

REFERENCES

- Abou-Rokbah, E. H. (2002). *Readiness for self-directed learning in Saudi Arabian students*. Unpublished doctoral dissertation, University of Missouri-St. Louis.
- Angelo, T. (2000). Classroom assessment: Guidelines for success. *Teaching excellence: Toward the best in the academy*, 12 (4), 1-2. North Miami Beach, FL: The Professional and Organizational Development Network in Higher Education Essays on Teaching Excellence series
- Aker, G., Spaulding, R., Adams, R., & White, B.B. (1984). *Enhancing your proficiencies in the design and facilitation of adult literacy education*. McRea, Georgia: Telfair Adult Education Center.
- American Statistical Association. (n.d.). *What is survey?* Retrieved April 30, 2004, from <http://www.amstat.org/sections/srms/brochures/survwhat.html>
- Angelo, T.A, & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco: Jossey-Bass.
- Bachor, D. (2000, December). *Reformatting reporting methods for case studies*. Paper presented at the Australian association for research in education, Sydney, New South Wales, Australia.

Barrett, H. C. (1998, October). *Electronic portfolios and standards*. Paper presented at Tel-Ed conference, New Orleans, LA.

Barrett, H. C. (2000). *Electronic teaching portfolios: Multimedia skills + portfolio development powerful professional development*. Retrieved October 11, 2003, from  
<http://electronicportfolios.org/portfolios/site2000.htm>

Barton, J., & Collins, A. (1993). Portfolios in teacher education. *Journal of Teacher Education*, 44, 200-210.

Baskett, H. K. M. (1993, January). *Workplace factors which enhance self-directed learning*. Paper presented at the Seventh International Symposium on Self-directed Learning, West Palm Beach, FL.

Benson, A., & Walker de Felix, J. (2001). The metaphor of the portfolio in program evaluation. In A. Benson, D. M. Hinn, & C. Lloyd (Eds), *Representing and communicating quality in program evaluation*, (PAGE) Greenwich, CT : JAI Press.

Berg, B. L.(2001). *Qualitative research methods for the social science*. Needham Heights, MA.

Bergman, T. (n.d.) *Feasible electronic portfolios: Global networking for the self-directed learner in the digital age*. Sitka, Alaska. Retrieved March 22, 2004, from

[http://www.mehs.educ.state.ak.us/portfolios/why\\_digital\\_portfolios.html](http://www.mehs.educ.state.ak.us/portfolios/why_digital_portfolios.html)

- Besser, H. (1993). Education as marketplace. In R. Muffoletto & N. Nelson Knupfer (Eds.), *Computers in education: Social, political, and historical perspectives* (pp.37-69). Cresskill, NJ: Hampton Press.
- Black, P. (1998). *Testing: Friend or foe? Theory and practice of assessment and testing*. Washington, DC: Falmer Press.
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods*. (2nd ed.). Needham Heights, Mass: Allyn & Bacon.
- Bork, A. (1993). Technology in education: A historical perspective. In R. Muffoletto, & N. Knupfer (Eds.), *Computers in education: Social, political, and historical perspectives* (pp. 71-90). Cresskill, NJ: Hampton Press.
- Boston, C. (2002). The concept of formative assessment. *Practical Assessment, Research & Evaluation*, 8(9). Retrieved April 23, 2004, from <http://pareonline.net/getvn.asp?v=8&n=9>
- Brent, R. (1992). Integrating technology into methods classes. *Technology and teacher education annual 1992*, 73-74. Charlottesville, VA: Association for the Advancement of Computing in Education.

- Brockett, R. B., & Hiemstra, R. (1991). *Self-direction in adult learning: Perspectives on theory, research, and practice*. London and New York: Routledge.
- Brockett, R. G. (1985). A response to Brookfield's critical paradigm of self-directed adult learning. *Adult Education Quarterly*, 36(91), 55-59.
- Brookfield, S. (1993). Self-directed learning, political clarity, and the critical practice of adult education. *Adult Education Quarterly*, 43(4), 227-242.
- Bruning, R. H., Schraw, G. J., & Ronning, R. R. (1995). *Cognitive psychology and instruction*. Englewood Cliffs, NJ : Prentice Hall.
- Caffarella, R. S. (1993). Self-directed learning. In S. B. Merriam (Ed.), *New Directions for Adult and Continuing Education: An update on adult learning theory (pp. 25-35)*. New Directions for Adult and Continuing Education, No. 57, San Francisco: Jossey-Bass.
- Cahoon, B. B. (1995). *Computer skills learning in the workplace: A comparative case study*. Unpublished doctoral dissertation, University of Georgia. Retrieved January 6, 2004, from <http://www.arches.uga.edu/~cahoonb/dissertation.html>
- Candy, P. C. (1991). *Self direction for lifelong learning: A comprehensive guide to theory and practice*. San Francisco: Jossey-Bass.

- Carney, J. M. (2001). *Electronic and traditional paper portfolios as tools for teacher knowledge representation*. Unpublished doctoral dissertation, University of Washington.
- Childers, S. (2003, September). Computer literacy: Necessity or buzzword. *Information Technology and Libraries*, 22(3). Retrieved April 20<sup>th</sup>, 2006, from <http://www.ala.org/ala/lita/litapublications/ital/2203childers.htm>
- Clark, M.C. (1993). Transformational learning. In S. B. Merriam, (Ed). *An update on adult learning theory (pp.47-56)*. New Directions for Adult and Continuing Education, NO. 57. San Fransisco: Jossey-Bass Publishers.
- Clarke, M. M., Madaus, G. F., Horn, C., & Ramos, M. A. (2000). Retrospective on educational testing and assessment in the 20th century, *Journal of Curriculum Studies*, 32(2), 159-182.
- Condition of Education 2000. (2000). Retrieved April 20, 2004, from <http://nces.ed.gov/pubs2000/2000062.pdf>
- Cranton, P. (1994). *Understanding and promoting transformative learning: A guide for educators of adults*. San Francisco: Jossey- Bass.

- Cranton, P. (1996). *Professional development as transformative learning: New perspectives for teachers of adults*. San Francisco: Jossey-Bass.
- Cross, K. P. (1981). *Adults as learners*. San Francisco: Jossey-Bass.
- Daley, B. J. (1997, October). *Transformative learning: Theory to practice links*. Paper presented at the Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, Michigan State University, East Lansing, MI.
- Davenport, J. III. (1987, March). *A way out of the andragogy morass*. Paper presented at the conference of the Georgia Adult Education Association, Savannah, GA.
- Darkenwald, G. G., & Merriam, S. B. (1982). *Adult education: Foundations of practice*. New York: HarperCollins.
- Dewey, J. (1986). *How we think: A restatement of the relation of reflective thinking to the educative process*. In J. Boydston (Ed.), *John Dewey: The later works: 1925-1953* (pp. 101-110). Vol. 8:1933. Carbondale: Southern Illinois University Press.
- Doolittle, P. (1994, April). *Teacher portfolio assessment*. Washington, DC: Educational Resources Information Center (ERIC Document Reproduction Service No. ED385608).

- Ellsworth, J. Z. (2002). Using student portfolios to increase reflective practice among elementary teachers. *Journal of Teacher Education*, 53(4), 342-355
- Fenton, R. (1996). *Performance assessment system development*. *Alaska Educational Research Journal*, 2(1), 13-22.
- Fingeret, H. (1993). *It belongs to me: A guide to portfolio assessment in adult education programs*. Durham, NC: Literacy South, Inc.
- Follo, E. (1994). *Career Portfolios: Helping Beginning Teachers Help Themselves*. (ERIC Document Reproduction Service No. ED 382 611)
- Fullerton, F. E. (1998). *Relationships among adult social roles, formal education, Perry epistemological level, and readiness for self-directed learning*. Unpublished doctoral dissertation, University of Missouri-St. Louis.
- Fulton, K. (1989). Technology training for teachers: A federal perspective. *Educational Technology*, 29(3), 12-17.
- Galloway, J. P. (2002, September). *Electronic portfolios for educators*. Retrieved December 25, 2003, from <http://jerrygalloway.com/pro/portfoliosforeducators.htm>
- Garrick, J. (1998). *Informal learning in the workplace: Unmasking human resource development*. London: Routledge.

- Goddard, C. (1983). *Defining computer literacy for higher and adult education*. (ERIC Document Reproduction Service No. ED243 371).
- Gray, D. E. (1999, March-April). The internet in lifelong learning. *International Journal of Lifelong Education* 18(2), 119-126.
- Guglielmino, L. M. (1977). *Development of the self-directed learning readiness scale*. Unpublished Doctoral dissertation, University of Georgia.
- Guglielmino, L. M. (1978). *Development of the self-directed learning readiness scale*. Unpublished Doctoral dissertation, University of Georgia. Dissertation Abstracts International, 38, 6467A.
- Guglielmino, L. M., & Guglielmino, P. J. (1991). *Learning preference assessment facilitator guide*. King of Prussia, PA: Organizational Design and Development, Inc.
- Guglielmino, L.M. (1993). Staff development programs based on teacher choice: Insights from adult education research. *Journal of Personnel Evaluation in Education* 7, 231-233.
- Hassan, A.J. (1981). *An investigation of the learning projects of adults on high and low readiness for self-direction learning* Unpublished Doctoral dissertation.



Iowa State University. Dissertation Abstracts  
International 42, 3838A-3839A.

Hiemstra, R. (1994). Self-directed learning. In T. Husen, &  
T. N. Postlethwaite (Eds.), *The international  
encyclopedia of education* (2nd ed.); p( Oxford, MI:  
Pergamon Press. Retrieved April 14, 2004, from  
<http://home.twcny.rr.com/hiemstra/sdlhdbk.html>

Hofstetter, F.T. (1997). *Cognitive versus behavioral  
psychology*. Retrieved April 14 2004, from  
<http://www.udel.edu/fth/pbs/webmodel.htm>

Horn, L., Peter, K., & Rooney, K. (2002, Fall). Profile of  
undergraduates in U.S. postsecondary education  
institutions: 1999-2000. *Educational Statistics  
Quarterly*, 4(3). Retrieved April 23, 2004, from  
[http://nces.ed.gov/pubs2003/quarterly/fall/4\\_1.asp](http://nces.ed.gov/pubs2003/quarterly/fall/4_1.asp)

International Society for Technology in Education (ISTE),  
(2003). *NCATE unit accreditation guidelines*. Retrieved  
October 20, 2003, from  
<http://www.iste.org/Standards/NCATE/unit.htm>

Johnson, J., Kaplan, J., & Marsh, S. M. (1996, August).  
*Professional teaching portfolio: A catalyst for  
rethinking education*. Paper presented at the  
International Conference, Self-Study in Teacher  
Education: Empowering our Future. Herstmonceux Castle,  
East Sussex, England. Retrieved January, 20, 2004 from:

[http://educ.queensu.ca/projects/action\\_research/jjohnson.htm](http://educ.queensu.ca/projects/action_research/jjohnson.htm)

Jones, J. E. (1994, Winter). Portfolio assessment as a strategy for self-direction in learning. In S. B. Merriam, (Ed). An update on adult learning theory (pp. 23-25). *New Directions for Adult and Continuing Education*, No. 64. San Francisco: Jossey-Bass Publishers.

Jones, J. E. (1992). Validation study of the self-directed learning readiness scale with university and community art students. In H. B. Long & Associates (Eds.), *Self-directed learning: Application and research* (pp.131-161) No. 5. Norman, OK: Oklahoma Research Center for Continuing Professional and Higher Education, University of Oklahoma.

Kerka, S. (1994). *Self-directed learning: Myths and realities* (Report). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 365818).

Kerka, S. (2000). Incidental learning. Trends and Issues Alert. 18. Retrieved November 17, 2004, from <http://www.cete.org/acve/docgen.asp?tbl=tia&ID=140>

Kim, J. K. (1997) *Adult illiteracy in America*. Retrieved April 24, 2004, from <http://eserver.org/courses/summer97/76100g/kim/>

- King, K. P., & Lawler, P.A. (2003, summer). Trends and issues in the professional development of teachers of adults. In K. P. King and P. A., Lawler, (Eds.). *New perspectives on designing and implementing professional development for teachers of adults* (pp. 5-14). *New Directions in Adult and Continuing Education*, No. 98. San Francisco: Jossey-Bass.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. NY: Cambridge Book Co.
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. (Rev. ed.) Chicago: Follett.
- Knowles, M. S., Holton III, E. F., & Swanson, R. A. (1998). *The adult learner* (5th ed). Houston, TX: Gulf Publishing.
- Krause, S. (1996). Portfolios in teacher education: Effects of instruction on preservice teachers' early comprehension of the portfolio process. *Journal of Teacher Education*, 47(2), 130-138.
- Labor, U.S., Department of (1999). *Computer ownership up sharply in the 1990s*. Issues in Labor Statistics. Retrieved April 13, 2004, from <http://www.bls.gov/opub/ils/pdf/opbils31.pdf>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE Publications, Inc.

Long, H. B., & Agyekum, S. K. (1988). Gugliemino's self-directed learning readiness scale: A validation study. *Higher Education*, 12, 77-87.

Loughtan, J., & Corriganm, D. (1995). Teaching portfolios: A strategy for developing learning and teaching in preservice education. *Teaching and Teacher Education*, 11(6), 565-77.

Lyons, N. (1998). Reflection in teaching: Can it be developmental? A portfolio perspective. *Teacher Education Quarterly*, 25(1), 115-27.

Maehl, W. H. (2000). *Lifelong learning at its best*. San Francisco: Jossey-Bass.

Marsick, V. J., & Watkins, K. E. (1990). *Informal and incidental learning in the workplace*. London and New York: Routledge. Retrieved April 13, 2004, from [www.fsu.edu/~elps/ae/download/ade5083/Marsick\\_Watkins.pdf](http://www.fsu.edu/~elps/ae/download/ade5083/Marsick_Watkins.pdf)

Marsick, V. J., & Watkins, K. E. (2001). Informal and incidental learning. In S. B. Merriem (Ed.), *An Update on Adult Learning Theory* (pp. 25-34). *New Directions for Adult and Continuing Education*, No. 89. San Francisco, CA: Jossey-Bass.

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide*. Washington, DC: The Falmer Press.

- McKeachie, W. J. (1999). Peer learning, collaborative learning, cooperative learning (pp. 143-147). In *Teaching tips: Strategies, research, and theory for college and university teachers*, (10th ed.). Boston: Houghton Mifflin.
- Mealman, C. A. (1993, October). *Incidental learning by adults in a nontraditional degree program: A case study*. Paper presented at Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, Columbus, Ohio.
- Merriam, S., B. (1998). *Qualitative research and case study: Applications in education*. San Francisco: Jossey-Bass Publishers.
- Merriam, S. B. (2001, Spring). Andragogy and self-directed learning: Pillars of adult learning theory. The New Update on Adult Learning Theory. *New Directions for Adult and Continuing Education*, 89, 3-13. San Francisco, CA: Jossey-Bass.
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide*. (2nd ed). San Francisco: Jossey-Bass Publishers.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

- Mezirow, J. (1995). Transformation theory of adult learning. In M. Welton (Ed.), *In defense of the lifeworld*. Albany, NY: State University of New York Press.
- Mezirow, J. (1997, summer). Transformative learning: Theory to practice. In P. Cranton (Ed.) *Transformative Learning in Action: Insights from Practice*, 74, 5-12.
- Mezirow, J., & Associates. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass.
- Missouri Standards for Teacher Education Programs (MoSTEP), (2003). Retrieved October 22, 2003, from <http://www.dese.state.mo.us/divurbteached/teached/standards.html>
- Mocker, D.W., & Spear, G.E. (1982). Lifelong learning: Formal, nonformal, informal, and self-directed (Information Series No. 241). Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, The National Center for Research in Vocational Education, The Ohio State University. (ERIC Document Reproduction Service No. ED220723).
- Morin, J. (1995). *Portfolios: An effective tool used by prospective teachers to encourage self-evaluation and improvement*. (ERIC Reproduction Document No. 391806).

- NCATE (1995). *Standards, procedures, and policies for the accreditation of professional education units*. (ERIC Reproduction Service No. ED3855).
- Napper, V., & Barrett, H. (2004, March). *Assessment and e-portfolios*. Paper presented at the Society for Information Technology and Teacher Education (SITE) Conference, Atlanta, Georgia.
- Nie, N. H., & Erbring, L. (2000, February). *Internet and society: A preliminary report*. Stanford, CA: Standford Institute for the Quantitative Study of Society.
- Office of Technology Assessment, U.S. Congress (1995). *Teachers and technology: Making the connection*. OTA-HER-616 Washington, DC: U.S. Government Printing Office.
- Ornstein, A. & Levine, D. (1993) *Foundations of education* (5th ed.) NY: Houghton Mifflin Co.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Paulson, F. L., Paulson, P. R., & Meyer, C. A. (1991). What makes a portfolio a portfolio? *Educational Leadership*, 48(5), 60-63.
- Posner, F. G. (1991). Self-directed learning: The missing ingredient for school reform. *Changing Schools*, 19(1), 1-4&8.

- Pulliam, J. D. (1987). *History of education in America* (4th ed.). Columbus, OH: Merrill Publishing Co.
- Pulliam, J. D., & Van Patten, J. J. (2003). *History of education in America* (8th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Purdue University (2003). *E-portfolios*. Retrieved March 20, 2004, from <http://p3t3.soe.purdue/portfolio.htm>
- Read, D., & Cafolla, R. (1999). Multimedia portfolios for preservice teachers: From theory to practice. *Journal of Technology and Teacher Education*, 7(2), 97-113.
- Roger, H. (1997). *Self-directed learning: Present and future*. Paper delivered at the 1st World Conference in Self-Directed Learning, Montreal, Canada. Retrieved March 20, 2004, from <http://www-distance.syr.edu/montrsdl.html>
- Ross-Gordon, J. M., & Dowling, W. D. (1995, July-August). Adult learning in the context of African-American women's voluntary organizations. *International Journal of Lifelong Education*, 14(4), 306-319.
- Schmitz, C. D. (n.d.), About the college. Retrieved April 30, 2004, from [http://coe.ums1.edu/public\\_coe/aboutcollege/dean.html](http://coe.ums1.edu/public_coe/aboutcollege/dean.html)
- Scordias, M.A. (2004). *Participation in web-based course changes teachers' knowledge and beliefs*. Unpublished



Doctoral dissertation, University of Missouri, St. Louis.

Smith, R. M., & Associates (1990). *Learning to learn across the life span*. San Francisco: Jossey-Bass.

Song, K., Scordias, M., Huang, C., & Hoagland, C. (2004, March). *Implementing e-portfolios in a university: An enterprise solution*. Paper presented at the Society for Information Technology and Teacher Education (SITE) Conference, Atlanta, Georgia.

Stanford Encyclopedia of Philosophy, Retrieved April 22, 2004, from

<http://plato.stanford.edu/entries/behaviorism/>

Stefanakis, E. (2002). *Multiple intelligences and portfolios*. Portsmouth, VA: Heinemann.

Swartz, R. J., & Parks, S. (1994). *Infusing the teaching of critical and creative thinking into content instruction: A lesson design handbook for the elementary grades*. Pacific Grove, CA: Critical Thinking Press and Software.

Taylor, E. W. (1998). The theory and practice of transformative learning: A critical review (Information Series No. 374). Columbus, OH: Center on Education and Training for Employment. (ERIC Document Reproduction No. ED 423422)

- Tough, A. M. (1971). *The adult's learning projects*. Toronto: Ontario Institute for Studies in Education.
- U.S. Department of Labor Bureau of Labor Statistics (1999). *Computer ownership up sharply in the 1990s*. Retrieved April 20, 2004, from <http://www.bls.gov/opub/ils/pdf/opbils31.pdf>
- Van Halen-Faber, C. (1997, Summer). Encouraging critical reflection in preservice teacher education: A narrative of a personal learning journey. In P. Cranton (Ed.) *Transformative learning in action: Insights from practice*, 74, 51-60.
- Vann, B. A. (1996, Summer). Learning self-direction in a social and experiential context. *Human Resource Development Quarterly* 7(2), 121-130.
- Vannatta, R. A. ((2000). Evaluation to planning: Technology integration in a school of education. *Journal of Technology and Teacher Education*, 8(3), 231-246.
- Yorks, L., & Marsick, V.(2000).Organizational learning and transformation. In J. Mezirow, & Associates (Eds), *Learning as transformation: Critical perspectives on theory in progress (pp. 253-281)*. San Francisco: Jossey-Bass.

Yorks, L., O'Neil, J., & Marsick, V. (Eds.) (1999). *Action learning: Successful strategies for individual, team and organizational development*. San Francisco: Berrett-Koehler.

Appendix A  
Participant Consent Form



## Department of Educational Leadership and Policy Studies

8001 Natural Bridge Road  
St. Louis, Missouri 63121  
Telephone: 314-516-5944  
Fax: 314-516-5942

### Informed Consent for Participation in Research Activities

Electronic Portfolios: Their Impact on Self-Directed Learning and Computer Technology Skills on  
Preservice Teachers

Participant \_\_\_\_\_ HSC Approval Number  
040407G

Principal Investigator Y. Carole Huang PI's Phone Number 925-449-xxxx

#### **Why am I being asked to participate?**

You are invited to participate in a research study that investigates whether preservice teachers' Self-Directed Learning Readiness Scores (SDLRS) are higher and Computer Technology Skills (CTS) they will enhance after doing an E-portfolio. This study will be conducted by Y. Carole Huang, a doctoral student at the University of Missouri-St. Louis. You have been asked to participate in the research because you are a student enrolled in a teacher education program at the University of Missouri –St. Louis and because you are doing your portfolio electronically. I ask that you read this form and ask any questions you may have before agreeing to be in the research. Your participation in this research is voluntary. Your decision whether to participate or not participate will not affect your current or future relations with the University.

#### **What is the purpose of this research?**

The purpose of this research study is to investigate the impact E-portfolio have on preservice teachers' self-directed learning and computer technology skills. The Significant of this study is to discover the role of self-directed learning in learning computer technology skills through E-portfolios. And the results of this research study should be beneficial to all the instructors who teach electronic portfolio programs; especially those who have mature student teaching candidates. Depending on the results, the archived portfolios may not be as vivid as expected to the study since it is all self-reported. In addition, this research may provide the foundation for further research into E-portfolio curriculum design and how developing an E-portfolio evokes life long learning.

#### **What procedures are involved?**

You will be given a pre-questionnaire to determine your self-directed learning readiness scores and you CTS. The researcher will also conduct personal interviews and observations throughout the semester to find out how you adopt the to the E-portfolio program. A post-survey will be given at the end of the semester to find out if your CTS level increased and if your self-directed learning level is higher.

Approximately 15 to 20 participants may be involved in this research at University of Missouri-St. Louis.

**What are the potential risks and discomforts?**

There are no potential risks and discomforts that may be associated with this research beyond daily life.

**Are there benefits to taking part in the research?**

- ♦ The primary benefit of this research is to contribute to a better understanding of how E-portfolio impact on preservice teachers' Self Directed Learning and Computer Technology Skills.
- ♦ You will not receive any direct benefits for participating in the study. Any benefits gained would be those from normally completing an E-portfolio.

**Will I be told about new information that may affect my decision to participate?**

During the study, you will be informed of any significant new findings (either good or bad), such as changes in the risks or benefits resulting from participation in the research, or new alternatives to participation, that might cause you to change your mind about continuing in the study. If new information is provided to you, your consent to continue to participate in this study will be re-obtained.

**What about privacy and confidentiality?**

The only people who will know that you are a research subject are members of the research team. No information about you, or provided by you during the research will be disclosed to others without your written permission, except:

- if necessary to protect your rights or welfare (for example, if you are injured and need emergency care or when the University of Missouri-St Louis Institutional Review Board monitors the research or consent process); or
- if required by law.

When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity. If photographs, videos or audiotape recordings of you will be used for educational purposes, your identity will be protected or disguised. Any information that is obtained in connection with this study, and that can be identified with you, will remain confidential and will be disclosed only with your permission or as required by law.

This study is designed to study a normal educational practice in an established educational setting. No one will have to access to the data other than the researcher and the identity of participants will be destroyed. There are no risks and discomforts that may be associated in this study.

**What are the costs for participating in this research?**

There are no additional costs for participating in this research.

**Can I withdraw or be removed from the study?**

If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You also may refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

If you decide to end your participation in the study, please complete the withdrawal letter found at <http://www.umsi.edu/services/ora/IRB.html>, or you may request that the Investigator send you a copy of the letter.

**Who should I contact if I have questions?**

The researcher conducting this study is Y. Carole Huang. You may ask any questions you have now. If you have questions later, you may contact the researcher at (925) 449-xxxx or [carolehuang@gmail.com](mailto:carolehuang@gmail.com)

**What are my rights as a research subject?**

If you have any questions about your rights as a research subject, you may call the Chairperson of the Institutional Review Board at (314) 516-5897.

**What if I am a UMSL student?**

You may choose not to participate, or to stop your participation in this research, at any time. This decision will not affect your class standing or grades at UMSL. The investigator also may end your participation in the research. If this happens, your class standing will not be affected. You will not be offered or receive any special consideration if you participate in this research.

**What if I am a UMSL employee?**

Your participation in this research is, in no way, part of your university duties, and your refusal to participate will not in any way affect your employment with the university or the benefits, privileges, or opportunities associated with your employment at UM-SL. You will not be offered or receive any special consideration if you participate in this research.

**Remember:** Your participation in this research is voluntary. Your decision whether to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

You will be given a copy of this form for your information and to keep for your records.

**I have read the above statement and have been able to express my concerns, to which the investigator has responded satisfactorily. I believe I understand the purpose of the study, as well as the potential benefits and risks that are involved.**

**All signature dates must match.**

---

Participant's Signature	Date	Participant's Printed Name
-------------------------	------	----------------------------

---

Researcher's Signature	Date
------------------------	------



## Appendix B

### Self-Directed Learning Readiness Scale

### Administration

The SDLRS is self-paced and designed primarily for use with adults. The scale can be administered individually to in small or large groups. It is administered on an untimed basis. Allow the respondents as much time as they need to complete the scale. Administration usually requires about 40 minutes. In order to avoid possible response bias, the researcher did not inform respondents of the name or the exact purpose of the scale. The researcher read the instruction prior to administration. Item responses are recorded on a separate answer sheet, which could be scored by computer.

### Scoring System

The researcher calculated the new scores for each individual's item values in each response category. Stronger preferences were indicated by higher numeric scores. The strongest preference was represented by the highest numeric score, namely 5. The weakest preference was represented by the lowest numeric score, namely 1. The scoring system followed the following three steps.

- A. Items number 3, 6, 7, 9, 12, 19, 20, 22, 23, 29, 31, 32, 35, 44, 48, 53, and 56 will be scored in reverse: 1=5, 2=4, 3=3, 4=2, and 5=1.
- B. The remaining items will be scored positively: 1=1, 2=2, 3=3, 4=4, 5=5.
- C. Added the total from A and B to obtain the SDLRS score

(Guglielmino, 1978).

**INSTRUCTIONS:** This is a questionnaire designed to gather data on learning preferences and attitudes towards learning. After reading each item, please indicate the degree to which you feel that statement is true of you. Please read each choice carefully and circle the number of the response which best expresses your feeling.

There is no time limit for the questionnaire. Try not to spend too much time on any one item, however. Your first reaction to the question will usually be the most accurate.

**ITEMS:**

1. I'm looking forward to learning as long as I'm living.
2. I know what I want to learn.
3. When I see something that I don't understand, I stay away from it.
4. If there is something I want to learn, I can figure out a way to learn it.
5. I love to learn.
6. It takes me a while to get started on new projects.
7. In a classroom, I expect the teacher to tell all class members exactly what to do at all times.
8. I believe that thinking about who you are, where you are, and where you are going should be a major part of every person's education.
9. I don't work very well on my own.

[illegible]

	<i>Almost never true of me; I hardly ever feel this way.</i>	<i>Not often true of me; I feel this way less than half the time.</i>	<i>Sometimes true of me; I feel this way about half the time.</i>	<i>Usually true of me; I feel this way more than half the time.</i>	<i>Almost always true of me; there are very few times when I don't feel this way</i>
10. If I discover a need for information that I don't have, I know where to go to get it.	1	2	3	4	5
11. I can learn things on my own better than most people.	1	2	3	4	5
12. Even if I have a great idea, I can't seem to develop a plan for making it work.	1	2	3	4	5
13. In a learning experience, I prefer to take part in deciding what will be learned and how.	1	2	3	4	5
14. Difficult study doesn't bother me if I'm interested in something.	1	2	3	4	5
15. No one but me is truly responsible for what I learn.	1	2	3	4	5
16. I can tell whether I'm learning something well or not.	1	2	3	4	5
17. There are so many things I want to learn that I wish that there were more hours in a day.	1	2	3	4	5
18. If there is something I have decided to learn, I can find time for it, no matter how busy I am.	1	2	3	4	5
19. Understanding what I read is a problem for me.	1	2	3	4	5
20. If I don't learn, it's not my fault.	1	2	3	4	5
21. I know when I need to learn more about something.	1	2	3	4	5
22. If I can understand something well enough to get a good grade on a test, it doesn't bother me if I still have questions about it.	1	2	3	4	5
23. I think libraries are boring places.	1	2	3	4	5
24. The people I admire most are always learning new things.	1	2	3	4	5



41. I'm happy with the way I investigate problems.
42. I become a leader in group learning situations.
43. I enjoy discussing ideas.
44. I don't like challenging learning situations.
45. I have a strong desire to learn new things.
46. The more I learn, the more exciting the world becomes.
47. Learning is fun.
48. It's better to stick with the learning methods that we know will work instead of always trying new ones.
49. I want to learn more so that I can keep growing as a person.
50. I am responsible for my learning — no one else is.
51. Learning how to learn is important to me.
52. I will never be too old to learn new things.
53. Constant learning is a bore.
54. Learning is a tool for life.
55. I learn several new things on my own each year.
56. Learning doesn't make any difference in my life.
57. I am an effective learner in the classroom and on my own.
58. Learners are leaders.

	<i>Almost never true of me; I hardly ever feel this way.</i>	<i>Not often true of me; I feel this way less than half the time.</i>	<i>Sometimes true of me; I feel this way about half the time.</i>	<i>Usually true of me; I feel this way more than half the time.</i>	<i>Almost always true of me; there are very few times when I don't feel this way.</i>
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5
1	1	2	3	4	5