Empowering Lifelong Learners through Knowledge of Individual Learning Processes:
A Case Study at One Community College

Ellengray G. Kennedy, Iowa State University

Purpose:

This study was motivated by the concern that learning often eludes students due to ineffective study strategies, poor understanding of teacher expectations, limited knowledge of individual learning preferences, and a general confusion over what is superfluous and what is meaningful (Armstrong, 1999). The purpose of this study was to determine if students, and specifically students from a small, rural Midwest community college, can learn strategies that enhance their ability to learn, reduce intimidation, and thus manage stress during the learning process in order to maximize learning potential. Thus, the study examined learning strategies and styles from the perspective of the learners. It examined how learners can benefit from an understanding of how they learn best, and how the individual learner can use this understanding of learning strategies and styles to take responsibility for creating an environment that maximizes learning potential.

Tools, such as the LSA tool and training, are available to assist individuals in assessing their preferred learning styles. According to Prashnig (1998), the learning style model developed by Dunn & Dunn is a research instrument containing scientifically researched style elements which are biological and remain fairly stable over a lifetime. With this common method, stakeholders can work collectively or individually to create positive learning environments and to develop an appreciation of diversity in individual learning (Prashnig).

Research Questions:

Two overarching research questions and four exploratory questions were developed for this study:

Overarching Research Question I: What are the changes in learning when individual learners gain knowledge of their preferred learning styles?

Exploratory Questions:
1. As a result of the LSA tool and training, how, if at all, do learners feel empowered and responsible for their learning, thus, creating an environment conducive to successful and satisfactory learning?
2. How, if at all, has the LSA learning experience changed student grades?

Overarching Research Question II: What do students perceive as the outcome of the LSA tool and training on their educational and personal lives?

Exploratory Questions:
3. How has the LSA learning experience affected students' satisfaction with their educational experiences?
4. Do students feel more or less stress with their academic experiences?

Method:

Four stages of case study methodology as recommended by Yin (1994) were employed for this study: 1) designing the case study, 2) conducting the case study, 3) analyzing the case study evidence, and 4) developing the conclusions, recommendations, and implications. While conducting the case study, six primary sources of data as listed were used: documentation, archival records, interviews and focus groups, direct observation, participant observation, and physical artifacts (Yin). According to Tellis (1997), case studies are considered intrinsic when the researcher has an interest in the case and tend to be selective, focusing on one or two issues. In

this study, the focus was on the perception of the community college students and faculty who have participated in the LSA tool and training. The researcher, who had previously been involved with the LSA tool and training, considered the points of view of the students, as well as the faculty, and the interaction between them (Tellis, 1997).

The case study method was selected for the research framework to provide better understanding of the research focus, with the actual case and the research site serving as a backdrop (Yin, 1994). The research site was a small, rural, Midwest community college. Status sampling and snowball sampling techniques were utilized to identify the 33 primary source research participants, 27 students for focus groups, and 6 faculty members for peer debriefing interviews (Dobbert, 1982; Krathwohl, 1998). Focus group questions were carefully constructed in order to gain insight from the students that would lead to answers to the overarching research questions. A semi-structured interview format was selected for the student focus groups. The faculty peer debriefing interviews gave credibility to the realities discovered and interpreted in this study and assured accurate portrayals (Lincoln & Guba, 1986). The faculty interviews gave credibility to the realities discovered and interpreted in this study and assured accurate portrayals (Lincoln & Guba, 1986). The faculty peer debriefing interviews also confirmed and enhanced the general findings and assured me that the data lead to the implications (Marshall & Rossman, 1995).

Rigor and quality of qualitative inquiry are established by addressing the foundational criteria framework and the emerging relational framework (Lincoln, 1995). I included the emerging relational framework in three important ways:

1) *Voice* was given to students who had taken the LSA tool and training. The research included the perspective of the students who participated in the focus groups, as well as the faculty, who had been involved in the LSA tool and training by either

    a) facilitating the course where the follow up training originally took place,

    b) opening their classrooms for the actual focus groups for the research, or

    c) participating in the peer debriefing interview. This provided an opportunity to hear "alternative voices" (Lincoln, 1995, p. 283).

2) *Reciprocity* is also important when addressing emerging relational frameworks by establishing reciprocal relationships ". . . marked by a deep sense of trust, caring, and mutuality" (Lincoln, 1995, p. 284). The research benefited from the support and guidance of the Success Center instructor, whose responsibilities included implementation of the LSA tool and training internally for all full time students attending the community college. The Success Center instructor helped coordinate efforts with the faculty as well as the students on campus. She also provided pertinent follow-up information from the Successful Learning course that includes employing the LSA tool and training for all new full-time arts & science students at the college. Her vast knowledge and involvement with the LSA tool and training provided me with a rich and comprehensive view of the experience for the students and faculty. Rather than viewing her multiple roles as a "biased factor," the research benefited and was enriched by her support and involvement.

3) My intent for the research was to "*serve the purposes of the community in which it was carried out*" (Lincoln, 1995, p. 280). To ensure that this occurred, I discussed the research with the students, the faculty, and the Success Center instructor throughout the planning and data collection stages. In addition, the results were shared with the research participants and the Chief Academic Officer of the college to be interpreted and used as an educational tool.

Conducting the case study stage included extensive preparation for data collection, discussion of the focus group questions by selected students who had participated in the LSA tool and training, and conducting the peer debriefer interviews with faculty. The multiple sources of data used in this case study were important to the reliability of this study (Stake, 1995). The four sources of data were used for this study, the first two were the *primary data sources* and the second two were the *secondary data sources*, and are as follows:

1. Student *focus groups.*
2. Peer debriefer *interviews.*
3. Reports and primary data from the Successful Learning student and faculty *course evaluations.*
4. Pilot project *student testimonies* from the board of trustees meeting.

Documentation was exact and broad. Physical artifacts included the LSA tool and training materials used for students and the Discovery session materials used for faculty professional development. Archival records included the Successful Learning evaluation results. No single source was more important; rather, they were complementary and were used in tandem.

The research addressed the foundational criteria framework by considering the three concepts: credibility, transferability, and dependability (Lincoln & Guba, 1985). To ensure credibility, triangulation and member checks were used. The triangulation involved the use of participation by students and faculty as "…different sources of the same information" (Lincoln & Guba, 1985, p. 305). The use complete descriptions, multiple focus groups and interviews, and purposeful sampling maintained transferability (Brotherson & Goldstein, 1992). Dependability was maintained by ensuring that the research was stable and consistent, yet flexible as the design evolved. Peer debriefers, multiple researchers, and an audit trail were used (Guba, 1981).

The stage of analyzing the case study evidence is one of the least developed aspects of the case study method (Yin, 1994). "Data analysis consists of examining, categorizing, tabulating, and otherwise recombining the evidence to address the initial propositions of the study" (Yin). This case study used tables to display data, tabulated the frequency of events and responses, ordered the information, and used multiple methods in lieu of statistical analysis (Miles & Huberman, 1984).

Results:

The results of this study were represented in sections organized around the four major data sources. The two primary data sources were *student focus groups* and *peer debriefing interviews.* The two secondary sources of data were *Successful Learning course evaluations* by students and faculty, and *student testimonies* from the pilot project.

The focus groups with the twenty-seven students resulted in an abundance of data about their perceptions and experiences with the LSA tool and training. They shared their thoughts concerning the effect and impact that the knowledge of their learning styles did, or in some cases, did not, have on their learning and educational experiences. As their responses were sorted, coded and categorized, five themes began emerged that were presented to the peer debriefers:

Theme ONE: Students Create Environments Conducive to Learning and Improve Study Skills.
Theme TWO: Students Improve Grades and Reduce Stress Levels.
Theme THREE: Students Gain Understanding and Appreciation of How They Best Learn; Increase Satisfaction and Confidence.
Theme FOUR: Teachers Influence the Learning Experience.
Theme FIVE: LSA Accurately Reflects Students' Learning Styles.
One additional theme emerged from the peer debriefing interviews.
Theme SIX: Communication Improves between Students and Faculty.

Conclusions and Implications:

The community college in this study should continue to use the LSA tool and training, increase faculty involvement, and add additional follow-up tools for the students. In addition, the two-hour Discovery Session has been attended on a voluntary basis and should be available to all faculty, especially newly hired faculty. Based on the results of this study, more extensive use of these resources would ensure that faculty involvement in the LSA initiative is college-wide.

There is potential for continued development of new tools and applications. The LSA tool and training includes a Junior Version for middle school, a Senior Version for high school, and an

Adult Version for the college student or lifelong learner. The college should continue to reach out externally, giving presentations at conferences, elementary and secondary schools, other community colleges, and four-year colleges and universities.

Data from the student focus groups and faculty peer debriefing interviews support the need to develop formalized follow-up sessions to ensure that the students review the LSA tool and training periodically. Further application and understanding of the implications of the tool would be evident for each learner. To maximize the benefits of the LSA tool and training for all students, follow-up and reinforcement should be discussed, planned, implemented, and assessed on a continuous basis by students and faculty to ensure further understanding and effective application.

This study has implications for students, as well as faculty, who are interested in maximizing learning potential through learning strategies that reduce intimidation and manage stress during the learning process. With regard to improved communication between students and faculty, I believe this research indicated that the use of assessment tools, the LSA tool and training in particular, ensures effective communication that builds skills to improve lifelong learning. Without changing the expectations of the curriculum or the desired outcomes, individuals can gain increased learning and knowledge within an environment that is less stressful because of increased confidence.

The development of this formal case study protocol provided reliability in the results of this study (Yin, 1994). This study revealed that changes took place in the learning of the students when the individual learners gained knowledge of their preferred learning styles. In addition, the majority of the students in this study perceived the outcome of the LSA tool and training on their educational experience as positive. The reduced frustration (stress) and the increased confidence with their educational experiences would most likely benefit their personal lives.

Generalizations from this study should be made carefully. Whereas the findings of this study were significant for those involved, the study is not without its limitations. This study involved research participants from only one institution, a small, Midwest community college located in a rural area. The results and conclusions cannot be presumed to be representative of, or transferable to, other similarly sized community colleges. In addition, regional differences could affect the transferability of the conclusions to other areas of the country.

This study was based primarily on the perceptions of 27 students and six faculty members involved in the focus groups and peer debriefing interviews. In addition, the perceptions of the students from the two secondary sources, the Successful Learning course evaluations and the two student testimonies, were included. A different participant sample, for example, one with more participants from the Career Option and the Vocational Technical programs and more Arts & Science transfer students who did not plan to transfer to elementary or secondary education four-year programs could have produced different results.

This study provided evidence for additional research on the affect of increased awareness of individual learning styles. While this study revealed that the perceived outcome of the LSA tool and training on participants educational lives was positive, this study did not determine the statistical significance of these effects. Further research utilizing quantitative research methods would be a natural follow-up study. For example, a survey to validate the findings could be administered to a statistically significant sample using the students from the pilot project (Fall 2000) and the students participating in the college-wide initiatives in the fall of 2001 and 2002. The correlation between the high school and college grade point averages of two groups of students, one group who were involved with the LSA tool and training and one group who were not, should be explored.

Continued research should be done on the validity of the LSA tool and training that was used in the study. In addition, the complementary roles of usage of the LSA, Myers Briggs Type Indicator, and the theory of Multiple Intelligences should be further investigated. Studying the significance to learners if the three tools were used in tandem and/or parallel to each other would

be beneficial. In order for students to fully benefit from learning styles, higher education should utilize every opportunity to integrate the information into the learning-centered methodology.

References:

Brotherson, M. J., & Goldstein, B. L. (1992). Quality design of focus groups in early childhood special education research. Journal of Early Intervention, 16 (4), 334-342

Dobbert, M. L. (1982). Ethnographic research: Theory and application for modern schools and societies. New York: Praeger.

Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-92.

Krathwohl, D. R., (1998). Methods of Educational & Social Science Research (2nd ed.). New York: Addison-Wesley Educational Publishers, Inc.

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. Qualitative Inquiry, 1 (3), 275-289.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hill, CA: Sage.

Lincoln, Y. S. & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. In D. D. Williams (Ed.), Naturalistic evaluation (pp.73-84). New Directions for Program Evaluation, No. 30. San Francisco: Jossey-Bass.

Marshall, C., & Rossman, G. B. (1995). Designing qualitative research (2nd ed.). Newbury Park, CA: Sage.

Miles, M. B., & Huberman, M. A. (1994). Qualitative Data Analysis. Thousand Oaks, CA: Sage Publishing, Inc.

Prashnig, B. (1998). The power of diversity: New ways of learning and teaching. New Zealand: David Bateman, Ltd.

Stake, R. E. (1995). The Art of Case Study Research. Thousand Oaks, CA: Sage Publications.

Tellis, W. (1997). Application of a case study methodology. The Qualitative Report, 3(3).

Yin, R. (1994). Case study research: Design and methods (2nd ed.). Thousand Oaks, CA: Sage Publishing.