

EVALUATING THE RELEVANCE OF SPECIALIZED UNIVERSITY COURSES IN PUBLIC TRANSPORTATION

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ABRIDGMENT

As the transit industry begins to attract more university graduates, it becomes important to examine the relation between university transportation course offerings and the transit industry's job requirements. From an evaluation of university transportation courses and programs can come information concerning the direction such programs must take to provide the most effective employees. Twelve public transit properties and five state departments of transportation were contacted by telephone and mail surveys to identify organizational needs and problem areas. Faculty members were contacted at several universities, and business, transportation, and civil engineering programs were reviewed. Recent university graduates employed in public transit activities were surveyed by a questionnaire regarding the relevance of their transportation education to their jobs. The results of the research show that, for most public transit industry jobs, universities are providing graduates with the proper training and capabilities. Also found was a strong demand for additional short courses and seminars that would enable industry personnel to keep abreast of the newest methods, techniques, and topics of interest to the industry. The data generated should be useful to universities and federal and state agencies in evaluating their position with respect to public transit education.

•WHEN the Urban Mass Transportation Administration was created, federal funds became available to public transit properties. In addition to the increased federal funds, increased state and local funding also became available to public transit properties. In recent discussions with key personnel at eight transit properties, six (Boston, Cleveland, Los Angeles, Oakland, St. Louis, and San Diego) indicated that they were receiving or expected to receive in the near future subsidy money under new funding programs.

Since the introduction of governmental funding, progress has been made toward breaking the declining revenue, service, and personnel cycle. Public transit properties have recently been able to hire trained people, which had been sorely needed in the past. Universities are a major source of trained personnel for the transit industry, and such personnel will be needed in increasing numbers as the industry continues to grow.

This project was aimed at investigating the relevance of university transportation course offerings to the solution of the problems facing the public transit professional. The underlying concern was whether the university training received by graduates properly prepares them for the responsibilities of employment in the public transit industry. Certainly, university training cannot be geared toward the specific job requirements of an entry-level position at a particular employment area. However, course content and program design should address transit needs.

In addition to investigating university course offerings, we also investigated approaches that could be added to existing programs. The possibility of adding work-study programs, short courses, or seminars to formal university training was considered in the overall evaluation.

Public transit properties and state departments of transportation were contacted to identify the problems, universities were contacted to identify the courses offered, and recent graduates in the public transit industry were contacted to rate the relevance of the courses to the problems the graduate faces.

Management personnel at 12 transit properties and five state departments of transportation were contacted by telephone and mail to identify the problems facing the person employed in the transit industry. Intergovernmental coordination, urban transportation planning, transit marketing, public relations and communications, human relations, and financial analysis were noted by transit managers as the key problem areas their employees face.

Preliminary research was conducted into the small package carrier group, but the results were disappointing. It was extremely difficult to determine the proper individuals to contact. Those who were eventually contacted either were unresponsive to the project or did not feel that university transportation training had a place in their industry and did not care to talk further on the matter. On-the-job training was noted as the only way to learn the highly specialized job requirements.

A major finding of the research was that both transit management and recent graduates felt the need for a more general education. Both groups felt that exposure to the overall transportation environment was at least as important as training in the technical areas of transportation. In addition to the engineering and business courses offered, courses in areas such as intergovernmental coordination, public affairs, and administration were recommended by the graduates. Further, those with an engineering background expressed a desire to take several business courses, and business students desired several engineering courses.

Several of the universities contacted offer such a variety of courses and encourage students to take as many courses outside of their major field as their program and interests allow. Based on the findings of the surveys, universities that offer transit courses but that do not encourage students to take political science, public affairs, and other related courses should consider adding several such courses to the existing transit program.

University transportation programs are capable of meeting the requirements of the transit industry. Included in the range of civil engineering courses available to students are urban transportation planning, transport policy, transportation systems planning, public transit systems, and transport administration. Several of the key courses available in a business logistics program are systems management and control, transportation laws and procedures, urban transit and urban development transport, and public policy and transit management.

The response to the questionnaire sent to 162 recent college graduates working in the transit industry suggests that university transportation course offerings are relevant. For the most part, the courses were called useful in day-to-day job responsibilities, and the techniques taught in the classroom were applicable to the job situation. However, there were several areas in which many graduates felt they had received a poor education. Of the 162 questionnaires mailed to recent graduates, 91 were returned, 47 of which came from graduates of a civil engineering or business logistics program within the last 5 years. The average graduate reported 3 years' work experience in the transit industry, 2.75 of which were completed in the current job location. The key areas noted as relevant by the graduates were degree and ease of application of education to day-to-day problems and the advantage a graduate of a transportation program has over coworkers with similar job responsibilities but without a transportation education.

Intergovernmental coordination, public relations and communications, administration, and technical aspects of public transit all received a high percentage of poor ratings for the education received.

The evaluation of civil engineering courses showed that they have a very high degree of usefulness. Only one course, public transit systems, was given a poor rating. Three of the eight graduates who had taken this course felt it was a waste of time. Public transit systems was also most often selected as the course graduates had not taken but now felt that they should have taken! A definite desire for including several business logistics courses in a civil engineering program was noted in the responses. Courses

such as public transit management and economics of transportation were often noted by the respondents as possible additions to a civil engineering program.

The evaluation of business logistics courses showed that the courses taken were often useful. However, not so many graduates took business logistics courses as took civil engineering courses. Also, the number of respondents with a business logistics education who felt they should have taken civil engineering courses was smaller than the number of civil engineering graduates who noted a desire to take business logistics courses.

One of the goals of this research was to determine whether sufficient demand existed for the addition of work-study programs to university transportation education. Transit management was highly in favor of such an addition. From the responses, 41 graduates favored work-study programs, and only four were opposed. The suggested length of time for a work-study program ranged from 10 weeks to more than a year. Two major problems standing in the way of this addition are funding and the distance between many universities and a public transit property or state DOT office. The funding problem is one that deserves the attention of all.

The last two questions dealt with topics for short courses or seminars. A list was presented of nine course titles with no other description given. On this basis, more than half of the graduates indicated a preference for attendance at one or more of the short courses or seminars. When they were asked to suggest topics that they felt seminars should address, 16 additional topics were listed.

A wide range of topics were suggested in the responses to the questionnaires: transportation and the environment, transportation and energy, system planning—transit or highway, new planning techniques, and citizen participation. The major finding was the high degree of interest in seminars shown by both management and recent graduates.