ONLINE K–12 EDUCATION: OPPORTUNITIES FOR COLLABORATION WITH HIGHER-EDUCATION

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ABSTRACT

It is common practice for researchers and developers of innovative programs, as well as for the foundations and agencies that provide support for such research and programming, to target their efforts on specific segments of the educational system: K–12 or higher education, for example. However, the growing acceptance of the idea that society as a whole will benefit from a move toward a seamless "K–16" system suggests that such compartmentalization is no longer appropriate, whether for traditional or online education. This paper addresses issues of how and in what ways those in K–12 and higher education can fruitfully collaborate in three growing areas of online practice: dual (or concurrent) enrollment programs for high-school students, alternative routes for teacher certification for mid-career changers, and professional development for practicing teachers.

KEYWORDS

K–16, Collaboration, Dual Enrollment, Teacher Certification, Professional Development

I. BACKGROUND

Concerns about the inadequacies of the current educational pipeline to prepare and motivate students for the postsecondary educational attainment necessary for social and economic success have prompted numerous educational reforms. However, despite the pressing social need for greater participation in postsecondary education and the reforms intended to encourage it, only 67% of the students who enter 9th grade graduate from high school within four years, only 38% enter college, only 26% are still enrolled in college after their sophomore year, and only 18% graduate with either an Associate's degree or Bachelor's degree within three or six years, respectively. The percentages are significantly lower for low-income and minority students [1]. As a result, the United States, once first in the proportion of its population aged 24–35 to obtain postsecondary degrees, is now in fifth place worldwide [2].

Increasingly, attention is focusing on education as an integrated K–16 continuum, rather than as separate systems, and on how to make the continuum a more effective overall system. A number of conferences and task forces have focused on the need for closer collaboration between K–12 and higher education as the only way to ensure the quality and equity of educational opportunities for students at all levels [3]. Collaboration has also been tied to the goal of increasing post-secondary enrollments. A recent national task force report [2, p. 9] proposed that "if the end goal is having more young people attain postsecondary credentials more quickly—with less waste of time and resources—attention should focus not only on better preparation at each level but also *on the connections between the K–12 and postsecondary education systems*" (emphasis in the original). Specific areas of focus recommended for K–12-higher-education collaborations include:

- Increasing high-school students' participation in AP courses and dual-enrollment programs [2];

- Expanding the pool of K–12 teachers and improving professional development of practicing teachers as a means for ensuring high-quality teaching for all students [4]; and
- Developing consistent and complementary standards of program quality and student achievement [3].

II.   EXTENT OF K–12 ONLINE EDUCATION

Online education in K–12 schools is a relatively new, but rapidly growing, educational phenomenon. A recent publication of the National Center for Education Statistics reported 328,000 enrollments in distance education courses (all technologies) among public school students during the 2002–2003 school year [5]. Although the prediction of the Education Commission of the States that more than one in five K–12 students will be receiving a substantial portion of their instruction online by 2005 [6] has proven to be overly optimistic, the fact that 72% of school districts currently offering distance courses reported that they expect to expand their e-learning programming in the future provides an indication of things to come.

The increasing official acceptance of online education for school children is reflected in the U.S. Department of Education's recognition of the potential of virtual schools to help states meet the educational requirements of the No Child Left Behind legislation and the resulting designation of online education as an acceptable way for school districts to create additional capacity for high-quality education [6].

III.   BUILDING ON CURRENT CONNECTIONS BETWEEN K–12 AND HIGHER EDUCATION

There are several readily apparent connections between K–12 education and higher education that suggest the potential for beneficial partnerships related to online activities. Areas of previously developed connections that have already been, or could be, extended into the online environment include: college-level courses for high-school students; training of career-transition professionals to become K–12 teachers; and professional development courses for practicing teachers.

A. College-Level Courses for High-School Students

A recent survey of college admissions officers reported that the most important factor in college admissions is student success in challenging courses, and the U.S. Department of Education has noted that a rigorous, high-quality high-school curriculum, such as that which includes access to AP courses, is the strongest predictor of bachelor's degree completion [7]. Also important is a clear understanding of expectations for college-level work.

Dual enrollment programs, in which high-school students take college-level courses for credit, can contribute to a successful transition from high school to post-secondary study by increasing the academic rigor of the high-school experience and by establishing an understanding of expectations for college-level work [8]. Currently, 40 states have dual enrollment policies, with 18 states mandating that dual enrollment opportunities be provided. However, "eligibility and tuition requirements, funding streams and program features vary widely from state to state" [9]. Often, the conflicting priorities of states, higher-education institutions, and high schools become barriers to the goal of broadening accessibility of these programs beyond the academically talented to other students who would benefit from a more challenging curriculum and/or expanded curricular offerings.

Although to date few rigorous studies of dual-enrollment programs have been conducted, preliminary research suggests several specific benefits. In several studies, students reported that the programs were useful and motivated them to enroll in college; in other studies, dual-enrollment participants were reported as graduating from both high-school and college at higher rates than those who did not take dual-enrollment courses [10]. A Florida study reported that high-school students who participate in dual-enrollment programs enroll in post-secondary institutions at rates significantly higher than students who do not participate in such programs, with the rates being even higher for Hispanic and African-American students than for white students (Florida Department of Education 2004, cited in [2]).

However, as the *Renewing Our Schools* report points out, merely creating new alternatives does not ensure the teaching and leadership capacity necessary to implement such programs. Increased access to AP courses and dual-enrollment options will depend on better collaboration between K–12 and higher education, collaboration that includes online approaches:

> Distance learning and other technology-based strategies lend themselves well to accelerated work on college-level classes. The extensive technology-based systems of many institutions of higher education would allow them to deliver course content, provide feedback to students, and give students remote access to top-quality professors and courses. [2]

The most recent report from the National Center for Educational Statistics [5] estimates that 45,300 students were enrolled in Advanced Placement or college-level courses offered through distance education in the 2002–2003 school year. This figure represents 14% of all distance education enrollments and 18% of the school districts offering AP courses. The proportion of enrollments in this category varies by geographic location and district size, with rural districts and small districts having a higher proportion of students enrolled in these courses compared to urban and larger districts. The current proportionally low level of online activity suggests the potential for considerable impact from collaborations between higher education and K–12 education in this area of practice.

B. Professional Development for Practicing Teachers

According to the National Staff Development Council, there is a direct connection between high-quality teacher professional development and students' academic performance [11]. Ongoing, high-quality professional development has been tied specifically to the goal of assuring equity for all students [4].

Research and experts on teacher professional development agree that high-quality professional development activities have a number of common characteristics:

- Ongoing as opposed to one-time
- Reflect realities of teachers' schedules
- Tied directly to teaching and learning objectives
- Provide hands on experience
- Provide opportunities for immediate application and reflection
- Provide opportunities for collegial sharing and mentoring [11, 12, 13].

Many traditional forms of professional development lack these essential elements of quality. For example, although research shows that sustained activities are much more effective in bringing about positive effects in the classroom, the traditional short "one-off" workshop continues to be the form of activity in which most teachers participate. Similarly, although standards for high-quality development emphasize the importance of hands-on experience, many traditional professional development activities fail to

incorporate such experiences. It is no wonder that only 20% of teachers report that their professional development activities have had a significant positive impact on their teaching [14].

Recognizing the benefits to teachers, students, and school districts, a number of educational associations and policy groups—including the National Middle School Association, the National Association of State Boards of Education, the CEO Forum on Education and Technology, and the National Staff Development Council—are promoting online professional development for teachers. These groups all note that online learning can provide opportunities that reflect the characteristics identified as necessary for high-quality professional development.

For example, the National Association of State Boards of Education has concluded that "e-learning will improve American education in valuable ways and should be universally implemented as soon as possible" [4, p. 4]. This group has also drawn an explicit connection between adoption of e-learning for schoolchildren and use of online education for teacher professional development:

> The fact that 98 percent of all U.S. schools are now connected to the Internet offers unprecedented opportunities for educators as well as their students to take advantage of "any time, any place, any path, any pace" e-learning to enhance their pedagogical and administrative skills in an ongoing manner. The Internet can potentially deliver to every educator in every school a wide variety of formal and informal courses available on demand, from brief skills-boosting courses to labor-intensive master's degrees. Online learning allows teachers and administrators to experience the same instructional practices they are expected to use with their students, such as project-based learning, assembling electronic portfolios, and searching out and critically evaluation information on the Internet [4, p. 30].

In referring specifically to professional development aimed at helping teachers integrate technology into the classroom, a CEO Forum report notes that

> Few techniques are more effective than learning by doing…. Teachers should use technologies such as distance learning, online networking, and web-and computer-based classes to access professional development resources [15, p. 20].

This observation is particularly true of a sub-category of teacher professional development: that needed by those K–12 teachers who teach online through virtual schools, consortium-like arrangements among public schools, or other structures. The particular skills and strategies needed by these teachers can best be gained and implemented via the experience of their own learning via the medium or media through which they themselves teach.

Several recent research reports also support the value of online teacher professional development. A study of an online professional development program for rural teachers and administrators found that the program had a positive influence on teacher collaboration and community building, teacher instructional improvements, and administrator leadership practices [16]. Researchers investigating the effectiveness and cost of an online professional development program for reading teachers in Tennessee reported high levels of teacher satisfaction with the program, substantial improvements in teacher knowledge, preliminary evidence of improvement in student outcomes, and increased cost-effectiveness when compared to the traditional face-to-face format [17].

Unfortunately, neither the clear potential of online delivery to extend high-quality professional development to teachers nor the endorsement by national and federal policy groups has been sufficient to

ensure widespread participation by teachers or financial reimbursement for such programs by school districts [18, 19]. As a result, collaboration between K–12 and higher education around the delivery of online teacher development programs remains undeveloped to the detriment of both groups: higher education institutions that could benefit from the enrollment of mature, committed students and K–12 teachers, many of whom could benefit from effective, convenient, and cost-effective professional development opportunities.

Increasing collaboration in this area will depend at least in part on providing K–12 decision makers and teachers themselves with information on the benefits of online education in meeting school districts' and teachers' professional development goals, as well as on helping them identify barriers to and strategies for more widespread adoption. Concurrently, those in higher education must be given evidence of the benefits of—and convinced of their responsibilities in—developing collaborative relationships focused on these goals.

C. Online Training of Career-Transition Professionals

The U.S. Department of Education notes that traditional teacher preparation programs will not be able to supply the two million new teachers needed to meet the nation's need for "highly qualified" teachers, as defined by the No Child Left Behind legislation. Teacher retirements, tightening standards, high attrition rates among beginning teachers, and a growing student population are stressing an already inadequate teacher-preparation system. Alternative routes to teacher certification are increasingly being adopted to meet the need for more and more qualified teachers. As of 2004, 43 states had implemented some type of alternative process for certifying teachers; currently, 20% or more of new teachers enter the profession through alternative routes, such as the Troops to Teachers program [20]. In some states, the proportion is over 50% [21].

Although traditionally delivered alternative programs for certification have helped to some extent in easing teacher shortages, they cannot train nearly enough prospective teachers to meet the demand [22, 21]. Additionally, for the mid-career professional attempting to juggle multiple roles, the fixed-site, fixed-time nature of such programs can be an insurmountable obstacle.

Alternative routes to certification offered on line provide benefits to all stakeholders, and their effectiveness has been demonstrated through participants' performance on state-mandated competency tests [23]. However, as with online in-service professional development, lack of knowledge about, or acceptance of, the online options have limited the potential impact of these programs. K–12 opinion leaders and decision makers must be educated about the potential of high-quality online educational programs to meet the urgent social need for more teachers. Strategic collaboration between the higher education institutions and K–12 stakeholders is necessary to foster the growth and acceptance of this method of alternative program delivery.

IV. CONCLUSION

The pressing need to improve the effectiveness of the overall national system of education means that higher education and K–12 education can no longer be viewed as separate systems. Online learning offers a particularly relevant focus for collaboration in the move toward a seamless K–16 system. Three areas are particularly amenable to online options: AP and dual-enrollment courses for high-school students, teacher professional development, and training of career-transition professionals to become teachers. Building and sustaining K–12-higher-education collaborations in these areas can strengthen the educational pipeline through better-prepared students and highly qualified teachers.

V. ABOUT THE AUTHOR

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VII. REFERENCES

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