An excellent teacher education program demands the careful integration of both campus-based and field-based instruction over a substantial amount of time. Teachers must be thoroughly prepared in general academic work and in pedagogy, and they should be exposed to the actualities of the classroom. An excellent teacher education program needs high quality faculty and staff, and needs them in sufficient numbers. The faculty must be highly competent intellectually and well educated in appropriate academic disciplines and in specific areas of pedagogy directly related to their instructional responsibilities. They must also have been experienced and successful teachers of children themselves. Serious consideration should be given to lengthening the teacher preparation program. There is a need to strengthen both academic and performance criteria for prospective teachers. To meet the needs of an excellent teacher education program, more funding is necessary, and better physical and instructional resources are essential. (JD)
Resources Needed for
an Excellent
Teacher Preparation Program

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Asking a teacher educator what resources are needed for an excellent teacher preparation program is like taking a malnourished person into a grocery store and saying, "What do you need?" He will be overwhelmed by the possibilities. He may ask for the first thing he sees; he may even ask for too little and be apologetic about asking. The fact is that teacher education, like the chronically hungry person, needs everything, every kind of nutrient, and more of what food it now has.

As a group, teacher educators are accustomed to making do, getting by, and getting along in institutional and political contexts that often do not value what we do, do not really support our efforts either financially or philosophically, and regard teacher education as a cheap way to give many students a "vocational" degree. Periodically (about once every twenty years), there is an uproar when the public discovers anew that teacher education has not been doing a uniformly excellent job. And, periodically, teacher educators have to explain to the public that we have not received the resources we need for excellence.
Specifying necessary resources depends on how one defines an excellent teacher preparation program, which in turn depends on how one defines the proper role of beginning teachers, the skills and knowledge they are to have, and the results they are to obtain with their pupils. In my judgement, beginning teachers should be prepared to serve as genuine professionals, not just as technicians, and should receive an education considerably deeper, broader, and more rigorous than is now customary. Our current system of school staffing certainly demands well-educated teachers prepared to perform multiple roles with little assistance or supervision. Our overriding goal is to prepare teachers who, first, do no harm to children and who, second, promote considerable growth among all of their pupils.

The general components of good teacher preparation programs are well-known, if not always well-implemented. First, future teachers need a broad general education to prepare them to serve as models of well-educated people and as purveyors of general education to their pupils. Second, prospective teachers need both breadth and depth in one or more academic disciplines. They should be learned well beyond their future pupils and should possess, not just the facts of a discipline, but also an understanding of how one thinks and learns in the various
disciplines and how one area of inquiry relates to and differs from others.

It is interesting to note that these first two components of teacher preparation usually are not the direct responsibility of the education department. If a teacher is deficient in basic skills, general education, or subject matter competence, we must look outside the education unit for the main source of the problem. Obviously, the first resource an excellent teacher preparation program must have is a total institutional context of high quality, and all the resources imaginable for teacher education will not compensate for a college or university setting that is generally shoddy.

At present, some people are calling for prospective teachers to have more coursework in academic disciplines and less in education on the theory that somehow more "subject matter" will cure what ails some teachers. My own observations suggest instead that

1. the most serious problems with the subject matter component for prospective teachers are not its length but lack of rigor and a preponderance of fragmented, fact-oriented courses without any attempt to present the course content as a coherent whole somehow relevant to an educated life.

2. the fact that some teacher education programs do need more work in the discipline(s) does not mean that the professional education component is any less important or should be diminished. Later, I will examine time as a critical resource for teacher preparation.
3. when teachers fail in the classroom, almost always their basic problem is pedagogical, not mastery of subject matter. To a considerable extent, good teachers, teachers who know how to teach, can and will compensate for some weakness in subject matter, whereas subject matter experts will fail if they cannot gain and hold children's attention and communicate their subject matter.

Coursework in the academic disciplines definitely does not teach prospective teachers what to teach their future pupils. If college material were appropriate for direct transmission to school children, then it already would be taught in K-12 schools. The purpose of such coursework is, first, to enable the educator
to perceive the meaning of the seeming impulsive and aimless reactions of the young, and to provide the stimuli needed to direct them so that they will amount to something. The more the educator knows of music the more he can perceive the possibilities of the inchoate musical impulses of a child. (Dewey, 1916, p. 190)

Second, subject matter mastery frees the teacher to attend to pupils. "When engaged in the direct act of teaching, the instructor needs to have subject matter at his fingers' ends, his attention should be upon the attitude and response of the pupil" (Dewey, 1916, p. 191).

The third component of teacher preparation is professional education -- the total set of coursework and practical experiences that prepares the person who has been liberally educated and who has mastered one or more academic disciplines to actually teach children.
Professional education includes 1) those "foundational" studies that provide the necessary background about children, learning, teaching, and schools for informed practice as a teacher and 2) practical studies in planning, implementing, and evaluating instruction. A list of exactly what should be included in the professional education component would be quite long, but essentially the curriculum should have provided the graduate with a high level of competence in the specific skills of teaching and with a large fund of information about the total context of teaching as a guide for decision-making.

Clearly, an excellent teacher preparation program, as I view it, should be rich and fat, full of both exciting ideas and realistic experiences. An excellent program demands the careful integration of both campus-based and field-based instruction over a substantial amount of time.

Instruction for future teachers that is solely or predominantly campus-based is divorced from the reality of school rooms and is necessarily predominantly theoretical and/or admonitory. There is nothing wrong with theory per se; in fact, all teaching ought to be based on some theory of what one is doing and why. Admonition -- telling future teachers what their obligations will be and what they shouldn't do -- is also necessary. However, theory and admonition alone cannot convey how precepts are to be translated into practice. A good analogy would be to tell prospective surgeons how an appendectomy is done, require them to read about the operation, maybe even show slides, but never require them to observe actual appendectomies, practice isolated subskills, assist surgeons, and, finally, perform the operation themselves under supervision.
On the other hand, entirely field-based instruction, which a few people have advocated, is also deficient. This is the apprenticeship model, which assumes that teaching is a clearly defined and delimited technical craft learnable by imitating a practitioner. Teaching, however, is not merely a technical craft. In fact, one of the most pervasive and persistent characteristics of teaching is its variability. Groups of pupils and individual pupils differ greatly from each other; and, as a child develops, he will differ from his earlier self; the social contexts of schooling vary, and within the classroom the events teachers must respond to and the variables they must control are unpredictable. To set only one model or a few models before prospective teachers for them to imitate in a low-level, rote fashion would produce teachers very limited in their repertoire of behaviors. Again, the medical analogy is illuminating. Imagine a system whereby one became a physician simply by serving under a licensed physician for several years.¹

Teacher education, then, must combine both theory and practice, both admonition and example, both ideas and realistic experience in an integrated, carefully planned curriculum. Furthermore, as the future teacher progresses, the professional education curriculum must change accordingly.

In the early stage of the program, teacher education must concentrate on helping the college student begin to view schooling from the other side of the desk. As Lortie (1975, pp. 62-65) noted, everyone who has

¹Medicine, law, and other mature professions, including teaching, rejected this system long ago.
been through K-12 schooling thinks he knows how it should be done and has some very firm -- and often mistaken or inadequate -- ideas about what teaching involves. Beginning education students must learn to study children, teachers, teaching, and schools; and they must also go into schools to observe real manifestations of the facts and concepts they have learned in the college classroom.

The early stage also requires our students and us to assess their career decisions. Some students initially attracted to teaching will be unsuitable for the profession. Some love children but do not have the emotional stamina and personal characteristics to handle 20 wiggly first graders or 30 cantankerous ninth graders. Some do not have the intellectual caliber to teach; some do not have the self-discipline and orderliness to organize a program of instruction. Some have wandered into the wrong program simply because they can't think what else to do with themselves.

In the middle stage, teacher education students should continue their study of teaching and begin to practice isolated skills in small steps, with ample opportunity for relearning and continued practice and to a high level of mastery. In this stage, the prospective teacher should learn that there are specific, discreet skills in teaching, what those skills are, and how to perform them.

In the final stage, the prospective teacher should learn to integrate the specific concepts and skills of teaching and gradually assume the full teaching role. Traditionally, student teaching has been intended to fill this purpose; however, the experiences of many beginning teachers
indicate that the traditional student teaching experience is probably too short to provide an adequate induction into the profession (Johnston and Ryan, 1983).

### Specifying the Resources

If we accept the general model of excellence in teacher education programs as described here, then the need for certain resources follows necessarily.

**Faculty and Staff.** The first and most important resource is faculty and staff. In terms of both quality and number, the people directly responsible for educating future teachers are critical. Done properly, teacher education is labor-intensive. Technology can certainly assist, but it cannot replace the close contact between a teacher of the art and science of teaching and the student of teaching.

Funding formulas for teacher education typically assume that it should operate primarily on a format of lecture/reading/paper and pencil tests, as do English, mathematics, and history. From the perspective of some administrators, this format is marvelously attractive because it is economical. One professor can lecture to thirty, a hundred, or even three hundred students in a hall; give multiple-choice, machine-scored examinations; and supposedly accomplish the business of higher education at low cost. Better yet, the professor can be replaced by a cheap teaching assistant, instructor, or part-timer.
Teacher educators struggle constantly against the notion that their courses can and should be taught as Psychology 101 or Introduction to Political Science 121 are commonly taught. For only one example of the special needs of teacher education, proper supervision of field experience—students is extremely time-consuming. Often, a group of education students cannot be placed in one school; each needs an individual placement in a separate classroom to maintain the appropriateness and realism of the experiences and to not overburden classroom teachers and schools. Supervisors then have a considerable demand on their time for travel, observation, and conferences with each student throughout the duration of the experience.² As it is now, when we include field experience in our teacher education curricula, we have three options—skimp on supervision, overburden professors with supervisory duties, or farm supervision out to graduate students and other subprofessionals.

Early field experience also requires considerable administrative time, if it is managed well. If an institution has more than a handful of education students, field experience becomes a tremendous logistical task. Someone must identify specific kinds of placements and match them to students and courses; keep schools, teachers, and education students informed of dates, times, purposes, activities, and expectations; maintain good public relations with multiple schools and school districts; deal with major problems in student performance; monitor students' attendance; record evaluations of students' performance and

²I take it for granted that we teacher educators are obligated to carefully supervise our students when we place them in schools.
document their participation; arrange transportation, and coordinate the
design and regular evaluation of the field experience component.
Obviously, a teacher education program committed to field experience for
its students must be able to make a large investment in supervisory,
staff, and administrative time.

Given the nature of teacher education, a more appropriate approach to
staffing would permit a coaching relationship, such as we find in drama,
sports, and clinical medicine. Both campus-based and field-based
components of teacher education call for a close, intense relationship
between a skilled teacher educator and a few students. Some aspects of
the excellent program can be conveyed in conventional classes to larger
groups of students. However, the main business of learning to teach
requires a skilled teacher educator who can and is permitted by the
situation to coach -- to demonstrate, design practice activities, observe
students, critique and reteach, observe again, and so forth until each
capable student masters the skills.

An excellent teacher preparation program needs high quality faculty
and staff, as well as sufficient numbers. Teacher education faculty, in
order to prepare excellent teachers, must possess a number of general
attributes. First, they must be highly competent intellectually and well
educated in appropriate academic disciplines and in specific areas of
pedagogy directly related to their instructional responsibilities.
Second, they must themselves have been experienced, highly successful
teachers of children in a setting like that for which they are preparing
new teachers. Finally, they must be capable of relating the knowledge
base of teaching and teacher education to their instruction of future teachers. In sum, faculty who are directly responsible for teacher education should come from the very best who enter the teaching profession -- excellent teachers who also possess the highest intellectual and personal skills and the commitment to obtain a high level of formal expertise in pedagogy.

Unfortunately, teacher education as a career has inherited recruitment problems parallel to those of school teaching -- low status, low salary, and often poor working conditions. An excellent teacher preparation program needs the financial and environmental resources to attract, retain, and reward top-quality faculty and staff.

Time. The second most important resource for teacher education is time. On the average, 20 percent of the total coursework required of a secondary teacher and 40 percent of that required of an elementary teacher consist of professional studies (Haberman and Stinnett, 1973). Conversely, for 60 to 80 percent of their education, students are not recognized in any significant way as professionals in training and have no contact with the teacher education unit (Clark and Marker, 1975).

Elementary majors average 37.5 semester hours in professional studies and 11.8 hours in clinical studies; secondary majors average 25.4 semester hours in professional studies and 10.7 hours in clinical studies (The State of Teacher Education, 1977). Furthermore, under the certification requirements of some states much skimpier programs are possible. Dumas and Weible (1983) and Feistritzer (1983) report that the states' standards for professional studies for elementry teachers were
highly variable in both amount and nature. Burks (1984) listed 18 states as still accepting 18 or fewer credit hours for secondary certification, and a few still accept small amounts of credit hours for even elementary certification.

Such limited time cannot begin to contain a fully professional preservice education for teachers. A number of individuals and groups (e.g., American Association of Colleges for Teacher Education, 1983; Cremin, 1978; Denemark and Nutter, 1980; Smith, 1980) have advocated extending the preparation period for beginning teachers beyond the traditional four years. Some individual institutions have extended their programs beyond four years, and a few states (e.g., Oklahoma, Florida) have legislated a fifth-year internship during which college and school personnel assist the beginning teacher in learning the situation-specific skills of teaching.

Students. Students are a critical resource for teacher education, and teacher educators long have been too lax in standards for admission to and graduation from teacher education programs. Often, our relative lack of selectivity in whom we admit has been ascribed to "low standards" or "lack of academic respectability." My observations of myself and my colleagues suggest that the more likely cause is that we as a group are so strongly oriented to nurturing and to recognizing our students' potential for growth and so resistant to pronouncing an individual a "failure" that we sometimes lose sight of our obligations to the children our students will eventually teach. Quite simply, we need to strengthen both academic and performance criteria for students in our programs to
ensure that our graduates are not merely "acceptable," but "excellent" teachers; and, to our credit, we have made clear progress in this area in recent years (Adams, 1983). The dilemma is this: If we raise our standards for admission and graduation, we will have fewer students; and, if the funding formulas are not changed, we will have fewer resources, including fewer faculty. Reductions in faculty, particularly at small and medium-sized institutions, represent more than what simple faculty/student ratios reflect; they represent an erosion of the diversity of a faculty, regardless of how many students are taught, and a dwindling of its intellectual and experiential mass.

Schools. If it is to conduct a comprehensive field experience program, a teacher preparation institution must have ready access to a wide variety of schools—traditional, progressive, and alternative schools; schools serving the full range of types, ages, and special needs of pupils, and schools in rural, urban, and suburban locations. And, the program needs ready access to excellent teachers within those schools. Obviously, few institutions can find all of these resources in their immediate area, and so most must go abroad. In addition, a teacher education program of any size will impact too heavily on local schools. In terms of resources, the excellent teacher preparation program needs funds and personnel to establish and maintain an extensive network of cooperating schools, to provide students with varied experiences in those schools, and to adequately compensate schools and teachers for the considerable voluntary contribution they make to our professional enterprise.
Physical Resources. An excellent teacher education program also needs some specific, and expensive, physical resources other than the traditional college classroom and the school classroom. Central administrators, governing bodies, and the general public assume that the chemistry department needs laboratories and equipment, that physics needs sensitive measuring devices and particle accelerators, and that psychology needs its rat rooms and laboratories. However, these same groups may not realize what specialized resources teacher education needs.

First, prospective teachers and teacher educators should have access to a wealth of curricular and instructional materials of all types, in all subject areas, and for all types of students -- textbooks, workbooks, slides, films and filmstrips, recordings and audio tapes, tests and testing equipment, children's and young adults' literature and magazines, teaching implements and tools, curriculum guides, packaged curricular materials and kits, gym equipment, art supplies, musical instruments, educational toys, etc. The selection should be wide and current, well-cataloged and maintained by specialized staff; and teacher educators should not need to scrounge for free materials or lend their own possessions, as many now do.

Second, teacher education students need a comprehensive media center that includes all modern learning technology, including computers, and a good selection of equipment for preparing materials. Education students need access to and instruction in media -- both how to simply use it and how to use it to enhance instruction. Further, the media center requires staff skilled in media instruction and financial support for maintenance, repair, and replacement of hard- and software.
Third, an excellent teacher preparation program requires specialized clinical facilities to provide intense, controlled, closely supervised experiences not feasible in field sites. Examples would include testing/tutoring rooms with one-way observation windows and facilities for videotaping; demonstration classrooms and laboratories, and facilities and equipment for such specialized functions as counseling; foreign language laboratory instruction; instruction in music, art, and physical education (regular and adapted), speech and hearing therapy, and other therapeutic purposes. At present, such facilities often are nonexistent, small and crowded, devoted primarily to other units and functions of the institution, or constantly commandeered for other purposes.

Fourth, a teacher education program needs healthy library resources for both students and faculty -- books, periodicals, indexes and other reference works, document retrieval services, etc. -- and competent librarians trained and interested in the field of education.

Finally, a teacher education program requires an abundant supply of such mundane things as paper and paper clips, photocopying and printing of instructional materials, and secretarial and clerical services. Any organization, if it is to perform its tasks well and promptly, needs a reasonable level of flexibility and expeditiousness in its routine operations.

All of these physical resources are necessary, along with trained staff to organize and maintain collections and facilities and to keep the resources available at hours convenient for students and faculty.
Furthermore, any initial investment for physical resources must be followed by continuing funding for maintenance, repair, and updating.

**How Much More?**

If an excellent teacher preparation program requires specific resources and if many, perhaps almost all, existing programs are not adequately supported, the question then becomes, "How much more support do existing teacher preparation programs need?" The answer will vary by institution. However, I believe I can describe three negative funding situations now found in teacher education and then provide general evidence on the scope of our current underfunding. I want to stress that the three negative scenarios I describe are found in only some institutions that prepare teachers.

**The Starving Institution.** Teacher education programs are found in approximately 1,200 institutions of higher education in this country (Feistritzer, 1984). Given our country's recent economic problems and the decline in the population of eighteen-year-olds, a fair number of these institutions are starving. Some historically mediocre institutions have declined into fiscal and intellectual poverty, and some historically low-quality institutions have become even poorer. Teacher education in many of these underfunded institutions is beyond any reasonable hope of improvement, especially because the total institutional environment is low-quality. To put it bluntly, these institutions should be put out of the business of preparing teachers.
Most of these starving institutions are also small ones, and so I need to say quickly that many small colleges have good or even excellent teacher education programs. In fact, some small colleges have a special commitment to teacher education and regard it as a central part of their mission. When a small institution limits the number of teacher education programs and carefully matches its efforts to its available faculty and other resources, the result can be high-quality graduates. Unfortunately, not all small institutions are able to do this.

The Research-Oriented Institution. In some of the larger, research-oriented institutions, teacher education programs are actually ignored and underfunded by the education unit itself. When the education unit overemphasizes other more "academically respectable" endeavors such as research, graduate education, and funded projects, undergraduate teacher education then serves primarily to provide money for the more valued pursuits, employment for graduate assistants, and, perhaps, research subjects for some studies. In their defense, the research-oriented colleges of education that ignore their teacher preparation programs have been forced into this stance by the total institution's value system and how it allocates rewards.

These institutions should get out of the business of preparing teachers if they cannot change their engrained attitudes and practices. However, these institutions typically do have the potential, or the critical mass, to offer excellent programs with the reallocation and addition of resources. Research productivity and graduate education are important in themselves and may even create a climate that enriches the
preparation of future teachers (Raths and Ruchkin, 1984). Institutions that are intended to fulfill a broad, multifaceted mission related to the teaching profession should not be forced to slight one role for another because of inadequate resources.

The Inhospitable Institutions. The final negative scenario is the institution of any size, perhaps financially and academically quite sound, that is fundamentally not hospitable to teacher education. In these institutions, the attitudes of central administrators and key groups of faculty toward teacher education range from lukewarm to downright hostile. They regard teacher education as an embarrassment, a peripheral activity, perhaps a necessary nuisance, and certainly not something to spend much money on (Monahan et. al, 1984).

Institutions that cannot or will not change negative attitudes toward teacher education also need to go out of that business. Many of these institutions, however, would probably change their attitudes if forced to choose between losing their teacher education programs and supporting them adequately, after assessing what those programs contribute in both practical and philosophical terms.

An Informal Case Study. In an effort to form a better picture of what additional financial resources teacher education programs need to become excellent, I have studied the budgets for undergraduate teacher education at three Ohio institutions -- one large college of education with a 35/65 ratio between its graduate/undergraduate efforts in terms of staffing one medium-sized college of education with a 25/75 ratio between its graduate/undergraduate efforts, and one small undergraduate
I chose institutions in Ohio because of a unique funding situation: the Ohio Department of Education in 1980 implemented new and very rigorous criteria for teacher education and also obtained continuing funds, known as Project 419 monies, to give directly to teacher education units to help defray the cost of implementing and maintaining the new standards.

Teacher education programs in these three institutions are still not adequately funded. However, I believe that their patterns of spending both general fund and Project 419 monies support the following tentative statements about the extent and nature of underfunding in teacher education in general:

First, the greatest need in terms of its absolute cost is for additional personnel. The three institutions supplemented their various categories of personnel from 13% to 35% above their regular budgetary allocations. Personnel hired (completely or partially) with the "extra" state funds included a human relations expert; a person to organize and coordinate early field experience placements; an elementary education professor specializing in mathematics education; a specialist in emotional disorders for special education; extra supervisors to lower the ratio of student teachers per supervisor; a specialist in secondary/content field reading; a coordinator for the educational media center; extra secretaries to keep student records and assist faculty; workstudy students to run the photocopying and printing services, and part-time faculty to replace a faculty member on sick leave, to offer extra class sections and reduce class size, and to fill a precise need in adolescent growth and development.
Each education unit indicated that, without additional funds from the state, their genuine and pressing needs for personnel would have gone unmet. In fact, the institutions spent less of the extra funds in personnel than they needed to because they were unsure of future funds. The spending patterns showed that even the two larger institutions were lacking instructional personnel in basic areas such as mathematics education and student teaching. Based on interviews with various colleagues in these and other institutions, I would estimate that the typical teacher education program needs, at the minimum, about 30% increase in personnel support, with larger increases (35-40%) for instructional and clerical personnel. Furthermore, I believe my estimates are fiscally conservative and minimal in terms of the program quality we need to achieve and fiscally conservative.

Second, the regular operating funds for teacher education programs -- supplies, instructional materials, equipment, travel and transportation, capital outlay, etc. -- are scandalously low and almost non-existent. Throughout the recent economic problems, most institutions have tried to reduce expenses as much as possible in nonpersonnel areas. As a result, a salary dollar for teacher education may have as little as three cents behind it in operating funds. One of the education units I studied supplemented its instructional materials fund by an average of 444% over three years; without supplemental funds and given other fixed operating expenses, their purchases of materials would have been meagre.

My estimate is that teacher education programs, to achieve excellence, typically need at least a 60% increase in general operating
expenses. Again, my estimate is a conservative one, and most likely I have erred on the conservative side.

Higher education in general has suffered a loss of resources in recent years, but teacher education, which was not well-supported to begin with, has lost more than its proportional share (Peseau, 1983). Monahan et al. (1984) visited and surveyed a number of teacher education institutions in 1982 and 1983; they concluded that

...there are widespread resource constraints [in teacher education] and that these are very serious and that in a large number of cases Schools and Colleges of Education have taken a more serious blow in regard to resource cutbacks than have most other academic units in such institutions. Although a number of Education units in universities have encountered reductions in enrollment, in some cases especially so at the undergraduate level, it is our considered judgement that the magnitude of resource cuts has been substantially greater than the enrollment deterioration would otherwise warrant. (p. 22)

The Bottom Line

The bottom line is that excellent teacher education programs require specific resources and considerably more resources than they now have. Several times I have used a medical analogy. Sometimes the analogy does not hold because teachers and physicians are quite
different. However, it does serve to reveal a marked discrepancy between the espoused and actual values of our society. The veneration and privilege (and hard cash) our society has given the medical profession are a natural result of our individual desires to live long and be healthy. My question is what value by comparison have we put on our children's minds, on the teachers who will develop those minds, and on education for those teachers? Our society's official, public sentiments are that the education of future teachers is vitally important, but our collective actions as a society allocating its resources have given the lie to our official pronouncements.

Surely ignorance and misinformation are serious ailments, figuratively and sometimes literally fatal. Surely the teachers we trust to cure ignorance and misinformation deserve more and better education than we as a society have given them. And surely excellent teacher education programs will return a thousandfold to our society what we must invest in them.
REFERENCES


Peseau, Raths,
