

DOCUMENT RESUME

ED 426 681

HE 031 839

AUTHOR Rugutt, John K.; Ellett, Chad D.; Culross, Rita R.  
TITLE Discriminating Student Learning and Efficacy Levels in  
Higher Education: Contributions of Classroom Environment and  
Teaching and Learning Effectiveness.  
PUB DATE 1998-01-00  
NOTE 30p.; Paper presented at the Annual Meeting of the Southwest  
Educational Research Association (January 1998, Houston,  
TX).  
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150) --  
Tests/Questionnaires (160)  
EDRS PRICE MF01/PC02 Plus Postage.  
DESCRIPTORS \*Classroom Environment; Cognitive Development; College  
Students; Evening Students; \*Higher Education;  
\*Instructional Effectiveness; Learning Processes;  
Nontraditional Students; \*Self Efficacy; Self Evaluation  
(Individuals); State Universities; \*Student Attitudes;  
Student Evaluation of Teacher Performance; Thinking Skills  
IDENTIFIERS \*Louisiana State University; Student Assessment of Teaching  
and Learning

ABSTRACT

This study examined the contribution of classroom learning environment and teaching and learning effectiveness variables to student learning and learning efficacy in higher education settings. It attempted to identify classroom environment characteristics that differentiate high- and low- academic-efficacy student groups and the teaching and learning effectiveness variables that differentiate these groups. Also examined were how these variables differentiate levels of student course evaluations and the emphasis given in class to the development of higher-order thinking skills. Subjects were all students (n=2,190) in 145 classes offered through the evening continuing education program at Louisiana State University during the 1996 fall semester. Students completed the Student Assessment of Teaching and Learning measure and the newly developed Personal Learning Environment Measure and Student Learning Efficacy Assessment. Findings clearly indicated that student academic self-efficacy was more potent in differentiating course and learning outcomes than either students' perceptions of elements of the classroom environment or their views about their personal motivation/involvement in learning and the general quality of teaching. Other findings suggested that the three instruments used were effective in evaluating the quality of teaching and learning environments. The data collection packet is appended. (Contains 51 references.) (DB)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

# Discriminating Student Learning and Efficacy Levels in Higher Education: Contributions of Classroom Environment and Teaching and Learning Effectiveness

**John K. Rugutt  
Chad D. Ellett  
Rita R. Culross**

**Louisiana State University  
Baton Rouge, Louisiana**

HE031 839

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND  
DISSEMINATE THIS MATERIAL HAS  
BEEN GRANTED BY

John K. Rugutt

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)

1

**Paper presented at the annual meeting of the Southwest Educational Research Association,  
Houston, Texas**

**January 1998**

**BEST COPY AVAILABLE**

## **Discriminating Student Learning and Efficacy Levels in Higher Education: Contributions of Classroom Environment and Teaching and Learning Effectiveness**

The quality of undergraduate teaching and learning environments on college/university campuses is a continuing national concern. The recent call to "reaffirm teaching as the university's primary task" (Carnegie Foundation for the Advancement of Teaching) emphasizes the importance of improving undergraduate teaching and learning environments. Traditionally, college teaching and courses have been evaluated through the use of student ratings and reviews of the literature (e.g., Aleamoni, 1987; Centra, 1993) provide considerable support for this procedure, particularly when such information is used for formative evaluation purposes. While important, student ratings of faculty and course characteristics alone are not sufficient to provide a basis for developing theory rich models of teaching and learning in higher education settings. In addition, they provide little basis for broadening our understanding of the complexity of teaching and learning, learning environment characteristics and student-related variables as these contribute to the enhancement of student learning. Development of student assessments of college teaching to include information about the enhancement of student learning has recently been cited as a critical evaluation need in higher education settings (McKeachie & Kaplan, 1996).

During the past 25 years, the study of learning environment characteristics and the contribution of these characteristics to student learning has received considerable attention in the literature (Fraser, 1986; Fraser & Walberg, 1993; McRobbie & Ellett, 1997). There has been some attention given to the measurement of learning environment characteristics in higher education settings (e.g., the College and University Classroom Learning Environment Inventory) (Fraser, et al., 1986). However, the vast majority of such studies have been completed in

elementary and secondary school settings and few such studies have been completed in higher education settings.

In the social learning literature in psychology, considerable attention has been given to the importance of the *self-efficacy* construct as an important mediating link between human cognition and behavior. As conceptualized by Bandura (1977), self-efficacy is viewed as highly situational and consists of expectancy beliefs and motivational factors which subsequently affect an individual's ability to organize and execute courses of action required to attain various types of goals and performances (Bandura, 1977; 1982; 1986; 1993; 1995). In addition, self-efficacy levels develop from complex experiences and interactions with the environment and result in perceptions of levels of activity/skill (competence) and personal judgments about what can be accomplished given to context/resources in the environment (motivation). High self-efficacy beliefs enhance motivation (Bandura & Cervone, 1993), promote higher goal setting behaviors, and influence persistence and commitment to goal accomplishment (Latham & Locke, 1986; Mento, Steel & Karren, 1987). A recent review of student academic self-efficacy research in elementary and secondary school settings clearly supports the importance of this theory rich construct to student learning (Pajares, 1996). However, few self-efficacy studies have been completed to date in college/university classroom settings.

This paper presents the results of a study in higher education classrooms derived from newer approaches to the assessment of teaching and learning, the rich literature developed during the past three decades on measuring classroom environment characteristics and theories and research pointing to the important role of academic self-efficacy as an important construct mediating learning.

## **Purpose**

The purpose of this paper is to describe the results of a study of the contribution of classroom learning environment and teaching and learning effectiveness variables to student learning and learning efficacy in higher education settings. More specifically the study was designed to answer the following questions: (a) what characteristics of the classroom learning environment differentiate between high and low academic efficacy student groups?; (b) what teaching and learning effectiveness variables differentiate these two groups?; © how do these variables differentiate levels of student course evaluations and the emphasis given in classes to the development of higher order thinking skills?

## **Methodology**

### **Sample**

The sample for the study consisted of all students (n=2190) in 145 classes offered through the Evening School, Division of Continuing Education at Louisiana State University during the 1996 fall semester. The classes represented a mixture of traditional undergraduate curricula (i.e., math, social sciences, humanities, etc.). Forty percent of these students were male, 60 percent were female, and 60 percent stated that they were full-time employed. Percentages of students by various age groups were as follows: 17 to 20 years old (23 %), 21 to 25 (45%), 26 to 30 (11%), and 31 and over (20.4%)

### **Measures**

#### **Student Assessment of Teaching and Learning (SATL).**

The revised form of the Student Assessment of Teaching and Learning (SATL) (Evans & Ellett, 1992) was used to measure students' perceptions of enhancement of personal learning.

The revised SATL (Ellett, Culross, McMullen, & Rugutt, 1996) consists of 25 items reflecting classroom event, conditions, and teaching practices (e.g., “the kind and number of thought-provoking questions asked”) that are designed to assess students’ perspectives of the extent to which their personal learning is enhanced using a three-point scale: Learning is (1) Not Enhanced, (2) Sometimes Enhanced, or (3) Always Enhanced. The 25 items were selected from an earlier form of the SATL for this study giving practical consideration to the length of the survey task and the results of item content reviews to select items believed to have the greatest generalizability across multiple classroom and course characteristic contexts. The 25 items comprising the short form of the SATL used in this study can be found in the data collection packet included as Appendix A.

### **Students’ Learning Environment Perceptions.**

Students’ personal perceptions of the learning environment were assessed using a newly developed measure described by Fraser et al. (1996) (Hereafter referred to as the Personal Learning Environment Measure (PLEM)). This measure is a constructivist learning-based measure originally designed for use with secondary students in science classes. It was developed by Fraser et al. (1996) to incorporate scales that had been shown in previous studies to be linked to student learning outcomes and to accommodate recent classroom learning concerns such as equity issues and higher-order thinking and understanding rather than lower-level fact learning and memorization. The PLEM was modified for this study by deleting 28 of the original 80 items judged as irrelevant to the college context and deleting items that appeared to lack generalizability across the content of various courses (e.g., “I explain the meaning of statements, diagrams, and graphs”). Students respond to the frequency of occurrence of each PLEM item

with a five-point scale ranging from 1=Almost Never to 5=Almost Always. The revised version of the PLEM used in this study is included in the data collection packet in Appendix A.

### **Student Learning Efficacy Assessment.**

Students' efficacy motivation and outcomes expectancy levels were assessed using six items designed to measure effort, motivation, persistence, knowledge/ability, personal responsibility, and perceived success in enhancing personal learning, using a five-point Lacerate scale ranging from 1=Little or None to 5=A Large Amount (such as "How much effort did you put forth in this course to enhance your own learning?"). The measure developed for use in this study, the Student Learning Efficacy Assessment (SEA) (Ellett & Loup, 1996), is a revised version of the Teacher Self and Organizational Efficacy Assessment (TSOEA) (Loup & Ellett, 1994). It was developed to measure student personal perceptions of motivation, persistence, and ability to attain learning goals. The six items comprising the SEA are included in the data collection packet in Appendix A.

### **Student Summative Judgements.**

Students were asked to make summative judgments about several course-related factors. These included the emphasis given to various types of learning during the course such as learning factual information, developing concepts, understanding and applying principles and rules, understanding and applying theories, engaging in critical analysis, problem solving, and creative thinking, developing professional, career, and job-related skills, and developing oral and written communication skills. Each item related to these skills was rated using a four-point Lacerate scale ranging from 1=No Emphasis to 4=Very Much Emphasis. The results of recent factor analyses of these items identified two salient factors: (1) Higher Order Thinking Skills

(HOTS) and (2) Personal and Applied Knowledge (PAK) (Ellett, McMullen, Rugutt, Culross, & Loup, 1977).

Students were also asked to grade the quality of teaching in the course, to rate the course in terms of its contribution to their personal learning, and to arrive at an overall course grade using a 100-point scale. These summative judgment data were used as dependent variables in various discriminant analyses completed. The HOTS and PAK items and course summative grading scales are shown in the data collection packet included in Appendix A.

### **Data Collection Procedures**

Data were collected for the study using individual instrument packets that were distributed to students within each of the 145 classes in the sample during the fall 1996 semester. Faculty members explained the purpose of the study, assured students of anonymity, encouraged participation, and left their classrooms while students completed the set of measures. All completed packets were sealed in envelopes and collected for data processing by a designated student or by faculty members upon returning to their classroom.

### **Data Analyses**

Data analyses included:(a) descriptive statistics for characteristics of the sample and the various measures, (b)Alpha internal consistency reliabilities for measurement subscales, and © a series of discriminant function analyses using extreme student groups (top and bottom quartiles) defined by students' emphasis on learning, summative course quality judgments, and academic self-efficacy (SLEA) scores. In these analyses, these variables were conceptualized as dependent variables, and factored subscales of the SATL and the PLEM were conceptualized as an independent variables set. In the analyses using students' summative judgements, the student



efficacy measure was also used as an independent variable.

## Results

### Descriptive Statistics

For the SATL measure, item means ranged from a high of 2.76 (“The instructor’s enthusiasm for teaching, learning and the subject taught”) to a low of 2.36 (“The extent to which students learn from one another”). For the PLEM measure, item means ranged from 2.86 (“I solve problems by obtaining information from the library”) to 4.44 (“I try to understand the work in this class”). SEA item means ranged from a low of 4.03 (“How much effort did you put forth in this course to enhance your own learning?”) to a high of 4.44 (“If you were repeatedly failing in this course, how much effort and persistence would you put forth to continue to enhance your own learning?”).

For the five HOTS items, means for emphasis placed on types of learning ranged from 3.11 (critical analysis and/or problem solving) to 3.1 (developing concepts). All five of the HOTS item means exceeded 3.00 (four-point scale). The PAK item means ranged from 2.68 (developing oral communication skills) to 3.07 (creative thinking).

Mean scores for the two summative course evaluation judgments (100-point scale) were: (1) How would you grade the quality of the teaching in this course ? (89.8) and (2) How would you grade this course overall? (88.4).

### Structure of Measures

Previous factor analyses of the three measures (Ellett, et al, 1997) identified the following subscales for the various measures used in this study: SATL (General Quality of Teaching and Learning (QTL) and Motivation and Involvement in Learning Activities (MI);

PLEM (Learning Equity and Clarity (LEQCLAR), Relationships with other Students (ROS), Personal Involvement of Students (PIS), and Teacher/Student Relations (TSR); SLEA, a single academic self-efficacy construct (SLEA). Alpha reliabilities for the measurement subscales ranged from .78 (SLEA) to .95 (LEQCLAR, QTL) with six of 9 coefficients exceeding .85 (Ellett, et al., 1997).

### **Discriminant Function Analyses**

As series of five linear discriminant function analyses was completed on the data. In each of these analyses, the student sample was partitioned into the upper and lower quartiles of each score distribution for each of the five dependent variables. In four of the five analyses, the factored SATL subscales (MI, QTL) and the factored PLEM subscales (LEQCLAR, ROS, TSR, PIS), and the SEA measure were used as an independent variable set. When the SEA was used as a dependent variable, only subscales for the SATL and the PLEM were used as an independent variable set.

The Table that follows identifies the dependent variable used in each discriminant function analysis, the most discriminating variables and their discriminant weights, and sample sizes for groups.

TABLE 1

- Dep. Variable = Student Summative Judgments of the Quality of Teaching

Most Discriminating Variables and Associated Weights

<u>Ind. Variable</u>	<u>Gp 1 (Low Gp.: n=555)</u>	<u>Gp 2 (Hi Gp.: n=766)</u>
SEA	1.54	1.63
QTL	0.78	1.11
MI	0.51	0.49

- Dep. Variable = Student Summative Judgements of Contributions to Personal Learning

<u>Ind. Variable</u>	<u>Gp 1 (Low Gp.: n=543)</u>	<u>Gp 2 (Hi Gp.: n=698)</u>
SEA	1.72	1.92
QTL	0.65	0.85
MI	0.57	0.60

- Dep. Variable = Student Summative Judgment of Overall Course Grade

<u>Ind. Variable</u>	<u>Gp 1 (Low Gp.: n=599)</u>	<u>Gp 2 (Hi Gp.: n=672)</u>
SEA	1.61	1.78
QTL	0.76	1.03
MI	0.67	0.75

TABLE 1 (Cont.)

- Dep. Variable = Students Summative Judgement of Emphasis Given to HOTS

<u>Ind. Variable</u>	<u>Gp 1 (Low Gp.: n=619)</u>	<u>Gp 2 (Hi Gp.: n=461)</u>
SEA	1.58	1.69
QTL	0.68	0.90
MI	0.66	0.75
TSR	-0.60	-0.63

- Dep Variable = Student Self-Efficacy for Learning (SEA Scores)

<u>Ind. Variable</u>	<u>Gp 1 (Low Gp.: n=768)</u>	<u>Gp 2 (Hi Gp.: n=454)</u>
QTL	0.49	0.45
TSR	-0.39	-0.34

---

As can be seen in the results in Table 1, the most important independent variables contributing to the linear discriminant functions predicting group membership for the first four dependent variables were the student efficacy (SEA), and SATL variables of quality of teaching and learning (QTL) and motivation/interest/involvement (MI). Of interest as well is the weight and direction (negative) of the TSR variable in the discriminant function differentiating groups on the course emphasis given to HOTS variable (fourth analysis). The PLEM variables contributed to each of these functions to a much lesser extent than the SEA and SATL measures.

For the fifth discriminant analysis, the most important variables predicting student group membership in high and low self-efficacy (SEA) groups were the SATL quality of teaching and learning (QTL) and the PLEM student/teacher relationships (TSR) variables. Interestingly, in

each analysis, the TSR variable was negatively weighted with the criterion variable used.

For the five discriminant functions computed, posterior probabilities of correct group membership ranged from a low of 79% (Low Gp. For the Contributions to Learning criterion variable) to a high of 94% (Hi Gp. for the Quality of Teaching criterion variable). For the low group, 80% correct posterior group classification was most typical. Correct posterior group membership percentages were somewhat higher for the Hi group; ranging from 89% to 94%. In considering the patterning of discriminant weights for the various independent variables, weights were slightly higher for the Hi group than for the Low group, which makes intuitive sense given the slight differences in posterior probabilities of correct group membership between the two groups.

### **Discussion/Significance/Implications**

The results of this study are important from a variety of perspectives. First, the revised version of the SATL makes a contribution to the faculty evaluation literature in higher education because of its response focus. The SATL requires students to make judgments about classroom events/conditions/activities from the perspective of the “extent to which they enhance personal learning.” This outcomes-based focus in assessment is quite different than more traditional evaluation instruments that typically ask students to rate the faculty member, course materials, etc. The new SATL focus on enhancement of learning is consistent with the recent call for developing measures of this sort (McKeachie & Kaplan, 1996).

Secondly, the results of the study clearly identify student academic self-efficacy as more potent in differentiating course and learning outcomes than either students’ perceptions of elements of the classroom learning environment or their views about their personal

motivation/involvement in learning and the general quality of teaching. These results suggest that student academic self-efficacy may be an antecedent of how students view the quality of courses in undergraduate education settings; or conversely, that successful experiences in these courses go hand in hand with the development of high academic self efficacy levels. This latter interpretation is rather consistent with the core tenants of self-efficacy theory (Bandura, 1977; 1982; 1993) and recent summaries of academic self-efficacy research (Pajares, 1996).

Of considerable interest as well, was the finding that students' ratings of the quality of teacher and student relationships was **negatively** weighted in each of the discriminant function analyses completed. This finding suggests that students who view undergraduate courses the most positively, who have high academic self efficacy, and who positively view the emphasis in their courses placed on higher order learning (thinking skills), at the same time view their relationships with their teachers' and other students **less positively** than those who do not hold these views. Thus, students who evaluate their undergraduate courses most positively appear to be those who give little emphasis to the frequency and importance of interpersonal relationships with teachers and other members of the class. Indeed, these students may be far more task oriented than socially oriented, learn more, and evaluate their learning experiences more positively than students who are more socially oriented. This interpretation makes intuitive sense as well given the extant literature on task orientation, engaged time and learning productivity

From a more practical perspective and considered collectively, the measures used in this study provide much more information about the quality of teaching and learning environments in higher education settings than traditionally used faculty and course evaluation forms. From the

formative evaluation perspective, the information from these multiple measures can foster the development of more enriched learning environments than the traditional practice of providing faculty with simple feedback from traditionally used teaching or course characteristics student rating forms.

In comparing the various measures used, it is interesting to note that the SATL was much more heavily weighted in differentiating student groups than the PLEM. Apparently, students' learning environment perspectives, grounded in views of how elements of the learning environment "enhance learning," make more important contributions to their course evaluations and views of personal learning experiences, than more generalized views of the frequency of occurrence of events in the learning environment as measured by the PLEM. The PLEM was derived from a larger measure originally constructed to reflect a constructivist-based, personal learning environment perspective (Fraser et al., 1996). If evaluations concerns are the extent to which students believe courses are of high quality, and if it is important to give emphasis to higher order learning and thinking skills development, then the results reported here suggest that the response format of the PLEM ("enhancement of learning") may be a better focus for assessing students' learning environments than the original measure developed by Fraser et al., 1996).

Information about how students perceive the quality of teaching and learning, the effectiveness/enhancement of their own learning, and important elements of the learning environment can provide a rich base for enhancing the quality of teaching and learning in higher education settings. Current plans are to actively use this data base within the Evening School at LSU to enhance the quality of teaching and learning, to provide better learning experiences for

students, and to provide faculty with important information that stands as an alternative to more typically used faculty and course evaluation instruments and procedures.



## References

- Aleamoni, L. (1987). Student rating myths versus research facts. Journal of Personnel Evaluation in Education, 1.(1), 11-119.
- Bandura, A. (1977). Self efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.
- Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. Educational Psychologist, 28.(2), 117-148.
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), Self-efficacy in changing societies. New York: Cambridge University Press.
- Bandura, A. & Cervone, D. (1983). Self-evaluation and self-efficacy mechanisms governing the motivational effects of goals. Journal of personality and Social Psychology, 50, 492-501.
- Brophy, J. (1986, October). Teacher influences on student achievement. American Psychologist, October, 1069-1077.
- Centra, J.A. (1993). Reflective faculty evaluation: Enhancing teaching and determining faculty effectiveness. San Francisco, CA: Jossey-Bass.

Chambliss, C. (1996). Revamping faculty evaluation methods: Rewarding student-centered learning. Collegeville, PA: Department of Psychology, Ursinus College.

Cohen, P.A. (1981). Student ratings of instruction and student achievement: A meta-analysis of multisection validity studies. Review of Educational Research, 51(3), 281-309.

Clarke, J., Ellett, C., Bateman, M. & Rugutt, J. (1996). Faculty receptivity/resistance to change, personal and organizational efficacy, decision deprivation and effectiveness in Research I universities. Paper presented at the annual meeting of the Association for the Study of Higher Education, Memphis, TN.

Edgerton, R., Hutchings, P., & Quinlan, K. (1991). The teaching portfolio: Capturing the scholarship of teaching. Washington, D.C.: The American Association of Higher Education.

Ellett, C.D. (1995). Louisiana Office of Community Services 1994-95 statewide personnel needs study: Final report. Baton Rouge, LA: Office of Research and Economic Development, Louisiana State University.

Ellett, C.D. (1997). Classroom-based assessments of teaching and learning. In J. Stronge (Ed.), Evaluating teaching: A Guide to current thinking and best practice. Newbury Park, CA: Corwin Press (In Press)

Ellett, C.D., Culross, R., McMullen, J. & Rugutt, J. (1996). Student Assessment of Teaching and Learning (SATL) (Short-Form). Baton Rouge, Louisiana: College of Education, Louisiana State University.

Ellett, C.D., McMullen, J.H., Rugutt, J.K., Culross, R.C., & Loup, K.S. (1997). Linking personal learning environment, quality of teaching and learning and learning efficacy: An initial study of college students. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.

Ellett, C.D., Garland, J., & Logan, C. (1987). Content classification, synthesis and verification of eight large-scale teacher performance assessment instruments. Project Report, Baton Rouge, LA: Louisiana Teaching Internship Project, College of Education, Louisiana State University

Ellett, C.D. & Loup, K. (1996). The Student Learning Efficacy Assessment (SLEA). Baton Rouge, LA: College of Education, Louisiana State University.

Ellett, C.D., Loup, K.S., & Chauvin, S.W. (1991). Development, validity and reliability of a new generation of assessments of effective teaching and learning: Future directions for the study of learning environments. Journal of Classroom Interaction, 26(2), 25-39.

Evans, L., & Ellett, C.D. (1992). Student Assessment of Teaching and Learning (SATL) (Long Form). Baton Rouge, Louisiana: College of Education, Louisiana State University.

Fraser, B.J. (1986). Classroom environment. London: Croom Helm.

Fraser, B.J. (1989). Twenty years on classroom environment work: Progress and prospect. Journal of Curriculum Studies, 21, 307-327.

Fraser, B., Anderson, G., & Walberg, H. (1982). Assessment of learning environments: Manual for the Learning Environment Inventory (LEI) and the My Class Inventory (MCI). (Third edition). Perth, Australia: Western Australian Institute of Technology.

Fraser, B.J., & Fisher, D. (1983). A comparison of actual and preferred classroom environment as perceived by science teachers and students. Journal of Research in Science Teaching, 20, 55-61.

Fraser, B.J., Fisher, D.L., & McRobbie, C.J. (1996). Development, validation and use of a new classroom environment instrument. Paper presented at the annual meeting of the American Educational Research Association, New York, N.Y.

Fraser, B., Treagust, D., & Dennis, N. (1986). Development of an instrument for assessing classroom psychosocial environments in universities and colleges. Studies in Higher Education, II, 43-54.

Fraser, B.J., Treagust, D.F., Williamson, J.C. & Tobin, K.G.(1987). Validation and application of the College and University Classroom Environment Inventory (CUC EI). In Barry J. Fraser (Ed.), The Study of Learning Environments (Vol. 2). Perth, Western Australia: Curtin University of Technology, 17-28.

Fraser, B.J., & Walberg, H.J. (Eds.) (1991). Educational environments: Evaluation, antecedents, and consequences. Oxford: Pergamon Press.

Furio, B.J. (1987). The relationship between instructor behaviors and student perceptions of control in the classroom. Research Report. Morgantown, West Virginia: West Virginia University.

Latham, G. & Locke, E. (1986). Goal setting. In E. Locke (Ed.), Generalizing to field settings. Lexington, Massachusetts, Heath.

Locke, E., Shaw, K., Saari, L., & Latham, G. (1981). Goal setting and task performance: 1969-1980. Psychological Bulletin, 90, 125-152.

Logan, C.S. & Ellett, C.D. (1988). Development, validity and reliability of a faculty evaluation instrument to measure generic teaching skills and perceived enhancement of learning. Journal of Personnel Evaluation in Education, 2.(1), 65-82.

Loup, K.S. (1994). Measuring and linking school professional learning environment characteristics, teacher self and organizational efficacy, receptivity to change and multiple indices of school effectiveness. Unpublished Doctoral Dissertation, Louisiana State University, Baton Rouge, Louisiana.

Loup, K.S., Clarke, J.C., & Ellett, C.D. (1997). Exploring dimensions of personal and organizational efficacy motivation: A study of teachers, social workers and university faculty. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.

Loup, K. & Ellett, C. (1994). The Teacher Self and Organizational Efficacy Assessment (TSOEA). Baton Rouge, Louisiana: Louisiana State University.

Loup, K. & Ellett, C.D. (1995). Development, reliability, and construct validity of a measure of teacher self and collective efficacies. Paper presented at the annual meeting of the American Educational Research Association, New York.

McKeachie, W.J., & Kaplan, M. (1996). Persistent problems in evaluating college teaching. American Association of Higher Education Bulletin, 48 (6), 5-8.

McRobbie, C.J., & Ellett, C.D. (1997) (Eds.). Advances in research on educational learning environments. International Journal of Educational Research. (In Press).

McMullen, J.H., Ellett, C.D., Culross, R.C., Loup, K.S., & Rugutt, J.K. (1997). Perceptions of personal learning environment, quality of teaching and learning, and learning efficacy among college students. Paper presented at the annual meeting of the Southwest Educational Research Association, Austin, Texas.

Mento, A., Steel, R. & Karren, R. (1987). A meta-analytic study of the effects of goal setting on task performance. Organizational Behavior and Human Decision Processes, 39, 52-83.

Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. American Psychologist, 50(9), 741-749.

Moos, R. (1974). The social climate scales: An overview. Palo Alto, CA: Consulting Psychologists Press.

Muffo, J. (1996). Lessons learned from a decade of assessment. Paper presented at the Annual Forum of the Association for Institutional Research, Albuquerque, NM.

Multon, K.D., Brown, S.D., & Lent, R.W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. Journal of Counseling Psychology, 38, 30-38.

Pajares, F. (1996). Self efficacy beliefs in academic settings. Review of Educational Research, (66), (4), 543-578.

Peterson, F. & DelMas, R. (1996). Effects of career-decision-making self-efficacy on the retention of under prepared adults: A path analytic study of student persistence. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Porter, A.C., & Brophy, J. (1988). Synthesis of research on good teaching: Insights from the work of the institute for research on teaching. Educational Leadership, 74-85.

Purtle, V. (1982). Guidelines for student evaluation of teaching. Unpublished manuscript, Baton Rouge, Louisiana: College of Arts and Sciences, Louisiana State University.

Richlin, L., & Manning, B. (1996). Using portfolios to document teaching excellence. New directions for teaching and learning, 65, (41-50).

Seldin, P. (1993). Successful use of teaching portfolios. Belton, MA: Anker Publishing.

**APPENDIX A**

**Data Collection Packet**



# STUDENT ASSESSMENT OF TEACHING AND LEARNING

*Louisiana State University*

## INSTRUCTIONS TO RESPONDENTS

This form is designed to assess teaching and learning in college classes. There are three parts to the instrument. Part I asks questions about teaching, learning and course characteristics. Part II asks about the type of learning in the course. Part III asks for overall evaluations of the course and additional comments.

### DIRECTIONS: Part I *Enhancement of Student Learning*

Three scale points are provided for each item. Read each item carefully and then select the one scale point which best reflects your judgement about the teaching/learning or course characteristic.

The three scale points that follow must be *read carefully* before completing the assessment form. Refer to these scale point descriptions as you read and score each item.

- 1 = Learning NOT Enhanced
- 2 = Learning SOMETIMES Enhanced
- 3 = Learning ALMOST ALWAYS Enhanced

**PLEASE CAREFULLY READ AND SCORE EACH ITEM INDEPENDENTLY.** That is, try not to let your response to one item influence your response to the next item.

*All responses are strictly confidential. You do not need to sign your name anywhere on this instrument.*

# Student Assessment of Teaching and Learning

24

This form is to be used by students to assess the quality of teaching and learning and other course-related factors. Use a #2 Pencil only in completing your response to each item.

## PART I: ENHANCEMENT OF STUDENT LEARNING

DIRECTIONS: Please carefully reflect upon your experiences as a learner in the course you are evaluating, read each item carefully, and bubble in one scale point that best reflects your assessment of the teaching/learning and/or course characteristic. This part requests that you do more than rate the instructor. Instead, consider the degree to which each item enhanced your learning as a student. Use the scale provided below in assessing each item.

### SCALE

- 1 = Learning NOT Enhanced
- 2 = Learning SOMETIMES Enhanced
- 3 = Learning ALMOST ALWAYS Enhanced

- |   |                         |                         |                         |
|---|-------------------------|-------------------------|-------------------------|
| 1. Clarity with which the course objectives are communicated  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 2. Clarity with which student responsibilities and expectations are explained   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 3. Use of class time  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 4. Outside assignments and integration of outside assignments with other course activities                                      | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 5. Teaching and learning techniques used during the course  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 6. The instructor's enthusiasm for teaching, learning and the subject taught  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 7. The interpersonal climate in the classroom (e.g., patience, courtesy, respect)   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 8. Encouragement for students to express their own ideas  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 9. Encouragement for students to participate in discussions   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 10. Clarity and understandability of the instructor's speech  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 11. Directions and explanations given for course content  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 12. The kind and number of thought-provoking questions asked  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 13. The extent to which students are encouraged to compare and contrast ideas   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 14. The extent to which students are involved in discussions among themselves   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 15. The extent to which students learn from one another   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 16. The degree to which the instructor helps students organize information and understand relationships among various topics    | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 17. Explanation(s) given for difficult material/ideas   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 18. Encouragement for students to ask questions   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 19. Clarification of content/ideas when confusion exists  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 20. Feedback about learning provided <u>during</u> teaching and learning activities   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 21. The extent to which adjustments are made in a lesson when needed  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 22. The degree to which students are encouraged to apply course content to solve problems or to understand real life situations | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| 23. The quantity/quality of feedback provided on graded work  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |

SCALE

- 1 = Learning NOT Enhanced
- 2 = Learning SOMETIMES Enhanced
- 3 = Learning ALMOST ALWAYS Enhanced

24. The quantity/quality of feedback provided on tests given ①    ②    ③
25. The extent to which students are provided opportunities to determine their progress in the course ①    ②    ③

PART II: TYPES OF LEARNING

DIRECTIONS: Use the four-point scale below to evaluate the degree to which each type of learning is emphasized in this course. (DO NOT rate how much you have learned ...Only the amount of emphasis given to each type of learning).

- 1 = No emphasis
- 2 = Some emphasis
- 3 = Much emphasis
- 4 = Very much emphasis

Rate the emphasis placed on each type of learning listed below:

26. learning factual information ①    ②    ③    ④
27. developing concepts ①    ②    ③    ④
28. understanding and applying principles and rules ①    ②    ③    ④
29. understanding and applying theories ①    ②    ③    ④
30. critical analysis and/or problem solving ①    ②    ③    ④
31. creative thinking ①    ②    ③    ④
32. developing knowledge of self and others ①    ②    ③    ④
33. developing professional, career, and job-related skills ①    ②    ③    ④
34. developing written communication skills ①    ②    ③    ④
35. developing oral communication skills ①    ②    ③    ④

PART III: OVERALL COURSE EVALUATION

DIRECTIONS: Use the 100-point scale provided below and pencil in the appropriate spaces in "tens" and "ones" that best reflect the numerical grade you would give this course for each of the three items that follow.

- SCALE
- A = 90 - 100
  - B = 80 - 89
  - C = 70 - 79
  - D = 60 - 69
  - F = Below 60

36. How would you grade the quality of teaching in this course?  
 Tens            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨            100   
 Ones            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
37. What was the contribution of the course to your personal learning?  
 Tens            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨            100   
 Ones            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
38. How would you grade this course overall?  
 Tens            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨            100   
 Ones            ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

# LSU Evening School Student Opinionnaire

Directions: Please respond to each of the following items by filling in the number that best reflects your opinion about each question.

1. How much effort did you put forth in this course to enhance your own learning?
 

Little or None		Some		A Large Amount
①	②	③	④	⑤
  
2. When there were difficult or uncertain obstacles to overcome in learning/achieving in this course, how much effort and persistence did you put forth to enhance your own learning?
 

Little or None		Some		A Large Amount
①	②	③	④	⑤
  
3. If you were repeatedly failing in this course, how much effort and persistence would you put forth to continue to enhance your own learning?
 

Little or None		Some		A Large Amount
①	②	③	④	⑤
  
4. How much knowledge and/or ability do you think you have to accomplish your learning objectives in this course?
 

Little or None		Some		A Large Amount
①	②	③	④	⑤
  
5. How much personal responsibility do you think you have to accomplish your learning objectives in this course?
 

Little or None		Some		A Large Amount
①	②	③	④	⑤
  
6. To what extent do you believe your efforts can accomplish the learning objective of this course?
 

Not at All		Somewhat		To a Large Extent
①	②	③	④	⑤

In this class:

	Never	Seldom	Sometimes	Often	Almost Always
1. I make friendships with other students.	①	②	③	④	⑤
2. I know other students.	①	②	③	④	⑤
3. I do favors for members of this class.	①	②	③	④	⑤
4. Students help me with my learning.	①	②	③	④	⑤
5. I help other class members who are having trouble with their work.	①	②	③	④	⑤
6. In this class, I am able to depend on other students for help.	①	②	③	④	⑤
7. The teacher takes a personal interest in me.	①	②	③	④	⑤
8. The teacher considers my feelings.	①	②	③	④	⑤
9. The teacher helps me when I have trouble with the work.	①	②	③	④	⑤
10. The teacher talks with me.	①	②	③	④	⑤
11. The teacher moves about the class to talk with me.	①	②	③	④	⑤
12. It is all right for me to tell the teacher that I do understand.	①	②	③	④	⑤
13. The teacher's questions help me to understand.	①	②	③	④	⑤
14. I discuss ideas in class.	①	②	③	④	⑤
15. I give my opinions during class discussions.	①	②	③	④	⑤
16. My ideas and suggestions are used during classroom discussions.	①	②	③	④	⑤
17. I explain my ideas to other students.	①	②	③	④	⑤
18. Students discuss with me how to go about solving problems.	①	②	③	④	⑤
19. I discuss different answers to questions.	①	②	③	④	⑤
20. I have a say in how my class time is used.	①	②	③	④	⑤
21. I have a say in deciding what activities I do.	①	②	③	④	⑤
22. I have a say in deciding how my learning is assessed.	①	②	③	④	⑤
23. The teacher decides when I move on to a new topic.	①	②	③	④	⑤
24. I am given a choice of topics for assignments.	①	②	③	④	⑤
25. I work at my own pace.	①	②	③	④	⑤
26. I carry out investigations to test my ideas.	①	②	③	④	⑤
27. I am asked to think about the evidence for statements.	①	②	③	④	⑤
28. I carry out investigations to answer questions coming from discussions.	①	②	③	④	⑤
29. I carry out investigations to answer the teacher's questions.	①	②	③	④	⑤
30. I solve problems by obtaining information from the library.	①	②	③	④	⑤
31. I solve problems by using information obtained from my own investigations.	①	②	③	④	⑤
32. I know what has to be done in this class.	①	②	③	④	⑤
33. Class assignments are clear so I know what to do.	①	②	③	④	⑤
34. I do as much as I set out to do.	①	②	③	④	⑤
35. I know the goals for this class.	①	②	③	④	⑤
36. I know what I am trying to accomplish in this class.	①	②	③	④	⑤
37. I pay attention during this class.	①	②	③	④	⑤
38. I try to understand the work in this class.	①	②	③	④	⑤
39. I cooperate with other students when doing assigned work.	①	②	③	④	⑤
40. I share my books and resources with other students when doing assignments.	①	②	③	④	⑤
41. I learn from other students in this class.	①	②	③	④	⑤
42. I work with other students in this class.	①	②	③	④	⑤
43. I cooperate with other students on class activities.	①	②	③	④	⑤
44. I work in groups in this class.	①	②	③	④	⑤
45. The teacher gives as much attention to my questions as to other students' questions.	①	②	③	④	⑤
46. I get the same amount of help from the teacher as do other students.	①	②	③	④	⑤
47. I am treated the same as other students in this class.	①	②	③	④	⑤
48. I receive the same encouragement from the teacher as other students do.	①	②	③	④	⑤
49. I get the same opportunity to contribute to class discussions as other students.	①	②	③	④	⑤
50. I am asked about the same number of questions as other students.	①	②	③	④	⑤
51. My work receives as much praise as other students' work.	①	②	③	④	⑤
52. I get the same opportunity to answer questions as other students.	①	②	③	④	⑤

# DEMOGRAPHIC INFORMATION

28

Sex :  Male  
 Female

Age :  17 - 20  
 21 - 25  
 26 - 30  
 31 and Over

Degree seeking :  Yes  
 No

Are you in the PASS program?  Yes  
 No

Do you work full time?  Yes  
 No

Do you take classes:  during the day  
 during the evening  
 both day and evening classes

**BEST COPY AVAILABLE**

30



U.S. Department of Education  
Office of Educational Research and Improvement (OERI)  
National Library of Education (NLE)  
Educational Resources Information Center (ERIC)



# REPRODUCTION RELEASE

(Specific Document)

## I. DOCUMENT IDENTIFICATION:

Title: <i>Discriminating Student Learning and Efficacy Levels in Higher Education: Contributions of Classroom Environment and Teaching and Learning Effectiveness</i>	
Author(s): <i>John Kepngeno Rugutt (Author); Co-Authors Chad D. Ellett, Rita R. Coe/Ross</i>	
Corporate Source: <i>LOUISIANA STATE UNIVERSITY, BATON ROUGE, LA 70803</i>	Publication Date: <i>JANUARY 1998</i>

## II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY</p> <p style="text-align: center;"><i>Sample</i></p> <p>_____</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>
---

The sample sticker shown below will be affixed to all Level 2A documents

<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY</p> <p style="text-align: center;"><i>Sample</i></p> <p>_____</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>
--

The sample sticker shown below will be affixed to all Level 2B documents

<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY</p> <p style="text-align: center;"><i>Sample</i></p> <p>_____</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>
--

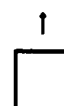
Level 1



Level 2A



Level 2B



Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.

If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, →



Signature: <i>John Kepngeno Rugutt</i>	Printed Name/Position/Title: <i>John Kepngeno Rugutt (GA)</i>
Organization/Address: <i>LOUISIANA STATE UNIVERSITY BATON III Peabody Hall, COE Baton Rouge, LA 70803</i>	Telephone: <i>(225) 383-3274</i> FAX: _____
E-Mail Address: <i>krugutt@unix1.sndc.lsu.edu</i>	Date: _____

--

**IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:**

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

**V. WHERE TO SEND THIS FORM:**

Send this form to the following ERIC Clearinghouse:
---

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

**ERIC Processing and Reference Facility**

**1100 West Street, 2nd Floor**

**Laurel, Maryland 20707-3598**

**Telephone: 301-497-4080**

**Toll Free: 800-799-3742**

**FAX: 301-953-0263**

**e-mail: [ericfac@inet.ed.gov](mailto:ericfac@inet.ed.gov)**

**WWW: <http://ericfac.piccard.csc.com>**

EFF-088 (Rev. 9/97)