

## The Ph.D. Versus the Ed.D.: Time for a Decision

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**ABSTRACT:** In this study, U.S. institutions that offer doctoral programs in education were surveyed and institutional catalogues of the past decade were reviewed to determine trends regarding the Ph.D. versus the Ed.D. Results of the study showed that (a) there is no clear institutional movement toward one degree title or the other; (b) research universities are increasingly reluctant and comprehensive colleges and universities are increasingly likely to offer the Ed.D. as their only doctoral degree title, and (c) requirements for the two doctoral titles are remarkably similar, including competencies in research and statistics. Findings are discussed in relation to three common positions of those who favor the Ed.D. over the Ph.D.: (a) the professional school argument, (b) the unification argument, and (c) the autonomy argument. The article concludes with a call for increased national dialogue to strengthen the education profession by reducing confusion between its two doctoral degree titles.

Schools of law offer the J.D. as their terminal professional degree, schools of medicine the M.D., but schools of education have not settled on a single degree. They continue to offer both the Ph.D. and the Ed.D. One might conclude that education holds on to both degrees because there are fundamental differences between the purposes for each degree—the Ed.D. for those preparing to serve as educational practitioners and the Ph.D. for those who plan to emphasize research and join university faculties.

Previous research has shown that although philosophical premises may differ for the two degree titles, specific degree requirements are remarkably similar (Andersen, 1983; Dill & Morrison, 1985). However, while these studies report admissions, residency, and credit hour requirements, none gives much detail regarding specific expectations in research competencies—presumably the touchstone of difference between the two degrees.

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In addition to knowing how program requirements for the two degrees differ, educational leaders need to understand the patterns, if any, that are emerging in the way various institutions are using these two degrees. For example, is the field following Clifford and Guthrie's (1988) recommendation to eliminate the Ph.D. as a degree in education, Courtenay's (1988) recommendation to eliminate the Ed.D., or Goodlad's (1990) recommendation to eliminate both degrees in favor of an altogether new degree? What pattern has been observed for institutions over the past decade? What trends do educational leaders predict for the future? What difference, if any, does the type of institution make in the degrees it may offer? Do research universities, for example, tend to offer the Ph.D. over the Ed.D.?

Limited data on doctoral degree programs in the field of education are available. For example, although the National Center for Educational Statistics records the number of doctoral degrees and master's degrees awarded each year, the data do not differentiate by degree (Ed.D. or Ph.D.). In addition, former researchers have limited their surveys to a small subsample of the population of institutions that offer graduate programs in education, usually to Research I Universities (Brown, 1990; Schneider, Brown, Denny, Mathis & Schmidt, 1984). Others have limited their studies to subdisciplines within the field of education (Dill & Morrison, 1985). Andersen's (1983) study was the most comprehensive, but even he did not differentiate trends based on types of institutions.

The present study addressed questions of prevalence, trends, and requirements for the Ph.D. and Ed.D. degrees from three major information sources: (a) *The Peterson's Guide to Graduate Programs in Business, Education, Health, and Law* for both 1979 and 1989 (Moore, 1979; 1989); (b) catalogues from all institutions granting graduate degrees in education for 1979 and 1989; and, (c) a survey questionnaire mailed to the dean's office at each SCDE (school, college, or department of education) at all 664 institutions that offer master's or doctoral degrees in education. The questionnaire included items related to both master's and doctoral programs; the master's program data are reported in a separate article (Osguthorpe & Wong, 1992).

The results of the study were interpreted in light of the three most common arguments for eliminating the Ph.D. in favor of the Ed.D.: (a) *the professional school argument*, (b) *the unification argument*, and (c) *the autonomy argument*. The professional school argument states that since SCDEs are professional schools they should follow the example of other professional schools, such as law and medicine, and offer their

own doctoral degree title. The unification argument contends that SCDEs are presently too diversified—offering doctoral programs in non-education fields—and that by focusing on the Ed.D. as their only doctoral degree title SCDEs could eliminate these allied fields and bring increased unity to their mission. The autonomy argument asserts that by offering the Ed.D. SCDEs would enjoy increased autonomy from institutional regulations aimed at the Ph.D., an arts and sciences degree.

### Data Analyses

Using *Peterson's Guide* and institutional catalogues as data sources, we identified the number of institutions offering various doctoral degree titles in education for both 1979 and 1989. The institutions included in the study were categorized using the Carnegie classification of institutions of higher learning (Carnegie Foundation, 1987), which assigns colleges and universities to one of four major categories: research, doctorate-granting, comprehensive, or liberal arts. The categories are based on the types of programs the institution offers and the amount of federal research funding it receives.

The number of questionnaires returned was 407 (61%), including those from the second mailing. The questionnaire contained 16 structured and 3 open-ended questions, focusing on the nature of graduate programs at each institution. Respondents were asked to indicate the titles of the education doctoral degrees offered at their institution, the requirements for each program (dissertation, projects, comprehensive exam, and oral exam), and the research competencies included in their doctoral curriculum (statistics, research design, naturalistic methods, etc.). Four members from the intended audience (deans and faculty) reviewed the questionnaire and suggested improvements. Three weeks following the initial mailing, a second wave of questionnaires with a new cover letter was mailed to those who had not responded.

Because institutional mission affects the types of programs offered, two calculations were performed to determine how accurately the sample of respondents represents the total population: (a) the percentages of respondents and non-respondents based on institutional type (research, doctorate-granting, comprehensive, or liberal arts), and (b) the percentages of respondents and non-respondents based upon membership in the Holmes Group. This second comparison was made because Holmes Group institutions have affirmed their support for ex-

tending teacher education programs beyond the 4-year baccalaureate, which could impact their master's and doctoral programs. If such institutions were either over or under-represented in the study, sampling bias might be inferred.

The results showed that the individual percentages of non-responding research, doctorate granting, comprehensive, and liberal arts colleges did not differ more than two percentage points from the individual percentages of responding institutions in each category. These results held even when the four major categories were divided into the eight sub-categories contained in the Carnegie system. In addition, of the 407 questionnaires returned, 60 of the respondents are listed among the 98 members of the Holmes Group in *Tomorrow's Schools* (Holmes Group, 1990). Thus the response rate for Holmes Group institutions was the same (61%) as the rate for the overall population of institutions. These results show that respondents did not differ systematically from non-respondents by institution type or by their public affirmation for extended teacher education programs.

The data gathered from the survey questionnaires are reported by number or percentage, with the exception of responses to the final question dealing with program requirements. The results of this question were analyzed using chi square to determine if research requirements for the Ed.D. differed significantly from those of the Ph.D.

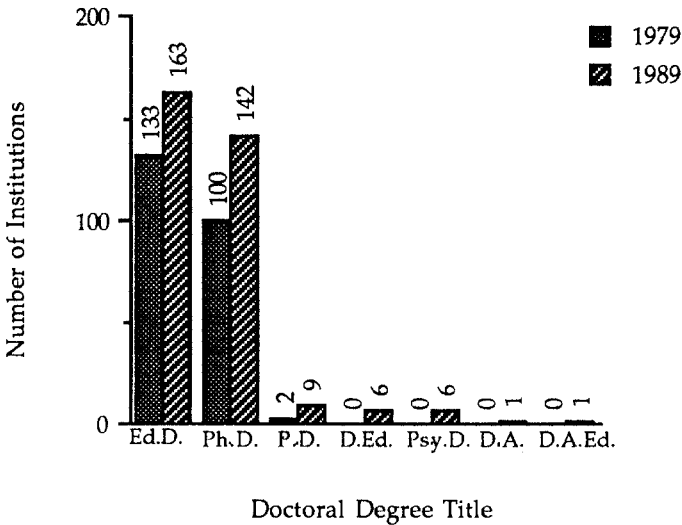
## Results

### *Types of Degrees Offered*

Figure 1 shows that the Ed.D. and the Ph.D. are by far the most common doctoral degrees offered in education. Figure 1 also indicates that during the past decade the number of institutions offering doctoral degrees in education has increased by 24% (157 in 1979, 202 in 1989). In 1989 twenty-three institutions offered doctoral degrees with other titles, compared to only six institutions in 1979. No previous study has mentioned these degrees, although Andersen (1983) implied that seven institutions in his sample offered a doctoral degree other than the Ph.D. or Ed.D.

Some of the institutions offering degrees other than the Ed.D. or Ph.D. have established a long tradition with their degree titles (e.g., Carnegie-Mellon University offering the D.A.), while others have a shorter tradition (e.g., George Mason University offering the D.A.Ed.).

**Figure 1**  
**The Number of Institutions Offering Various Doctoral Degree Titles in Education**

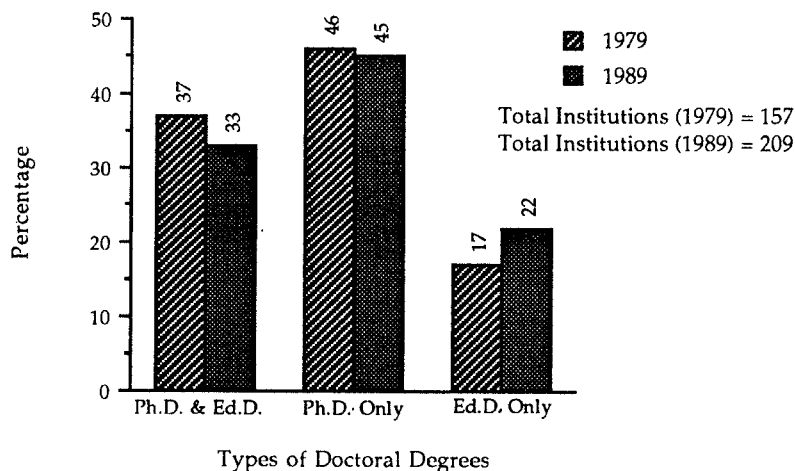


Although our survey did not ask respondents to indicate reasons for selecting a particular degree title, discussions with institutional representatives have revealed that reasons vary considerably from one institution to another. In some cases the SCDE itself has suggested a new title to overcome the confusion over the Ph.D. versus the Ed.D. In other cases the graduate school has required that the SCDE offer a certain title to coincide with other graduate offerings at the institution.

Figure 2 shows that during the past decade there has been a slight decrease in the percentage of institutions offering the Ed.D. as their only doctoral degree title, and a slight increase in the percentage offering only the Ph.D. The most important finding from this figure is that neither the Ed.D. nor the Ph.D. clearly dominates as the doctoral degree of choice in the field of education. Nearly half of the doctorate granting institutions in the country offer both degrees; the other half offer the Ph.D. or the Ed.D. as their only doctoral degree in education.

Table 1 shows the number of institutions offering each type of degree in 1979 and 1989 according to the Carnegie classification of universities. These data show clearly that research universities are increas-

**Figure 2**  
**Percentage of Institutions Offering the Ed.D. & Ph.D., Ed.D. only, and Ph.D. Only in 1979 and 1989**



ingly reluctant to offer the Ed.D. as their only doctoral degree, their preference being to offer both degrees. Moving to the doctorate granting universities and then to the comprehensive colleges and universities, there is a gradual shift to the Ed.D. In 1989, for example, 91% of the research universities offered the Ph.D., 64% of the doctorate granting universities, and only 35% of the comprehensive universities. Thus the data show a relatively large increase in the number of comprehensive universities that offer the Ed.D. as their only degree and a concomitant decrease in the number of research universities offering only the Ed.D.

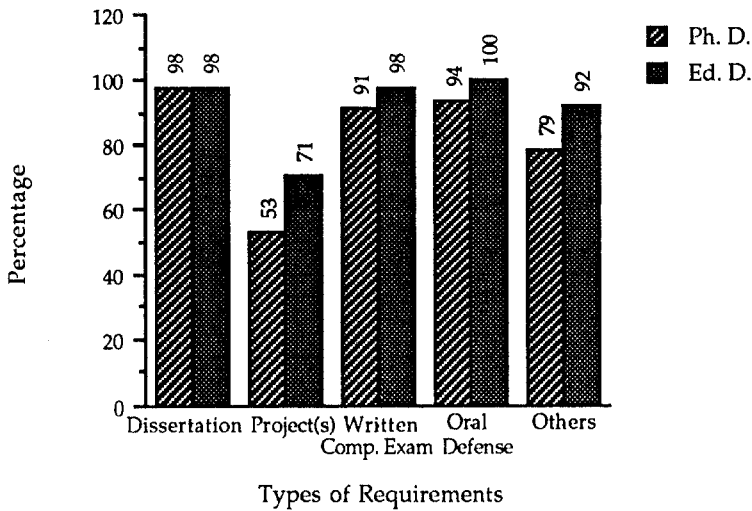
### *Degree Requirements*

Because the Ed.D. is more likely to be the degree of choice for less research-oriented institutions, one might assume that there would be less emphasis on the dissertation and on courses designed to prepare students to complete a dissertation. The results of the questionnaire, however, did not confirm this assumption. For example, Figure 3 shows that the same percentage of education deans and chairs reported that their institutions required a dissertation for the Ed.D. as reported a dissertation required for the Ph.D. (98%). Of those rare institutions

Table 1  
**Comparison of Types of Institutions Offering Ph.D. & Ed.D. Programs in 1979 and 1989**

<i>Type of Institution</i>	<i>Ph.D. &amp; Ed.D.</i>		<i>Ph.D. Only</i>		<i>Ed.D. Only</i>				
	1979	1989	Change	1979	1989	Change			
Research	47	57	+10	13	17	+4	12	7	-5
Doctorate Granting	21	29	+8	12	17	+5	26	26	+0
Comprehensive	4	9	+5	2	8	+6	19	32	+13

**Figure 3**  
**Percentage of Institutions Reporting Selected Requirements**  
**for Their Ed.D. and Ph.D. programs**



that did not require a dissertation, most reported that they required some other type of research or evaluation project in lieu of the dissertation. As Figure 3 demonstrates, the requirements of a dissertation, a written comprehensive examination, and an oral defense are as standard for the Ed.D. as they are for the Ph.D.—the degree to which such requirements have traditionally been tied.

When institutions were asked to indicate specific research and evaluation competencies required for each type of degree program, again results showed only slight differences between the Ph.D. and the Ed.D. programs. Table 2 shows that of nine competencies included on the questionnaire, only one was significantly different for the two degree titles—"advanced inferential statistics." Even though significantly fewer Ed.D. than Ph.D. programs required students to master this competency, more than two thirds (71%) required this skill for Ed.D. students. In essence, with the exception of the "advanced naturalistic methods" required by slightly more than half of the institutions, most common research and evaluation competencies are required for both Ph.D. and Ed.D. students.



**Table 2**  
**Percentage of Institutions Requiring Selected Research and Evaluation Competencies for Ed.D. and Ph.D. Programs**

	<i>Ed.D</i>	<i>Ph.D</i>	$X^2$	<i>DF</i>	<i>P</i>
Conduct literature searches	88	93	1.00	1	.32
Basic Naturalistic Methods	67	73	0.61	1	.44
Advanced Naturalistic Methods	54	53	0.01	1	.93
Single Subject Designs	60	70	2.10	1	.10
Advanced Experimental Design	74	78	0.35	1	.55
Basic Inferential Statistics	84	90	1.50	1	.21
Advanced Inferential Statistics	71	89	8.10	1	.01*
Product-Program Evaluation	74	69	0.42	1	.51
Educational Measurement	72	74	0.11	1	.73

### Discussion and Conclusions

The following conclusions can be drawn from the data gathered in this study:

- The Ed.D. and Ph.D. continue to be the most common doctoral degree titles in the field of education, although during the past decade the number of institutions offering doctoral programs with other titles has increased.
- Although the number of institutions offering doctoral programs in the field of education has increased during the past decade, the percentage offering the Ed.D., Ph.D., or both degrees has changed only slightly. The data do not indicate a clear movement toward either degree.
- During the past decade the percentage of research universities offering the Ed.D. as their only doctoral degree in education has decreased, and the percentage of comprehensive universities offering the Ed.D. as their only doctoral degree has increased.
- Program requirements are remarkably similar for Ed.D. and Ph.D. programs, including competencies in research and statistics.

How might these findings inform the debate regarding doctoral programs in education? The debate itself is not easy to characterize because so little has been published on the topic. Rather the arguments for one degree or the other have emerged from departmental, college, and university discussions over how a specific degree program should be titled. Some have argued for eliminating the Ed.D. in favor of the Ph.D. (Brown, 1990; Courtenay, 1988; Schneider, personal communication, April 1991). Their argument usually centers on the practical realities that students seem to prefer the Ph.D., that it is a more established doctoral degree, and that it allows students to pursue a content specialization in the arts and sciences. Others have argued that education should offer its own doctoral degree. Goodlad (1990), Wisniewski (1990), and Dill and Morrison (1985), in addition to Clifford and Guthrie (1988), have all suggested that the field of education would benefit from having its own professional degree. Indeed, the Ed.D. was conceived at Harvard with the rationale that education must have its own title separate from the arts and sciences.

The few who have formally entered the debate regarding doctoral study in the field of education have offered a variety of arguments in favor of the Ed.D. over the Ph.D. Though labels differ, the arguments might be grouped into one of the following three categories: (a) *the professional school argument*, (b) *the unification argument*, and (c) *the autonomy argument*.

### *The Professional School Argument*

Clifford and Guthrie (1988), among others, argue that schools of education should recognize that they are professional schools and pattern themselves more after other professional schools rather than attempt to mimic the social sciences. Because law and medicine offer their own degrees, the J.D. and the M.D., education should offer its own unique degree, the Ed.D. The basis for this argument is that professions are not academic disciplines, but rather fields that draw on a variety of disciplines to prepare their degree recipients for the profession. Thus research in the professions should focus on application rather than theory. And because the Ph.D. has its roots in theoretical research, the Ed.D. is a more appropriate designation for education graduates. In addition, because the majority of those receiving doctorates in the field of education emphasize teaching and administration rather than research in their careers, doctoral programs in education

should not focus on research in the same manner as a Ph.D. program in the hard sciences.

Compelling as this reasoning may be, a few contrasting issues should be raised before the professional school argument can be accepted. First, the data in this study show that the requirements for the two degree programs are nearly identical. Programs leading to both degrees require dissertations and comprehensive and oral exams at the approximately the same rates. The data show clearly that Ed.D. requirements are more similar to Ph.D. requirements than to other "professional" doctorates that do not require dissertations (i.e., J.D. and M.D.). This is not to suggest that some Ph.D. programs do not differ substantially from some Ed.D. programs, but it does suggest that there may be as much variation in Ph.D. programs as there is between Ph.D. and Ed.D. programs. Thus the degrees themselves cannot be viewed as signaling a clear difference in programs. Second, Brown's (1990) findings indicate that students at institutions that offer both degrees prefer the Ph.D. over the Ed.D. This finding may be because the Ph.D. has a more respected place in academia. The trend data in this study reinforce this perception by showing that during the past decade research universities have been reluctant to eliminate the Ph.D. in favor of the Ed.D.

Less frequently discussed is a third argument related to the nature of the teaching profession. One may compare the doctoral recipient in education with the Ph.D. recipient in the hard sciences and conclude that the nature of the disciplines differs so greatly that the doctoral degree should also differ. Doctoral recipients in education do not, after all, find themselves in research laboratories following graduation. Law and medicine, which are based on application rather than theory, have created separate doctoral degrees. However, business, engineering, and several other professional areas have chosen overwhelmingly to offer the Ph.D. as their doctoral degree. The dissertation in business or engineering is normally more applied in nature than the dissertation in physics or chemistry, and students of the humanities, although they too are awarded the Ph.D., seldom pursue research-oriented careers. The data collected in this study show that SCDEs are currently following a similar path—not clearly differentiating the professional degree from the research degree.

Much of the Ed.D.-Ph.D. controversy centers on the role research should play in the education profession. For example, if the professional school argument is carried far enough, one might conclude that the dissertation should be eliminated from all education doctoral pro-

grams because law and medicine do not require a dissertation. But the results of this study show that 98% of the doctoral programs in education continue to require the dissertation along with an array of research competencies necessary to complete a dissertation. One justification for the dissertation as a requirement for the Ed.D. may be that the knowledge bases for educators are developed differently from the knowledge bases for law or medicine. For example, medical research is conducted by a host of related professionals (e.g., biologists, bacteriologists, pharmacologists) in addition to medical doctors who pursue a university career. The courts extend the legal knowledge base each time a judge or a supreme court justice writes the justification for a decision on a case.

Educators will continue to conduct a major portion of the research in education. Doctoral students will likely continue to contribute significantly to the overall research effort—whether seeking an Ed.D. or a Ph.D. Those at research universities calling for the elimination of the Ph.D. on the grounds that it is not a professional degree will likely be disappointed (i.e., Clifford & Guthrie, 1988). From the data collected in this study, research universities are increasingly less likely (not more likely) to offer only the Ed.D. Only the comprehensive colleges and universities increased in this category and these are institutions which by definition, “with few exceptions,” do not offer doctoral programs of any kind (Carnegie Foundation for the Advancement of Teaching, 1987, p. 7).

### *The Unification Argument*

Some have argued that the Ed.D. would provide the needed mechanism to unify the field of education—bringing together the varied disciplines that are grouped into schools of education (Wisniewski, 1990). The education profession, they argue, is splintered because of the variety of specialty areas, such as health, physical education, industrial education, speech pathology, and counseling psychology, that often offer doctoral programs in schools of education. Eliminating the Ph.D. in favor of the Ed.D. would serve as a symbol to help focus the SCDE’s mission on preparing educators, rather than supplying professionals for clinics, hospitals, and private business. Drawing this argument further, one might assume that an SCDE could move to a single Ed.D. degree in “education,” and, like law and medicine, allow specialization without designating the specialty in the degree title itself.

The idea of unifying doctoral programs has merit, but we found no indication that such a movement is in process. Our results show that schools of education, instead of converging on a single doctoral degree title that signifies the mastery of certain knowledge and skills, are creating new titles that, because of their newness, are less meaningful, even within the profession itself. Those institutions that offer only a single doctoral degree do not appear to show a preference for the Ph.D. or the Ed.D. Although some institutions offer a single degree (i.e., Ph.D. or Ed.D. in Education) and allow students to pursue various specializations, such unification occurs under the Ph.D. as well as under the Ed.D.

### *The Autonomy Argument*

Some argue that if schools of education hold onto the Ph.D. they must march to the drumbeat of the arts and sciences, subject to graduate school administrators who are more concerned about the quality of Ph.D. programs than they are about professional degree programs. As administrators of schools of education view the autonomy enjoyed by law schools and medical schools, they sometimes conclude that if schools of education had their unique doctoral title, specific to the education profession, that same autonomy might be given to their schools. For example, eliminating the dissertation from an Ed.D. program would be much easier than eliminating it from a Ph.D. program because graduate school administrators would be willing to allow the SCDE to define "their own" degree, whereas eliminating the dissertation from the Ph.D. program would reflect negatively on other Ph.D. programs in the institution. This line of reasoning was put forth when the first Ed.D. program was created at Harvard (Dill & Morrison, 1985).

Although the autonomy argument was not tested directly in this study, one might infer from the results of the questionnaire that, because Ed.D. programs are so similar to Ph.D. programs, they may not be as free from external control as some might think. If eliminating the Ph.D. in favor of the Ed.D. would allow SCDE faculty to design professional doctoral programs that differ substantially from the current Ph.D. programs, why did the data in this study indicate so much similarity between requirements for the two degrees? Other research, such as the recent study by Goodlad (1990), also give no evidence that schools of education enjoy increased prestige or autonomy due to the doctoral degrees that they offer. After all, university administrators

must rely on criteria set in a given discipline when they judge the quality of graduate or undergraduate programs in a school or college. However, our data suggest that the standards for the Ed.D. and Ph.D. in education are so similar that education faculty cannot justify different requirements for programs carrying either title.

### **Future Directions**

Schools of education have four options with regard to doctoral program titles: (a) continue to offer both the Ed.D. and Ph.D. in their current undifferentiated state (Carpenter, 1987); (b) continue to offer both degrees, but differentiate between program requirements for each; (c) offer only one degree and define more clearly the expectations for the degree, specifically the role of the dissertation; or, (d) offer a degree with a title other than Ed.D. or Ph.D. The first option is the easiest but, perhaps, the most dangerous. Continuing to offer both degrees without differentiating the programs within the profession keeps the education profession, even at the doctoral level, underrated and confused.

The second option (differentiating between the two degrees) is preferred by many because it leaves maximum freedom for institutions to offer and students to pursue either or both degrees, but demands that the profession indicate clearly how the graduate programs differ. However, previous efforts to differentiate between the two degrees at a national level ended in a stalemate (Moore, Russell, & Ferguson, 1960). This study offers little to indicate that such an effort would be more fruitful in the 1990s than it was in the 1960s. The number of institutions offering doctoral degrees in the field of education has more than doubled during that time, and the findings of this study indicate that the type of institution greatly affects the type of degree offered. A few notable research institutions offer only the Ed.D. through their schools of education (e.g., Harvard and Johns Hopkins), but most of the increase in the Ed.D. over the past decade has been in comprehensive colleges and universities which, by definition, do not emphasize doctoral study and may not be allowed to offer the Ph.D. in any field, including education.

The third option, although it would be the most difficult to pursue, has the potential of bringing the most benefit to the profession—not only because it would result in less confusion over the meaning of the doctoral degree in education, but because it would cause educators to

come to agreement regarding fundamental requirements for the degree. For example, if the dissertation is retained as a requirement for doctoral study in education, the profession must agree on what criteria the profession will put forth to judge the quality of the final product and how these criteria will differ from those in other professions and disciplines. The current national effort to define more clearly what is meant by scholarship in higher education (Boyer, 1990; Smith, 1990) has direct implications for graduate study in the field of education. It has recently been said: "It is unrealistic, not to say unwise, to think of the common standards, expectations, formats, and the like that are equally applicable . . . to dissertations in experimental physics on the one hand and English literature [or, we might add, education] on the other (Council of Graduate Schools, 1991, p. 14).

The fourth option, to offer a degree other than the Ed.D. or Ph.D., could prove beneficial, but only if the profession agreed to eliminate its other doctoral degree titles. For example, Goodlad (1990) has recommended that SCDEs offer the D.Paed. (Doctor of Pedagogy) as a means of reducing the confusion that presently exists between the Ph.D. and Ed.D. Our study shows that no institution currently offers a degree with that title. The concern is that some institutions would begin to implement the D.Paed. without eliminating their other titles, thus adding to the current confusion, rather than ameliorating it. The question that remains is whether SCDEs could change to the D.Paed. (or some other title) as effectively as the law profession changed from the L.L.B. to the J.D.

Regarding dissertation requirements, the final question on the survey from the present study asked respondents to estimate the percentage of dissertations in the field of education that resulted in some type of state or national publication. The results of this question were not summarized because too many respondents could not estimate the percentages. This inability is important because it gives some indication of the importance placed on professional publication in current doctoral programs in education. If option three were followed, the field could address this issue directly by defining the role publication should play in a doctoral program and determining the types of publications appropriate in the field. Such expectations could then be integrated in accreditation standards, as well as communicated directly to faculty and students in schools of education.

The important aspect of options three and four is not the specific degree that is to be selected, but rather that once a degree is agreed upon, the major effort must focus on degree requirements. Option two

would be highly preferable to option one, because it too would focus attention in the field on doctoral requirements in a way that has not occurred for decades. Baccalaureate and master's programs would need to be included in the dialogue regarding doctoral requirements (see Osguthorpe, Zhou & Schneider, 1990). For example, when comparing the data collected in this study with that of Osguthorpe & Wong (1992), one might conclude that some master's programs are as demanding as some doctoral programs. And as extended teacher preparation programs emerge, there is some question as to whether some baccalaureate programs are as demanding as some master's programs. This confusion must be reduced if education is to increase in stature as a profession. Because so many SCDEs are currently re-examining their missions and programs, there has never been a more appropriate time to rethink doctoral study and its place in the education profession.

## References

- Andersen, D.G. (1983). Differentiation of the Ed.D. and Ph.D. in education. *Journal of Teacher Education*, 36(3), 55-58.
- Boyer, E.L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, N.J.: Carnegie Foundation for the Advancement of Teaching.
- Brown, L.D. (1990, April). A perspective on the Ph.D.-Ed.D. discussion in schools of education. Paper presented at the meeting of the American Educational Research Association, Boston.
- Carnegie Foundation for the Advancement of Teaching. (1987). *A classification of higher education*. Princeton, NJ: Princeton University Press.
- Carpenter, D.S. (1987). On-going dialogue: Degrees of difference. *The Review of Higher Education*, 10(3), 281-286.
- Clifford, G.J., & Guthrie, J.W. (1988). *Ed School: A brief for professional education*. Chicago: The University of Chicago Press.
- The Council of Graduate Schools in the United States (1991). *Role and nature of the doctoral dissertation*. Washington, DC.
- Courtenay, B.C. (1988). Eliminating the confusion over the Ed.D. and Ph.D. in colleges and schools of education. *Innovative Higher Education*, 13(1), 11-21.
- Dill, D.D., & Morrison, J.L. (1985). Ed.D. and Ph.D. research training in the field of higher education: A survey and proposal. *The Review of Higher Education*, 8(2), 169-186.
- Goodlad, J.L. (1990). *Teachers for our nation's schools*. San Francisco: Jossey-Bass.
- Holmes Group, (1990). *Tomorrow's schools: Principles for the design of professional development schools*. East Lansing, MI.
- Moore, H.E., Russell, J.H., & Ferguson, D.G. (1960). *The doctorate in education* (Vol. 2). Washington, DC: The American Association of Colleges for Teacher Education.
- Moore, T.C. (1979). *Peterson's guide to graduate programs in business, education, health and law*. Princeton, N.J.: Peterson's Guides.
- Moore, T.C. (1989). *Peterson's guide to graduate programs in business, education, health and law (23rd ed.)* Princeton, NJ: Peterson's Guides.



- Osguthorpe, R.T., Zhou, L., & Schneider, C. (1990, April). *The Graduate Degree Dilemma: A school of education's mission and its programs*. Paper presented at the meeting of the American Educational Research Association, Boston.
- Osguthorpe, R.T., & Wong, M.J. (1992, February). The master's degree and extended teacher preparation programs: A call for consensus. Paper presented at the annual meeting of the Association of Teacher Educators, Orlando, Florida.
- Schneider, B.L., Brown, L., Denny, T., Mathis, B.C., & Schmidt, W. (1984). The deans' perspective on the status of doctoral programs in schools of education. *Phi Delta Kappan*, 65, 617-620.
- Smith, P. (1990). *Killing the spirit: Higher education in America*. New York: Viking Press.
- Wisniewski, R. (1990, February). *Colleges of education twenty years hence*. Paper presented at the meeting of the American Association of Colleges for Teacher Education, Chicago, Illinois.