoretical work pointing to the value of narrative research (for example, Elliott, 2005; Czarniaswska, 2004; Greenhalgh, Russell and Swinglehurst, 2005; Greenhalgh and Hurwitz, 1999). These will form a protocol for developing embedded evaluation in e-learning course design and provide a significant advance in approaches to evaluating the learner experience in distance programmes. The authors of the paper will draw upon the ideas of Hase and Kenyon who argue that the design of courses needs to be flexible and self determined but that "a self-determined learning approach (is) beyond the reality of most of today's universities. (Hase & Kenyon 2000) The authors of this paper contend that this is no longer the case.

Werder, Carmen, Western Washington University

Let's Go Meta Together: Creating a Continuum of Reflective Practices

In describing the scholarship of teaching and learning, Hutchings and Shulman (1999) emphasize how this kind of inquiry "requires a kind of 'going meta,' in which faculty frame and systematically investigate ...the conditions under which student learning occurs... Based on the frequency of its mention in the literature, one of those salient conditions seems to be the opportunity for ongoing reflection. Yet reflective practices are often developed in isolation from one another and without the benefit of students and colleagues from across campus working together in the design stage. Certainly, if we are going to develop the most beneficial reflective practices across learning contexts and if students are going to be most intentional about enacting those practices, we need to go meta together. This session features student and faculty discussants who will facilitate the creation of a physical artifact demonstrating a continuum of reflective practices from office to classroom to campus. Participants will first develop a shared understanding of reflection as a teaching and learning tool. Workshop leaders and discussants will then briefly demonstrate sample reflective practices spanning the continuum. The main workshop activity will engage participants in the interactive format used by Western Washington University's Teaching-Learning Academy to address the overarching question: How do we develop intentional and systematic reflective practices across an institution? In answering this question, workshop participants will develop a continuum diagram highlighting the most beneficial reflective practices across learning contexts.

Synthesis by Kim Graber

This session was designed as a working session. Upon entering the room, participants are asked to complete a question on a worksheet related to reflection. The question asks,

1. *What is reflection?*

a. *For me personally, reflection at its best is like a _____*

b. *In the classroom, reflection at its best is like a _____*

c. *In the community beyond the classroom, reflection at its best is like a _____*

The lead presenter, Carmen Werder, states that the working session is designed to make explicit the process of discovery. Participants are asked to shout out features of reflection. Responses include: (a) trust, (b) enjoyable, (c) thinking thoughts, (d) change, (e) purposeful, (f) interrogate, (g) renewal, (h) being present, (i) using intra-personal intelligence, (j) trajectory from past to future, (k) meta-cognition, (l) meditative, (m) transformation, (n) creative (o) memorable, (p) multi-faceted, and (q) enigma.

Another presenter from the theater arts describes how she hangs a quote from the Wizard of Oz on her office door ("10 minutes, please. Nobody gets in to see the Wizard. Not nobody. Not nohow") to give herself an opportunity to reflect immediately after class and prior to office hours. She describes how she uses different quotes to engage students in reflection.

A co-presenter who is a senior undergraduate describes her experiences as a non-traditional student with six children. She uses the acronym, ART (anticipate, resonate, translate), to describe principles that guide her practices as a person becoming a teacher.

Carmen Werder discusses a handout entitled, "Metaphor as Reflective Practice." She discusses how one can use metaphor to describe experiences in the classroom (e.g., "I was as smooth as butter.").

The participants are asked to complete Question 2 on the worksheet, "How do you use reflection?" They are self-divided into four groups and asked to place their responses within the circles in a ven diagram (individual reflection activities, classroom reflection activities, campus/community reflection activities). The presenter suggests that participants place the word, meta-cognition, in the center of the diagram.

After 15 minutes, the presenters engage participants in a large group format to brainstorm SoTL research questions. Responses include:

- 1. What does reflection look like?*
- 2. What do learners think it looks like?*
- 3. Is it different for different learners?*
- 4. What does reflection sound like?*
- 5. Does it matter if reflective practices are used outside of the classroom?*
- 6. What reflective practices work best?*
- 7. What are the goals of reflection?*
- 8. What do we reflect about?*
- 9. Do we have reflection outside of our daily lives?*
- 10. How can we facilitate/create reflective space and community in our community?*
- 11. How can we structure curriculum to naturally prompt reflection?*

The last five minutes of the session are used to reflect on what types of questions need to be asked about reflection. The presenters state that this is consistent with the goals of SoTL. One of the participants ends the session by reading the poem, "Fire," that can be used as a metaphor for reflection (by Judy Sorum Brown, "The Sea Accepts All Rivers and Other Poems").

Key points from this session:

- Reflection has many meanings and can occur anywhere.*
- Many research questions on reflection have yet to be addressed.*
- The lead presenter, Carmen Werder, states that the working session is designed to make explicit the process of discovery. Participants were asked to shout out features of reflection. Responses included: (a) trust, (b) enjoyable, (c) thinking thoughts, (d) change, (e) purposeful, (f) interrogate, (g) renewal, (h) being present, (i) using intra-personal intelligence, (j) trajectory from past to future, (k) meta-cognition, (l) meditative, (m) transformation, (n) creative (o) memorable, (p) multi-faceted, and (q) enigma.*

Recommended resources from this session: N/A

Whitaker, Noel, University of New South Wales

From Content Centred to Student Development Centred Learning: a Multifaceted Approach

Graduate Attributes (GAs; i.e. generic skills) are being embedded into curricula in the UNSW Science Faculty as a result of a suite of initiatives by a small group (4) of academic and general staff (EdSquad: <http://www.science.unsw.edu.au/guide/slatig/edsquad.html>). In this presentation, we will describe development of this effort, particularly the alignment of a number of complementary initiatives to embed GAs and change the culture of teaching in science, a process that has been iterative, inclusive, public, and ultimately exhausting. First-year students were guided in interviewing prospective employers about the abilities and skills of graduates that they

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valued. The students then compiled trial portfolios to record their development of these abilities, which were comparatively characterised with the university's GAs. These UNSW GAs were contextualised for the science disciplines by academics from our Science Learning and Teaching Interest Group (SLATIG). Concurrently, SLATIG identified specific scholarly teaching strategies which members had successfully used to support the development of these GAs. Next, course convenors in each department of the Science Faculty worked with EdSquad to map GA development in their courses. The mapping also identified learning activities and assessment tasks that support and document GA development. Furthermore, the process encouraged academics to critically reflect on their teaching. Strategies for development of GAs are being integrated in Course Outline descriptions that undergraduates receive as they begin a course, and are also incorporated into tutor (teaching assistant) training for PhD students. Review of GAs has become an integral part of the review process for courses and degree programs.

Synthesis by Ahrash Bissell

A team of faculty in the School of Sciences at the University of New South Wales, called EdSquad, has decided to tackle a particularly urgent issue in undergraduate education. In essence, they recognized that while mission statements for most liberal arts schools profess to develop "graduate attributes (GAs)" for their students, it is not at all clear if such GAs are actually being developed, or even if they are being taught and encouraged in any explicit manner. This stands in contrast to professional schools, which usually have courses and explicit instruction for developing such skills. One of the best forms of evidence for this problem comes from employer interviews, where employers repeatedly state that they are seeking graduates with well-developed GAs, not necessarily disciplinary expertise. EdSquad recruited a number of undergraduates to interview employers in order to develop a list of desired GAs, and then those students self-monitored the development of those GAs for themselves as they moved through their undergraduate curriculum. EdSquad also analyzed and mapped assignments (within courses), courses, and the whole curriculum for places where specific GAs were presumably being taught, which is a first step (in theory) towards designing better teaching and assessment practices to encourage GA development. However, the team is at an impasse, in that they do not have all of this good information, but getting it to the faculty and administrators in a non-threatening and effective manner is proving challenging. They sought audience input for what strategies they might take to facilitate these next steps.

Due to lack of time, we were not able to engage in sufficient open discussion to share any particularly useful insights, and there were many questions about the data they had already collected. Nonetheless, I think there was a sense among the participants that the answer ultimately boils down to "try, try, and then try again, and be patient." Changing undergraduate behavior is tough, but changing faculty and administrative behavior is a serious challenge. The presenters collected sheets with some ideas from the participants and may share them with the ISSOTL community later.

Regarding SOTL, the session raised several interesting questions. Where is the best place to embed GAs into the curriculum... within courses, or separately? How would we measure the effectiveness of each model? Have they developed a good measure for the GAs themselves, or how else were they planning to measure impact?

All three of the talks within this concurrent session dealt with institutional change in the face of measurement challenges and changing curricular guidelines, and they probably have much to learn from each other.

Key points from this session:

- *Both liberal arts and professional schools emphasize non-disciplinary skills, called "graduate attributes." However, professional schools usually teach and assess such skills explicitly, whereas liberal arts schools do neither.*
- *Convincing faculty and administrators to focus on graduate attributes as an explicit element of the undergraduate curriculum is challenging.*

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- *The presenters have taken some significant steps which may make it possible to measure the development of graduate attributes along the path of an undergraduate degree.*
- *Regarding SOTL, the session raised several interesting questions. Where is the best place to embed GAs into the curriculum... within courses, or separately? How would we measure the effectiveness of each model? Have they developed a good measure for the GAs themselves, or how else wee they planning to measure impact?*

Recommended resources from this session:

- *The map of the relationships between course and curriculum assignments and the associated graduate attributes would be valuable to the SOTL community.*
- *Some information about how students were able to assess and track the development of their own GAs would also be of interest.*

White, Susan, University of Maryland Teaching with Technology – Financial Markets Labs

The field of finance has changed dramatically over the past years, both in terms of the speed and availability of market and securities information, and in terms of the expectations for students entering the securities industry. With the Internet and other portals, real-time pricing and analysis has not only become possible, but standard for many of the major markets. The Financial Markets Netcentric Laboratories at the Smith School provides a laboratory setting in which to demonstrate how to model securities prices and to interpret market information—a setting which provides a "low-risk atmosphere for student learning. We have used the lab to advance both teaching and research. This paper describes our ongoing work in creating course materials that integrate the technology of the laboratories with the theories described in textbooks and case materials, as well as our student intern program. In addition, the lab is an invaluable tool in research, in particular, in developing finance case studies. We have also taken the lab to the community, through a program for high school students. We have developed several lab "modules, which can be easily used by other Smith School finance faculty members who wish to use an "off-the-shelf laboratory exercise for integration into their classes. Our emphasis is on creating course modules that have a large impact on the entire finance department curriculum, thus providing benefits to as many undergraduate and MBA students as possible.

White, Tracy, University of Wisconsin - Barron County Methods of Inquiry: The Anatomy of a Case Study Approach for Addressing Student Learning in Biology

Our SoTL group of nine biologists has been studying a problem that cuts across classrooms and culture: the oversimplification of the goals and processes of science. In this workshop, we will encourage critical examination of our project as a springboard for examining the varied approaches to SoTL project design, implementation, and analysis. We will use the specific methodologies and tools of our project—the ones that worked and the ones that didn't—to facilitate deeper understanding of effective SoTL project design. For example, specific learning research helped us formulate a list of learning outcomes that would distinguish students with a sophisticated understanding of the nature of scientific inquiry, allowing us to generate a rubric and specific learning tools. One tool was a set of case studies which allowed repeated modeling of a critical analysis of scientific experimental design. Another set of case studies intend to illustrate how a series of well-designed investigations works iteratively to produce the scientific bodies of knowledge. Workshop participants will explore how these and other approaches were developed, how they affected the direction of the project, and how effectively they created a window into student understanding. Discussion will also be directed at exploring alternate methodologies and their potential impacts.

Synthesis by Nancy Chick

The team began by providing an overview of their project as an example for participants, rather than working on an abstract conversation about SoTL processes in the sciences. (Their SoTL problem began with the lack of student understanding of the scientific method or the nature of scientific inquiry.) The presenters explained their approach, influenced by Grant Wiggins and Jay McTighe's backwards design, as a model: clarify

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the learning goal and what it looks like, develop assessments to help students perform the goal, and then design instruction to teach students about the performance. Through their example, they opened up a discussion of ways to probe student understanding, varieties of evidence, and varying qualities and goals of these types of evidence.

The presenters then asked small groups to brainstorm the beginnings of a backwards design for the working question, “Do my students effectively use the feedback I provide on lab reports?” First, groups successfully unpacked the idea of “effectively use” to specify the multiple levels of understanding and performance of understanding embedded in this rather abstract question:

- Do they see the feedback and recognize it as something they should read?*
- Did they then read it?*
- Did they understand the language?*
- Did they self-assess using this feedback and then incorporate the feedback into subsequent performances?*
- Did they recognize the “why” of the feedback, or the disciplinary or generic conventions behind the feedback (e.g., avoiding the use of “I” in science writing)?*

Next, groups were instructed to consider how they might gather information from students that reveals how and if students are approaching those goals—if they are learning. The presenters offered suggestions for linking their assessments to what is known about learning (Bloom’s taxonomy, Wiggins and McTighe’s facets of understanding). Some of the group suggestions were as follows:

- Have students write a response to the feedback (on the back of the lab report or in a feedback form designed as a double-entry journal)*
- Have students submit their previous lab report with the new one, which they annotate with comments about how they applied the feedback.*
- Have students classify the comments to assess their understanding of them (content, organization, mechanics, disciplinary conventions, etc.).*
- Have students prioritize the comments and develop a plan for improvement.*
- Have students keep a log of their strengths, areas to work on, instructor recommendations for progress, and specific plans for progress—all based on the feedback.*
- Have students write a reflection on the comments: what was most useful, most confusing, most difficult to apply in the feedback, and why?*
- Use focus groups to explain how they used the feedback.*

A discussion followed about the importance of gathering a variety of evidence, “triangulating” types of data to provide stronger, fuller, more “robust” conclusions. The session ended with a brief overview of how the presenters’ project reflected these principles and the resulting strengths of their own findings.

The ideas generated within the small group were varied and strong. Although the discussion focused on studying and improving how students effectively use feedback on lab reports, by extension, the session modeled and offered ideas for helping students integrate feedback on any writing assignment.

Key points from this session:

- The presenters’ project, used as a model for the working session’s exploration of developing science-based SoTL projects, has revealed that students’ understanding of scientific inquiry or thinking like a scientist is independent of their knowledge of scientific facts; thus, helping students recognize and develop science-based habits of mind is a fruitful area of SoTL work.*

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- *Grant Wiggins and Jay McTighe's backward design provides a good model for the development of SoTL projects.*
- *Using a variety of types of evidence strengthens the findings of any SoTL project.*
- *The ideas generated within the small group were varied and strong. Although the discussion focused on studying and improving how students effectively use feedback on lab reports, by extension, the session modeled and offered ideas for helping students integrate feedback on any writing assignment.*

Recommended resources from this session:

- *Grant Wiggins and Jay McTighe's, Understanding By Design*
- *Bloom's Taxonomy*
- *Pat Hutchings's introduction to Opening Lines*

Wichadee, Saovapa, Bangkok University

The Effects of Cooperative Learning on English Reading Skill and Attitudes of the First-Year Students at Bangkok University

The study investigated the effects of cooperative learning on English reading skill of the first-year students, surveyed their attitudes towards cooperative learning, and examined their cooperative learning behaviors. The subjects of this research were one EFL first-year class containing 40 students at Bangkok University. They were selected through the purposive sampling. A Student Teams-Achievement Divisions program was used with the subject group over 12-week period. The instruments were reading comprehension test, the questionnaire of attitudes towards cooperative learning, the cooperative learning behavioral assessment form, and the interview. The researcher administered English reading comprehension test before and after teaching. The pre-test and post-test scores of the group were compared using a t-test dependent measure. After twelve weeks of treatment, the students obtained higher reading comprehension scores for the post-test than the pre-test scores at the .05 level of significance. Regarding the students' attitudes towards cooperative learning, the findings indicated that most students rated cooperative learning moderately positive. Also, assessment forms showed they performed good cooperative learning behaviors in their tasks.

Wickens, Renate, York University

SoTEL: Towards a Scholarship of Technology Enhanced Learning

The publication of Ernest Boyer's innovative study, *Scholarship Reconsidered: Priorities of the Professoriate* (1990), sparked sixteen years of academic studies, high level conferences, and campus teaching reforms in a movement that has come to be known as the Scholarship of Teaching and Learning (SoTL). During this same period, a rapidly developing study and practice of digital pedagogy, to be discussed here under the heading of Technology Enhanced Learning (TEL), generated its own extensive theoretical and practice-oriented literature. This paper is part of an ongoing work that explores points of intersection between SoTL and TEL in order to lay the groundwork for the latter as "scholarship in Boyer's sense of the term, that is, the Scholarship of Technology Enhanced Learning (SoTEL).

Wiersema, Janice, Iowa State University

Community and Learning: Learning Communities to Enhance Student Learning

Many college students succeed by working independently in their college classes, but thriving in their future interdependent world requires the abilities to learn continuously, communicate effectively, think critically, and form meaningful relationships. Although learning communities have been used successfully to promote both social and academic development, these outcomes likely can be enhanced. This session will explore findings from a phenomenological study of an interdisciplinary community of learners who took responsibility for their own learning while supporting the development of their colleagues. These students' experiences of learning in community suggest new directions for those involved with learning communities.

Wiersema, Janice A., Iowa State University

Developing Intentional Learners: Expectations and Accountability Make a Difference

In many college courses students succeed by memorizing facts and principles, but solving ill-defined problems of the future requires critical thinking and continuous learning, not solely

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technical knowledge. This session examines the findings from a phenomenological study of eight students involved in an interdisciplinary community focused on developing responsible life-long learners. Although students' descriptions of the nature of high expectations that impacted their learning were not surprising, it is significant that every student, independently, identified being held accountable for meeting the high expectations was critical for transformation into intentional learners. Implications for educators are that students must be challenged with ambiguous, complex tasks relevant to them as professionals and must be held accountable for meeting high expectations.

Wilcox, Susan, Queen's University

Transformation through Self-Study Scholarship

One expects scholarly inquiry to make a contribution to knowledge. In the case of teaching scholarship, inquiry should contribute to what we know of teaching and learning. One also hopes that knowledge gained will shape future action in meaningful ways. Thus we promote inquiry into teaching and learning precisely because of our interest in educational improvement. Many of us have a third, rather grand expectation for teaching scholarship: we hope it will transform the very culture of our colleges and universities. This session focuses on self-study, an approach to scholarship that holds real promise for the transformation of higher education, and addresses the practical implications of adopting this approach. What can we hope to achieve through self-study scholarship, and what kind of support is necessary? Schon (1995) has argued that the new scholarship proposed by Boyer implies, "a kind of action research with norms of its own, a form of critical social science that raises difficult epistemological, institutional, and political issues. My interest in self-study arises in this call for critical practice-based inquiry. Self-study is a mode of scholarship in which teachers examine their beliefs and actions within particular educational contexts and explore pedagogical questions. The provisional answers they formulate always come with implications for further action. My experience with self-study confirms that it incorporates the goals of critical action research and is potentially transformative – for individuals and institutional and disciplinary cultures. Self-study also helps us to gain a better appreciation for what is involved in the transformations we desire.

Synthesis by Susan Ko

*This presentation occurred under the title: **Building Cultures of Inquiry**. The other presenter was Nicholas Bekas, Valencia Community College.*

The presenter's view is that self-study takes the point of view of the teacher in regarding the teaching and learning experience. It is a mode of scholarship through which teachers explore their beliefs and actions in the context of teaching. Through self-study, teachers develop a sense of their professional identity. By utilizing critical reflection, faculty can challenge their existing practice, identify those values and roles of importance to themselves, and this can lead to transformation of their own teaching.

The presenter referred to Mezirow on the idea of "transformative learning." In adult learning theory, transformation is a critical, reflective process of questioning our assumptions, perceptions and beliefs. This can be both a cognitive, rational process but also intuitive. Critical questioning can result in a gradual or sudden shift in views and subsequent action. When individuals change their views and act on it, and engage in dialogue with others, transformative learning can take place.

Transformation must be a voluntary practice, but it is possible to help facilitate transformative processes in others. Self study can be supported by dialogue with other faculty, collaboration, rubrics, mentoring, etc. It can even be expressed through artistic means, or through portfolios of practice. If one is working to help support and facilitate self-study, it is important to be sensitive to issues of confidentiality.

Finally, the presenter made the point that self-study can be empowering to faculty. If faculty are encouraged to share ideas with colleagues, to talk about teaching, and forge

positive relationships, the message is conveyed that "teachers matter."

This presentation fitted within the context of the ISSOTL's theme of transformational agendas, putting the emphasis on the individual faculty working to transform his or her own practice, with sensitivity to the support and facilitation that should be applied to enable faculty to accomplish self-study.

Some issues to think about in regard to this presentation are the extent to which performance evaluation and other outside instruments might be utilized to help support faculty's self-study. What should be the role of student feedback and how can we best help faculty to incorporate and interpret student feedback?

Key points from this session:

- *Self study looks at the teaching and learning experience from the perspective of the teacher, and is well suited to the process of transformation of higher ed*
- *self study focuses on questions of professional identity and teaching practices, and is grounded in critical reflection*
- *self study can be supported in a variety of ways, through collaboration, on own's own, or even through artistic expression*

Recommended resources from this session:

- *Mezirow (1981) on adult learning based on engaging in critical thought and reflective action, and the concept of transformative learning, "the activity of making an interpretation that subsequently guides decision and action".*

Wilford, Barbara, University of Teesside

Students Experience of Using the VLE to Support Learning Whilst on placement

The Virtual learning environment (VLE) Blackboard (Bb) has been used since October 2002 and supports student learning whilst on clinical placement. Module evaluation students indicated there were aspects of their experience that required further exploration. A multi method approach was used to investigate how radiography students use a VLE whilst on placement. Focus groups and an attitudinal questionnaire were used with pre registration diagnostic radiography students, who had completed at least one clinical placement, to ascertain how Bb was incorporated into their studying whilst working in the field. The findings indicate that students generally find the Bb environment easy to use, and the material supports their learning in the clinical setting. Some students did express feelings of isolation and miss contact and interaction with peers and staff. They like the flexibility to study in their own time and at their own pace. Whilst students had a positive perception of the flexibility and independence in studying that Bb affords them this was inconsistent with their attitudes towards taking responsibility for their own learning, which may indicate underlying issues relating to the development of learner autonomy. Students may not be adequately prepared for the responsibility of autonomous e-learning. The results highlight that further research could be conducted exploring students perceptions of learner autonomy and what that means for them. The implications for current programmes relate to curriculum development to prepare students prior to placement in learning strategies that will enable them to engage fully with the material and manage their own learning.

Willink, Kate, University of Waterloo

Tracking Transformations in Student Perspectives on Socio/Cultural Diversity

My research focuses on the intellectual and affective challenges students' encounter during the transformative learning processes associated with changes in understanding socio-cultural diversity. The central issue for this presentation is how to articulate and profile the intellectual and affective transformations in students' intercultural understanding in order to foster classroom learning, document teaching methods that are generally adaptable in other classrooms, and develop appropriate assessment methods. This research is guided by Mezirow's (1991) definition of perspective transformation: "the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about the world; changing these structures of habitual expectation to make possible a more inclusive, discriminating, and integrating perspective; and, finally, making choices or otherwise acting upon

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these new understandings (p. 167). More current work on transformative research adds the affective component to Meizerow's work — an "intuitive, creative, emotional process of transformational learning (Grabov 1997. p. 90). The course design, assignments and assessment methods offer students opportunities to make and reflect on their own perspective transformations. Instructors gain insight into how to assess individual student's changes, which vary widely based on each person's cultural experiences and background. Results from a pilot study will address how to design an integrative curriculum that encourages reflection and perspective transformation and how to assess learning in a diverse class where students possess different entry knowledge and experience.

Synthesis by Kathryn Huggett

*This presentation occurred under the title: **Perspectives on Diversity and Learning**. The other presenter was Suzanne Burgoyne, University of Missouri, Columbia.*

This session highlighted the importance of employing learner-centered approaches to learning about diversity. Although both presenters stressed the need for additional assessment data, they described effective initiatives (an ePortfolio and interactive theatre format) that could easily be adapted for use elsewhere.

Dr. Willink's ePortfolio provides students the opportunity to document their own insights, fears, failures related to socio/cultural diversity. To promote transformative learning, Dr. Willink requires students to share their ePortfolio with another student, and reflect on changes over the course of the term. Dr. Willink also introduced the novel strategy of distributing cards on which students record those thoughts "I wish I had said..." to ensure that students have full opportunity to participate -- even if they need additional time to process and reflect upon challenging content.

Dr. Miller described and demonstrated an interactive theatre activity designed to provide faculty the opportunity to develop and rehearse approaches to addressing diversity issues in the classroom. This novel approach is learner-centered, experiential, and engaging.

Both innovations require learners to engage in learning in the affective domain (i.e., values and attitudes). Although assessment data are limited to date, it is intriguing to hypothesize that these experiences will foster greater long-term learning and understanding than traditional approaches (e.g., lectures or assigned readings without reflection).

Key points from this session:

- *Structured, intentional reflection, when included in the curriculum as part of the ePortfolio, is effective.*
- *ePortfolios afford students a "safe" opportunity to record inspired insights, unanticipated connections, and magnificent failures. When students reflect on these over the course of the semester, they engage in self-assessment and ultimately, transformative learning.*
- *The interactive theatre, like the ePortfolio, provides a safe and meaningful opportunity for faculty to rehearse and revise approaches to addressing diversity issues in the classroom.*

Recommended resources from this session:

- *Understanding and Promoting Transformative Learning: A Guide for Educators of Adults by Stephen Brookfield*
- *Transformative Dimensions of Adult Learning (1991) by Jack Mezirow*

Wilner, Arlene, Rider University

What's the Problem Now? How Faculty Can Help Administrators Invest Wisely

In a seminal SoTL article published nearly a decade ago, Randy Bass challenged faculty to consider the positive aspects of problem-posing in the contexts of teaching and learning. Now

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that SoTL has gained respect on many campuses as a worthy faculty-development enterprise, the challenge of defining the problem to be solved in the classroom has been complicated by increasing pressure to connect individual classroom projects to larger goals of recruitment, retention, and program assessment. At a time when state support for higher education is being curtailed and administrators who may like the theory of SoTL are under a mandate to cut "unnecessary programs, the case for SoTL must be made in practical as well as philosophical terms. How can SoTL help turn a cautious faculty-administration relationship into a collaborative one by revealing mutual interests and common ground? By illustrating how a small but systematic SoTL program, incorporating a range of going-public requirements and opportunities, can inspire administrators and synergize the work of committees in typical strategic areas (such as freshman-year experience, learning-objectives-across-the-curriculum, and honors programs), the presenters will suggest how SoTL leaders can answer the question posed by a range of university stakeholders: What's in it for me? Wilner will illustrate how the BRIDGE campus-wide SoTL project (now entering its sixth year) achieves visibility and demonstrates accountability, and Law will explain its emerging role as a crucial pivot toward achieving goals of the University's Strategic Plan. Audience members will be invited to consider key connections and intersections on their campuses.

Wilson, Ben, Charles Sturt University

Forcing Faculty to Be Scholarly - a Policy from above

In 2004 Charles Sturt University in Australia implemented a performance based funding model to improve teaching, primarily in response to greater accountability requirements from government. Faculty must undertake at least two scholarly activities in relation to their teaching to be classified as "teaching active. The definition of scholarly activities was necessarily broad so as not to alienate those faculty with less knowledge of the scholarship of teaching. Activities from which faculty could choose included peer review of teaching, subject reviews, certificate courses, classroom dynamics evaluation, design of computer aided learning projects, educational research projects and staff development activities. In departments where less than 50% of faculty are "teaching active 5% of recurrent funding is withheld. In 2006 a study examined the perceptions of faculty in relation to the reasons, effectiveness and outcomes of the model. The research found that while there was significant scepticism with respect to the model's ability to improve teaching, when faculty members were asked whether their own teaching had improved as a result of participating in the scholarly activities, many responded positively. It is clear that while there may be significant resistance to the implementation of such a model, it is also clear that scholarly activities can have a positive impact on faculty's own perception of their teaching. It remains to be seen whether actual improvements in teaching have resulted.

Wilson, Kim L., Purdue University

International Service-learning and Sustainable Village-based Development: Assessing Transformative Effects on Learning Reciprocity

Reciprocity is a fundamental concept at the core of service-learning where every individual, organization, and entity involved in service-learning functions as both a teacher and a learner. The degree to which partners enter the service-learning endeavor committed to reciprocal relationships will determine whether the academy moves away from seeing the community as a learning laboratory and toward viewing it as a partner in an effort to increase each other's capacity and power (Jacoby, 1996). This shift is magnified with an international partner in a developing country where traditional methods of hierarchical, top-down, and prescriptive style is combined with partner's expectations of supporting community development through monetary and material resources. An interdisciplinary team of faculty at Purdue University created and taught an innovative approach to international learning, discovery, and engagement that combined a classroom educational experience on campus and an international service-learning experience in Ecuador. In Maymester 2006, 13 students from five departments and two colleges spent three weeks in the villages of Tumbabiro using a "grassroots participatory process where the local people organized and planned their own programs in a sustainable way by means of a "bottom-up process. Change in attitudes about reciprocity was assessed using directive journals, focus groups, and class/field observations. Results showed that international service-learning experience when paired with a self-reliant, participatory practice for sustainable village-based

development changed student's attitudes and approach to reciprocity from one of provider and expert to one of facilitator and empowerment.

Synthesis by George Rehrey

*This presentation occurred under the title: **Service Learning and Integrative Analysis**. The other presenters were Bertram (Chip) Bruce, University of Illinois, Urbana-Champaign and Neill Usticl, Australian Catholic University.*

This session was a conversation about three service learning programs that all share a common concern for understanding how civic engagement and community involvement influence student learning and foster critical reflection for students and across disciplines. In addition, all three presentations discussed, either explicitly or implicitly, the manner in which reciprocal relationships that the students built with the communities they served provided a rich learning experience that in many ways exceeded anticipated course outcomes.

According to qualitative data obtained through the use of open ended survey questions, Kim Wilson and Joan Jurich identified reciprocal themes that emerged from their students' involvement in the International Service Learning and Sustainable Village-based Development project, which took place in the Village of Tumbabiro, Ecuador during the Maymester of 2006. The reciprocal themes they discovered in the data were communication, learning, responsibility and respect and were accompanied with subtexts about accepting and appreciating cultural differences, finding common ground across boundaries and most importantly, coming to terms with program ownership and who ultimately gets to determine what community services are provided.

Similar themes of cultural values and the appreciation for cultural identity, effective and open communication between differing cultures, and the need to find commonality across cultural divides surfaced in Chip Bruce's discussion about the Community Informatics Corps (CIC), which offers Saturday and summer courses at the Puerto Rican Cultural Center in Chicago, with additional online courses taught through the Urbana-Champaign campus at the University of Illinois. The aim of the CIC is to recruit and mentor a cohort of Latino, African-American, and other students interested in the experiences of underserved groups in society who are eager for a career that gives them the opportunity to contribute to their communities.

The themes and topics sited above were integrated by the final presenter, Mike Radford, who framed service learning as "emergence" phenomenon sited in complex theory analysis. Based upon his study of service learning as a complex activity, Radford suggested that as we plan and implement service learning programs we recognize their success hinges upon the ability to embrace unpredictable and unfolding events, and that to accomplish that we take into consideration, at the very least, four influencing factors; the need to remain flexible by exploiting the unpredictable, the use of creativity and imagination, the ability to build upon momentum by working with system changes, and the ability to see and understand situations holistically.

Key points from this session:

- *Reciprocity is an important aspect of service learning.*
- *Service learning can be framed and understood through the lens of complex theory analysis.*
- *The service learning experience has the potential to far exceed anticipated course outcomes.*

Recommended resources from this session:

- *Cilliers, P. (1998) Complexity and Postmodernism, London; Routledge*
- *Gleick, J. (1998) Chaos: The amazing science of the unpredictable, London, Farber and Farber*

- *Radford, M (2006) Researching Classrooms; complexity and chaos, British Educational Research Journal 32;2 pp 177-190*

Wright, Paul, Faculty of Technology, Southampton Solent University

From Arranger to Analyst: A Comparison of Three Models for Academic Development

This paper examines three models of academic development that have been employed within the Faculty of Technology at Southampton Solent University. Initially, academic development within the Faculty was set up as a 'service', organising 'events', in much the way a previously centralised system of institutional academic development had worked. This very much leant upon the developers' own scholarship and network, and, so, the itinerary of events often reflected a filtering process that the organisers imposed. Reflecting upon the scant attendance, it was clear this model was flawed. A second model of advisor/problem solver was instigated, where colleagues were encouraged to bring problems to developers and, through action learning, address and own solutions. Although this model had limited success, it required prior discourse, where problems were realised, before learning and development could take place. Finally, a third model of analyst/counsellor was devised. Through the process of New Course Validation and Existing Course Periodic Review, which is a cycle of quinquennial internal and external validation for presently run courses, course teams were requested to liaise with academic developers in order to address curriculum, teaching, and assessment issues. The paper documents the journey between these models, reflecting upon their relative benefits and pitfalls, but argues for a devolved academic development model, with developers who are scholarly, but also still experience life at the chalk face.

Y

Yonge, Olive, University of Alberta

Evaluating Students is Hard to do When You are a Rural Preceptor

Background: One of the most demanding and challenging teaching tasks for any professional is evaluation of performance. Although this role is daunting for educators, it is even more challenging and problematic for practitioners, specifically preceptors teaching undergraduate nursing students. **Methods:** The focus will be on the findings from a grounded theory study examining evaluation processes used by rural-based preceptors in Alberta and Saskatchewan, Canada when precepting undergraduate nursing students. Nursing programs encourage student placements in rural facilities, knowing graduates are more likely to work in rural settings if they have had satisfying student experiences in those settings. **Results:** An evaluation model must be meaningful, contextual, and lead to valid and reliable evaluations. Rural nurses need support in their teaching and evaluation roles, thus creating more satisfying learning experiences for students and them selves. The grounded theory revealed a number of themes for students and preceptors: day to day informal evaluation is very important, formal evaluations are not as important as informal evaluations, the evaluation forms can cause confusion, rural nursing is unique, the majority of learning and teaching occurred through modeling, observing and asking questions, and lastly there was a concern about grade assignment. **Conclusions:** Preceptors and students most valued informal feedback and require strategies and time to enhance this exchange. The use of a grade and the forms to assign the grade needs to be re assessed. Lastly, knowledge transfer is central to teaching and evaluation of this transfer is critical to ensure the graduation of safe nurses.

Z

Zimmerman, James, Missouri State University
Bridging Theory, Research and Practice: Ameliorating Educational Perspectives and Student Learning

The vitality of the scholarship of teaching and learning can be strengthened through enhancing the linkages between research, theory, and practice. Those linkages can help educators, researchers, developers, and practitioners (1) foster strong positive motivation for learning, (2) consider the importance of the prior knowledge, skills, and beliefs of participants, (3) create active engagement for deep learning, (4) anticipate the transfer of knowledge and skills beyond the immediate settings and tasks in which they are acquired, and (5) develop capacities for reflection and self-regulation. However, in each of these areas, researchers tend to conduct and publish specialized studies that are not interpreted for, or applied to, the work of educators and developers. Likewise, educators and developers tend to conduct their practices as disconnected from research and theory which could help strengthen explanations of why and how particular practices are effective. Models that serve the purpose of linking theory, research, and practice can be useful tools for preparing, shaping, and developing the scholarship of teaching and learning. In this presentation, we focus on one such model: the "theory-based integrative model for motivation and learning in higher education. As a result of this presentation, participants will acquire (1) an understanding of a theory-based, empirically-supported model for integrating practice with research and theory, (2) examples of how this model has been successfully applied in different disciplines and settings to positively affect student learning and faculty development, and (3) practical ideas on how this model can be implemented with diverse populations in academic settings.

Synthesis by Lori Breslow

*This presentation occurred under the title: **Linking Theory, Research and Practice: A Model and an Application**. The other presenter was Jeffrey Bernstein, Eastern Michigan University.*

Jim Zimmerman and his colleagues have provided a model for taking social science theory and demonstrating how it can be applied in practical ways in the classroom. Building on the research into motivation by Deci and Ryan (see resources below), they have created what they have named the Integrative Learning Program (ILP). Deci and Ryan maintain that students are motivated, for example, when they have a degree of autonomy and when they feel connected to those with whom they are learning. (It is interesting to note that Zimmerman and his collaborators looked at several theories of motivation before settling on Deci and Ryan's work. They did so because they decided, first, that it best explained motivation and, second, that it could be applied in real ways in the classroom.)

Zimmerman gave examples of how ILP can be applied in a discipline-specific course (chemistry) and in an approach to learning (service learning). He also described how ILP is being assessed in his chemistry classroom, using the University of Wisconsin's SALG (Student Assessment of Learning Gains) instrument.

Jeffrey Bernstein and Rebecca Nowacek discussed how they developed two courses, one in political science and one in rhetoric, at their respective universities. While they did not base this work on theory (at least not one they mentioned), they did go about developing their courses in a systematic way, sharing challenges and brainstorming with one another to create solutions.

Given Graham Gibbs's remarks at the Saturday plenary--that is, that much of the work he heard described at the conference was atheoretical and not based on evidence--the approach that Zimmerman, et al. have taken should be examined closely. Although we may not agree with their decision to embed their work in the Deci and Ryan model, the fact that they have used a research paradigm (after examining several) should be

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commended. Work in the scholarship of teaching and learning should be grounded in theory and evidence in just the way they have done.

Key points from this session:

- *Educators create an integrative theory by marrying theory with personal experience; this leads to their learning model.*
- *Effective learning is a self-regulated process.*
- *Faculty in such disciplines as rhetoric, communication, and political science, among others, need to develop a "discourse for disagreement." That is, they need to create ways to help students learn to disagree productively.*

Recommended resources from this session:

Deci, E. L. and Ryan, R. M. (2000). "The 'what' and 'why' of goal pursuits: Human needs and self-determination of behavior." Psychological Inquiry, 11:227-268.

Zimmerman, Maureen, Maricopa Community College District Learning Academic Self-regulation Strategies in an Online Nutrition Course

The purpose of this classroom-based research study conducted in the fall of 2003 with students enrolled in a web-based nutrition course was to facilitate the development of self-regulation while students were enrolled in the online milieu to determine if enhanced self-regulation fostered student learning. A body of literature about self-regulated learning exists and helped inform the data collection and analysis for this study. The findings of this study suggest that more attention should be directed at developing hybrid courses for students who are not highly self-regulated. The impact on student learning will be that more students will learn self-regulatory behaviors during the face-to-face component of hybrid courses, and will then be able to engage in deep learning and thus be more likely to go on to successfully complete web-based courses. Anyone teaching online, hybrid, or face-to-face classes will benefit from understanding how academic self-regulation fosters student learning.

Zimmerman, Scott, Missouri State University Impact of Interdisciplinary Learning on Critical Thinking Using Case Study Method

This pilot research evaluated the effectiveness of interdisciplinary, case-based, team learning to increase critical thinking ability. A body of interdisciplinary health-related case studies was produced and peer reviewed by community providers and other faculty. The case studies were presented to interdisciplinary learning teams made up of graduate student volunteers from the Physician Assistant Studies, Social Work, Nurse Anesthetist, Psychology, and Communication Sciences and Disorders graduate programs. The case studies were intended to address biomedical, ethical, and social issues related to health care. Intra- and inter-team discussions promoted interdisciplinary interactions by posing complex multiple-choice questions. Teams reported decisions simultaneously and faculty elicited rationale and dissenting opinions from other teams. Assessment was completed using the Watson-Glaser Critical Thinking Appraisal and Kirkpatrick Evaluation Model, as well as faculty and student debriefing at end of each weekly session and at the end of course. Weekly and final evaluations showed positive student perceptions of interdisciplinary focus and case study learning. We found no overall effect of the experience on student critical thinking ability ($p=0.16$). However, those students who scored below the median on the pretest had a significant increase in their Watson-Glaser Critical Thinking Appraisal scores on the post-test ($p=0.017$). Student comments implied that the case studies and interdisciplinary processes contributed to both their understanding of health care issues and their critical thinking abilities. This project will be used to inform other educators as to the value of an interdisciplinary case-based course to increase critical thinking. **Lead author: Dr. Glenda F. Short, Missouri State University.**

Zoller, Uri, University of Haifa - Oranim

Algorithmic Teaching to HOCS Learning Paradigm Shift: The Key to Making a Difference

Striving for sustainability requires a paradigm shift in conceptualization, thinking, research and education, particularly concerning the science-technology-environment-society (STES) interfaces. Consequently, STES literacy requires the development of students' evaluative system thinking and transfer capabilities, in this interdisciplinary context, via innovative higher-order cognitive skills (HOCS)-promoting teaching, assessment and learning strategies. Given the current striving for sustainability, worldwide, and the consequent paradigms shift, such as from unlimited growth to sustainable development, correction-to-prevention and from options selections to options generation, the corresponding paradigms shift in science, technology, social science and environmental education, such as from algorithmic teaching to HOCS-promoting learning, is unavoidable. The related paradigms shift reflects the worldwide phenomenon of ever-increasing social pressure towards more accountable, socially- and globally conscious environmentally-responsible sustainable development. Consequently, this pressure constitutes a driving force for the teaching-to-learning paradigm shift in education at all levels. This requires flexible contextually-bound relevant, adaptive knowledge and the HOCS capabilities of critical thinking, decision making and problem solving, for effectively and responsibly dealing with the complexity of multi-dimensional, socio-economical-technological-environmental systems. From the perspective of sustainability, any relevant generated, or acquired knowledge that is put into action in the environmental context, should be guided by the ideal[s] of globally conscious social responsibility. This requires a corresponding new type of STES education, targeted at building an evaluative thinking capability-based STES literacy. Our research findings and longitudinal application of this HOCS-promoting educational practice suggest that, although the road to STES literacy for sustainability is rocky, it is nevertheless, educationally, feasible and, therefore, attainable.

Zuiker, Virginia Solis, University of Minnesota

A Collaborate Approach to Redesigning a Large Enrollment Course Using Case Studies

Large enrollment course redesign is a complex undertaking. As part of a three year grant from the Archibald Bush foundation, 12 course teams on the University of Minnesota Twin Cities campus committed to an iterative design process to improve outcomes in their respective courses. In this presentation, members of one course team will describe features of the grant process that contribute to effective course redesign. Particular attention will be paid to the collaboration within the team between the instructor, a graduate student, undergraduate student representatives, and two consultants. The course, Personal and Family Finances, faces challenges common to large enrollment courses. Students come from a variety of backgrounds, majors, interests, and abilities. The subject matter itself contributes to the difficulties, as it weaves together financial mathematical models, personal and family financial management principles, and family socio-psychological dynamics. To address these challenges, the team elected to integrate a collaborative case study approach utilizing a case study that was embedded in a new textbook for the course. The case study was integrated into the lecture environment in two ways—first, as a regular activity within a module of the course, and then as a culminating event at the conclusion of a module. We will discuss the theoretical rationale, the results of student surveys and classroom observations, and share details of the next iteration of the design.

Synthesis by Lori Breslow

Dr. Zuiker and colleagues explained their findings within a larger 12 team project funded by the Archibald Bush Foundation and focused on large course redesign using innovative pedagogy and technology. This team discussed their efforts to include case studies as part of a Personal and Family Finance course. Then the larger effort was discussed to provide a broader perspective on their efforts.

Large auditorium settings provide a challenge to designing and delivering college course using an active learning strategy. This group used case studies with the goal of improving student engagement and deeper learning. Using student surveys they attempted to answer the question, "How should case studies be embedded in the

course?" Two approaches were used within the same course; case studies integrated within the content delivery and case studies used following content delivery (summary approach). 68% of students preferred integrated cases though there was a general student perception that cases were beneficial for fostering a deeper understanding of the concepts. In addition, the qualitative surveys revealed two other positive outcomes, a perception of greater student engagement and increased confidence in applying the material (self efficacy). As with other studies in this area, the presenters found some student resistance. The authors commented that some students prefer remaining passive in the classroom. The authors suggested that some students have a simplistic view of education. As one student commented, "Lectures are what help for tests". Observations of classroom behavior revealed seating location to be related to participation; Hill (back of the room) students were less likely to be engaged than Valley (front of the room) students. Even within groups there was variable engagement though no reason for this was mentioned.

Future efforts for this team in this course include: using only the integrated case method, addressing student resistance to case studies, will use focus groups to continue course improvement.

An explanation of the larger scholarly effort followed the specific course discussion. This group is one of 12 that is participating in a 3 year effort to redesign large courses for improved learning using innovative teaching and technology. The 12 teams meet monthly for participant presentations and workshops by nationally recognized experts and peers. These meetings are intended to build an internal community of scholars for SoTL. The authors commented on some of the lessons they have taken from this experience so far, including the need for complimentary strengths from the participants and clearly defined roles.

The session broke little new ground but provided further support for several established areas of SoTL. There is a subset of students who prefer to remain passive in class, case studies are a useful tool for promoting deeper learning, and that seating is a factor in student engagement.

The authors have an opportunity to explore the impact that a classroom of students from a variety of academic disciplines. In a typical semester 40% or more of the students are from disciplines outside of Finance. Interdisciplinary learning environments may be powerful stimulators for learning and critical thinking.

Recommended resources from this session:

- Archibald Bush Foundation: <http://www1.umn.edu/innovate>
- Ballantine et al. *Accounting Education*, 13(2), 171-189, 2004
- Hanna, et al. *Proc Assoc Financial Counseling Planning Ed.* 47, 1997