

Implementing Web-based Portfolios and Learning Journals as Learner Support Tools: An Illustration

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Abstract

Web-based portfolios are becoming increasingly important in various educational environments. In the online master of distance education program offered at UMUC the development of a portfolio has been an integral part of the program requirements. To deal with the associated issues a number of policies have been adopted and a tutorial to support learners in their development process has been developed. Learning journals are introduced as a support measure in the development of portfolios. Both these tools strengthen meta-cognitive skills, build self-confidence and encourage students to become independent and self directed learners – all important factors for learners' success in a distance environment.

1. Introduction

This chapter addresses portfolios and learning journals as forms of learner support and illustrates how they can become integral to supporting the learning process over an extended period of time. Portfolios can serve different purposes but are always a goal driven, organized collection of items (artifacts) that demonstrate a learner's expansion of knowledge and skills over time (Kilbane & Milman, 2003). Journal writing is intentional reflection used to facilitate and support the development of insight, cognitive awareness, and critical thinking. These two tools, often used for assessment and/or to demonstrate growth, also provide forums that enable students to develop meta-cognitive skills, build self-confidence and encourage the development of the abilities needed to become independent and self-directed learners and thus make a significant contribution to the overall learning process. This chapter focuses on the theoretical underpinnings, the challenges of incorporating these tools into a program and how these can be addressed. The more practical aspects are based on experiences and measures taken in the online Master of Distance Education (MDE) Program offered by the University of Maryland University College (UMUC) and the Carl von Ossietzky University Oldenburg and the MDE tutorial for portfolio and learning journal development is introduced.

2. The Background of the MDE Program

The MDE was launched in January 2000 by the degree granting University of Maryland University College (UMUC) in partnership with the Center for Distance Education (ZEF) at Carl von Ossietzky University of Oldenburg, which contributes two of the six integrated certificate programs. The Master and Certificate programs are completely accessible online. The MDE sets out to "... qualify present and future managers of distance education in both public and private education, as well as in the training sectors.... These managers need to be qualified as leaders, since they will be required to be active advocates for distance education and training in their organizations and need to manage significant change processes...." (Bernath & Rubin, 2003, p. 20). The concept of portfolios

as an element of assessment was introduced in the syllabus of the first course in early 2000. The guidelines state that

Each Master's student will work towards the development of a personal portfolio. The goal of the portfolio is to demonstrate your qualifications gained in the field and to provide evidence of your competencies and skills in a variety of disciplines/roles. It is our hope that this Portfolio would end up being your passport to the professional world. The portfolio contains formal and voluntary documents. Formal documents are appropriate assignments and other contributions to the final grades in each course. Obviously you will want to choose your best. Voluntary documents may show any other kind of active participation while you have been enrolled in the Master's program. These voluntary contributions allow students to show their proficiency and skills as a professional distance educator. In addition, the Portfolio will contain your Resume or Curriculum Vita, and may contain a photograph and graphics. This portfolio is a requirement for successful completion of the final Distance Education Project course. Each student is responsible for keeping a permanent copy of the various assignments and documents from each course. (OMDE690 The Distance Education Project and Portfolio, 2000, ¶6).

The introduction of portfolios also alleviates some of the uncertainty associated with the origin of students' contributions and assignments in a completely online program and thus increases the reliability of grades.

The MDE begins with the course *Foundations of Distance Education* (OMDE 601), where the idea of the portfolio is introduced and concludes with the required capstone course *The Distance Education Portfolio and Project* (OMDE 690). During the course of the almost four years in which the program has been offered, the guidelines for the portfolio have been steadily improved and refined. This has been most prominent in the capstone course and with postings to the MDE Homepage (URL: <http://www.info.umuc.edu/mde/>).

Experiences in the capstone courses have shown that students are often conceptually and technically ill-equipped to develop web-based portfolios when they register for this final course. This circumstance leads to a steep learning curve and much more time needed than planned or envisioned for the completion of the portfolio in the 15-week course. It has become clear that portfolio development requires more guidance, in more detail and with more consistency and the program managers have taken on this responsibility. A number of decisions to support students in this ongoing work in progress have been made:

- A tutorial is to be developed that will introduce students to the idea of portfolios and learning journals and the skills and tools needed to support its ongoing 'construction';
- The tutorial is introduced to students in the *Foundations of Distance Education* (OMDE 601) course and a link to and a reminder of its importance is made in all MDE courses;
- Students must submit a draft of their portfolios prior to registering for *The Distance Education Portfolio and Project* (OMDE 690).

3. The Portfolio

3.1. What are Portfolios?

The idea of portfolios as a learning tool is not new, however the digital form in which students must submit the portfolio – as a web page or a web site in the MDE (OMDE 690: The Distance Education Project and Portfolio, 2000) – and the required skills often are. For this reason, the term ‘web-based portfolios’ is used in this article. Many examples of portfolios exist and are included in the portfolio and learning journal tutorial that was developed to support students and prepare them for OMDE 690.

The web-based portfolio can be a collection of work (assignments, research papers, essays, projects, faculty feedback and comments, photographs and graphics) around learning goals, the rationale for selecting specific items, the learner’s reflections on the achievement of these goals and on the portfolio as a whole – “...a focus on growth and development over time, implemented through selection, reflection and inspection” (Barrett, 2001, ¶ 5). The MDE stresses the importance of the portfolio as the “...passport to the professional world” (OMDE690 The Distance Education Project and Portfolio, 2000, ¶ 6) and must also include a resume and/or Curriculum Vita. Using the Web gives students control in assembling, organizing, revising and integrating new materials throughout the course of their studies. Avraamidou and Zembal-Sual’s (2002) research shows that “... portfolio development is a constructivist process that facilitates connections between concepts and practices” (¶ 33) and takes process and product into consideration.

3.2. Formal Set-up

The students are responsible for their portfolios. Being involved in a portfolio development process allows students to control, monitor and reflect their progress in the program and can be aligned with curriculum, instruction and assessment. It reflects learning experiences and can be used with potential employers.

It is important to introduce the portfolio early (Barrett, 2001; Kubler LaBoskey, 2000) and provide support to tackle the development phases with guidance from instructors (in the MDE in courses 601 and 690). The portfolios in the MDE program are not evaluated, but specific components must be included in each portfolio and assessment is either ‘pass’ or ‘fail’ (OMDE690 The Distance Education Project and Portfolio, 2000, ¶9). Other than that the format is open and there are very few prescribed requirements for content and none for structure. The MDE program’s goal is to provide flexibility in the elements of organization, content, ideas and presentation.

Portfolios provide the student with the opportunity for deliberation and decision-making relating to questions and issues that are most important to her/him. The advantage, if introduced at the beginning of a program and followed up on in subsequent courses, is the extended period of time where a number of items can be collected (and discarded) and an ongoing reflective process takes place making the process a natural part of learning. This in turn could promote a portfolio ‘culture’ and the continued use of the portfolio in a holistic and lifelong learning environment.

In the process of portfolio development Barrett (1999) designated different levels and stages to address. These include:

- Collecting and organizing one's work, which is determined by the portfolios purpose, goals, audience and intended future use. This also includes thoughts on designing and planning the presentation, identifying software and storage resources, assessing one's skills and being aware of limitations (internal and external).
- Selecting from the collection what best demonstrates the specified objectives and goals and show individuality.
- Reflecting on the selected items and the portfolio as a whole. The learning journal serves as the basis of long term recording of reflection and self-assessment and as a tool for metacognition.
- Inspecting and self-assessing the goals, identifying patterns, and sharing with peers and instructors; setting goals for future learning in order to use the portfolio as a professional development tool and for future employment.
- Presenting and publishing in the appropriate manner and evaluating the portfolio's effectiveness in light of purpose and context.

The portfolio should include "... the rationale (purpose for forming the portfolio), intents (its goals), contents (the actual displays), standards (what is good and not-so-good performance), and judgments (what the content tells us)" (Paulson, Paulson, & Meyer, 1991, p. 62). Although the portfolio may serve different purposes at different times these should not conflict with one another and only contain what the student is willing to make public to a specific audience. Aside from showing growth over a period of time it provides a forum that encourages students to develop the abilities needed to become independent and self-directed learners (Ibid, p. 63).

3.3. Contributions to Learning

The advantages of creating web-based portfolios are numerous. The focus on growth and development over time through selection, reflection and inspection of course work, goal setting and self-assessment coincides well with a (the MDE program's) constructivist approach and builds self-confidence. It offers a method which not only identifies ones strengths but gaps in learning, which can generate future learning goals (NSCC, 2003). And, it can enhance a student's multimedia skills thus adding to one's employability.

The storage space for a portfolio is minimal; portfolios are portable and easily shared and accessed and have developmental potential beyond a program. The outcomes will result in unique collections of work, are learner centred and controlled, and provide a valid and balanced picture of a student's learning process measured against a program's intentions. In the MDE it can help tell the program's 'story' and its impact and may also provide a richer picture of the program's participants and their needs. It can be one tool to assess and reflect the program as a whole. Finally, Cooper (1996) believes offering portfolios as an additional form in which to demonstrate ones abilities may make a program more attractive to potential students. However, the students are the primary users and beneficiaries of portfolios "... using it as a tool to map their own progress as learners in terms of ... abilities and ... outcomes" (Alverno College, 2003, FAQ 9).

3.4. Issues and Difficulties

Portfolio development demands considerable time. In the MDE program, the issue of time management for students and faculty is one of primary concern. The first students

had little structured support for the development of their portfolio, which led to steep learning curves in the capstone course *The Distance Education Portfolio and Project* (OMDE 690) itself. New policies were introduced and students who wish to register will first have to provide a portfolio outline. Consistent reminders to students are provided in all courses in order to enable an ongoing process and make the process more manageable.

Topics that need to be taken into consideration when planning the development of a portfolio are storage space for items; self-reflection and feedback; security and the ability to set viewing permissions; organizing links and grouping, as well as publishing and adapting the portfolio for the intended audience.

Using a 'generic tools approach' (Gibson & Barrett, 2002) where customized systems are not provided allows for a broader framework of creativity, but impedes the evaluation of the product. The learning journal (see point 4 below) is used to capture the process of the portfolio development, adjustments, and the learner's growth over time. However, limited validity and reliability make evaluation and comparability difficult. Standardization requires well defined evaluation criteria and rubrics (Neiman, 1999, ¶. 15) and takes time and testing. Standardized outcomes are not intended in the MDE program and may conflict with other special qualities of portfolios. Parsons (1998) reminds us that linguistic and cultural backgrounds and boundaries also need to be taken into consideration. (Cf. Spronk's chapter in this volume for a discussion of the intersection between learner support and culture/language.)

The use of portfolios over the duration of the program necessitates faculty/instructor training to handle and deal with portfolio development and even to re-think course design to accommodate the notion of portfolios (Batson, 2002). Long term extra burdens cannot be placed on faculty nor is there room for disruptions (time and managerial issues) as reported by Nidds & McGerald (1997). In the MDE program the task of introducing and managing portfolio questions and issues is the responsibility of the instructors in MDE 601 and MDE 690 and the program directors. A tutorial is introduced in MDE 601 as the entry ticket to the portfolio process; the final product achieved in MDE 690 is necessary for successful completion of the program.

Strategic and policy issues are not addressed in this chapter, however, the efforts encompassed in the portfolio development may stimulate discussions around and help determine the scope and value of 'e-dentities' (Ittelson, 2001) for students in online programs.

3.5. Technology

In the MDE program there is no prescribed portfolio software although it exists. Instead, commonly available tools that are low cost (or free) and low technology (thus keeping the development process flexible, and at the same time acknowledging students' varying skill levels) are introduced and described. The tutorial illustrates this more closely.

Students need access to a server, storage capabilities (floppy, CDROM or zip), authoring software (Frontpage, Dreamweaver), the skills to use these tools and awareness of associated questions (e.g. privacy issues). Use of other tools, programs, software or multimedia will depend on the students and their own developmental choices. In the MDE program students are responsible for collecting and storing items and in charge of the tools they wish to use.

4. Learning Journals

4.1. What are Learning Journals?

Journal writing is an intentional reflective design strategy used in various learning environments to facilitate and support the development of insight, reflection, cognitive awareness, critical thinking and to promote personal growth. Journal writing is a means of communication with the personal, professional and academic self (Fichten, 2000; Andrusyszyn, & Davie, 1997). Of particular interest for the online MDE program environment is literature (Burge, 1993; Andrusyszyn, & Davie, 1997; Fichten, 2000) that suggests responding and writing responses in asynchronous environments showed increased reflection:

... the volume of dialogue generated and the asynchronous medium, can make it difficult to link disconnected threads of a discussion conceptually (Harasim, 1990). Access to and periodic review of the permanent electronic transcript generated in this medium encourages reflection and promotes the synthesis of ideas.... Although reflection may take place in the online environment as an outcome of the time learners take to construct responses, encouraging learners to shift beyond perception to deeper, more insightful meaning-making may be more challenging. (Davie & Palmer, 1984; Davie & Wells, 1991; Grabowski, 1990; Harasim, 1990, as cited in Andrusyszyn & Davie, 1997, ¶ 7).

The introduction and promotion of learning journals may help deal with this challenge and add a more private forum in addition to the courses, which are (semi) public.

4.2. Rationale

Learning journals provide a framework to support the process of reflective learning in individual courses and in the portfolio process as a whole. Their use not only documents the developmental process of the portfolios – making it more than just a ‘showcase or selection of work’ (Neiman, 1999, ¶ 7) – but also supports the documentation and self-assessment of processes. It ‘keeps records’, encourages metacognition, ownership and control, and provides guidance. The learning journal will be the basis from which steps, missteps, decisions and successes can be extracted (Hill, Kamber & Norwick, 1994).

Additionally, learning journals can capture research interests, literature and links that can continuously be built upon during the program and will be available when (in the MDE) the final project in the capstone course must be tackled. Steps, styles and advice on learning journals are illustrated in the tutorial.

4.3. Advantages and Issues

The learning journal and the portfolio compliment one another: both provide opportunities to critically reflect learning incidents (Naidu, 2003). At a more basic level the learning journal can be used to record events on a course basis and create transparency in ongoing processes. At the end of the program it can be pulled together at the portfolio level.

In the WebTycho learning environment, the UMUC platform with which the MDE program works/runs, discussions in the classes are often fragmented and difficult to capture, especially with large volumes of communication and interaction. To date there is no sensible and/or easy way to store these messages. The workbook provided in

WebTycho provides a temporary space during the course, but is not user friendly or accessible over a longer period of time. The learning journal can provide a space where conference ‘threads’, workbook entries, assignments, feedback and study group activities can be stored in a structured fashion and are available for review at any time to explore connections between courses, topics, issues and personal development.

Barriers to the development and maintenance of learning journals may be the additional time needed to maintain and manage them. In addition, it is yet another ‘writing’ activity in an already text-heavy environment. It demands self-discipline, motivation and the opinion that it is a worthwhile activity. However, when regarded as a ‘safe learning place’ and not associated with grades or evaluation and with some practice and experience it is reasonable to assume that value for many students may evolve. Given the graduate level of the MDE program, attitudinal barriers to keeping a journal (self-doubt, fear of exposure, feelings of threat, painfulness or discomfort) should not generally be a concern. If so, the introduction of learning journals may have the unintended positive consequence of a safe haven in the online learning environment. Here, as with the portfolio, frequent and regular reminders to keep up the process will most certainly be necessary and along with the tutorial itself constitute an important support element.

The learning journals will not be assessed or evaluated for the same reasons mentioned with regard to the portfolios. Nor is it this author’s opinion that it should be considered a mandatory part of the portfolio and assessed in the final course (cf. Kerka, 2002 for a review of literature on the assessment issues of journals). However, it is a tool that supports the development and finalization of the portfolio.

A number of possibilities exist to write/produce learning journals. Alternatives such as a simple learning journal in a text editor and more sophisticated possibilities such as blogs and wikis (Godwin-Jones, 2003) are discussed and presented in the tutorial. The main focus is on offering a variety of low cost and easy to use tools. The advantage of a web-based tool is that it can be linked to other logs, workbooks and be integrated in the portfolio.

5. The Connections in the MDE Program

Experiences in the MDE thus far and in research have shown that students must be supported in developing their portfolios. The topic of continuous portfolio development must be frequently mentioned to the students and MDE faculty must be made aware of this ongoing process in order to provide the information in their courses and link to the tutorial. This helps ensure that growth and learning are reflected on and students are well prepared to enter the final course *The Distance Education Portfolio and Project* (OMDE 690). Much of the anxiety and pressure felt by students thus far can be relieved. The tutorial for the web based portfolio and learning journal provides structure and guidance with regard to purpose, data structure, type of data, storage, control, design, technologies needed and available, as well as tools to facilitate the development of skills. Time will tell whether regular upkeep and completion of both elements can be achieved and the two activities compliment one another thus providing a richer process and a holistic product.

5.1. The MDE Tutorial

The tutorial for portfolio development and learning journal writing aims at providing background information on portfolios and learning journals with regard to theory, concrete practice and examples. Maximum student flexibility is stressed by introducing generic tools. The tutorial addresses the varying level of students' skills, as well as students' financial constraints and need for flexibility by referring to free or low cost generic tools.

The tutorial is still under development; a preliminary link (link and content are subject to change) is available: <http://www.uni-oldenburg.de/zef/christinewalti/tutorial>.

6. Conclusion

The concept and maintenance of portfolios and learning journals throughout a program must be systematically and consequently emphasized. Students are introduced to the idea of portfolio building, reflective writing and the tools that can aid them in this process. This encourages and supports reflection and learning throughout the program, facilitates consistency and mastery, alleviates anxiety and bolsters students' confidence.

References:

- Alverno College. (2003). *The diagnostic digital portfolio – FAQ 9*. Retrieved January 6, 2004, from <http://ddp.alverno.edu/compare.html>
- Andrusyszyn, M., & Davie, L. (1997). Facilitating reflection through interactive journal writing in an online graduate course: A qualitative study. *Journal of Distance Education*, 12(1), 71 para. Retrieved August 21, 2003, from <http://cade.athabasca.ca/vol12.1/andruszyndavie.html>
- Avraamidou, L., & Zembal-Sual, C. (2002). Making the case for the use of web-based portfolios in support of learning to teach. *The Journal of Interactive Online Learning*, 1(2), 52 para. Retrieved January 29, 2003, from <http://www.ncolr.org/jiol/archives/2002/2/01/index.html>
- Barrett, H. (1999). *Electronic portfolios + multimedia development + portfolio development – The electronic portfolio development process*, 47 para. Retrieved February 2, 2003, from <http://electronicportfolios.com/portfolios/EPDevProcess.html>
- Barrett, H. (2001). *Electronic portfolios*. Educational Technology – An Encyclopedia, 36 para. Retrieved January 30, 2003, from <http://electronicportfolios.com/portfolios/encyclopediaentry.htm>
- Batson, T. (2002). The electronic portfolio boom: What's it all about? *Syllabus Magazine* 12/1/02, 27 para. Retrieved September 3, 2003, from <http://www.syllabus.com/print.asp?ID=6984>
- Bernath, U., & Rubin, E. (2003). The online master of distance education (MDE): Its history and realization. In U. Bernath & E. Rubin (Eds.), *Reflections on teaching and learning in an online master program* (pp. 9–50). Oldenburg: BIS Verlag.

- Burge, E. (1993). Adult distance learning: Challenges for contemporary practice. In T. Barer-Stein & J. A. Draper (Eds.), *The craft of teaching adults* (pp.215–230). Toronto, Ontario: Culture Concepts. (ED 362 644).
- Cooper, T. (1996). *Portfolio assessment in higher education*. Proceedings Western Australian Institute for Educational Research Forum 1996, 32 para. Retrieved January 30, 2003, from <http://education.curtin.edu.au/waier/forums/1996/cooper.html>
- Fichten, W. (2000). Das Lerntagebuch als Kurselement. In U. Bernath, W. Fichten, J. Klaus & J. Rieforth, (Eds.), *Psychologische Gesundheitsförderung für Pflegekräfte in der Dialyse – Dokumentation einer betriebsinternen Fortbildung* (pp. 39–47). Oldenburg: BIS Verlag.
- Gibson, D., & Barrett, H. (2002). *Directions in electronic portfolio development*. ITFORUM PAPER #66, 29 para. Posted November 30, 2002. Retrieved September 24, 2003, from <http://electronicportfolios.com/ITFORUM66.html>
- Godwin-Jones, B. (2003). Emerging technologies – blogs and wikis: Environments for on-line collaboration. *Language Learning and Technology* 7(2), 12–16. Retrieved September 19, 2003, from <http://llt.msu.edu/vol7num2/pdf/emerging.pdf>
- Hill, B., Kamber, P., & Norwick, L. (1994). 6 ways to make student portfolios more meaningful and manageable. *Instructor*, 104(1), 118–121. Retrieved July 3, 2003, from Expanded Academic Index ASAP database.
- Ittelson, J. (2001). Building an e-identity for each student. *Educause Quarterly* 4/November, 43–45. Retrieved February 20, 2003, from <http://www.educause.edu/ir/library/pdf/eqm0147.pdf>
- Kerka, S. (2002). Journal writing as an adult learning tool. *ERIC*, No. 22 19 para. Retrieved June 6, 2003, from http://www.ericfacility.net/databases/ERIC_Digests/ed399413.html
- Kilbane, C., & Milman, N. (2003). *The digital teaching portfolio handbook. A how-to guide for educators*. Boston: Pearson Education.
- Kubler LaBoskey, V. (2000). Portfolios here, portfolios there... searching for the essence of 'educational portfolios'. *Phi Delta Kappa*, 81(8), 590–595. Retrieved June 23, 2003, from Expanded Academic ASAP database.
- Naidu, S. (Ed.). (2003). *Learning and teaching with technology: Principles and practices*. London: Kogan Page.
- Neiman, L. (1999). *Linking theory and practice in portfolio assessment*. OnWEAC Educational Series, October, 30 para. Retrieved January 30, 2003, from <http://www.weac.org/resource/1999-00/oct99/focus2.htm>
- Nidds, J. & McGerald, J. (1997). How functional is portfolio assessment anyway? *Education Digest Jan 97*, 62(5), 47. Retrieved June 18, 2003, from MasterFILE Premier database.
- Nova Scotia Community College (NSCC). (2003). *Portfolio education – What are the benefits?* 6 para. Retrieved September 23, 2003, from <http://www.nscs.ca/Admissions/Portfolio/>
- Parsons, J. (1998). Portfolio assessment: Let us proceed with caution. *Adult Learning*, 9(4), 28–30. Retrieved August 23, 2003, from Academic Search Premier database.

- Paulson, F. L., Paulson, P. R., & Meyer, C. (1991). What makes a portfolio a portfolio? *Educational Leadership*, 48(5), 60–63. Retrieved September 9, 2003, from Academic Search Premier database.
- OMDE690 The Distance Education Project and Portfolio. (2000). *Portfolio guidelines*. MDE Program Homepage, 12 para. Retrieved January 6, 2004, from <http://info.umuc.edu/mde/project-portfolio.htm>

Other Readings Consulted:

- American Association for Higher Education (AAHE). (n. d.). *Electronic portfolios homepage*. Retrieved January 30, 2003, from <http://aahe.ital.utexas.edu/electronicportfolios/index.html>
- Baggaley, J. (2003). Blogging as a course management tool. *The Technology Source* July/August 2003, 9 para. Retrieved July 22, 2003, from <http://ts.mivu.org/default.asp?show=article&id=2011>
- Barrett, H. (1998). Strategic questions: What to consider when planning for electronic portfolios. *Learning and Leading with Technology*, 26(2), 6–13. Retrieved July 16, 2003, from WilsonSelectPlus database.
- Barrett, H. (2000). Create your own portfolio. *Learning & leading with technology*, April, 63 para. Retrieved June 11, 2003, from <http://transition.alaska.edu/www/portfolios/iste2k.html>
- Barrett, H. (2002). *Pedagogical issues in electronic portfolio implementation*. Paper presented at the American Educational Research Association Conference, Chicago, April 22, 2003, 9 para. Retrieved September 24, 2003, from <http://electronicportfolios.com/EPpedissues.pdf>
- Barrett, H. (2003). *At-a-glance guides – Common software tools for creating and publishing electronic portfolios*. Retrieved September 24, 2003, from <http://electronicportfolios.com/ALI/index.html>
- Batty, M. (2000). *Learning journals guidance*. 8 para. Retrieved September 23, 2003, from <http://www.leeds.ac.uk/sddu/assess/journals.htm>
- Bernath, U., & Rubin, E. (1999) (Eds.). *Final report and documentation of the virtual seminar for professional development in distance education – A project within the AT&T global distance learning initiative*. Oldenburg: BIS Verlag
- Binary Blue. (2002). *The electronic learning journal*. 19 para. Retrieved June 11, 2003, from <http://binaryblue.com.au/elj>
- Boud, D. (2001). Using journal writing to enhance reflective practice. In L. M. English & M.A. Gillen (Eds.), *Promoting journal writing in adult education. New directions in adult and continuing education No. 90*. 9–18. San Francisco: Jossey-Bass. Retrieved September 30, 2003, from http://www.education.uts.edu.au/ostaff/staff/publications/db_31_boud_in_english.pdf
- Carlsmith, C. (1994). *An 'academical notebook'*. Teaching Concerns-Newsletter of the Teaching Resource Center for Faculty and Teaching Assistants, University of

- Virginia, 5 para. Retrieved August 22, 2003, from <http://trc.virginia.edu/tc/1994/Academical.htm>
- Gibbs, G. (1988). The use of learning journals in engineering. In *Learning by Doing – A Guide to Teaching and Learning Methods*, Ch. 5.8, 8 para. Retrieved September 23, 2003, from http://www.chelt.ac.uk/gdn/gibbs/ch5_8.htm
- Kalamazoo College. (2001). *The Kalamazoo College portfolio*. Retrieved June 11, 2003, from <http://www.kzoo.edu/pfolio>
- Lorenzo Associates. (2003). EPortfolios: Who's doing what? *Educational Pathways*, 2(5), Subscription Newsletter.
- MDE Homepage. (2000). *MDE tools and guides*. Retrieved June 11, 2003, from <http://info.umuc.edu/mde/tools.htm>
- Middlesex community college. (1979). *Students' service-learning journals*. 8 para. Retrieved June 11, 2003, from <http://www.middlesex.cc.ma.us/service-learning/journals.htm>
- National Learning Infrastructure Initiative NLII. (2003). *E-portfolios – 2002–2003 key theme*. Retrieved February 20, 2003, from <http://www.educause.edu/nlii/keythemes/eportfolios.asp>
- Newman, D. R. (1998). *Project learning logs and reflective reviews*. 14 para. Retrieved June 9, 2004, from <http://www.qub.ac.uk/mgt/itsoc/proj/learjour.html>
- Niguidula, D. (1993). *The digital portfolio: A richer picture of student performance*. Coalition of Essential Schools, 53 para. Retrieved January 30, 2003, from http://www.essentialschools.org/cs/cespr/view/ces_res/225
- Office of the Provost Washington State University. (2000). *The teaching portfolio at Washington State University*. Retrieved June 11 2003, from <http://www.wsu.edu/provost/teaching.htm>
- Schroeder, R. (2003). Blogging to disseminate best online learning practices and technology news. *Proceedings of the Distance Learning Conference 2003, Madison, WI, August 12th–15th 2003*. Retrieved September 11, 2003, from http://www.uwex.edu/disted/conference/Resource_library/proceedings/03_75.pdf
- Schwalbe, K. (1996). Learning from learning journals. Presentation at *STLHE, Ottawa*, June 14, 1996. Retrieved June 11, 2003, from <http://www.augsburg.edu/depts/infotech/learn/>
- Share P. (2003). *Learning journals*. ITSligo, 5 para. Retrieved June 11, 2003, from <http://staffweb.itsligo.ie/staff/pshare/assessment/learning%20journals.htm>
- The Office of Academic Assessment & Institutional Research. (2000). *Assessment workbook, Ch. 5. Ball State University*, 21 para. Retrieved September 24, 2003, from <http://web.bsu.edu/IRAA/AA/WB/chapter5.htm>
- Treuer, P., & Jenson, J. (2003). Electronic portfolios need standards to thrive. *Educause Quarterly* 2, 34–42. Retrieved September 24, 2003, from <http://www.educause.edu/ir/library/pdf/eqm0324.pdf>
- University of Sussex. (2003). *Learning journals and the reflective essay*. Retrieved June 9, 2003, from <http://www.biols.susx.ac.uk/ugteach/cws/topbce/learnjour.htm>

- Wrede, O. (2003). Details of the global brain: Weblogs and discourse. *Conference Proceedings Blogtalk, Vienna*, May 23rd –24th 2003. Retrieved August 8, 2003, from http://weblogs.design.fh-aachen.de/owrede/publikationen/weblogs_and_discourse
- WSU Professional Portfolio for Teacher Education. (n. d.). *College of education – professional portfolio – teacher education program*. Retrieved June 6, 2003, from <http://education.wichita.edu/teportfolio/indexTOC.htm>
- Young, J. (2002, March 8). E-portfolios could give students a new sense of their accomplishments. *The Chronicle of Higher Education*, 2002, A31–32.