

Specializations, Faculty Interest, and Courses in Physical Planning Subjects at Graduate Planning Schools

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■ Introduction

In 1987 the author of this paper argued in a paper presented at the Annual Conference of the Association of Collegiate Schools of Planning (ACSP) that research and education in physical planning subjects have been “nearly abandoned by many of the major schools of city and regional planning” (Pivo et al. 1987). It was argued that planning students are not being adequately prepared to deal with many of the problems faced by practicing planners, that a lack of physical planning research has weakened the development of the field, that it has become difficult to recruit new faculty members interested in physical planning subjects, and that this is threatening to weaken the effectiveness of city planners in their most traditional area of responsibility.

At the same conference a “battle for the profession” began with David Sawicki’s farewell address as President of ACSP which was concerned to a large degree with the future of planning practice in general and the “balance between our traditional concerns with the physical environment and the social concerns we adopted in the early 1970s” (Sawicki 1988; Weiss 1988; Birch 1988; Kaufman 1988).

The purpose of this paper is to present empirical findings on the level of physical planning educational activity in North American graduate schools of city and regional planning. It is intended to strengthen the factual basis for the ongoing discussion of the role of physical planning in the future of city and regional planning education.

Two caveats should be stated at the outset. This article is not intended to resolve the issue of what the balance should be between physical and nonphysical planning subjects or indeed whether such a distinction is even possible. That is both a normative and empirical issue of practice and theory that goes well beyond the scope of this article. In addition, the focus on so-called physical

Abstract

This article describes the level of physical planning educational activity at graduate schools of city and regional planning. The major findings are (1) in many schools, specializations in physical planning subjects are unavailable; (2) there are a large number of schools at which faculty are not interested in many of the subjects; and (3) between 36 percent and 91 percent of the schools do not offer courses in various physical planning subjects.

The general conclusion is that even though physical planning subjects can be studied in a number of planning programs, many schools are not particularly active or have nearly abandoned activity in the physical planning area.

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planning subjects is not intended to cast any prejudice against the significance of social, political, economic, cultural, and other critical elements of urban planning.

There are three theories about what has been happening to physical planning subjects in graduate planning education. One theory is that physical planning subjects have been abandoned in favor of social and economic subjects as well as planning process and analysis. This would be consistent with the abandonment of environmental determinism called for during the 1960s and the infusion of social sciences into planning (Gans 1969; Hemmens 1988).

The second theory is that physical planning is alive and well as a part of most planning programs. While physical planning may not be taught as a single subject, certain specializations have emerged or persisted within city and regional planning that are directly relevant to physical planning, such as land use, transportation, infrastructure, and urban design. Moreover, the decline of Great Society programs and the growth of public concern for environmental, land use, and infrastructure issues have resulted in a strong job market for planners with strengths in physical planning subjects, to which the planning schools have responded.

The third theory is that physical planning subjects are covered indirectly through a number of courses of a more general orientation that also cover nonphysical planning subjects. The subjects may be covered, for example, in policy, analysis, research, or studio courses that discuss a variety of subjects relevant to planning. It may appear that physical planning subjects are not being covered, but this may be due to the title and description, not the specific content, of courses in a curriculum.

Evidence will be presented which shows that many schools have indeed nearly abandoned physical planning. Although specializations, faculty interest, and courses in physical planning subjects exist at many schools, they are also missing from a large number of planning programs. As a nation of schools, physical planning subjects continue to be pursued; many individual schools, however, have nearly abandoned the area.

■ What Is Physical Planning?

In order to conduct this investigation, a working definition of physical planning was required. The most direct definition that could be found comes from a 1958 urban planning textbook:

Physical planning is concerned with the general pattern of land use, the character and location of public buildings and structures, the design of streets, the location and development of transit and transportation systems, and all other physical facilities which are necessary or desirable to promote the economic betterment, comfort, con-

venience, and the general welfare. (Webster 1958, 137)

A later definition of British town planning also describes what is the traditional definition of physical planning while expanding it to include civic design:

Planning a town involves . . . determining in advance of development the location of homes, industry, commerce, parks and playing fields, public and community buildings, the layout of the arterial road system, the requirements of railways, sea and air transport, water supply, sewerage and other public utility services. . . . In addition . . . the town plan calls for civic design, the art which endeavors to weld the various components of the scheme into a beautiful and harmonious entity. (Brown, Sherrard, and Shaw 1969, 3)

According to these definitions, the field includes several different subjects, including land use, urban design, transportation, and community facilities.

Several authors have listed what they consider to be the physical elements of the city. These can also be used to indicate the subjects most relevant to physical planning. For example, Loew (1979) made a list of the physical elements of the city that includes geology, topography, climate, soils, infrastructure, land uses, building fabric, townscape, landscape, schools, and open space. Melville Branch (1985) has also listed the elements of what he called "the physical city." His list includes overall form, topography, buildings, infrastructure, transportation, utilities, open space, density, climate, vegetation, aesthetic quality, and urban design.

Based on this and other relevant literature (Raymond 1978; McHarg 1978; Perloff 1957; Kyle 1956; Adams 1954; Basset 1949), certain subjects were defined as physical planning subjects for the purposes of this research. These include land use planning, land use policy, urban design, infrastructure and community facilities, transportation, environmental planning, urban morphology, and spatial structure. It is recognized that these subjects are not necessarily the exclusive purview of physical planning. As with most applied fields, these basic subjects are relevant to a number of areas of professional practice. For example, urban development planners typically use knowledge about transportation and land use. Listing these as physical planning subjects does not imply they are irrelevant to other areas of planning practice.

■ Data Sources

The objective of this study was to measure the level of educational activity in physical planning at graduate schools of city and regional planning. This was accom-

Table 1 **Number of Schools with Physical Planning Specializations**

| Subject | 1976 | % | 1986 | % | % Change |
|--|--------|----|------|----|----------|
| Infrastructure | 4 | 6 | 15 | 24 | +18 |
| Land Use and/or Environmental Planning | 39 | 63 | 39 | 63 | 0 |
| Transportation | 33 | 53 | 22 | 35 | -18 |
| Urban Design | 30 | 48 | 21 | 34 | -14 |
| | N = 62 | | | | |

plished by using three indicators: specializations available for graduate study, faculty interests, and course offerings.

Data on faculty interests and available specializations were collected from the 1974, 1976, and 1986 *ACSP Guide to Graduate Education in Urban and Regional Planning* (Susskind 1974; Brooks et al. 1976; Patton and Reed 1986). Data on course offerings, including course titles and brief content descriptions, were collected from 1987-88 college catalogs.

It should be noted that these sources can have some inherent reliability problems. Editors of the guides and catalogs attempt to ensure their accuracy; but errors can arise during the collection or interpretation of information provided by the various planning departments. Some errors can be intentional. There are incentives for departments to overstate the scope of their programs in order to attract students or otherwise benefit from being perceived as larger or more diverse than they actually are. This could bias the results in this paper toward the overestimation of the level of physical planning educational activity. Other errors can be accidental. Accidental errors do not have a predictable bias. These possible data problems should be kept in mind when interpreting the results which follow.

■ Graduate Study Areas of Specialization

Areas of graduate study specialization that were available to students were examined for all of the sixty-two schools that listed them in both the 1976 and 1986 *ACSP Guide*. Based on the list of physical planning subjects adopted for this study, the number of schools that offered specializations in infrastructure, land use and/or

environmental planning, transportation, and urban design were counted. The results are given in Table 1.

In 1986, specializations in physical planning subjects were available in roughly one-quarter to two-thirds of the schools, depending on the subject. Between 1976 and 1986 there was a decline in the percentage of schools offering specializations in transportation and urban design, no change in the percentage offering land use, and an increase in the percentage of schools offering a specialization in infrastructure.

The data also were examined to determine the number of different physical planning specializations that were available at each of the schools. The results are given in Table 2.

Over four-fifths of the planning schools offered at least one specialization in a physical planning subject in 1986. On the other hand, half the schools offered one or no specializations. A comprehensive set of specializations was very rare.

The number of schools offering two or three specializations declined between 1976 and 1986, while the number offering one specialization increased. Thus, in 1986 many schools did offer a specialization in a physical planning subject, however the number of different specializations available in many schools was limited and has declined during the past decade.

■ Faculty Interests

Another way students can learn about a subject is by working with professors who are interested in the area. The 1974 and 1986 *ACSP Guide* were examined to determine the number of faculty members who were interested in physical planning subjects at each of the plan-

Table 2 **Number of Schools by Number of Physical Planning Specializations Available**

| No. of Specializations Offered | 1976 | % | 1986 | % | % Change |
|--------------------------------|--------|----|------|----|----------|
| None | 10 | 16 | 10 | 16 | 0 |
| One | 14 | 23 | 21 | 34 | +11 |
| Two | 22 | 35 | 21 | 34 | - 1 |
| Three | 15 | 24 | 9 | 15 | - 9 |
| Four | 1 | 2 | 1 | 2 | 0 |
| | N = 62 | | | | |

Table 3

Number of Schools with One or More Faculty Members Interested in Physical Planning Subjects^a

| Subject | 1974 | % | 1986 | % | % Change |
|---------------------|--------|----|------|----|----------|
| Physical Planning | 2 | 4 | 5 | 11 | + 7 |
| Land Use Planning | 13 | 28 | 28 | 60 | +32 |
| Land Use Law/Policy | 10 | 21 | 16 | 34 | +13 |
| Urban Design | 23 | 49 | 28 | 60 | +11 |
| Infrastructure | 6 | 13 | 10 | 21 | + 8 |
| Transportation | 30 | 64 | 30 | 64 | 0 |
| Environment | 20 | 43 | 19 | 40 | - 3 |
| | N = 47 | | | | |

■ Note

a. Includes faculty with half-time or greater appointments.

ning schools. All of the schools that listed faculty interests in both the 1974 and the 1986 *Guide* were analyzed. Faculty were counted as being interested in a subject only if they listed the subject as an interest in the *Guide*. Faculty members with 50% or greater appointments in the planning departments were counted separately from other affiliated faculty. A more detailed list of subjects was used than in the analysis of specializations in order to reflect the more specific interests listed by the faculty.

Table 3 shows the number of planning schools with at least one half-time or greater faculty member interested in each of the physical planning subjects.

There was an increase between 1974 and 1986 in the percentage of schools with at least one half-time or greater faculty member interested in physical planning, land use planning, land use policy, urban design, or infrastructure. The greatest increase was in land use planning, where the number of schools with interested faculty more than doubled. Interest was unchanged in transportation and decreased in environmental planning.

The most commonly listed interests in 1986 were land use planning, urban design, and transportation. Nevertheless, even for transportation, the most frequently listed interest, more than one in three planning schools

did not have a half-time or greater faculty member interested in the subject. For the least popular subjects, infrastructure and physical planning, nearly eight and nine out of every ten schools, respectively, did not have a half-time or greater faculty member who was interested in the subject.

The data also were analyzed to determine the number of different physical planning subjects that were of interest to half-time or greater faculty members at each school. The same list of subjects used in Table 3 was used here except for physical planning because it, in and of itself, suggests a broad interest in various subjects within the field. Table 4 gives the results.

Between 1974 and 1986 there was an increase in the percentage of faculties interested in four to six subjects and a decline in the percentage of faculties interested in three or fewer subjects. These results indicate a broadening of interest in physical planning subjects within the faculties.

Although interests have broadened, 42% of the faculties in 1986 were listed as being interested in two or fewer physical planning subjects. Thus, even after the broadening of interests that occurred during the past decade, there was still a limited range of interest in physical planning subjects in many of the faculties.

Table 4

Number of Schools by the Number of Physical Planning Subjects of Interest to One or More Faculty Members^a

| No. of Subjects | 1974 | % | 1986 | % | % Change |
|-----------------|--------|----|------|----|----------|
| Zero | 1 | 2 | 1 | 2 | 0 |
| One | 6 | 13 | 3 | 7 | - 6 |
| Two | 14 | 30 | 15 | 33 | + 3 |
| Three | 18 | 39 | 12 | 26 | -13 |
| Four | 7 | 15 | 7 | 15 | 0 |
| Five | 0 | 0 | 7 | 15 | +15 |
| Six | 0 | 0 | 1 | 2 | + 2 |
| | N = 46 | | | | |

■ Note

a. Includes faculty with half-time or greater appointments.

Table 5

Number of Schools in 1986 with Faculty Lacking Expressed Interest in Physical Planning Subjects by Number of Subjects of Interest

| No. of Subjects | Land Use | Design | Transportation | Infrastructure | Environment | Law/Policy |
|-----------------|-----------|-----------|----------------|----------------|-------------|------------|
| One | 6 | 7 | 9 | 10 | 7 | 10 |
| Two | 10 | 10 | 12 | 19 | 16 | 16 |
| Three | 13 | 4 | 12 | 17 | 5 | 18 |
| Four | 2 | 1 | 2 | 13 | 3 | 7 |
| Five | 1 | 1 | 0 | 6 | 0 | 2 |
| Six | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 36 | 27 | 39 | 69 | 35 | 57 |
| | N = 82 | | | | | |

The data also were analyzed to determine which subjects were most often missing from the interests of the half-time or greater faculty members within a given faculty. This was only done for 1986 so all of the schools that listed faculty interests were included in the analysis. The results are given in Table 5. The schools are grouped into rows according to the number of subjects of interest to a faculty. This was done to show the extent to which the number of interests in a faculty affected the type of subjects that were missing from their interests.

No matter how many subjects are within the interests of the faculty at a given planning school, the subject most often missing was either land use law/policy or infrastructure. This became more significant as the range of interests increased. Urban design and land use planning were the subjects least often missing from the interests of a given faculty.

Planning schools sometimes make affiliate appointments to fill gaps in their faculty interests. This seemed particularly likely for land use law/policy and infrastructure, which were frequently missing interests among half-time or greater faculty members and closely related

to other fields (i.e., law and civil engineering, respectively). Therefore, the interests of affiliated faculty members with less than 50% appointments were added to those of the half-time or greater faculty to determine how affiliated faculty changed the overall level of interest in physical planning subjects. The results for 1986 are given in Table 6.

Several schools were supplementing their faculty's interests with less than half-time appointments. This was most common in land use law/policy, where presumably lawyers were brought in who were interested in the subject. Faculty interests in urban design and transportation were also supplemented with less than half-time appointments. Interest in infrastructure, environmental planning, and land use planning were seldom supplemented by affiliated faculty.

When all types of appointments were combined, the majority of the physical planning subjects were found to be of interest in 1986 to at least one faculty member at a majority of the schools. On the other hand, a substantial number of planning schools did not have a faculty member interested in each of the subjects. With the exception of urban design and transportation, each sub-

Table 6

Number of Schools in 1986 with at Least One Faculty Member Interested in Physical Planning Subjects^a

| Subject | All | % | 50%+ | % | Difference in Percentage |
|---------------------|--------|----|------|----|--------------------------|
| Physical Planning | 6 | 13 | 5 | 11 | 2 |
| Land Use Planning | 30 | 64 | 28 | 60 | 4 |
| Land Use Law/Policy | 27 | 57 | 16 | 34 | 23 |
| Urban Design | 34 | 72 | 28 | 60 | 12 |
| Infrastructure | 12 | 26 | 10 | 21 | 5 |
| Transportation | 37 | 79 | 30 | 64 | 15 |
| Environment | 23 | 49 | 19 | 40 | 9 |
| | N = 47 | | | | |

■ Note

a. All types of appointments versus 50% or more appointments.

Table 7 Number of Schools with at Least One Course in Physical Planning Subjects

| Subject | Number | % |
|----------------------|--------|----|
| Physical Planning | 4 | 9 |
| Land Use Law/Policy | 20 | 45 |
| Land Use Planning | 16 | 36 |
| Urban Design | 18 | 41 |
| Infrastructure | 20 | 45 |
| Transportation | 28 | 64 |
| Environment | 26 | 59 |
| Urban Form/Structure | 24 | 55 |
| | N = 44 | |

ject was missing from the interests of at least one out of every three faculties.

■ Course Availability

University catalogs for the 1987-88 academic year were examined to determine the availability of courses on physical planning subjects. Because of the difficulty of this task, a systematic sample of half the schools in the 1986 *ACSP Guide* were selected for examination. The subject area of each course offering was determined from the title and brief description given in the catalog. The number and percentage of schools which offered at least one course in each physical planning subject was determined. The results are given in Table 7.

Although physical planning was seldom taught as a separate course, the related subjects were taught by approximately one-third to two-thirds of the schools, depending on the subject. The least commonly taught subject was land use planning (i.e., how to prepare a land use plan) which was unavailable at two out of three schools.

■ Breadth of Courses Available

In addition to knowing the number of schools that offered a course in each of the physical planning subjects, it would be useful to know how many different physical planning subjects were taught at each of the planning schools. The data from the 1987-88 catalogs were examined for this purpose. Table 8 gives the results. The eight subjects referred to in the table are those eight subjects listed in Table 7.

Most schools did not offer what could be considered a broad or comprehensive set of physical planning courses. Roughly one out of every five schools offered no courses on physical planning subjects and nearly one out of every two schools had courses on four or fewer different subjects. About a third of the schools had relatively broad coverage by offering at least one course on

Table 8 Number of Schools in 1986 by Number of Physical Planning Subjects Taught in Courses

| No. of Subjects | No. of Schools | % | Cumulative % |
|-----------------|----------------|------|--------------|
| None | 8 | 18.2 | 18.2 |
| One | 2 | 4.5 | 22.7 |
| Two | 0 | 0 | 22.7 |
| Three | 8 | 18.2 | 40.9 |
| Four | 4 | 9.0 | 49.9 |
| Five | 8 | 18.2 | 68.1 |
| Six | 8 | 18.2 | 86.3 |
| Seven | 5 | 11.3 | 97.6 |
| Eight | 1 | 2.3 | 99.9 |
| | N = 44 | | |

six of the eight subjects. Only one school offered a course in every subject.

■ Depth of Available Course Work

The last analysis that was conducted on the available course work concerned the number of courses that were taught in each of the subject areas at those schools that did offer a course on the subject. The purpose was to measure the depth to which each subject was covered where it was being taught. Eight separate groups of schools were created from the sample. Each group contained those schools in the sample which taught at least one course in a particular subject. An average number of courses taught by the schools in each group was calculated. Table 9 gives the results.

For several subjects, additional course work beyond a single class was often unavailable. An average of fewer than two courses on physical planning, land use planning, land use policy, infrastructure, and urban form/structure were given at the schools that offered these subjects. Urban design, transportation, and the environment were typically covered in two or three courses.

■ Predictive Factors

An attempt was made to identify factors from the available data that might predict the level of physical planning educational activity at a given school. Correlation coefficients were calculated between the indicators of educational activity and possible predictive variables available in the *ACSP Guide*. The indicators of educational activity used in this analysis were the number of physical planning specializations available, the number of physical planning subjects of interest to faculty members, the total number of courses on physical planning subjects, and the number of different physical planning subjects covered by available courses. The possible predictive variables that were evaluated were the age of the professional degree program, the number of full-time-

Table 9

**Average Number of Courses in
1986 on Physical Planning Sub-
jects at Schools That Taught at
Least One Course on the Subject**

| No. of Subjects | N | Average No. |
|----------------------|----|-------------|
| Physical Planning | 4 | 1.0 |
| Land Use Law/Policy | 20 | 1.7 |
| Land Use Planning | 16 | 1.5 |
| Urban Design | 18 | 2.7 |
| Infrastructure | 20 | 1.1 |
| Transportation | 28 | 2.4 |
| Environment | 26 | 3.0 |
| Urban Form/Structure | 24 | 1.6 |

equivalent professors in the program, the number of full- and part-time students in the program, whether the program was accredited by the Planning Accreditation Board (PAB), and whether the Ph.D. degree was offered. Other variables that might also predict the level of educational activity, such as local history or national policy priorities, were not studied because they were not available from the *ACSP Guide*.

Neither the age of a planning program nor the number of students in a program were significantly correlated with any of the indicators of educational activity.

There was a significant correlation between the number of faculty members in a program and the number of physical planning subjects of interest to the faculty; the correlation, however, was not particularly strong ($r = .26$, $p = .035$, $n = 47$). The number of faculty members also was correlated with both the number of physical planning courses offered and the number of different physical planning subjects covered, but these relationships were only significant at the .10 level.

A moderately strong predictor of educational activity was whether or not a program was accredited by the PAB. The correlations are given in Table 10.

The merely modest strength of PAB accreditation for predicting physical planning educational activity is not surprising given the fact that most of the accreditation requirements and criteria are unrelated to physical planning education by itself. The first category of accreditation requirements used by the PAB are four "general requirements." The most relevant requirement is not at all specific to physical planning, namely, "the degree program's primary mission must be that of preparing students to become practitioners in the planning profession." Another category of requirements deals with curriculum and specifies that students must be exposed to twelve "content areas." Only one of these is related to physical planning subjects, that is to say "the physical structure and the dynamics of physical development of human settlements." There also are five "faculty requirements," but they also are not particularly relevant to physical planning. Of these, the most relevant require-

Table 10

**Pearson Correlation Coeffi-
cients between PAB Accredi-
tation and Physical Plan-
ning Activity Indicators**

| Indicator | r | n | p |
|---|-----|----|------|
| No. of Specializations Available | .48 | 53 | .000 |
| No. of Subjects of Interest to Faculty | .30 | 52 | .015 |
| No. of Total Courses | .29 | 38 | .037 |
| No. of Subjects Covered by Courses | .22 | 38 | .094 |

ment is that "persons whose graduate education and/or professional experience are primarily within the planning profession shall comprise at least half of the full-time faculty and at least half of the full-time-equivalent faculty." Given these accreditation requirements, it is even surprising to find that accreditation is a moderately good predictor of physical planning educational activity in graduate planning schools.

The presence of a Ph.D. program was correlated at a statistically significant level with the number of physical planning specializations that were available and the total number of courses in physical planning, but the correlations were unimpressive ($r = .27$, $n = 53$, $p = .026$ and $r = .31$, $n = 38$, $p = .029$, respectively). This may be of particular interest to those who have been following the recent discussions in this journal about whether the Ph.D.'s coming out of planning schools are sufficiently committed to the core of planning practice and whether there may be a danger of planning schools in the future being captured by the "less committed" (Sawicki 1988; Kaufman 1988).

The best variable for predicting physical planning educational activity was actually one of the physical planning activity indicators, namely the number of physical planning subjects of interest to one or more faculty members. This factor was correlated with the number of physical planning courses ($r = .52$, $n = 38$, $p = .000$) and the number of different physical planning subjects covered by at least one course ($r = .57$, $n = 38$, $p = .000$). Whether this is a causal relationship and, if so, the direction of causality, is not known. While this correlation may not be surprising, it is not a tautology. A faculty does not necessarily have to teach courses only in the areas in which they are interested, nor is it necessary for them to be primarily interested in the subjects they teach. A faculty certainly could teach courses in areas that are needed by the students even though they may not be of particularly interest to the faculty.

To summarize, the strongest predictor of physical planning educational activity among the variables studied was the number of different physical planning subjects of interest to one or more faculty members. PAB accreditation, the availability of the Ph.D. degree, and

the size of the faculty also were significant but weaker predictors for some of the activity indicators. A program's age and the size of its student body were not significantly correlated with the level of physical planning activity.

■ Summary and Discussion

This study provides new information on the level of educational activity in physical planning subjects at graduate schools of city and regional planning. It measures this activity in terms of the availability of specializations, faculty interests, and courses offered.

It is possible to specialize in physical planning subjects at a number of graduate schools. At most schools, however, a limited number of physical planning subjects are offered as a specialty and in many schools such specializations are unavailable.

For each physical planning subject, there are a substantial number of schools where one can find at least one faculty member who is interested in the area. In addition, individual faculties are now interested in a greater variety of these subjects than a decade ago. There are still a large number of schools, however, at which faculty are not interested in many of the subjects. At nearly half the schools, faculty were interested in two or fewer of the eight physical planning subjects studied.

Courses in each physical planning subject also are available at a number of schools. Depending on the subject, however, between 36% and 91% of the schools do not offer courses in the area. In addition, most schools do not offer a comprehensive set of courses in these subjects and do not offer advanced courses in the physical planning subjects they do teach.

The best predictor of physical planning educational activity at a planning school was the number of physical planning subjects of interest to faculty members. Accreditation by the PAB, the presence of a Ph.D. program, and the faculty size were correlated with at least some indicators of physical planning educational activity.

The conclusion that emerges from this work is that while physical planning subjects can be studied at a number of planning schools and interest has increased among faculties in these subjects during the past decade, many schools are either not fully engaged in physical planning education or have nearly abandoned physical planning for other subject areas. There appears to be a lack of both depth and breadth in physical planning education at a large number of graduate schools of city and regional planning. This general conclusion is consistent with a finding of Contant and Forkenbrock's (1986) study of planning methods. They found that only 30% of the schools surveyed reported a "physical planning orientation" (Contant and Forkenbrock 1986).

It is possible that physical planning subjects are being taught, but in a different way. This study does not de-

termine whether the subjects are being covered indirectly through a number of courses of a more general orientation. Nevertheless, at many schools physical planning subjects do not receive focused attention in courses devoted exclusively to them. Moreover, course availability was only one of three indicators of educational activity used by this study. The overall findings are reinforced by indicators of faculty interests and specializations that are available to graduate students. Still, further research would be useful to determine the extent to which the subjects are being covered in a less direct fashion and the effectiveness of this approach if it is being used.

One's interpretation of these findings is somewhat analogous to whether one perceives half a glass of water as being half empty or half full. One can emphasize the fact that physical planning is active at many schools or one can emphasize that it is not active at many others. While it appears to be the case that, as a nation of schools, physical planning education is available, it also appears true that many students may not be exposed to many physical planning subjects in a large number of individual planning programs. How one responds to this ultimately depends on one's ideas about what the core of city and regional planning education should be. That is an issue that cannot be resolved by the data reported in this paper. It will require both normative discussions about what the profession should become and empirical studies of what curriculum will best prepare students for practice.

Former President of ACSP, David Sawicki, in his annual conference address, which was published recently in *JPER* Volume 7, Number 2, argued that "our lack of focus both substantively and organizationally . . . is leading to our demise" (Sawicki 1988). Sawicki claimed that certain activities are a part of our professional definition and that we have been giving up our interest in the very areas in which we can provide those services which set us apart from other professions (Sawicki 1988). It was also argued in the same issue of *JPER* that "physical planning . . . [should be the] core basis, the stable future of planning education and research" (Weiss 1988).

This paper does not resolve this difficult issue, but it does provide some evidence about the degree to which physical planning subjects are being focused upon by graduate planning schools. The evidence presented here indicates that in many schools there is a scarcity of courses, specializations, and faculty interested in physical planning subjects. If Sawicki is right, this may be eroding the very foundation of the city planning profession. □

■ References

American Institute of Certified Planners. 1983. *Job Analysis Survey Report*. Washington, D.C.: AICP.

- Adams, F. J. 1954. *Urban Planning Education in the United States*. Cincinnati: The Alfred Bettman Foundation.
- Bassett, E. M. 1949. As quoted by H.M. Lewis in *Planning the Modern City*. New York: John Wiley and Sons.
- Birch, E. L. 1988. Battle for the profession. *Journal of Planning Education and Research* 7(3):194-195.
- Branch, M. 1985. *Comprehensive Planning: Introduction and Explanation*. Washington, D.C.: American Planning Association.
- Brooks, M. P.; McDonough, M. B.; Sanders, H. A.; Winter, M. A. 1976. *The ACSP-ASPO Guide to Graduate Education in Urban and Regional Planning*. Chicago: American Society of Planning Officials.
- Brown, A. J.; Sherrard, H. M.; and Shaw, J. H. 1969. *An Introduction to Town and Country Planning*. New York: Elsevier Publishing Company, Inc.
- Contant, C. K., and Forkenbrock, D. J. 1986. Planning methods: An analysis of supply and demand. *Journal of Planning Education and Research* 6(1):10-21.
- Gans, H. J. 1969. Planning for people, not buildings. *Environment and Planning* 1(1):33-46.
- Hemmens, G. C. 1988. Thirty years of planning education. *Journal of Planning Education and Research* 7(2):85-91.
- Kaufman, J. L. 1988. Professionals, Ph.D.'s, and planning faculty. *Journal of Planning Education and Research* 7(3):196.
- Kyle, L. C. 1956. What is planning? In *Community Planning*, ed. H. L. Marx. New York: The H. W. Wilson Company.
- Loew, S. 1979. *Local Planning*. London: Pembroge Press, Ltd.
- McHarg, I. 1978. Ecological planning: The planner as catalyst. In *Planning Theory in the 1980s*, eds. R. W. Burchell and G. Sternlieb. New Brunswick, New Jersey: Center for Urban Policy Research, Rutgers University.
- Miller, D., and Westerlund, F. 1986. Teaching about land use: How is it dealt with as an area of professional specialization? Paper presented at the 28th Annual Conference of the American Collegiate Schools of Planning, Milwaukee, Wisconsin.
- Patton, C., and Reed, K. 1986. *Guide to Graduate Schools in Urban and Regional Planning*. Milwaukee: Association of Collegiate Schools of Planning.
- Perloff, H. S. 1957. *Education for Planning: City, State, and Regional*. Baltimore: The Johns Hopkins Press.
- Pivo, G.; Ellis, C.; Leaf, M.; Magutu, G. 1987. A modest contribution to the resurrection of physical planning. Paper presented at the 29th Annual Conference of the American Collegiate Schools of Planning, Los Angeles, November. Forthcoming in *Journal of Architecture and Planning Research*.
- Raymond, G. M. 1978. The role of the physical urban planner. In *Planning Theory in the 1980s*, eds. R. W. Burchell and G. Sternlieb. New Brunswick, New Jersey: Center for Urban Policy Research, Rutgers University.
- Sawicki, D. 1988. Planning education and planning practice: Can we plan for the next decade? *Journal of Planning Education and Research* 7(2):115-120.
- Susskind, L. 1974. *Guide to Graduate Education in Urban and Regional Planning*. East Lansing, Michigan: Association of Collegiate Schools of Planning.
- Webster, D. H. 1958. *Urban Planning and Municipal Public Policy*. New York: Harper and Row.
- Weiss, M. 1988. Planning education and research: Retrospect and prospect. *Journal of Planning Education and Research* 7(2):96-97.