



# Journal of Vocational and Technical Education

**Editor:**Kirk Swortzel: [kswortzel@ais.msstate.edu](mailto:kswortzel@ais.msstate.edu)**Volume 12, Number 2****Spring 1996**[DLA Ejournal Home](#) | [JVTE Home](#) | [Table of Contents for this issue](#) | [Search JVTE and other ejournals](#)

## **DISTINGUISHING CHARACTERISTICS AMONG EXEMPLARY TRAINERS IN BUSINESS AND INDUSTRY**

**James A. Leach**  
**Professor and Director**  
**Human Resource Development Specialization**  
**University of Illinois**

**Running Head: Characteristics of Exemplary Trainers**

### **Abstract**

This article reports on a study of trainers in business and industry. The objective of the research was to describe using behavioral and attitudinal terms, the characteristics that differentiate exemplary instructors from average instructors. The research was conducted in fifteen organizations representing a variety of business and industrial settings in Illinois and Indiana. A research team interviewed a nominated group of exemplary trainers and a comparison group of average trainers. Extremely detailed accounts of high points and low points in recent teaching experiences (i.e., critical incidents) were elicited from each person. The research team then conducted an inductive content analysis of the approximately one hundred fifty self-reported critical incidents. The research results reported include a description of the characteristics which differentiated the exemplary trainers from the average trainers.

**DISTINGUISHING CHARACTERISTICS AMONG EXEMPLARY  
TRAINERS IN BUSINESS AND INDUSTRY**

Accompanying recent unprecedented growth in corporate training is a growing interest in understanding

more clearly what factors contribute to high quality instruction and what distinguishes the best private sector instructors from their colleagues. Attempting to improve performance of others by using master or star performers as models has been advocated for many years and has been used with some success in a number of large companies (Froiland, 1993). However, this strategy has been limited in the education, training and development field where most evaluation effort has been aimed at identifying causes for poor performance.

Numerous studies have addressed the issues of teacher personality and effectiveness in the public school setting. The knowledge, skills, and roles required for success as an excellent teacher have been well described (e.g. Dunkin and Biddle, 1974; Irby, 1978; Shulman, 1987; and Wotruba and Wright, 1975). In fact, 18 years ago Eble (1976) reviewed studies from the beginning of this century and found a "reasonably consistent finding about the earmarks of good teaching" (p.18). Irby (1978) analyzed 16 studies dealing with students' perceptions of teachers. He found similarity on four dimensions: organization/clarity, enthusiasm/stimulation, instructor knowledge, and group interaction skill. Wotruba and Wright (1975) summarized twenty-one studies in which various groups had been asked to identify the qualities of good teaching. The resulting list of the nine most frequently named characteristics include: communication skills, positive attitude, knowledge, organizational ability, enthusiasm, fairness, flexibility, encouraging, and good speaking skills.

Most studies stressed knowledge and organization of subject matter, skills in instruction, and personal qualities and attitudes useful in working with students. Where personal characteristics are emphasized in studies, good teachers are singled out as being enthusiastic, energetic, approachable, open, concerned, and imaginative, as well as possessing a sense of humor. In a study using the same general procedures as this study, Schneider and Klemp (1982) identified five general categories of competencies of effective teachers and mentors in degree programs for adults. Exemplary teachers of adults were identified as: (1) having a student-centered orientation, (2) having a humanistic learning orientation, (3) creating a context conducive to adult learning, (4) grounding learning objectives in an analysis of students' needs, and (5) facilitating the learning process.

The knowledge, skills, and roles required for success as a trainer working in business and industry are less well documented. However, there is growing consensus of the knowledge and competencies required of trainers. The American Society for Training and Development (1983 and 1989) and the International Board of Standards for Training, Performance and Instruction (1986 and 1988) have supported research studies to identify competencies required of trainers to perform their roles successfully. The competencies identified are strikingly similar to those needed by public school teachers, especially those instructors working with adults. Leach (1992) developed a profile of characteristics that training managers judged to be associated with excellent training in business and industrial settings. On one hand, those instructors viewed as excellent by their superiors seem to be those who are disciplined and not very independent. On the other hand, they are described as adjusted, assertive, and enterprising. The profile seems to describe individuals who can set and accomplish goals and work well with others in established parameters.

Without question, high subject matter knowledge and skill levels are implicit factors in the formula for trainer excellence. However, even trainers with a repository of knowledge about effective teaching are not always identified as excellent. Certainly there is more than a catalog of knowledge and skills that defines the excellent trainer. Identifying distinguishing characteristics of exemplary instructors will provide a better understanding of their overall character, can provide a potential role model for those interested in careers in private sector training, and may prove useful in the selection of personnel for training and development positions. In addition, identification of distinguishing behaviors can serve as the basis for making adjustments and important additions to procedures and curriculum used in the professional preparation and development of private sector training personnel.

## **Purpose of the Study**

The primary purpose of this study was to enhance the understanding of what contributes to effective instruction in business and industrial settings by identifying distinguishing characteristics and behaviors of

instructors who perform at a high level. More specifically, the following research questions were addressed:

1. What threshold characteristics and competencies do exemplary and average instructors have in common?
2. What are the discrete characteristics and competencies that distinguish exemplary instructors in business and industrial settings?

Guided by these questions, this study attempted to identify characteristics and behaviors exhibited by both average and exemplary instructors (threshold characteristics) and the discrete characteristics and behaviors that differentiate exemplary instructors from average instructors. The findings are useful for helping to establish a framework for recruitment and selection, performance assessment, and staff development.

## **Procedures**

### **Sample**

The research was conducted on-site at 15 major manufacturing and service companies and two hospitals within Illinois and Indiana. Each of these companies was selected because of its large number of instructors working in classroom settings and their willingness to participate in the study. The sample of exemplary instructors consisted of instructors who were employed by these companies and who were judged to perform at a high level. Only 27 instructors met the following criteria for selection as an exemplary trainer:

1. nomination as a high performer (exemplary instructor) by representatives of the HRD management team,
2. nomination as a high performer (exemplary instructor) by instructors from the same company (peer nomination), and
3. verification through student ratings that each nominee is an "outstanding performer."

No specific criteria for nomination as an exemplary instructor were provided to HRD managers or instructors. It is assumed that exemplary instructors were nominated based on a combination of performance criteria and perceptions based on established reputation. A comparison sample of 26 instructors was selected from the same companies. These instructors were widely known within their organizations, but were not nominated as exemplary instructors. These instructors were deemed to be average trainers since they were not nominated as outstanding performers. Nominations of average or less effective performers were not sought. During the interviews, the interviewee did not know which instructors were identified as the exemplary instructors or average instructors. No attempt was made in the study to select trainers based on the content they taught (e.g. management training and technical training).

## **Data Collection**

A three-member research team conducted critical behavior interviews ([Cambria Consulting, 1986](#)) with individuals in both samples. Critical behavior interviewing is a structured, critical incident-based interview process "designed to uncover precise information on the actions and thoughts that make up competence in a given job" ([Klemp & McClelland, 1986, p. 5](#)). The critical behavior interview is designed to obtain highly specific information regarding key situations where the interviewees felt particularly effective or ineffective on the job. Interviewees are asked a series of open-ended questions and asked to describe incidents centering around (1) a training high point and (2) an incident that with hindsight could have been improved.

Prior to conducting instructor interviews, the HRD manager from each organization was contacted by telephone and then provided a written description of the interview process and questions. At that point the HRD management team rated the trainers as either excellent or average. During the interview phase, trainers nominated exemplary peers. Student ratings were also used to distinguish between exemplary and average

performers.

Interviewees were contacted prior to the interview and encouraged to decide beforehand which critical incidents they would discuss during the interview and to bring notes to the interview regarding the critical incidents. This helped to relieve anxiety on the part of the interviewee and to maximize efficient use of interview time.

To initiate a relaxed environment prior to beginning the interview, the researchers provided a brief introduction of the project and the purpose of the study along with personal information describing the researcher's involvement with the study. Researchers asked permission from the trainer to tape record each interview. All 53 interviews were recorded via audio tape recorder. Subjects were then asked to provide background information about their organization and information about their previous training and educational background.

Subjects were then asked to describe three incidents, two of which were positive experiences and one of which was negative or with hindsight would be altered to produce a more positive outcome. Collectively, the subjects generated 159 critical incidents. The interviewees (trainers) selected their own incidents for discussion. The objective of the interview was to generate detailed information regarding the types of characteristics the trainer demonstrated in the course of the incident and the personal thoughts associated by the trainer with the behaviors. The subjects were asked to explain training events as if they were unfolding again. The subjects were asked to explain what led up to the event and to provide a detailed description of the incident and the outcome. Each interview was scheduled for a minimum of one hour. Some interviews were extended to one and one-half hours or more depending on the amount of information provided by the interviewee.

## **Instrumentation**

An interview guide was developed to record information and provide direction to the critical behavior interview process. The first section of the instrument was used to record background information. Interviewers asked questions regarding the organization, the composition of the training department, and their job scope. In addition, interviewees were asked to describe all types of formal training completed for preparation as an educator in a business environment. To confirm that each interviewee (trainer) spent at least one-third of his or her work time in training related functions, interviewees were asked to describe the key duties of their positions.

Incorporated in the background section of the instrument was a question asking the interviewee to nominate other trainers they considered to be exemplary within the organization. This question assisted the researchers in determining the exemplary trainers within each organization.

The main body of the instrument contained questions to guide the interviewees in their descriptions of three separate critical incidents. First, each interviewee was asked to describe a situation that was a high point. This critical incident focused on individual effectiveness in the training environment. Interviewees were asked to give a description of the critical incident in detail, including events that led up to the incident, a description of the high point, and a description of the outcome of the critical incident. Following the descriptions of the first critical incident, the subjects were asked to use the same procedures to describe a second high point.

After describing two positive critical incidents, the interviewee was asked to describe a low point (i.e., a negative critical incident) using the same procedures. Interviewees were asked how they would change the situations given the same circumstances.

Significant to the study was a question asking the trainer to describe personal characteristics. Each interviewee was asked to describe attributes which made him/her an effective trainer. This question was asked following the first critical incident section and rephrased and posed again at the end of the interview following the description of the third critical incident.

## **Data Analysis**

The 53 interviews were conducted over a period of 12 months. From these interviews, a total of 159 critical incidents were reported and transcribed. Information collected during the interviews was subjected to a thematic analysis. The object of this analysis was to determine those themes (characteristics and behaviors) that were present (or largely present) within the group nominated as exemplary, and absent (or largely absent) within the comparison group of interviewees. Each interview was coded and independently analyzed by three researchers for the presence or absence of characteristics and behaviors. Following the independent assessments, the researchers met to synthesize their analyses. The characteristics and behaviors identified by each researcher were then compared, discussed and revised.

The researchers scanned the transcripts and noted central ideas and grouped key behaviors or competencies together to form general themes. The major themes were: (1) Preparation Skills, (2) Presentation/Instructional Skills, and (3) Group Process Skills.

To clarify statements or word choices, transcripts and tape-recorded interviews were reviewed in depth. Each researcher developed an independent list of key word competencies and behaviors that emerged during interviews he or she had conducted. Next, each of the three researchers reviewed all transcripts independently to confirm the list of behaviors or competencies. In all cases the reviewers did not know whether the transcript was from an interview conducted with an exemplary or an average trainer. The three researchers then met to synthesize the information and determine inter-rater agreement. Only in a few cases did the researchers disagree on whether a behavior cited during an interview was representative of a competency. In such cases, if two of the three researchers agreed that the behavior represented a certain competency, it was included in the tally.

Frequencies were determined for competencies and characteristics identified during the interviews for average and exemplary trainers. Analysis of differences between frequencies was conducted to determine which competencies are threshold in nature (i.e., displayed by both average and exemplary trainers) and the discrete characteristics that differentiate exemplary trainers from their average counterparts.

## **Results**

The results of this study were used to answer the two research questions previously posed in discussion of the purpose of the study:

1. What threshold characteristics and competencies do exemplary and average instructors have in common?
2. What are the discrete characteristics and competencies that distinguish exemplary instructors in business and industrial settings?

The mean years of experience for the average trainer group was four, while the mean for the exemplary trainers was almost nine years of training experience. Actual training experience was characterized by spending at least one-third of work time on training activities and demonstrated stand-up training experience. No trainers with less than two years of stand-up training experience were rated as exemplary.

Threshold characteristics were identified by determining which competencies were exhibited by both average and exemplary trainers. It was determined that each of the competencies identified during the interviews is threshold in nature. Due to the qualitative nature of the study, no analysis to determine statistical significance was conducted. However, a comparison of frequency counts of competencies displayed through behaviors described by average trainers and exemplary trainers revealed only marginal differences between the groups. That was not the expected result. It was expected that when compared, the frequencies of some competencies would be much greater in the exemplary trainer group than in the average trainer group. Keep in mind that comparisons were not made with poor trainers where differences would likely have been greater.



The threshold competencies and the number of both average and exemplary trainers who provided evidence of the competency in their descriptions of critical incidents are reported in Table 1. It is important to remember that the trainers were not asked whether they use these skills. The table reflects only a summary of the number of trainers who described use of the competencies in their descriptions of critical incidents. The list of competencies emerged from the descriptions of critical incidents provided by the trainers and is not intended to represent all competencies required of trainers. In order to be included in the list of competencies, a competency had to be described by at least 10 trainers in the descriptions of their critical incidents. It is, therefore, possible that competencies omitted from the list could have changed the outcome somewhat.

Table 1. Number of Average and Exemplary Trainers Who Described Use of Threshold Competencies In Critical Incident Descriptions

Competencies	Number of Trainers	
	Average	Exemplary
	n = 161	n = 228
Sets goals and objectives for training	17	22
Develops lesson plans	13	17
Keeps current and up to date	10	13
Conducts needs assessments	14	21
Provides advice to students	6	4
Designs instruction so it is easily understood	12	24
Provides positive reinforcement	14	14
Blends different training techniques	25	26
Uses questioning to involve participants	8	12
Facilitates group learning activities	7	16
Clearly explains concepts	7	13
Presents training in a logical sequence	8	10
Recognizes and attends to individual differences	9	13
Explains complex ideas so they can be easily understood	4	10
Evaluates effects and impact of training	7	13

As was mentioned earlier, trainers were also asked to describe personal characteristics that they believed helped them to be effective. Again, it was assumed that differences would emerge between the average and exemplary trainers. However, no differences were found. Trainers from both groups identified the following categories of personal characteristics as helping them to be effective: (1) responsiveness, (2) enthusiasm/high energy, (3) humor, (4) sincerity/honesty, (5) flexibility, and (6) tolerance.

Further analysis of the interview data did, however, provide information to help determine the discrete characteristics and behaviors that distinguish exemplary classroom instructors in business and industrial settings. Assuming that the critical incidents are representative of their behavior in the classroom, exemplary trainers appear to have the ability or willingness to operationalize certain important personality characteristics into discrete behaviors that their average counterparts do not.

Because the researchers expected a difference between the two groups, the validity of the self-reported personal characteristics was examined further. The interview transcripts were examined again. This time,

however , the researchers were looking for evidence described in the critical incidents of the espoused personal characteristics reported by both groups. Results of this analysis indicated that, although both average and exemplary trainers described themselves as possessing similar personal characteristics, the exemplary trainers seem to exhibit (as described in their critical incidents) certain personal characteristics more often than the average trainers. The categories of personality characteristics cited by both average and exemplary trainers and the number of trainers for whom evidence was found in the description of their critical incidents to support behavior associated with the characteristics are reported in Table 2.

Table 2. Number of Average and Exemplary Trainers Who Described Behavior Associated with Espoused Personal Characteristics

Personal Characteristics	Number of Trainers	
	Average	Exemplary
	n = 34	n = 100
Responsiveness	12	27
Enthusiasm/High energy	2	12
Humor	5	14
Sincerity/Honesty	6	18
Flexibility	6	17
Tolerance	3	12

### Exemplary Trainer Profile

By first identifying threshold competencies and behaviors of both average and exemplary trainers and then analyzing critical incidents against the self-reported personal characteristics, the following profile of the exemplary trainer was assembled.

Results of this study indicated that there is little difference between exemplary trainers and their average counterparts with regard to their perceived competence associated with instructional skills and techniques. However, this study did not actually assess their instructional competence. It is likely that the exemplary instructors were, in fact, better able to use their instructional skills. In addition, both groups described certain categories of personal characteristics as important for effective training. What distinguished the exemplary trainers in this study is their ability to translate espoused personal characteristics into discrete tangible behaviors.

### Responsiveness

The exemplary trainers not only demonstrated a concern for the mechanics of training but also a concern for the participants. Throughout their descriptions of critical incidents, exemplary trainers demonstrated their responsiveness by expressing interest in the individual learner, by listening, by accommodating individual differences, by establishing a rapport with participants, and by using relaxed mannerism during training. Becoming involved with the participants is apparently an important reason the exemplary trainer excels in the profession. The exemplary trainers described situations where they were receptive to comments and questions and were eager to promote and generate pertinent discussion. The exemplary trainers described situations where they chose pertinent questions based on the dynamics of the group to which they were presenting. Exemplary trainers appear to know when it is important to generate and engage in

pertinent discussion. They also appear to know when and how to appropriately end a discussion. The descriptions of critical incidents provided by average instructors did not exhibit this high level of responsiveness to student interests and needs. The descriptions portrayed a much more mechanistic approach to instruction with emphasis placed on, and an apparent sense of pride in, accomplishing the instructional task at hand despite constraints such as limited amount of time and different backgrounds and characteristics of students.

### Enthusiasm/High Energy

The exemplary trainers described incidents that revealed enthusiasm not only during the training event but prior to training and in most aspects of their work. The exemplary trainers described optimism towards training projects. Twenty-two of the 27 exemplary trainers interviewed described activities associated with formally planning ahead for future projects. The exemplary trainers described cases where they used the actual training setting as a means to improve future training. During the critical incidents described, most exemplary trainers described time-consuming activities that require a high energy level. Most of the exemplary trainers described intentionally creating an up-beat climate for the participants. Paramount for exemplary trainers was their overall ability to prepare for the training event. Exemplary trainers described placing emphasis on having a thorough knowledge of the training content prior to conducting the training. Exemplary trainers were willing to commit time to educating themselves to become fully competent to deliver a training program. Less than one-third of the exemplary trainers were subject matter experts in the field(s) for which they provide training prior to assuming the role of trainer. The majority of the exemplary trainers indicated that they became experts on the content of the training while working in the training department. Both average and exemplary trainers focused on the importance of knowing the material in-depth prior to conducting the training. Many reported that they conduct needs assessments and prepare detailed lesson plans prior to training. However, the extent to which the average instructors provided specific examples of behavior that demonstrated genuine enthusiasm for conducting training was far less than their exemplary counterparts.

### Humor

Twenty-two exemplary trainers described themselves as having a sense of humor. Most cited efforts to make the training fun for participants. The exemplary trainers cited many cases where they poked fun at themselves during training. Almost all exemplary trainers spoke of incorporating humor in conjunction with personal, real life stories and examples during training to relax the trainees and create an open environment. By contrast, the critical incidents described by average instructors rarely included reference to use of humor in the classroom.

### Sincerity/Honesty

Exemplary trainers described reasons for and actions which demonstrated a true interest in delivering the training to the best of their ability. Several exemplary trainers demonstrated the importance of establishing a clear sense of direction during training to reduce participant anxiety. Several spoke of taking every participant question seriously. A number of incidents described by exemplary trainers dealt with not pretending to have answers to questions when they did not and providing honest feedback on performance. The average instructors provided much less description of specific actions that demonstrated sincerity and honesty.

### Flexibility

Regardless of the amount of preparation prior to the training event, the exemplary trainers described incidents where they recognized the need to adjust, alter, or eliminate material during the training, based on the unique needs of the participants. Exemplary trainers described how they may eliminate less pertinent material to meet a time constraint. Most of the exemplary



trainers specifically cited incidents where they instantaneously adjusted the content of instruction to accommodate participants' unique needs. Exemplary trainers in this study described the ability to diverge from prescribed material, alter or eliminate less pertinent material, and explore new areas outside the outlined course material. Over half of the average trainers reported using questioning but were less likely to probe or generate lengthy discussion not previously outlined in the training curriculum. On the contrary, the majority of exemplary trainers were less likely to be concerned with losing control of the classroom training. They described situations where they stimulated pertinent discussion and determined the appropriate time to revert to the outlined course material. Almost all of the exemplary trainers reported that they regularly diverge from prescribed training material once the training commences. Pertinent discussion was seen by exemplary trainers to exemplify a successful training event.

## **Tolerance**

Exemplary trainers described situations where they thought it was important to maintain a positive attitude and tolerate disruptions during training. The majority of negative critical incidents described by average trainers dealt with situations where the trainer became angry or frustrated during training and therefore lost composure during the training event. The exemplary trainers rarely described critical incidents where that occurred. By contrast, the exemplary trainers described situations where they did not take participant criticism as a personal attack. Conflict resolution in a positive and professional manner was described by many exemplary trainers. Related to tolerance, many exemplary trainers described incidents where they were willing and able to accommodate different learning styles.

## **Implications**

The Exemplary Trainer Profile developed as a result of this study may provide important information for HRD managers and trainers. The profile can be used by organizations as a guide for recruiting and hiring trainers. Characteristics identified in the profile such as enthusiasm, humor, flexibility, and tolerance can be identified within the context of employment interviews and simulation activities. Competencies and characteristics identified in the profile can serve as selection criteria for new hires. It is likely that new hires who are predisposed to the characteristics of exemplary trainers will be more likely to become exemplary trainers than those without the characteristics.

The Exemplary Trainer Profile along with the competencies and behaviors identified in this study can be used as evaluation tools to assess current effectiveness of trainers in an organization and can serve as a cornerstone of staff-development efforts. Critical incident interviews could even be used as an evaluation and/or screening tool. Trainers can work toward improving specific competencies and incorporating deliberate behaviors that display the personal characteristics of exemplary trainers.

Most of the evaluation and staff-development efforts in the training and development field have focused on what causes or contributes to poor performance. Much of the emphasis has been on discovering what trainers need to know to be effective. Basing hiring decisions and staff-development activities on information obtained by identifying the best trainers and determining what they do to achieve exemplary results will, by itself, not create a staff of star performers. Exemplary performance in any field is usually the result of a variety of factors including effective management and well designed jobs and organizations. However, basing training staff assessment and development decisions and activities on proven accomplishments and behaviors of exemplary trainers rather than solely on knowledge of subject matter content and training methods appears to hold promise.

An important question that this study did not address is what the exemplary trainers did not do. What the exemplary training staff did not do may contribute significantly to their excellence. Another question which emerged from the study is the effect of experience on quality of performance. The average training staff possessed approximately four years of experience while the exemplary training staff had approximately nine

years of experience. The question of the extent to which the difference in performance is solely a function of experience needs to be investigated.

## References

- Braskamp, L. A., Brandenburg, D., & Ory, J. (1984). *Evaluating teaching effectiveness: A practical guide*. Beverly Hills: Sage Publications.
- Cambria Consulting. (1986). *Critical behavior interviewing*. Boston: Charles River Consulting
- Dunkin, J. J., & Biddle, B. J. (1974). *The study of teaching*. New York: Holt, Rinehart, and Winston.
- Eble, K. E. (1976). *The craft of teaching*. San Francisco: Jossey-Bass.
- Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin*, 51(4).
- Froiland, P. (1993). Reproducing star performers. *Training*, Sep. 93, p.33.
- Gordon, J. (1992). Industry Report. *Training*, Oct. 92, p. 25.
- International Board of Standards for Training, Performance, and Instruction (IBSTPI). (1986). *Instructional design competencies: The standards*.
- International Board of Standards for Training, Performance, and Instruction. (1988). *Instructor competencies: The standards*, 1.
- Irby, D. M. (1978). Clinical faculty development. In L. Ford (Ed.). *Clinical education for the allied health professions*. St. Louis: C. V. Mosby Company.
- Klemp, G. O. and McClelland, D. C. (1986). What characterizes intelligent functioning among senior managers? In Sternberg, R. J. and Wagner, R. K. (Eds.), *Practical intelligence: Nature and origins of competence in the every day world*. Boston: Cambridge University Press.
- Leach, J. A. (1992). *Private Sector Instructors: The Nature of Effective Vocational Educators Working in Business and Industry*. National Center for Research in Vocational Education. University of California, Berkeley.
- McLagan, P. A. (1989). Models for HRD practice. *Training and Development Journal*, 43(9), 49-59.
- McLagan, P. A. (Ed). (1983). *Models for excellence: The conclusions and recommendations of the ASTD training and development competency study*. Washington, D. C.: American Society for Training and Development.
- Schneider, C. G., & Klemp, G. O. (1982). *Competencies of effective teachers and mentors in degree programs for adults*. Unpublished manuscript. University of Chicago: Chicago.
- Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Wotruba, T. R. & Wright, P. L. (1975). How to develop a teacher rating instrument: A research approach. *Journal of Higher Education*, 46(6), 653-663.



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License](#).

URL: <http://scholar.lib.vt.edu/ejournals/JVTE/v12n2/leach.html>

Last modified: 12/10/09 10:47:20 by Zulfia Imtiaz