Improving International Project Success

Kurt H. Becker and Gary Stewardson

There are numerous elements necessary for developing nations to transition into the world economy and raise the standard of living of their citizenry. One element is a skilled workforce. Countries looking to develop a skilled workforce often look for assistance from other countries. International expertise and resources come through projects funded by world loans or through economic aid from developed countries. "Vocational and technical education play important economic and social development roles" (Herschbach & Campbell, 2000, p. 19) in the international development process, and opportunities are available for professionals in the field of vocational and technology education with attributes to assist the international development process. Taking advantage of these opportunities enables those in the profession to gain international recognition for themselves and for the discipline, to assist underdeveloped nations in technological development, and to reap the financial rewards of international consulting.

Various vocational training projects are employed throughout the world, each utilizing models with varying degrees of success. Factors that affect the success of projects within these countries include (a) a comprehensive model to meet the needs of the country and (b) international and domestic consultants with attributes to facilitate the model. How these factors are used to enhance the success of vocational training projects is illustrated in the following.

Comprehensive Model

For a project to be successful a comprehensive model must be utilized to meet the needs of the host country. When properly designed and orchestrated, the model can produce quality outcomes and have a tremendous positive impact on the progress of a country.

With the fall of the Soviet Union, there has been a need for the development of economic and technical training programs in Central and Eastern Europe. The U.S. Department of Labor (USDOL), through the U.S. Agency for International Development (USAID), has implemented several development projects in this area.

Experience gained during the early 1990s by USDOL technical assistance experts working in Central and Eastern Europe to help workers and communities severely impacted by economic restructuring led to the development of a comprehensive adjustment model or strategy comprised of four components. This model has proven successful over the past few years. Figure 1 illustrates the model that is achieving success in the region. The objective of this strategy is to reduce the serious worker and community adjustment problems caused by the privatization and restructuring of state-owned enterprises. When governments adopt this model and use it in a systematic and integrated manner with other active labor market measures, it reduces the economic and social costs of adjustment, shortens the time required for training, and facilitates the transition to a market economy (USDOL, 1998).

The USDOL adjustment model is comprised of the following four components:

- *Rapid response worker adjustment component* to plan, organize, and facilitate the transition of workers to new jobs.

Figure 1. USDOL model.
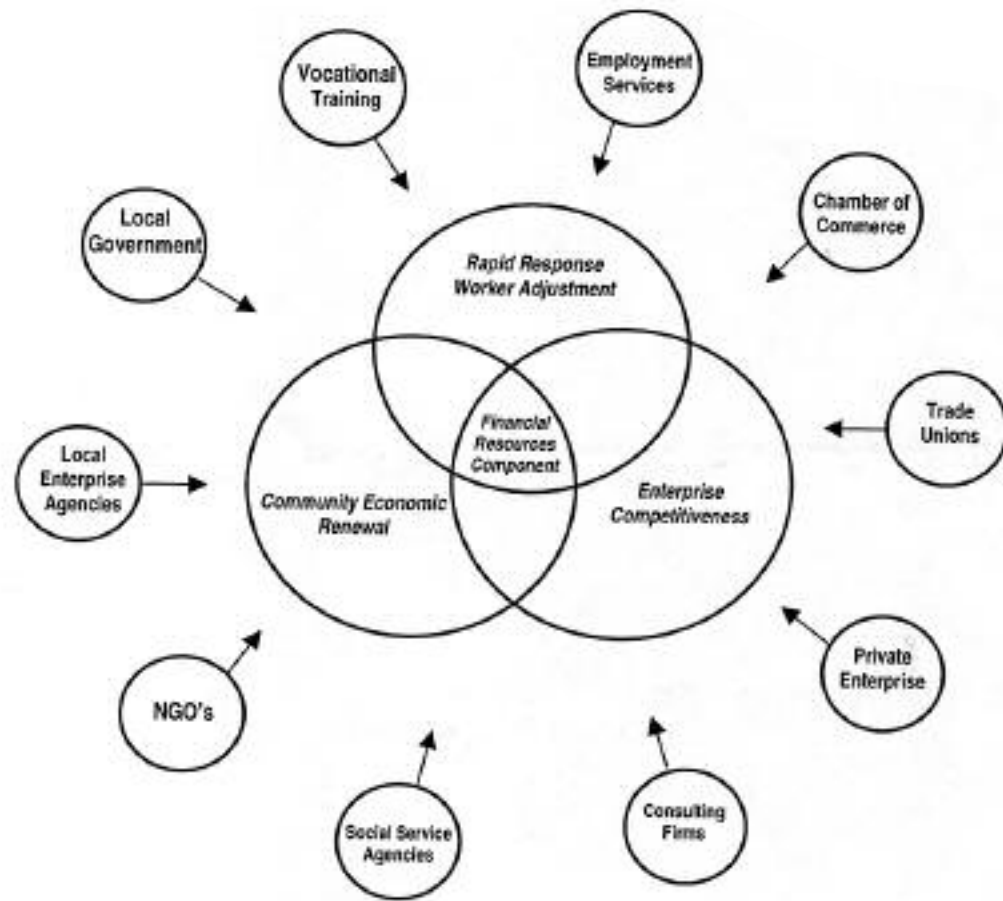
• *Community economic renewal component* to stimulate local economic development efforts and generate new jobs in communities impacted by enterprise restructuring.
• *Enterprise competitiveness component* to strengthen surviving enterprises and preserve jobs.
• *Financial resources component* to provide funds to implement the worker, community, and enterprise adjustment components.

Rapid Response Worker Adjustment Component

The rapid response worker adjustment component is implemented by a small group of highly skilled industrial adjustment (IA) specialists who function as a rapid response team. IA specialists facilitate the timely organization and implementation of a systematic worker adjustment process in enterprises and communities undergoing economic restructuring. They work with restructur-

ing state-owned enterprise managers and worker representatives to develop and implement plans to provide adjustment services and programs in order to transition large groups of workers to new employment as quickly as possible. In addition, they provide technical assistance to help develop and implement effective community economic renewal and enterprise competitiveness strategies.

Whenever possible, IA specialists work with state-owned enterprise managers and function as the primary mechanism to:

• Conduct surveys to determine worker needs.
• Plan and organize "in-plant" pre-layoff services.
• Establish an outplacement or resource center in the plant if one is needed.
• Arrange for the delivery of pre- and post-layoff employment and training services to workers being dis-

placed, including job search training, job development, job placement, self-employment help, vocational counseling, retraining, financial planning, remedial education, entrepreneurial training, and other forms of employment assistance.

Community Economic Renewal Component

The community economic renewal component of the USDOL adjustment model helps communities and regions experiencing restructuring, downsizing, or enterprise closures to develop and use a systematic business growth, job retention, and job creation strategy to begin or expand local economic development efforts.

IA specialists work with government, business, and labor leaders in communities experiencing economic restructuring and privatization to help them better understand the essential local economic development principles and processes

required to revitalize their economies. Implementing the community economic renewal process creates a new sense of "community" and direction in the face of serious economic threats.

Enterprise Competitiveness Component

The enterprise competitiveness component helps state-owned enterprises undergoing restructuring and downsizing, as well as other business enterprises in the impacted communities or region, to become more productive and competitive in the global economy. Healthy enterprises provide more secure jobs for their managers and workers and generate additional jobs in the community.

IA specialists help communities and enterprises accomplish these objectives by providing information to enterprise management and worker representatives about innovative techniques and programs that can be made available to help them strengthen their enterprises, by helping them to assess their situation, and by arranging for or delivering specific enterprise competitiveness training and technical assistance services. The enterprise competitiveness component is an integrated approach that includes five essential elements:

1. **Upgrading workers' skills** by aiding restructuring state-owned enterprises and other enterprises to help increase their competitiveness or expand their operations by using Quick Start training to upgrade their existing workers' skills or to train new workers.

2. **Improving labor-management relations** by providing Training for Partnership and Interest-Based Problem-Solving workshops that teach managers, workers, and union officials in affected enterprises and communities the techniques that can be used to solve problems, build cooperative partnerships, and generate high-performance workplaces.

3. **Increasing productivity and reducing costs** by helping restructuring enterprise managers and their unions to establish plant-level productivity improvement and cost-saving projects to reduce costs and increase productivity.

4. **Improving human resource utilization** by helping restructuring enterprises to develop and implement strategies that improve human resource utilization to preserve jobs.

5. **Maximizing joint competitive advantage of small enterprises** by assessing the need and opportunity for interfirm cooperation and collaborative networks of small companies in communities or regions to help them maximize their joint competitive advantage in the global marketplace.

Financial Resources Component

The financial resources component provides the money to pay for adjustment components. The financial component can be organized and implemented in several ways:

• USAID funds that are allocated for adjustment projects in countries are normally placed under the control of the USDOL Worker Adjustment Project.
• Salaries of IA specialists and operating costs of IA teams are normally provided by the government from funds budgeted to the ministry of labor, employment service or national labor office, or through other appropriate agencies.
• Some resources may also come from the proceeds of grants or loans provided by international agencies and donors (USDOL, 1998).

The USDOL model has proven to be successful because it utilizes components that focus on a structured involvement from communities, worker adjustment to prepare for market changes, enterprise competitiveness to stimulate the workforce, and strategic funding. All of these are necessary to produce gains to the host country.

The enterprise competitiveness component of the USDOL model addresses vocational training and uses IA or "Quick Start" specialists. These specialists or consultants work with employers and training organizations to design Quick Start training programs that provide specific upgrade or skill training for existing workers or unemployed workers who will be hired to meet the needs of business. Quick Start is a short-term training or retraining program that is specifically designed for new, expanding, or restructuring companies that must retrain their workforce because of changing products, technology, or production processes (Hansen, 2001). Short training schedules mean that an enterprise receives a quicker return for its investment, as do employees and the agency providing the financial resources.

The seven steps involved in developing a Quick Start program consist of:

• Establishing a labor office/business/training linkage.
• Implementing a systematic training development process.
• Developing training curriculum and materials.
• Selecting and training instructors.
• Recruiting, screening, and selecting trainees.
• Conducting skill-training program(s).
• Evaluating the results.

Following this procedure produces an effective result for vocational training. Professionals of vocational and technology education are well suited to engage in a component such as this because of a strong background in vocational curriculum development and a well-rounded technical expertise in various trades. To date, several countries in Central and Eastern Europe have successfully implemented Quick Start including Poland, Bulgaria, Hungary, and Macedonia. In Poland Quick Start has been successfully used in the coal mining industry. As the mining industry started closing facilities because of the reduced demand for coal, displaced workers needed training in other fields and miners who were not

being displaced needed cross training in other areas of mining. The Quick Start system was used effectively to cross-train mining workers in a reduced timeframe giving the industry the flexibility to better utilize the existing workforce. In Bulgaria it has been used in the textiles, machining, and automotive industries. In Hungary it has been used in the printing industry, and in Macedonia it has been used in the computer design, textiles, and publishing industries.

Consultant Attributes

In addition to having a model that proves to be successful, another factor that affects the success of international projects is using international and domestic consultants who possess the attributes necessary to implement the model. Consultants play a vital role in determining if project goals are met. International and domestic consultants work together to facilitate the model within a country, each having specific jobs related to the project.

Consultant Barriers

The international consultants have many challenges because the transfer of successful vocational training systems from one culture to another is not a simple task. There are a variety of barriers that exist when facilitating international projects; in fact, barriers exist within every culture, some obvious and others not so obvious. Making matters more difficult, the barriers change with each country and sometimes within regions of the same country. It is important that an international consultant be aware of barriers that include (a) language, (b) resistance to change, (c) sustainability, and (d) culture.

Language is an obvious barrier if you do not speak the language of the host country. Language as a barrier is the case in many situations. Translators/interpreters assist with the language barrier. Professional translators/interpreters not only make the international consultant understood, but assist with organization and dissemination of information. Additionally, they assist the international consultants with the flow of the training

and facilitate activities during the training. International consultants should establish a good working relationship with the translator/interpreter.

Resistance to change is another barrier that is obvious, but often ignored. It is human nature: People tend to resist change. Wilson (1992) stated that nobody changes unless the pain is intolerable or the gain is overwhelmingly attractive. Consultants working on international projects must communicate the benefits of change to the host country and play an important role in promoting the change necessary to make the project successful and sustainable.

Sustainability is the mark of a successful project. Sustainability requires the local people to embrace change and the practice of new techniques. The international consultant from the first day on the job must continuously review the methods used for sustainability for any given country. Sustainability tends to be one of the most difficult obstacles or barriers for an international consultant. The international consultant must map out a clear plan to the domestic personnel.

Culture is a barrier that may be less obvious to the international consultant, but is still important and must be identified. Having knowledge of cultural differences is important for an international consultant. An example of a simple cultural barrier that cannot be ignored is one that surfaces during training. The consultant should be aware that in some cultures there is a need for extended breaks. Training in Western culture acknowledges short breaks (10 to 15 minutes) while in other cultures longer breaks are preferred (30 minutes). In our Western culture we usually take lunch at 12:00 noon and other cultures take a large meal at 1:30 p.m. This slight change in the training format can assist in keeping the trainees comfortable and happy during the training and allow the message of the consultant to be accepted.

Overcoming Barriers

Understanding that barriers exist is critical for international consultants to be

successful. To overcome barriers that exist when facilitating international projects, consultants should exhibit certain traits and skills. These include:

• Being able to customize a model.
• Understanding the culture.
• Implementing a data collection system.
• Being able to establish articulation between consultants.

One of the most important traits that an international consultant should exhibit is the ability to customize a model to meet the needs of the host country. Consultants many times overlook this process as they assume that the model used in one country will work in other countries or locations. This is simply not the case. Many times the existing model needs to be modified. Subtle changes in the way the model is orchestrated can mean the difference between success and failure. Customizing a model to a specific country's needs may involve working closely with a domestic consultant. A domestic consultant can assist to determine what changes will and will not work. The domestic consultant may assist in identifying local personnel who can effectively contribute in leadership positions and give perspective and understanding to the current economic conditions of the country. Domestic consultants should work closely with international consultants to identify critical infrastructure needs and jointly facilitate the process. The international consultant needs to have a strong tie to the domestic consultant. When a host country provides a domestic consultant, there needs to be constant articulation between the domestic and international consultants.

Another trait that successful international consultants exhibit is the ability to learn about the culture of the host country. The translator/interpreter can assist with learning some basic language of the country. This can include simple greetings and words related to the project or training within the project. Learning about a country's history, customs, food, etc., is useful because it will not only give information that will aid in understanding

the culture, but also will stimulate further dialog and build trust. Consultants are more likely to have success with an increased understanding of the culture.

The ability to implement a comprehensive data collection system is another important trait that international consultants should exhibit. When a quality system is in place and administered properly, the aid country and host country can both see tangible outcomes. The data collection system should have a clear design that can be effective, be able to collect comprehensive data, and have an evaluation component to monitor the results. This requires collecting data at the outset of the project and continuing throughout the entire project. With a system in place, monitoring successes and/or failures can be done. The system can determine if the project is performing as it is supposed to, when it is getting off track, and what corrective measure should be implemented to get it back on track. It is extremely important that the data collection system involve the international consultant working directly with domestic consultants at the national, regional, and local levels. Each party should have a clear vision as to how the results of the data are used and the benefits to the host country.

Another trait that international consultants should exhibit is the need to articulate with domestic consultants at the

national, regional, and local levels. Project success is magnified with articulation between the groups. There are several reasons why articulation is important. As stated earlier, cultural change is slow. Without a direct hands-on relationship, the domestic consultants may not fully recognize the value-added benefits of the project. It is important that the domestic consultants understand the benefits and are motivated to continue the work in progress once the international consultants withdraw from the project. The domestic consultant is a link to enhance project success and sustainability.

Vocational and technology education professionals are in a unique situation when it comes to international development since there is the need for technical training in underdeveloped countries throughout the world. As vocational and technology education professionals become involved in international projects, it is important that certain traits are utilized. Perhaps the key to being a successful international consultant is to be sensitive to possible barriers and be flexible and willing to modify the process as needed. In addition, using an effective model with consultants that have the necessary attributes to assist in project success is required. Each project brings with it a unique set of circumstances and it is important to realize the following:

• International consultants play an important role in the overall facilitation of a project.
• International consultants give direction to the project and oversee modifications to the proposed model; their leadership is imperative.
• Domestic consultants should be involved to increase articulation at various levels of project organization.
• Project sustainability requires articulation with domestic consultants.
• The Quick Start model has proven successful in many countries.
• Using a model with the components of the USDOL model can promote success within the project.

International consulting is an exciting part of the vocational and technology education discipline and can prove very rewarding for those who participate. As professionals in the field get involved, this will assist in promoting the discipline in a positive light and open new doors to other cultures.

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Selected Factors of Teaching Effectiveness: Perceptions of Apprenticeship Trainers

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It is theoretically impossible to measure a teacher's effectiveness by measuring only student achievement (Biddle & Ellana, 1964; Medley, Coker, & Soar, 1984). There is no scientific method of separating what and how much a pupil learned from the teacher, due to all other extraneous list of traits attributed to the teacher (Sikora, 1997).

Kindsvatter, Wilen, and Ishler (1988) addressed seven assumptions and beliefs basic to effective teaching:

• The quality of teaching is directly contingent upon the quality of the decision making that precedes that teaching.
• Teaching is a complex behavior.
• Teaching is a learned behavior.
• Instruction should be based on the most effective strategies, methods, techniques, and behaviors as determined by current research and learning.
• Students must be motivated.
• The social settings in which instruction occurs is a major factor affecting that instruction.
• Teaching in the final analysis is a personal invention.

The results of teaching have been studied in terms of student achievement, adjustment, attitudes, socioeconomic status, and creativity (Nwagwu, 1998). Despite all these activities, no studies have examined the factors underlying teaching effectiveness as perceived by apprenticeship trainers.

Under a proposed five-year strategic plan for the new federal workforce development law, the U.S. Department of Labor aims to increase by 10% the total number of registered apprentices and the number of women in such programs. The plan, which outlines the department's vision for the 1998 Workforce Investment Act (WIA) from 1999 to 2004, proposes to increase the number of individuals in registered apprenticeship programs from 415,262 to 458,482 over five years. It also targets to increase by 10% (from 8,748 to 9,897) the number of women in such programs by 2004 (Dembicki, 1999).

The current emphasis on educational reform in our nation's schools should be forcing us to examine the underlying factors of teaching effectiveness. As work and technology issues increase, apprenticeship trainers must be effective in preparing apprentices for their future roles in selected allied trades (e.g., industrial painting, wall covering, drywall finishing floor covering, glazing, sign painting).

What We Sought to Do

The following objectives guided this investigation:

• To identify factors underlying apprenticeship trainers' perceptions of teaching effectiveness.
• To describe the level of importance of teaching effectiveness as perceived by apprenticeship trainers.
• To determine if significant differences existed in mean scores among four groups of apprenticeship trainers' perceptions toward selected factors of teaching effectiveness.
• To compare perceived level of teaching effectiveness of apprenticeship trainers by age groups.

How We Proceeded

The target population was apprenticeship trainers of allied trades from all 50 states and Canada. The accessible population for this exploratory study consisted of apprenticeship trainers ($N = 306$) who attended the annual International Union of Painters and Allied Trades (IUPAT) four-day seminar at Marshall Community and Technical College during the summer of 1999. A registration list of the four-day event was obtained from Marshall Community and Technical College and served as the frame for the study. The apprentice trainers who comprised the population of the study were operationally defined as prospective trainers of trainers.

According to Krejcie and Morgan (1970), a sample size of 169 is needed to represent a population of 306 when a simple random sample is drawn. However, Tatsuoka (1982) cautioned that when stratified samples are used rather than simple random samples, smaller samples should be drawn to more accurately represent the population because the design effect is less than one for stratified samples. Therefore, the sample size recommended by Krejcie and Morgan was reduced from 169 to 150 and was drawn as a proportionally stratified sample composed of 48 first-year apprenticeship trainers, 45 second-year apprenticeship trainers, 30 third-year apprenticeship trainers, and 27 fourth-year apprenticeship trainers.

A two-part questionnaire was developed by the researcher. The first part of the instrument asked participants to determine their perceptions of teaching effectiveness.

A 5-point Likert-type scale was used (1 = *not applicable*, 2 = *unimportant*, 3 = *important*, 4 = *very important*, and 5 = *essential*). Muller (1986) stated that using a scale with a middle category seems to work as well as a scale without a middle category. The second part of the instrument asked participants to provide pertinent demographic information.

Content and face validity for the instrument were established by a panel of experts consisting of university faculty, community college administrators, and business and industry personnel. Fourteen purposely selected adult and technical education graduate students served to establish reliability of the questionnaire. The resulting Cronbach's alpha reliability coefficient for internal consistency was .8817.

The instrument was administered by the coordinator of the seminar on the third day of this four-day event. However, this time period of administration proved to be less than ideal as indicated by a return rate of only 53% (79) usable questionnaires. Caution is warranted in generalizing the results beyond the accessible sample.

What We Learned and What It Tells Us

Data were analyzed with the SPSS for Windows computer program. Appropriate statistics for description were used including frequencies, percentages, means, and standard deviations.

Factor analysis (principal components with varimax rotation) was used to identify factors underlying apprenticeship trainers' perceptions of teaching effectiveness. Procedures for conducting the factor analysis were patterned after those of McCaslin and Torres (1992). Analysis of variance was used to test for significant differences among the subsamples of apprenticeship trainers on their perceived factors of teaching effectiveness. When significant differences were observed, the Duncan's multiple range test was used to identify where differences existed.

The data on apprenticeship trainers indicated that a majority (89.9%) of the respondents were male, 10.1% were female. This finding is supported by data reported by Dembicki (1999). According to Dembicki, the U.S. Department of Labor aims to increase by 10% the total number of women participating in apprenticeship-related areas.

The characteristics collected from apprenticeship trainers also revealed that over 30% fell within the 35 and 45 age brackets. In addressing the educational level, almost two thirds (62.0%) of the apprenticeship trainers reported having completed college credits beyond the high school level. Apprenticeship trainers reported an average of 16.26 years of employment ($SD = 9.54$) in their current or most recent occupation.

To discern whether there was clustering among the items, the ratings of respondents were subjected to factor analysis (principal components with varimax rotation). The analysis resolved the 51 items into 10 factors including a dominant one that accounted for over two fifths of the total variance explained. A factor is a set of individual questionnaire items that coalesce into an entity on the basis of their intercorrelation, presumably on the basis of their conceptual similarity.

The 10 factors accounted for 70.7% of the total variance. Factor loadings ranged from .51 to .81. According to Hair, Anderson, Tatham, and Black (1998), loadings of .30 are to be considered significant; loadings of .40, more significant; and loadings over .50, very significant. As indicated above, it is presumed that factors are held together by an underlying theme or concept. This underlying theme provides a basis for their naming. In order of percentage of variance explained, the 10 factors in this solution were named as follows: faculty-student interaction, classroom management, professional development, enthusiasm, students participate in evaluation, socialize with students, procedures and policies, positive individual attention, communication and feedback, and atmosphere for respect.

Examination of the faculty-student interaction factor indicated that it was dominant, explaining 29.7% of the variance. It was also revealed that the items in this factor, for the most part, refer to a process of encouragement and involvement of students in learning activities. In the survey of people nominated for the 1999 All-USA Teacher Team, respondents reported that interaction with students and influence of students' lives ranked highest among items that teachers found to be rewarding about their jobs (DeBarros, 1999).

The remaining nine factors each explained relatively small amounts of variance. The atmosphere for respect factor was comprised of a single questionnaire item. In a strict sense, a single item cannot constitute a factor. However, "respect" for apprenticeship trainers must in this context be taken as a special case—an important outlier. The fact that it did not correlate with other questionnaire items did not diminish its value. Indeed, this item had a factor loading of .79, *very significant*, and virtually the highest among the 51 questionnaire items. DeBarros (1999) reported that, in general, students respect teachers.

Apprenticeship trainers agreed that it was *very important* ($M = 4.50, SD = 0.73$) for instructors to be at all scheduled classes. Respondents were more likely to agree that it was unimportant ($M = 2.65, SD = 0.98$) for students to assist in composing test questions. Almost three fourths (72.54%) of the items were reported as important ($M = 3.01$-3.97) by respondents in this study.

Significant differences were observed among means on 6 of the 10 factors of teaching effectiveness. Duncan's multiple comparison test was used to determine the nature of difference among the four groups of apprenticeship trainers. This analysis revealed that first-year apprenticeship trainers were significantly different from fourth-year and third-year apprenticeship trainers on the faculty-student interaction factor. The data also revealed that first-year apprenticeship trainers were significantly different from third-year and fourth-year apprenticeship trainers on the communication and feedback factor. Second-year apprenticeship trainers also reported a similar pattern for the communication and feedback factor. Communication and feedback are essential tools for helping students understand cognitively what they are doing, what they should and should not be doing, and what adjustments should be made (Rink, 1993).

Apprenticeship trainers from the four different groups did not differ significantly on the following four factors: pro-

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fessional development services, participation of students in the evaluation process, socialize with students, and atmosphere for respect.

Significant differences were observed among means on 5 of the 10 factors (classroom management, explanation of procedures and policies, professional development, communication and feedback, and atmosphere for respect) of teaching effectiveness by age groups.

Apprenticeship trainers within the 35 to 44 age bracket were significantly different (M = 22.67, SD = 4.05) from apprenticeship trainers in the 45 to 54 age group (M = 24.77, SD = 3.25) on the classroom management factor. This finding suggests that apprenticeship trainers within the 45 to 54 age bracket were more likely to have higher mean ratings for classroom management. This finding can probably be attributed to experience within the apprenticeship industry.

The data revealed that apprenticeship trainers who fell within the 25 to 34 age group were less likely to have high mean ratings for the 10 factors of teaching effectiveness when compared with the other age groups.

Based on the results of this study, the typical apprenticeship trainer in this study (a) was more likely to be a male, (b) was more likely to be in the age bracket of 35 to 54 years old, (c) had completed some college credit hours, and (d) had completed an average of 16 years of employment in current or most recent occupation.

In this study, apprenticeship trainers were more likely to report the following statements as *very important* for teaching effectiveness:

• Be at all scheduled classes.
• Be fair and impartial in dealing with

requests.
• Show enthusiasm for students and subject matter.
• Listen to students' opinions and comments.
• Be specific about acceptable and unacceptable behavior.
• At the beginning of class(es), state topics and objectives.
• Give appropriate and considerate responses to questions.

These findings illustrate the importance of these statements as measuring indicators of teaching effectiveness for apprenticeship trainers.

Third- and fourth-year apprenticeship trainers were more likely to report higher mean ratings for the 10 perceived factors of teaching effectiveness when compared to first- and second-year apprenticeship trainers. This finding can probably be attributed to the amount of in-service training completed by third- and fourth-year apprenticeship trainers.

The following perceived factors of teaching effectiveness were highly significant among the four groups of apprenticeship trainers: communication and feedback, faculty-student interaction, and explanation of policies and procedures. The data seem to suggest that communication and feedback, faculty-student interaction, and explanation of policies and procedures are essential factors for assessing teaching effectiveness of apprenticeship trainers. Overall, younger apprenticeship trainers appeared to be less aware of the essential factors of teaching effectiveness.

The following implications and recommendations are offered:

There was not a representative sample of female apprenticeship trainers in this study. This implies that there is a need to recruit and retain more female

apprenticeship trainers. To increase participation, apprenticeship agencies should develop and circulate awareness and education materials to community-based organizations.

Apprenticeship trainers rated almost three fourths of the 51 items as *important* for an instructor to practice. This finding suggests that apprenticeship trainers value a majority of these selected measures of teaching effectiveness as essential for evaluation and assessment of apprenticeship trainers.

First- and second-year apprenticeship trainers were more likely to report low mean ratings for the 10 perceived factors of teaching effectiveness. This probably implies that these two groups have not received sufficient training in the area of teaching effectiveness. Preservice training should therefore be made available to prospective apprenticeship trainers in the area of teaching effectiveness. Mentoring should be provided for incoming and younger apprenticeship trainers.

Research should be conducted to determine the relationship between teaching styles and teaching effectiveness of apprenticeship trainers.

Improving teaching effectiveness is not merely a function of effective reward system, but rather a collaborative function of several factors working together to improve not only what goes on in the classroom but to improve quality of faculty. Apprenticeship trainers must learn a body of knowledge essential for teaching, how to prepare for instruction, and how to deliver instruction to become effective.

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