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# The Importance of Case Studies for LIS Education

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## Abstract

As the curriculum and methods of LIS education are evolving to meet new expectations, the case study methodology is an important pedagogical tool to strengthen the skills of students. The educational theory of John Dewey and with the management theory of Henry Mintzberg are provided as foundational context. There is significant value in this methodology in regards to adult learning characteristics such as active learning and incorporation of the student's life experience in problem-solving and scenario analysis. The core competencies expected of librarians, as referenced in the statements of various professional associations such as the ALA and SLA, can be developed during the LIS education by utilizing this approach. At the University of Ottawa, where the authors teach, the School of Information Studies has defined its learning outcomes. It is clear that the case study approach aligns very closely with these outcomes, and is therefore an excellent method for enhancing the quality of the program.

## Keywords

Case studies; LIS education; management; adult learning; learning outcomes; competencies;

## Introduction

LIS education is grappling with a rapidly changing work environment for newly graduating librarians and information professionals. The management of information and services is in constant evolution; technologies and tools are changing at a furious pace; the competencies required for success in today's digital and data-driven workplace are very different from a generation or two ago. In this transformational context, it is important to consider the value of case studies as an instructional strategy that can be highly beneficial for effective learning outcomes in LIS education. In this article, the co-authors describe the educational theory, the relationship to adult learning, the core competencies, and the learning outcomes that can result from utilizing the case study approach. Over 80% of graduates of LIS programs will be expected to supervise or manage others in the world place at some point in their career. Graduates of LIS programs should expect, as professionals, to be prepared to lead and manage staff, *formally or informally*, to participate in the management process by helping recruit, train and mentor newcomers, by chairing meetings, forming committees, representing the organization vis-a-vis external bodies, and "managing" donors, along with other groups.

## John Dewey and Active Learning

It is instructive to begin this investigation with the educational philosopher John Dewey (1859-1952). As early as the turn of the 20<sup>th</sup> century, Dewey advised pedagogues that the best way to learn is by “doing.” Regardless of one’s propensity to accept John Dewey’s philosophy of education, sometimes dubbed, “Dewey-ing,” he nonetheless continues to enjoy an outstanding place in the history of 20<sup>th</sup> century education, as well as philosophy, liberal thought, and reform of school practices.

Dewey outlines his basic theory on how learning takes place and the process which he believed is a “*thinking process*” just as a scientist approaches his/her craft. If one is to learn at all, one must learn to think: “the native and unspoiled attitude of childhood, marked by ardent curiosity, fertile imagination, and love of experimental inquiry, is near, very near to the attitude of the scientific mind.” (Dykhuizen, 1973, p. 94).

In one of his most popular teacher-training books, *Democracy and Education*, Dewey describes the kind of democratic education system needed for the 20<sup>th</sup> century (Dykhuizen, p. 139). Dewey contends that schools should endeavour to form a continuum with the child’s experiences outside of school. Subject matters should center on his/her current interests, and learning must be accompanied by *doing* in order for theory and practice to develop together. Opportunities should be provided in the classroom for projects & activities in which the child’s interest can be tested. Dewey wrote extensively on the value of “experience” in the learning process and deplored the tendency to downplay its value in schools in favour of theoretical coursework. “Experience is too often seen as something different from and inferior to knowledge.” (Dykhuizen, p. 178) “Experiencing in purposeful activity is a way of understanding” (Dykhuizen, p. 272) as doing and making are integral passages to *knowing*. Whether one agrees entirely with Dewey’s philosophy as applied to school children or to the school curricula, when it comes to adult learners, who often enroll in courses equipped with an abundance of practical “experience,” capitalizing on such rich mines can only enhance the learning process.

Courses in subjects such as chemistry, medicine, or engineering impart a specific, prescribed body of knowledge. However, when it comes to a subject as complex as management where a theoretical body of knowledge represents but a portion of the whole learning experience, how does one provide graduate students with challenging and practical learning opportunities? Theory alone regarding planning, directing, controlling, staffing, will not produce a good manager. Many LIS students enroll in programs already equipped with some years of experience in the workplace with valuable work experience that can enhance the learning process. How does one tap into that extremely rich mine of theoretical and practical knowledge that LIS graduate students bring to the classroom? Their varied academic backgrounds constitute an additional bonus for creating and enhancing a learning environment in LIS programs.

## Relationship to Adult Learning

From an adult learning perspective, the case study approach has much to recommend it. Undertaking case studies involve an active, experiential learning dimension – the student engages with the issues, assesses the evidence, and incorporates his or her experience and judgment. This allows a resonance between past and present – the student has a wealth of ideas, emotions, thoughts, and perspectives that are based on his or her life experience. This is far richer, deeper, and more nuanced than it would be for a child learner. The ability to draw linkages and associations between the problems to be solved in a case study and the adult’s own personal experience creates a much deeper engagement and sense of relevance and meaning than it would for a child. “The learner comes with experience, which means that with many kinds of learning, adults are themselves the richest resources for one another and that there is a wide range of experience in most groups of learners.” (Mumford, 2006, p. 72 )

The interactive nature of case study analysis lends itself very well to the importance of active learning that is a hallmark of success for adult education. Adults need to be engaged in a focused, pragmatic manner, which triggers their intellectual and emotional faculties. A passive, lecture-style presentation has limited effect on the learning process for the adult learner. Adults need a sense of validation for their learning progress, to ensure that they are actively building upon their existing understanding and knowledge. Teaching processes need to be anchored in this awareness of adult learning dynamics. Dorothy Mackeracher writes that, “Adult learning focuses primarily on modifying, transforming, and reintegrating knowledge and skills, rather than on forming and accumulating them as in childhood.” (Mackeracher, 1996, p. 37)

Adult education needs to take into account the importance of problem-solving in a manner distinct from child learning. Mujtaba and Preziosi argue that, "Faculty members and facilitators should recognize that adults want their learning to be problem-oriented, personalized and appropriate to their need for direction and personal responsibility" (Mujtaba and Preziosi, 2006, p. 9). At the core of each case study is a narrative – a set of events that requires empathy, analysis, intellect, and lateral thinking. The adult learner, used to facing multi-faceted problems in his or her life, can imaginatively put himself or herself into the heart of the scenario and employ his or her wealth of past experience to bear on the assignment. While this can at times be a hindrance (i.e. in potentially framing a rigid mental approach), it is more typically an asset for the student's analysis and cognitive process as he or she works through the case. The ethical dimension should not be overlooked either. The adult has developed over time a moral compass that provides conscious or unconscious direction in resolving life's problems. The case study often presents ethical elements that need to be factored into the analysis of the issues and the potential outcome. In this light, the case study approach can challenge the adult learner's moral philosophy (based on his or her life experience and value system), thus enriching the experience and making it more personal and engaging.

Case studies don't have a straightforward outcome or solution; there are multiple paths to a resolution, each with a different set of arguments and cost-benefit analysis. It is a question of dissecting the various issues of the real-world problem and applying a range of analytical and problem-solving skills in order to build a persuasive argument that is pragmatic and defensible from a management perspective. In this context, it is worth noting Jenny Rogers' view that "...most adult learners are strongly motivated by wishing to acquire skill and knowledge that they can use in immediate and practical ways." (Rogers, 1989, p. 48)

Case studies also encourages the adult student to build meta-skills into their educational process, or more precisely, learning how to learn. It is a cumulative, iterative activity that can provide benefits across the educational career of the student. To quote Mackeracher again, "As a goal, learning to learn challenges individual learners to develop skills and knowledge which will allow them to learn more effectively in various contexts and settings." (Mackeracher, p. 15)

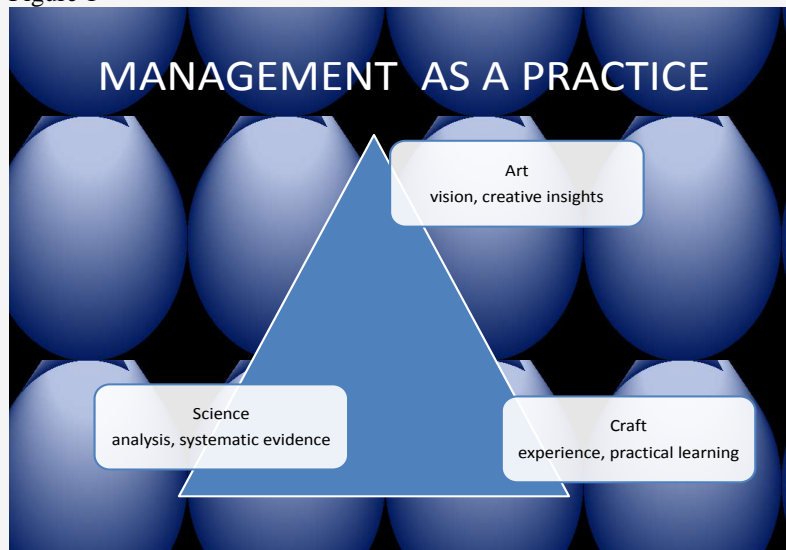
In short, the characteristics of the adult learner provide fertile ground for the application of the case study approach to learning. The adult learner is typically autonomous, and is goal-oriented, responsible, and seeking practical benefits from education. He or she arrives with a wide range of personal experience and knowledge that conditions his or her attitudes to learning and the educational system. We should also emphasize the role of time's passage in affecting the learning process. As Peter Jarvis has insightfully remarked, "This experience of time is an important factor in the adult's learning process and one that is often forgotten in discussions about learning....as time becomes shorter, so the learning needs focus more acutely upon the problems of the immediate present and previous experience becomes increasingly important to the older person." (Jarvis, 2004, p. 92-93) The case study as a pedagogical tool is most befitting the needs and interests of the adult learner.

### **The Case Study Methodology**

The case study option particularly in a discipline as complex as management, enables learners to grapple with issues not dissimilar to those they will face in the workplace, but in a non-threatening setting that provides hands-on practice for the tasks that await them. In MBA programs, case study methodology has been recognized as providing a valuable experience for students. Indeed, research shows that, "Case studies and in particular the discussions they provoke, are acknowledged to provide a beneficial learning experience since using case studies is an effective mechanism for bringing real life experience into the classroom." (O Cinneide, 2006, p. 349)

In his book *Managing*, Henry Mintzberg refers to the practice of managing as having three fundamental components, i.e., art, craft and science (Mintzberg, 2009). A good manager brings visionary and creative skills to the job. This constitutes the "art" component. However, a manager must make some careful analyses and calculations based on data when making a decision. This *look-before-one-leaps* method constitutes the "science" component. But managing is not a pure science so experience and practical training must also inform a manager's decisions and actions. In Mintzberg's view, management is neither a pure science nor a profession. Rather, it is a practice, a craft where expertise is gained in a messy milieu made up of uncertainties, enormous pressures, demanding stakeholders, and incessant competition for one's time and energy.

Figure 1



If, as Mintzberg affirms, there is “no one best way to manage; it depends on the situation” (Mintzberg, 2009, p. 10) all three components should form part of a good manager’s *modus operandi*. So the question remains, How to create learning opportunities for future managers?

The case study methodology requires one to identify a problem or a set of problems. Sometimes background information is provided with the cases; sometimes it is not. Inquiry always starts with observation (Mintzberg, p. 134) and this is exactly what case study assignments require. The individual or group must observe, carefully study the case, reflect on it and develop critical thinking skills to assess the situation, design a strategy for action, identify potential pitfalls and make a decision - alone or as a team. This is thinking; therefore this is learning (Dykhuisen, 1973, p. 199) and this is exactly what a wise manager does every day. To really study a case, individuals and groups must do the following:

- 1) Examine the situation with a critical eye, inquiring as a scientist would;
- 2) Ascertain what is known about the case, what is inferred and what can be assumed;
- 3) Articulate a vision with regards to solving the problem at hand;
- 4) Hone their skills in using whatever data is available to find a solution to the problem;
- 5) Rely on whatever previous managerial experience they have had themselves or have seen practiced by other managers; and
- 6) Propose a solution to the problem at hand.

And, as it is clear that “most case studies do not have one obvious and clear solution” (Stanford University Newsletter on Teaching, 1994, p. 1), Mintzberg is quick to point out that nothing replaces good judgment in the management matrix of art, craft and science.

Group assignments based on case studies have the added advantage of simulating a real-life administrative process as groups form miniature think tanks working in communities as a team. The group thus becomes an administrative/managerial team charged with solving a particular problem by tapping into the expertise of each member while forging collective efforts to reach an acceptable solution. The case study methodology encourages learners to seek those factual but critical details that impact directly or indirectly on the case, to work collectively to reach consensus, while sharpening their decision-making skills, and finally communicating a rationale for the decisions they take regarding the case. All the while, the group supplies the intellectual nourishment and reinforcement for its members to make sound judgments and reach consensus. Prescribed theoretical textbooks alone can never provide such rich learning opportunities.

For the most part, few LIS programs have kept abreast with MBA programs in acquainting students with the benefits of case study methodology. Too often in the past, LIS programs have focused on “techniques” which may be

essential in courses such as cataloguing but left graduates poorly equipped to cope with supervisory and managerial duties expected of them in the workplace. Students enrolled in LIS programs have expectations but prospective employers also have expectations, some of which may be different from those of students.

Many LIS graduates may not always realize that the so-called real world cannot be managed through a set of techniques where two plus two always equals four. Rather, depending on the particular circumstances in certain instances, what may be appropriate action in one case is not suitable in another. This is judgment. Using the case study methodology provides additional benefits for students because, as there isn't a single prescribed solution to any one problem, students are required to base their decisions and recommendations on sound judgment. For the most part, organizations are very complex entities. Gaining perspectives on how organizations work helps individuals: a) Diagnose what is happening; b) Become sensitized to the political climate in which the organizations are operating; and c) Devise and defend strategies for appropriate action as members of said organizations. Lastly, there is a hectic pace to managerial work that has been consistent since the mid 1950's. Studies have shown that foremen average one activity every forty eight seconds, middle managers work half an hour without interruptions only once every two days, and for chief executives, half of their many activities last less than nine minutes (Mintzberg, p. 19). As a result of his research, Mintzberg concludes that managers are often so busy with various tasks and activities that they no longer have the time to manage effectively. The sheer volume of work, the speed with which they must handle issues and make decisions, and the short timeframe all contribute to a stressful environment wherein some managers do many things, but none effectively. One can anticipate that the global knowledge economy into which LIS graduates are cast does not augur a reduced tempo in the years to come. If anything, the stresses and the expectations will only grow. Mintzberg outlines a management model that shows how the most effective practitioners are the ones who dismiss; a) popular trends of style, and b) hierarchy and culture. Instead they focus on reflection, analysis, worldliness, collaboration and a proactive approach.

### **Relationship to Core Competencies and Learning Outcomes**

Over the past decade, numerous librarian associations have articulated their vision of the core competencies that are required of librarians to be successful in the 21<sup>st</sup> century. These statements provide a wealth of ideas and understanding on the future of the profession and the attributes that will define the role of the librarian. The FLICC Competencies for Federal Librarians asserts that "Competencies create a common bond of understanding and a common language for defining professional standards. Competencies are the foundation for competency-based management and continuous process improvement, ensuring that federal librarians have the knowledge, skills, and abilities to accomplish mission requirements. " (Library of Congress, 2011, p. 2) The Association of Southeastern Research Libraries has observed that, "Competencies have been discussed and developed by many groups in the LIS profession as a means to identify credentials, improve education, describe jobs, and evaluate performance. " (ASERL, 2001) This a concise encapsulation of the importance of competencies – they identify the skill set of the successful librarian; they lead to modifications to educational programs such as the professional librarian degree and continuing education opportunities; they allow employers to define the qualifications for a position; and they provide a framework for assessing performance of librarians. The Canadian Association of Research Libraries offers a similar approach. Their core competencies profile "addresses the recruitment and restructuring issues inasmuch as it presents a set of key skills, attributes, and attitudes which are suggested as integral to building and maintaining a nimble staff which ably serves its community and continually adapts to a dynamic, constantly evolving research/information landscape" (CARL, 2010, p. 3)

The use of case studies in the LIS curriculum can play a significant role in allowing the librarian to meet these objectives. The application of problem-solving skills in the context of real-world problems requires the student to engage with issues that encompass all areas of library services, facilities, collections, and projects. The analytical, evidence-based approach to assessing a challenging scenario requires the student to engage in critical thinking, information gathering, creativity, the weighing of issues and evidence, and strong communication skills. Teamwork is a typical element as well, since the use of teams requires the groups to work collaboratively and equitably on their assignments. Presentation skills are honed. Case studies can involve not only a wide range of topics but can be pitched at various levels of complexity and detail. A glance at several of the professional association competencies statements can illustrate the close relevance of the case study approach.

The Special Libraries Association competencies statement refers to the information professional establishing "... effective management, operational and financial management processes and exercises sound business and financial



judgments in making decisions that balance operational and strategic considerations." (SLA 2003, p. 5) The statement also asserts that the information professional "Gathers the best available evidence to support decisions about the development of new service and products, the modification of current services or the elimination of services to continually improve the array of information services offered." (SLA, p. 5) Both of these competencies are well served by the case study method, which emphasizes the development of sound management decisions and strategies, based on a solid environmental scan and analytical thinking. Employing an evidence-based approach is important for the student to develop a persuasive and cohesive argument. This will serve him well, regardless of the type of library he works in or the trajectory of his career.

The American Library Association competencies statement indicates that a graduate should be able to understand: Foundations of the Profession; Information Resources; Organization of Recorded Knowledge and Information; Technological Knowledge and Skills; Reference and User Services; Research; Continuing Education and Lifelong Learning; Administration and Management (ALA, 2009, p.1) Among the various examples is the ability to utilize "The principles and techniques necessary to identify and analyze emerging technologies and innovations in order to recognize and implement relevant technological improvements" (ALA, p.3) and "The concepts behind, and methods for, developing partnerships, collaborations, networks, and other structures with all stakeholders and within communities served." (ALA, 2009, p.1)

The case study approach is well suited to develop both of these abilities. In the former, it applies a structured framework for analyzing technology-based challenges, and taking into account the environmental variables that affect the strengths and weaknesses of any given solution. In the latter, it can foster an awareness and sensitivity to the social and political dynamics involved in analyzing problem scenarios in libraries. This is a crucial but often overlooked dimension of the real world that students and newly minted librarians would not truly understand. All competency statements refer to the importance of addressing complex problems; evaluating services and seeking technology-based solutions; adapting to a rapidly changing environment; developing managerial and leadership abilities; organizational awareness; and utilizing strong communication and advocacy skills. Alignment with such competencies is a critical dimension of LIS education, and the case study approach can play an important role in fostering a mindset that can respond to these challenges.

The School of Information Studies in Ottawa, Canada, where the co-authors teach, has recently developed a set of learning outcomes. The purpose is to give expression to program objectives and to help guide curriculum review. The School is quite new - it was founded in 2009. The development of the student learning outcomes has been an important landmark in the evolution of the School's program. The learning outcomes deemed critical by the School have been developed with reference to the accreditation standards set by the American Library Association for master's programs in library and information science, as well as the program evaluation standards set forth by the Ontario Universities Council for Quality Assurance for master's degrees granted by universities in Ontario. The case study approach can also be integral in the development of an i-Portfolio course, which is a summative experience that is intended to bring together the student's learning, reflection, and integration of their experience in the program. In documenting the student's experience through course work, field experience, and community engagement, the i-Portfolio is a holistic approach to reflecting the student's academic career - and the learning outcomes are crucial for the evaluation of this experience. An i-Portfolio course is being developed at the School of Information Studies.

There are six learning outcomes that overarch the University of Ottawa curriculum: Knowledge Base; Research and Evaluation Skills; Planning and Problem Solving; Communication Skills; Professional Values and Ethics; and Initiative, Teamwork and Self-Assessment. It is compellingly clear that the case study approach can play a significant role in allowing the student to attain each of these outcomes. It enables him or her to develop a greater practical knowledge of information services and policies; it enables him or her to understand research methodologies that can underpin the evaluation of information services, policies, practices, and technologies; it requires him or her to devise solutions to problems in the provision and management of information services; it teaches him or her to communicate effectively in a professional environment to present ideas and strategies; it requires him or her to consider the role of professional values and ethics in the formulation of policies and the delivery of services; and develops in him or her the ability to function effectively in teams while demonstrating initiative and assessing his or her strengths or weaknesses in developing potential solutions to problems. While the case study may not be applicable to all courses and every context, it has teaching value and a potentially wide impact across many courses that involve problem-solving and analytical skills with a management or leadership perspective. Each LIS school

has its own learning outcomes, developed in its own organizational context, but it would be safe to say that the above outcomes would bear a strong similarity to those of other ALA-accredited LIS programs in North America. More than anything else, we need to be cognizant of the need for succession planning, and to develop "the leaders and managers who will lead the library in the future" (Whitmell, 2006, p. 27) and "the development of a cadre of library leaders and the creation of a highly skilled and flexible workforce" (Whitmell, p. 28). These are universal challenges for libraries. Based on our experience, we feel that the case study method can play an important role in teaching students who will be better equipped to understand and address the transformational issues that they will face in their career. We have discovered that this method enhances student engagement with the course content and objectives, and provides a rich framework for linking students' personal experience and knowledge with the thorny challenges of a real-world scenario.

The case study methodology provides a golden pedagogical opportunity for LIS students on several fronts. Firstly, the case study methodology helps students grasp the complexity of working life and the demands therein by devising solutions that demonstrate the application of a broad range of core competencies, including "Knowledge Base", "Research and Evaluation Skills", "Professional Values and Ethics" and "Planning and Problem Solving." Secondly, the case study methodology helps hone critical thinking skills to a point where the skills are applied automatically before one acts, like a muscle that is conditioned to function well. It is particularly important to conceptualize the importance of analyzing the specific circumstances of a case before attempting to apply a set of prescribed rules and operatives. Thirdly, group work, whether in twos, threes, or fours provides an opportunity for students to be evaluated on their "Initiative and Teamwork" as well as on their "Communication Skills." And lastly, it accords quite seamlessly with the expectations and characteristics of adult learners, as we have delineated. Once so trained to the point where this becomes routine, LIS professionals will be well equipped to make contributions to an ever-evolving professional body of knowledge in the fast-changing information industry. Moreover, they will be well positioned to assume leadership roles and to become change agents in their workplaces, thus helping to address the impending challenge of continuity and succession planning.

## Conclusion

The case study approach has much to recommend it. Students benefit from assessing real-world problems that engage them with issues they will soon face in their professional life. Additionally, they benefit from an understanding of the dynamics and complexities involved in management. Adult learning characteristics and principles align very closely with the pedagogical value of case studies. Moreover, there is much potential to address the learning outcomes of LIS education and the competencies described by various professional library associations through this approach. As a result, LIS programs would benefit from examining whether there are opportunities to integrate this method into their education. This would strengthen the value of the degree that students receive.

## References

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Abels, E. (2003). *Competencies for Information Professionals of the 21st Century*. Retrieved June 3, 2012 from [http://www.sla.org/PDFs/Competencies2003\\_revised.pdf](http://www.sla.org/PDFs/Competencies2003_revised.pdf)

ALA Presidential Task Force on Library Education, *ALA's Core Competencies of Librarianship*, 2008. Retrieved June 3, 2012 from <http://www.ala.org/ala/educationcareers/careers/corecomp/corecompetences/finalcorecompstat09.pdf>

Association of Southeastern Research Libraries (2001), *Shaping the Future: ASERL's Competencies for Research Librarians*. Retrieved June 3, 2012 from <http://www.aserl.org/statements/competencies/competencies.pdf>

Canadian Association of Research Libraries (2010) Core Competencies for 21st Century CARL Librarians. Retrieved June 3, 2012 from [http://carl-abrc.ca/uploads/pdfs/core\\_comp\\_profile-e.pdf](http://carl-abrc.ca/uploads/pdfs/core_comp_profile-e.pdf).



- Dykhuizen, G. (1973). *The Life and Mind of John Dewey*. Chicago: Southern Illinois University Press.
- Federal Library & Information Center Committee (2008), Library of Congress. *Federal Librarian Competencies*. Retrieved June 3, 2012 from [http://www.loc.gov/flicc/publications/Lib\\_Compt/Lib\\_Compt\\_Oct2008.pdf](http://www.loc.gov/flicc/publications/Lib_Compt/Lib_Compt_Oct2008.pdf)
- Jarvis, P. (2004). *Adult Education & Lifelong Learning*. 3rd ed. London: Routledge Farmer.
- Mackeracher, D. (1996). *Making Sense of Adult Learning*. Toronto: Culture Concepts Inc.
- Mintzberg, H. (2009). *Managing*. 1<sup>st</sup> ed. San Francisco: Berrett-Koehler Publishers.
- Mujtaba, B. and Preziosi, R. (2006). *Adult Education in Academia: Recruiting and Retaining Extraordinary Facilitators of Learning*, 2nd ed. Greenwich, CT: Information Age Publishing
- Mumford, A. (2006). Action learning: nothing so practical as a good theory. *Action Learning: Research and Practice* 3, 69-76.
- O Cinneide, B. (January 2006). *Developing and Testing Student Oriented Case Studies*. Journal of European Industrial Training 30, 349-364.
- Pring, R. (2007). *John Dewey: A Philosopher of Education For Our Time?* London. Continuum International Publishing Group.
- Rogers, J. (1989). *Adult Learning*. 3rd ed. Milton Keynes, UK: Open University Press.
- Stanford University Newsletter on Teaching (Winter 1994). "*Speaking of Teaching*" 5, 1.
- Tsui, L. (November-December 2002). Fostering critical thinking through effective pedagogy. *Journal of Higher Education* 73,740-763.
- Whitmell, V. (2006). *The Future of Human Resources in Canadian Libraries, 'the 8Rs Study'*. Ottawa: Canadian Association of Research Libraries.
-