In a general sense, the origin of computer-based learning methods as they have developed internationally derived from correspondence instruction. In the United States, certain problems drove the development of alternative forms of higher education such as correspondence instruction at the end of the 19th century, including geographical separation from sources of higher education, demands of work and military service, lack of access for women, minorities, and the handicapped, religious convictions, and limitations of the curriculum.

One of the major obstacles to participation in conventional educational programs at the end of the 19th century was geographical separation. In many rural communities, assembling students at a central school, particularly a university, presented a problem because the farm family could not afford to lose the labor of young adults for any great length of time (MacKenzie, Christensen, & Rigby, 1968).

Another group needing correspondence instruction were those who were unable because of their jobs or social stations, either during the traditional college ages of 18 to 22 or as adults, to participate in traditional education. This group included those in the military and housewives. Women made up the majority of students in beginning efforts of correspondence courses because they did not have the access to higher education that men had, and this pattern has continued internationally with distance learning. Similarly, the physically handicapped also had little opportunity to study at the turn of the century, and little attempt was made to accommodate their special needs.

Student qualifications generally, as defined by the universities, were another reason for the development of correspondence instruction. Often, potential students did not have the prerequisite qualifications to gain entrance to traditional classroom programs. Although increasingly there were compulsory attendance laws, there was a significant percentage of the population (many recent immigrants to America) who had not received the education that they needed to gain entrance to traditional university programs. In this manner, correspondence instruction was an instrument for implementing equal access to higher education in America regardless of a student’s preparation.

To many at the turn of the century, correspondence instruction meant training, not education. The need in industry for increasing skilled workers drove this vocational education demand. In the military, the role of soldiers also became increasingly technical and required vocational education. In addition, government employees became more technical in their daily occupations and had a need for vocational training.

Another reason for the need of correspondence instruction was desire for religious training. The development of the Chautauqua Movement in the United States, directly linked to correspondence instruction at the University of Chicago, was originally instigated by a desire for continuing religious studies. Because religious study was not allowed in public schools, those citizens wanting their children trained in religious instruction sought out religious schools. However, some of these schools were not geographically available, particularly if a family had very specific religious needs or belonged to a smaller faction. Historically, religious organizations have offered correspondence instruction to train ministers and to spread church doctrine. The Chautauqua Movement began as a Methodist religious movement and the University of Chicago had its origin in the Baptist church. This religious utilization of correspondence courses has continued. In a 1960 survey, 32 Bible schools still reported home study departments with a total of 259,000 enrollees. Some examples of prominent religious organizations offering correspondence courses include the Correspondence School of the Moody Bible Institute, which was established in 1901 and was still in operation in 1968, and The Emmaus Bible School, which offered courses...
translated into 80 different languages. Also, the Correspondence School of the Lutheran Bible Institute provided free courses in 70 prisons in America.

Limited college and K-12 curriculum in rural areas also led to a demand for correspondence instruction internationally. With a limited student body and a small number of qualified teachers, both ends of the curriculum, beginning and advanced, tended to be left out. Furthermore, more specialized disciplines such as foreign languages and laboratory sciences were difficult to support. Vocational courses also often required additional capital outlay beyond the capabilities of both rural schools and city schools with limited resources.

Correspondence courses grew out of a very large need for an educated workforce worldwide. At the turn of the century, 90% of the working population in America had not graduated from high school (Strom, 1964). As late as 1920, less that 20% of high-school students went on to college. These statistics reveal the degree to which the general population in America was lacking formal education. This was not a population that would meet the needs of the industrial age in America, and not a workforce likely to feel their needs for personal development had been met. Correspondence courses grew out of this demand for access to higher education and to meet the increased need brought on by industrialization for an educated workforce.

As early as 1850, correspondence courses were used in England. On the European continent, the offering of courses by mail was an established practice by 1856 when the Society for Modern Languages in Berlin offered courses in French, German, and English by mail (MacKenzie et al., 1968; Noffsinger, 1942). In America, correspondence courses began on three fronts: to provide enrichment opportunities, to attain specific vocational skills, and to receive religious instruction. Anna Eliot Ticknor, the daughter of a Harvard professor, founded the first correspondence instruction program in the United States in June of 1873 that focused primarily on enrichment courses. Named the Society to Encourage Studies at Home, it aimed at meeting the needs of women who had limited access to traditional higher education. The courses were structured as an exchange of letters between instructor and student based on readings and tests. The society offered 24 different courses and reached a peak of 1,000 enrollments in 1882. All of the courses were noncredit and made no attempt to be a substitute for traditional higher education.

Thomas J. Foster, who published the Shenandoah Herald, was the first figure in American history to focus on the development of correspondence courses for training. In 1886, he began printing pamphlets on accident prevention for mine workers. In 1891, he began to offer correspondence courses for miners for a fee, and in less than six months, he had over 1,000 enrollments. The courses met a clear need and the curriculum was soon expanded to meet additional training needs beyond mining. In 1901, the school was incorporated as the International Correspondence Schools (ICS).

Professional associations used correspondence instruction intensively for training. In 1901, the American Institute of Banking (AIB) formed the Correspondence School of Banking. The United Typothetae of America (UTA) offered a training program for apprentice and journeyman printers through correspondence courses with certification upon completion. In 1935, the International City Managers’ Association established its Institute for Training in Municipal Administration with courses made available through correspondence to local government employees. A correspondence study program for isolated members of the American Savings and Loan Institute (ASLI) was organized in 1934. The American Academy of Ophthalmology and Otalaryngology designed a course in 1940 for MDs. The American Dietetic Association used a correspondence course to train personnel who serve under dietitians. Medical professions continue to be leaders in distance learning internationally.

**UNIVERSITY-BASED CORRESPONDENCE COURSES**

In 1883, 32 professors from major universities including Harvard, John Hopkins, Cornell, and the University of Wisconsin met to form the Correspondence University, with its base of operations in Ithaca, New York. The Correspondence University did not offer separate degrees and was mostly interested in correspondence courses to supplement traditional classroom courses. The first established