Interest in the development of human resources has recently increased within the transit industry. Concurrently, the number of professional development programs offered by academic institutions has increased as a result of initiatives by UMTA. Some of the issues relating to professional development, based on the experience of the Institute for Urban Transportation at Indiana University, are discussed. The discussion will successively focus on the general concept of employee development, consider the needs for employee development in the transit industry, and explore five important issues that have emerged from the Institute's experience with professional development programs.

Employee development is defined as all activities designed to enhance the personal capabilities of individual employees and involves three types of activities: (a) apprenticeship training, (b) continuing education, and (c) professional development. There is an important need for employee development within the transit industry because transit is labor intensive and suffers from high managerial turnover rates. However, employee development has received little attention for a variety of historical, economic, and political reasons. Recent developments suggest that the situation is changing and have resulted in the creation of numerous professional development programs. Five issues related to the design of such programs are discussed: choice of topic, choice of faculty, student mix, overall balance of program, and program logistics. In spite of attendant difficulties, these programs offer a unique opportunity to stimulate exchange among industry professionals and to improve the dialogue between the academic community and the transit industry.

There are many types of activities that can be defined as employee development and these will be classified in three basic categories: (a) apprenticeship training, (b) continuing education, and (c) professional development. A distinction will be made here between "employee" and "organizational" development; although both serve to enhance an agency's human resources, this discussion will focus on those activities that deal with the individual's capabilities rather than with group dynamics. A description of the three categories of employee development follows.

**Apprenticeship Training**

Apprenticeship training enables the employee to acquire those fundamental skills that will be required to carry out responsibilities in a given position. In transit, for example, this involves the training received by drivers and mechanics to ensure minimum acceptable standards of professionalism, safety, and dependability. Such apprenticeship training also serves to make employees aware of standard procedures, responsibilities, and expectations. It is above all a mechanism for establishing controls, integrating the employee within the organization, and transforming the employee into a service delivery agent.

**Continuing Education**

Continuing education enables employees to broaden their intellectual capabilities by pursuing educational programs with the intent of eventually obtaining a degree. This can often increase an employee's potential for career mobility and provides a valuable means of increasing employee satisfaction.

**Professional Development**

Professional development is intended to improve employee effectiveness and efficiency in managing present or new responsibilities. Unlike apprenticeship training, which is primarily aimed at achieving integration and control and is often best performed by the agency itself, professional development can often be provided outside the agency. For example, an intensive workshop program at a university, isolated from the professional's daily crises, may provide an environment that is more conducive to upgrading skills or enhancing creativity than is that
at the agency. Before exploring some of the issues that emerged from IUT's experience offering professional development programs, a brief discussion of the need for employee development in the transit industry is in order.

NEED FOR EMPLOYEE DEVELOPMENT IN THE TRANSIT INDUSTRY

Two characteristics of the transit industry make employee development particularly important. First, the transit industry is a highly labor-intensive industry with 73 percent of the industry's operating expenses represented by labor costs (1). Transit is fundamentally a service provided for people by people. Second, the transit industry experiences a high rate of turnover of managers and professionals. This occurs for a variety of reasons including the social pressures generated by the political environment in which transit service is provided (2-4). The high turnover rate underscores the importance of ensuring employee satisfaction and implies that there will always be a need to train newcomers to the industry.

These two inherent characteristics of the transit industry indicate that considerable attention should be given to the human resources involved in the provision of transit service. Reliable, quality transit service requires continuous investment not only in physical capital but also in human resources. However, examination of the industry shows that little recognition has been given to the importance of employee development. First, little money has been spent on training and professional development, and what has been spent is insignificant compared with yearly investments in capital facilities and vehicles. Second, employee development is an important organizational objective in few transit agencies.

Historical, economic, and political pressures provide an explanation of this neglect. First, historical developments, such as the 1934 Holding Company Act, forced the large electric utility companies to divest themselves of their transit holdings. The indirect impact of this was that the transit industry, already in decline, lost its access to the utilities' highly professional management as well as their ability to attract qualified new employees or develop existing human resources (5,p.424). Second, economic pressures resulted from the industry's decline during the 1950s and 1960s. As companies found it increasingly difficult to be profitable, all forms of investment, both physical and human, were forfeited.

Third, in the 1970s most transit operations became public and this often created a political environment. This has had a detrimental influence on employee development; highly political environments lead to crisis management and "fire fighting" and make it difficult for managers to give any rational thought to the needs of the organization and its employees. Furthermore, political environments tend to focus more attention on physical capital decisions than on human resources because of the implicit distribution of funds and power involved and because of their visibility. "Ribbon-cutting" for new rail construction or new buses provides more political visibility than investment in employee training, creating pressures that affect organizational priorities.

These historical, economic, and political pressures have led management of transit agencies and the providers of financial support (local, state, and federal) to neglect the important need for employee development. This lack of interest has, in turn, been reflected in the low level of involvement of the academic community in employee development activities. However, recent changes in attitudes have brought new interest in employee development.

Several factors indicate a growing recognition of the importance of the issue within the industry itself. Individual transit managers have put forth calls for more emphasis in the area (5,p.39). A large consortium of transit agencies was formed in the West to pool resources and provide training for member employees. The American Public Transit Association (APTA) is increasingly interested in employee development as reflected in the topics covered at its conferences.

There is also a growing interest among government agencies. For example, several state departments of transportation have expanded their technical assistance activities to provide training for managers, staff, and board members of public transportation agencies. These training programs, often organized in conjunction with universities or consultants, have involved a variety of topics, from exploring comprehensive approaches to managerial or board-member effectiveness to the teaching of specific skills such as risk management, scheduling, grants administration, or using microcomputers.

At the federal level, both UMTA and FHWA have increasingly involved employee development. UMTA has initiated three important actions to promote employee development. It has encouraged the development of several training programs through research grants. It has considerably expanded the number of institutions endorsed for its fellowship support program. It has designated nine Centers for Transit Research and Management Development; one objective of these centers is to expand professional development opportunities. These three initiatives have resulted in a great expansion of employee development opportunities for the transit industry. FHWA has also become increasingly involved and has made training for managers and officials of small and rural transit systems a component of their regional technology transfer program.

This attention by both management and government has coincided with a period when many academic institutions are seeking new directions and has thus resulted in increased involvement of universities in transit employee development, in particular in the area of professional development programs. It is in this light that the experience of the Institute for Urban Transportation at Indiana University may provide a timely overview of the issues related to providing professional development for transit employees.

PROFESSIONAL DEVELOPMENT: EXPERIENCE AND ISSUES

Professional development (PD) programs offer considerable potential for universities to develop a more active relationship with the transit industry, and this has been proven by IUT's experience of the last 2 years. This experience has helped identify five important issues that affect the design of PD programs: choice of topic, choice of faculty, student mix, overall balance of program, and program logistics.

Choice of Topics

In designing a PD program one of the first problems to consider is the choice of a topic that is both relevant and feasible. Topics chosen for PD programs have varied widely. Some PD programs focus on a specific issue or area of study (e.g., financial management, labor relations); others focus on a specific segment of the industry (e.g., policy board
members, middle managers) and the skills and knowledge these professionals need to perform effectively and efficiently. The methods by which topics are chosen also vary. For example, topics can be chosen through consultation with an industry-based advisory board, through interaction with specific agencies, through observation of current issues of concern to the industry, or through an assessment of relevant expertise that has been accumulated at the institution through teaching or research.

Given the large variety of academic institutions, it is not surprising to find such a variety of PD programs. This is a healthy development as long as two important criteria are kept in mind: relevance and feasibility. In assessing a potential topic it is important to consider its relevance to the transit industry. The purpose of PD programs is to serve the needs of the industry, and academics must be careful to avoid the pitfall of pursuing interesting but irrelevant paths. It is thus important to be sure proposed topics do in fact correspond to industry concerns. Working with advisory groups or specific agencies is one method of doing this. Another is to derive topics from program evaluations filled out by participants.

A related issue is the use of PD programs for disseminating research results. Although such programs can be effective mechanisms, they must be used carefully: the results of academic research need to be framed in terms that are relevant to program participants. It is thus necessary to step back and assess the purpose of the program and relate the program content to the needs of participants.

The second important consideration in choosing a topic is the feasibility of the proposed program. This essentially requires a realistic assessment of the expertise already present at the academic institution (e.g., faculty, staff, existing research, experience, knowledge of topic, previous experience with industry) as well as potential complementary outside sources of expertise. One must be realistic: if the topics chosen are not relevant or cannot be properly taught, the program is a waste of time and energy for all involved.

Choice of Faculty

When a program topic has been chosen and broken down into potential sessions, the next problem is to choose faculty for the program. This is a complex process of matching potential session topics to potential speakers. Potential speakers may include the faculty directly linked to the transportation-related academic institution, qualified professional staff of the institution, other faculty from the university who teach relevant topics, and outside speakers from the industry, government, or other academic institutions.

Ideally, one would want faculty who are interested in a relevant topic, who are familiar enough with transit to relate their expertise to the experience of participants, and who are challenging educators. Such persons are rare and one is often faced with a choice between having qualified faculty who may not be very familiar with the peculiarities of the transit industry and professionals from the industry who may not be very good educators. Establishing a balance is difficult: relating the program directly to the specific concerns of the transit industry is paramount, but creating a true developmental experience requires qualified educators. It is important to remember that a PD program is not just an industry conference; it should be an educational experience.

Student Mix

In choosing a topic to be developed into a PD program one also needs to determine which segment or segments of the transit industry are most likely to need, and be attracted to, such a program. One important but difficult issue is determining what type of student mix to seek. There is a definite trade-off between having a diverse group of participants and one that is uniform but more cohesive. In the first case one will try to attract participants from a wide range of locations, size of property, and backgrounds. This may help broaden intellectual horizons, stimulate interaction, and enrich discussions but at the same time may make it more difficult to discuss specific skills and tools because the students' experience with them is so varied. In the second case, one will try to make the group more uniform by screening participant applications more thoroughly and thus avoiding the "odd" persons who stand out or are unable to follow the technical discussions. This trade-off is difficult to make and must be based on program topic, intent, and philosophy of the academic institution.

Overall Balance of Program

In designing and implementing a PD program one must be sensitive to the overall balance of that program. This is a somewhat complex issue of how participants perceive the program as an educational experience. Two dimensions seem to be particularly important in this delicate equation: methodological focus and pedagogical medium. Each of these dimensions involves a trade-off, and by considering these two elements simultaneously one can assess the overall balance of the program. This can be useful in differentiating PD programs and in evaluating their effectiveness.

Methodological focus ranges from a narrow focus on skills and tools to a broad exploration of perspective and processes. In its narrowest form, a PD program may focus on teaching specific skill and describing tools that help professionals solve the problems they face. The educational question being answered through such programs is "how?" Training courses exploring established planning methodologies (Urban Transportation Planning System), managerial tools (management performance audits), or the adaptation of new technology (computer applications) provide examples of focused activities. In such programs hands-on and nuts-and-bolts attitudes are essential because the intent is to provide practical tools to participants.

At the other end of the methodological spectrum, one finds PD activities that are intended to broaden intellectual perspectives and provoke thought rather than merely upgrade skills. The methodological focus is on the process rather than on the tools, and the educational question being answered is "why?" Executive development programs that explore the issues of decision making are fine examples. Comprehensive courses that outline all the aspects of the provision of transit service might also be considered process-oriented programs. In such programs it is important to avoid being either trivial or overwhelming.

A second dimension that can be used to assess a PD program is the predominant pedagogical medium. The content of a course can be conveyed by two methods: in a didactic mode, expertise and knowledge are conveyed in a primarily unidirectional process from expert to participant; in an interactive mode, learning by participants is accomplished by a multi-
tude of communications and exchange among participants. In a more simplistic image this dimension represents the relative balance of lectures and case studies. There is of course no right or wrong position but a trade-off to assess; lectures are more efficient in a certain sense because they convey more information, and correspond better to the usual style of faculty. On the other hand, in case studies, although less information can be covered, learning is more complete as is the developmental process for the individual.

The balance of a program should depend on the topics, intent, and type of participants. It also often depends on session topics, program schedule, and especially on personalities and styles of faculty. Using both dimensions, one can graphically illustrate the overall balance achieved in a given PD program as shown in Figure 1. Such a conceptualization is useful because it helps differentiate programs in educational terms. It also helps clarify the goals of the program, as perceived by participants, and thus provides guidelines for modifications to the program. It is obvious from this discussion that evaluation is an important function: A composite picture of the overall balance of a program can be obtained by gathering various types of input (written evaluations, oral evaluations, informal discussions, and perceptions of staff).

\[ \text{Predominantly Didactic} \]

\[ \text{"skills training"} \quad \text{"overview course"} \]

\[ \text{Predominantly Interactive} \]

\[ \text{Horizontal axis: Methodological Focus} \]

\[ \text{Vertical axis: Pedagogical Medium} \]

FIGURE 1 Overall balance of professional development program.

Program Logistics

Finally, and amidst these pedagogical considerations, one should be aware of the logistic complexity of putting together PD programs and of the impact this will have on the overall success of the program. Program design is perhaps the most intellectually stimulating aspect of PD activities, but the most difficult part is the million mundane actions needed to carry out the planning, marketing, preparation, implementation, and evaluation of the program. These are what ensure a smoothly delivered program, one that provides a truly complete learning experience. An academic institution should carefully consider this often-neglected issue to determine if the benefits derived from putting together the program are worth the effort.

CONCLUSION

There is a definite need for increased employee development opportunities in the transit industry, and the academic community shares the responsibility for expanding these opportunities. Of the three types of employee development that were identified in this paper, apprenticeship training, continuing education, and professional development, the last category holds the greatest potential for enhanced involvement of academic institutions.

During the last 2 years many academic institutions have started offering professional development programs for the transit industry. Several key issues have been identified from the experience of the Institute for Urban Transportation at Indiana University. In particular, the choice of topic, the choice of faculty, the student mix, the overall balance of the program, and the program's logistics raise difficult problems in the design and implementation of a professional development program.

In spite of these difficulties, involvement in professional development activities is a stimulating experience. Such programs offer a unique forum for exchange among participants. The program brings together professionals from very different backgrounds and agencies in an environment isolated from their daily responsibilities. It provides the opportunity and time for them to exchange experiences, become familiar with the peculiarities of this industry, and especially to realize the commonality of the problems they face. To some extent this exchange function is as important as anything that is taught in the classroom.

Finally, academic involvement in professional development activities provides a unique mechanism for improving communications between the academic community and the industry and for overcoming existing barriers ([5], p.5). Identifying relevant topics, addressing real concerns of the industry, and direct exchange that takes place in and out of the classroom are real and practical mechanisms for establishing a dialogue. In the long run, this is a critical concern of both parties. The current increase in activity in the professional development area is a good beginning that will enable more stimulating interaction to be developed.

REFERENCES