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From Collections to Laboratories to Centers: Development of the Curriculum Materials Collections or Centers to 1940

Rita Kohrman, Grand Valley State University

The need for curriculum materials collections/centers is evident with a study of the development of education practices in the United States. 'Keeping-school' was viewed with such disdain that anyone without training was believed to be able to teach—"Any farmer can teach" (Bowen, 1887, p. 14). As education became more important to the growth of the nation and its citizens, teacher preparation changed from mimicking how one was taught to being viewed as a science and requiring its own laboratories similar to science and medical laboratories.

Western Michigan University's Education Library is recognized as the first continuously used curriculum materials center in institutions of higher education in the United States (Leary, 1938; Mac Vean, 1958). Originally called Western State Normal School, the school opened in 1903 and started a curriculum bureau in 1922. It was a research based center containing textbooks intended for faculty use (Knauss, 1953). But where did the idea arise for such a facility or collection? Many studies and dissertations (Drag, 1947; Ellis, 1969; James, 1963; Syropoulos, 1971) on curriculum materials centers report that the idea for such facilities arose in the early 1920s, but a careful reading of autobiographies and memoirs written in the 1700s and articles and books written in the 1800s reveal the existence of curriculum collections, laboratories, or libraries well before 1920. Curriculum centers were intended to allow preservice teachers to experiment with lesson planning and learn the tools of the trade, textbooks and teaching aids, hence the appropriated

use of the term laboratories. These interesting avenues and back roads that trace the beginning of curriculum materials centers are linked to teacher preparation and curriculum reform in the United States.

In the 1700s, community leaders seeking to acquire a school teacher would often greet incoming ships from Europe. The ships' manifests would list such commodities as "various Irish products ...including school masters, beef, pork, and potatoes" (Hofstadter, 1962, p. 313). The listing of "healthy" indentured apprentices or school masters ready for disposal would result in a rush to the arriving ships by town officials to "buy a school master" or apprentice (Sedlak, 1989, p. 259; Knight & Hall, 1951, p. 15). Knight and Hall cite the publication of a legal notice of the apprenticeship of John Campbell to a New York City schoolmaster, George Brownell. The obligations and responsibilities of Campbell and Brownell clearly stated that Campbell was to be "taught and instructed in the art trade of calling of a schoolmaster," in exchange for his meals, clothing, lodging and washing for ten years and three months (pp. 13–14).

Gazettes from across the colonies often carried advertisements for masters or apprentices. It was not uncommon for literate men to advertise themselves as school masters, hoping to obtain a teaching position until a more promising career, such as ministers, doctors, or lawyers, could be obtained (Elsbree, 1939; Fraser, 2007). John Adams, after graduating from Harvard in 1755, kept school for a year until he was able to apprentice himself to a lawyer by means of a two year contract (McCullough, 2008). A study of Harvard and Yale graduates during the colonial period revealed that 40 percent of Harvard graduates and 20 percent of Yale graduates held positions as teachers until they obtained positions as ministers or other professions (Rury, 1989).

Many early Americans viewed teaching apprenticeships as a waste of time. Teaching was a matter of mimicking how one was taught. It was considered a "by-product of learning" (Miller, 1922, p. 131). Standard teaching methods included recitations and simultaneous chanting choirs (Johnson, 1994; Rice, 1892). Apprentices and ushers, the next level above apprentices, would assist school masters by listening to the

recitations of small groups of students, often referred to as scholars in period writings. The recitations were frequently limited to just two or three math problems or six or more lines of reading (Fowle, 2005). Copies of the master's copy book or lessons were handed down to apprentices or ushers. If a scholar questioned the answer to a mathematical problem, for example, the teacher would refer to the master's copy. What was written, even if incorrect, was the final answer. Inquiring scholars would often be reprimanded for questioning the teacher (Fowle, 2005). Preparing for the next day's lessons included apprentices and ushers handwriting copy slips from their masters' books (Elsbree, 1939) and preparing the quill tips two hours a night (Fowle, 2005).

Master teachers could also be self taught. John Jenkins advertised his book *The Art of Writing* (1791) as a means of self study that would aid "an ambitious American youth ...and set himself up as a teacher of others without any regular apprenticeship" (cited in Nash, 1969, pp. 4–5). If a person could not obtain proper training as a teacher, then reading Jenkins' book or Samuel R. Hall's *Lectures on School-Keeping* (1829) would suffice, and potential teachers would "be made acquainted with the science of teaching" (Hall, 1829, p. iv). James Guild wrote in his autobiography, *From Tunbridge, Vermont to London, England: The Journal of James Guild, Peddler, Tinker, Schoolmaster, Portrait Painter, from 1818–1824*, that he had only 30 hours of instruction, but opened a school and obtained students without "any recommendation or specimen of penmanship ...but I told them I was a writer... and in the first day I had 11 scholars.... I thought that if I did not say but little and be careful how I spoke, they would not mistrust that I was nothing but a plowboy" (cited in Nash, 1969, p. 6).

Unfortunately, these inconsistent methods of training resulted in an unfavorable reputation for many teachers. Since many were hired as indentured servants, apprentices or school masters were often associated with "convicted felons, rogues, rascals, villains, and others of low degree ... [including] political prisoners, captives of war, debtors and adventurers" (Elsbree, 1939, p. 27). The low regard for school keeping was reflected in a statement made by Benjamin Franklin in 1750. He rec-

commended teacher training for the “poorer sort... to act as schoolmasters” (Ogren, 2006, p. 13). Catharine Beecher in 1846 described male teachers as “coarse, hard, unfeeling men, too lazy or too stupid to follow the appropriate duties of their sex” (Beecher, 1981, p. 40). Jewell (1865) stated that “the business of public school teaching is a subject to such a depression as prevents it from taking rank among the learned professions.... [Regarded by the masses] with little or no respect... and even teachers themselves evince little or none of that reverence of love” (p. 530). Teachers were viewed as “little better than a dog” (p. 582). Bowen (1887) described the education system as having “degenerated into routine... starved by parsimony by the late 1880s. Any hovel would answer for a school-house, any primer would do for a text-book, any farmer’s apprentice was competent to teach school” (p. 14). Rice’s authoritative and ground breaking 1892 studies of teaching in 36 urban settings revealed that professionally trained teachers were still held in low esteem, even by teachers and administrators who felt that teacher training was not necessary or desirable (Rice, 1892).

Carl Kaestle (1973) researched New York City teachers from 1750 to 1850 and found that the teaching was viewed as “more a trade than a profession” (p. 5) and teachers were viewed as a lower status occupation than educated men such as a lawyers, ministers, or doctors, often holding part time positions as grocers, choristers, and grog shop owners (p. 40). Jewel (1865) stated that teaching was not considered “true professional labor” (p. 579) ...[and] “a position degrading to the calling and to be the death of all its professional aspirations” (p. 583).

Soon though, the need for teacher preparation was recognized by citizens and state governments, resulting in the beginning of normal schools. Many were originally established as vocational training schools with admission vocational aptitude tests (Harper, 1939). College was intended for those planning to be ministers, lawyers, or doctors. School keeping was viewed as vocational training separate and lower than a college education, subject to annual examinations to verify the students’ suitability to teach, and to be recommended for a position or certification (p. 13). Borrowman (1865) cites a study sponsored by the Carnegie

Foundation for the Advancement of Teaching on the history and function of normal schools in Missouri. It reported that the normal school system in Missouri was to provide "intensive professional training, exclusively for teachers" (p. 185) and was not a college, but "a vocational institution of college rank" (p. 189).

Since the colonial times, a variety of books were used in teaching. It is an often held misconception that early schools in the United States used only hornbooks, or titles like McGuffey's Reader, or Webster's spelling books. Reality is that teachers often had to contend with textbooks passed down among family members (Venezky, 1986). A study in 1839 revealed 141 different schoolbooks used in the Connecticut schools in five different subject areas. The Wisconsin state superintendent of schools complained in 1854 that there were fifteen different spelling books, eighteen readers, ten geographies, fifteen arithmetics, and twenty grammar textbooks in use in schools statewide (Elsbree, 1939). As a way to bring consistency into teaching practices, textbooks published in the United States became a means for curriculum reform (Cuban, 1993; Manzo, 1999).

Textbooks were believed to be the best means for mental discipline and exercise for the mind (Elsbree, 1939; Kliebard, 1986). Harris (1880), a textbook advocate, believed that textbooks were an instrument "... to preserve and teach a valuable and substantial human experience (p. 6)... as the most direct and effective method of initiating the individual man into spiritual participation in the activity of his race" (p. 9). According to a Yale faculty study in 1828, the recitation of passages and standardized questions and answers found in the back of textbooks provided the content necessary for learning (cited in Kliebard, 1986). California even prohibited the use of any other texts than the state approved and published textbooks in the 1800s (Manzo, 1999). It was felt that children to lose their ability to use and navigate books, and teachers could not properly discipline the mind without the use of textbooks (Rice, 1895).

Various teaching techniques did find their way into the school rooms, often through the textbooks themselves. Many textbooks con-

tained "To the Teachers" sections where one could find essay questions, arithmetic problems, maps, graphs, charts or detailed teaching suggestions for art, music or penmanship (Nietz, 1961, p. 5). Samuel Temple's *An Arithmetical Primer* (1809) provided space for the students to write answers (cited in Nietz, 1962, p. 153).

As with any vocational training/apprenticeship, preservice teachers were expected to purchase their own tools, such as textbooks, manuals, and instructional devices or apparatus. Henry Barnard (1846), the Commissioner of Public Schools for Rhode Island, stated that "much of the inefficiency of school education of every grade is mainly owing to the want of such cheap and simple aids for visible illustration... which every teacher of ordinary intelligence can acquire and practice" (p. 150). Teachers could find listings for teaching materials at end of journals or books (Book department, 1893; Dwight, 1835; Hall, 1829). It was not unusual for employed teachers to bring in their globes or maps into classrooms if the schools did not have such items (Fuller, 1989). School masters in Boston were even allowed to use newspapers at their discretion as early as the 1790s (Fowle, 2005).

Starting in the 1800s curriculum reform advocates felt that dominance of textbooks was "outmoded as a central instructional device" (Goodlad, 1967, p. 281). Theodore Dwight, Jr., encouraged the use of apparatus or handmade teaching aids, such as a pumpkin for a world or a celestial globe (Dwight, 1835). Dwight also listed pages of apparatus or other teaching aids in his book, *The School-Master's Friend*. One teaching aid was advertised as containing "valuable articles... to aid in the instruction of the young. Cards and maps are put on binders' boards, etc., and may be washed, and will last for years. They are fitted to hang in schools as literary ornaments" (pp. 207–210).

Meanwhile, educators in Europe saw the value of using aids and devices years, even centuries before. McGuinness (1969) cited the 1578 Ashton's Ordinance in Shrewsbury, England which required school buildings' libraries and "gallerie... [be] furnished with all manner of books, mappes, spheres, instruments of astronomye and all things apperteyninge to learning" (p.154). Tracing tablets to assist children in

trace letters were unearthed in volcano buried Pompeii. Flash cards were used as far back as the fourteenth century (Dale, 1953).

With the introduction of Swiss educational reformer Johann Pestalozzi's object learning theory in the early 1800s, teachers in Europe and the United States found they could enhance student learning through the use of physical objects, and moved away from the tyranny of the textbook, memorization, and recitations. Between 1809 and 1813, a school in Philadelphia based its lessons on the Pestalozzi method of using objects or object learning. Unfortunately, the school did not continue its use after the teacher left (Elsbree, 1939).

James Carter, a politician from Massachusetts, and Thomas Galaudet, a minister from Hartford, Connecticut, proposed in 1826 that teaching schools allow observation, practice schools, and provide a library and teaching apparatus (Harper, 1939; Ogren, 2006). Upon learning this, the enterprising Josiah Holbrook started the Holbrook School Apparatus Manufacturing Company in the same year to meet a new market demand. Holbrook offered a large variety of devices, along with teacher's manuals. By the 1860s, he had established stores across the United States (Ogren, 2006, p. 225).

Horace Mann shared his observations of his 1846 tour of European schools and reinforced the use of objects or manipulatives to stimulate a student's engagement. Mann observed European teachers using various objects including cards, animal and plant specimens, portraits, weights and measures, reading boards, library books, blackboards, models and musical instruments (Mann, 1846, pp. 51–55). Cyrus Peirce, after his 1849 European tour, wrote to Henry Barnard in 1851, stating that such modern devices as maps and globes in the classroom were of little value in the learning process without prior knowledge on how to use them by the preservice teachers (cited in Borrowman, 1965, p. 70).

Slowly, and with little financial support, state and county boards of education made provisions for the purchase of school apparatus including maps, globes, learning charts, and books for libraries (Dwight, 1835; Fuller, 1989; *List of library books*, 1888; Miller, 1922). The blackboard was unknown until 1809 and did not become a standard device

in classrooms until after 1820, but was rarely used (Elsbree, 1939, pp. 222–223). School board members, superintendents and principals would purchase instructional aids and library books. Unfortunately, the purchased of useless or inappropriate apparatus, books and other devices became common, resulting in numerous complaints by teachers and the public (Held, 1959).

New York ranks as one of the earliest examples of a state legislature supporting the purchase of books and apparatus for their schools and teaching institutions (Held, 1959; Miller, 1922). The annual reports (1835–1851) of the New York Regents of Education revealed how the state financed schools districts and academies for teacher preparation. The reports were expected to describe the methods used by teachers to instruct and drill the pupils. Visual materials and mechanical devices were used during astronomy, geography, geology, and similar subjects. Cabinets containing minerals and plant and animal specimens were purchased (Miller, 1922, p. 124). Blackboards were listed as devices, as were the “rod and ferule” for disciplinary purposes (p. 128). New York Regents in 1823 and the Legislature in 1827 advocated and provided financial support for the training of the teachers by providing “well-equipped laboratories and libraries” for them to be deemed competent (p. 136). A total of \$309 was designated for each of the teaching academies. Adjusted for inflation, \$309 would be equal to \$6,860 in 2009. The money was to cover such devices as

orrery (“an apparatus for representing the motions and phases of the planets, satellites, etc., in the solar system” (Orrery, 1968)), numerical frame and geometrical solids, globes, movable planisphere, tide dial, optical apparatus, mechanical powers, hydrostatic apparatus, pneumatic apparatus, chemical apparatus, 100 specimens of mineralogy, electrical machine, instruments to teach surveying, map of the United States, map of the State of New York, atlas, telescope, [and] quadrant (p. 138).

California, following New York’s example, enacted a law in 1866

requiring the purchase of books for libraries; in 1874 the law was modified to include apparatus. Unfortunately, teachers were viewed as not trustworthy to purchase useful materials. Instead, administrators, principals and trustees were swindled into buying useless books and apparatus from traveling salesmen. Complaints were often made regarding the wasteful spending on “unsuitable books or on books that never reached the libraries” or the purchasing of apparatus would “destroy the inclination for study” (Held, 1959, p. 87).

True to the vocational nature of normal schools, many normal schools offered manual training as a part of teacher preparation. Calvin Woodruff, an early promoter, saw manual training as “essential to the right and full development of the human mind... [and] a means of a complete and efficacious educated brain” (Woodruff, 1885). Hampton Normal and Agricultural Institute and Tuskegee Normal and Industrial Institute may have been models of manual training for many normal schools. Hampton opened in 1868 and Tuskegee in 1881 to provide training for freed slaves to teach in African American schools. Booker T. Washington used Tuskegee’s manual training laboratory as a way to put Pestalozzi’s theory into practice and to stimulate intelligence and critical thinking for preservice teachers (Washington, 1904). Both Hampton and Tuskegee built manual training facilities on their campuses, but their main emphases continued to be the training of teachers. Manual training facilities were a means to teach object lessons or the hands-on approach to teaching (Anderson, 1988; Washington, 1904). It was not until 1916 that Dewey would advocate manual training for children and adolescents. (Dewey, 1916; Generals, 2000).

By the late 1880s the United States Bureau of Education, local school districts, education faculty and theorists called for the establishment of libraries and laboratories in normal schools to assist student teachers in learning how to make a simple apparatus and to learn other practical teaching skills needed as teachers. Preservice teachers would learn their trade much the same as apprentices learned their trade by participating in the work under the supervision of a master (Kliebard, 1999). In 1907, educators campaigned for the establishment of labora-

tories within the normal schools so preservice teachers could experience lesson planning, teaching, and classroom management of students. Only through exposure to content and expectations would the preservice teachers know how to utilize teaching materials (Bolton, 1907).

It was recognized that those teaching the sciences needed to train in a science laboratory (Howe, 1892); biology teachers needed animal laboratories (Sudduth, 1893). A chemistry laboratory at the Normal School Bridgewater, MA, in 1872, and a physics laboratory at the Normal School at Emporia, KA, in 1888, was built for preservice teachers where they could learn the foundations of science experiments in order to teach their future students. In 1894 a botany laboratory was provided for the student teachers at the normal school at Westfield, MA, to enable student teachers to "observe, draw, describe, experiment and teach" (Fraser, 2007, p. 122). Why not a general teaching laboratory?

The Colorado State Normal School experimented with such a concept. They opened a Pedagogical Museum in 1898 whose purpose was to provide older and newer textbooks, pictures, apparatus (charts, thermometers, anemometer, etc.), games, toys and school furniture to assist in teacher training (Roberts, 1990). Unfortunately, it is believed that many of the non-print items were scattered throughout the school's departments after 1908 and were not centrally located into one room again until sometime in 1950s in the Education Resource Center of the library.

Teachers College's Bureau of Elementary Curriculum Research opened in 1924 and was later called the Curriculum Construction Laboratory. The faculty believed textbooks and other materials should be included a library or laboratory facilities for the preservice teachers' and students' use. This would end the needless duplication of materials by individual faculty members and make items available to anyone at the institution (Stratemeyer, 1925).

The Louisiana Rural Normal School at Grambling started its Curriculum Laboratory in 1936 and was seen as "integral part of the Normal School" (McAllister, 1938, p.137). The laboratory was deemed a unique feature for a teacher-education program. School administrators

recognized that lesson plans should include the use of textbooks, manuals, and teaching aids, and therefore needed to be provided in adequate library facilities such as the Curriculum Laboratory. It was the goal of the teachers at Louisiana Rural to provide their students with “experiences which would prepare her to assume successfully the responsibilities of the job... and to contribute to the all-around development of the ideal rural teacher” (pp. 135–136).

Curriculum laboratories, as a distinct term or phrase, first appeared in an article written by Henry Harap (1932). He was describing the curriculum laboratory at Western Reserve University which started in 1929. Harap stated that the word laboratory did not necessary mean a science laboratory and the term was misleading since the etymology was of a more general nature. He viewed curriculum laboratories as a work place for the preparation of curricula. Harap described “the curriculum laboratory is to classroom practice what the architectural office is to the finished structure” (p. 634). The term ‘curriculum laboratory’ was confusing or easily misunderstood because of the use of the word laboratory. Drag states that the term was often used to designate curriculum planning or curriculum committees (Drag, 1947). Leary made a similar claim of the confusion of the term (Leary, 1938). It has since come to be defined as

a department within a library or a separate unit within a school or college, organized to provide teaching aids for students such elementary and/or secondary students textbooks, courses of study, tests, sample units, pamphlet materials, a picture file, filmstrips, slides, and other materials which may be helpful to the teacher in preparation of a unit of work. Synonymous [with] curriculum materials center, curriculum laboratory, curriculum library, instructional materials center, textbook library (Good, 1959, p. 309).

The changing nature of curriculum reform, the need for curriculum centers or laboratories, and the use of the term is found in the history

of Western Michigan University's Education Library. The Curriculum Bureau, at the then called Western State Normal School (later Western Michigan University), was identified in both Leary's and Drag's studies as one of the earliest curriculum centers. Started in 1922, the Curriculum Bureau was in an office of a faculty member located in the training school building. It provided textbooks and other books related to curricula improvement for the faculty. Its purpose as a research center was to "appraise the training school curriculum and to recommend changes that would improve the work of the school" (Knauss, 1953, 105). Mac Vean (1958) noted the purpose of the Curriculum Bureau was as an education library first and never a curriculum material center. Leary's study indicated that they collected and assembled curriculum materials, produced curriculum materials, advised and directed, and loaned materials (Leary, 1938, p. 32). Renamed the Text-book Library in 1939, the library modified its purpose from faculty focus to one of teacher-training and student research. A requirement for research work by the preservice teachers changed the collection focus to include the purchase of research and resource materials, journals and magazines. Curricula resource materials included teaching aids, files of pictures, and workbooks, but also research materials to meet the preservice teacher needs. In 1943, the facility was again renamed to Educational Service Library, and moved to the old administrative building and continued to provide teacher-training support (Knauss, 1953).

Colson reported that in 1931 the Virginia State Board of Education began a three year program of curriculum revision that required the organization of curriculum centers in the state's teacher training institutions. These facilities offered courses in curriculum development to meet the needs of "Negro children" and to provide "materials for use in curriculum construction" (Colson, 1934, pp. 312). Virginia State College for Negroes was already addressing the above issues with its 1931-1932 "The Needs of the Negro in America" (p. 312). The group developed specified curriculum materials which concentrated on the needs of African American children. The development of 103 units of work (or curriculum units) resulted in the group's work dissemination of

the materials to African American teachers and over 300 white teachers in Virginia (p. 313).

George Walter Rosenlof's 1929 study is an early study of library facilities found in teacher training institutions, including seminar and textbook collections. He defined seminar libraries as temporary collections found in laboratories or seminar rooms, usually found in departments rather than central libraries. Rosenlof also highlighted what he referred to as the Textbook Exhibit Libraries, noting they were a recent phenomenon. These special libraries had well-defined purposes including the displaying of publishers' textbooks, supplemental materials, and children's literature books to assist "in organizing curricula by student teachers" (p. 69). Rosenlof found 16 such libraries but did not identify them. He encouraged teachers colleges to "provide for the establishment of a distinct and separate collection of books to known as the 'Textbook Exhibit Library' (p. 152).

Beatrice Leary (1938) followed Rosenlof with her 1936–1937 study of state, districts, or academic curriculum laboratories for the U.S. Bureau of Education. She reported on 107 such agencies: 11 state agencies, 61 city agencies, and 35 higher education agencies. Leary reported that the Detroit City School system was connected with the College of Education at Wayne State University, then called Detroit Normal School, since approximately 1918 and its main activity was the producing of curriculum materials. Detroit Normal School was founded in 1881, renamed Detroit Teachers College in 1920, then Wayne State University in 1933 and was under the direction of the Detroit Superintendent of Schools (Engle & Borgman, 1984). The Division of Instructions, as it was referred to at that time, was housed separately (at Wayne State) and included a reference library and workrooms (Leary, 1938).

Leary's examination of 35 curriculum laboratories in colleges, universities, teachers colleges, and normal schools provided a clearer picture as to the function and purposes of these facilities. While Western Michigan State Teachers College was listed as the earliest such facility (1922), Leary did not provide a detailed explanation of Western in her narrative, as with such institutions as Teachers College, George Pea-

body College of Teachers, and Northwestern University (Leary, 1938). Resources at the latter facilities included textbooks, professional books and periodicals, but also maps, posters, charts, standardized tests, and “enrichment materials” such as airplanes, flowers to supplement and enrich the curriculum (p. 11).

Frances Drag (1947) provided an extensive study of curriculum laboratories in the United States. His study revealed an explosion of curriculum laboratories or curriculum research bureaus after the Leary report of 1938: 353, Drag; 107, Leary. Of the 842 inquiries sent to institutions of higher education, 145 (17.2%) responded in the affirmative as to having curriculum laboratories; Leary reported 35 in higher education. Drag noted 3 unidentified institutions of higher education between 1887 and 1900, and reported departments or divisions in these institutions whose primary function was curriculum building or study. Between 1901 and 1920, he reported 7 unidentified curriculum laboratories in colleges or universities; between the years 1921 and 1930, 18 curriculum laboratories were identified. From 1931 to 1940, 52 such facilities in higher education institutions were in existence. By 1945, Drag reported on 145 institutions of higher education as having a curriculum laboratory (Drag, 1947).

James (1963) provided a succinct overview on curriculum development and the curriculum laboratory as a place for pre-service teacher instruction. She stated that the reorganization of curriculum in the 1890s had its distinct beginnings with the Committee of Ten. The Committee made no mention of curriculum laboratories, but by the 1930s, education leaders, such as Henry Harap, were including the term in their public writings. As mentioned previously, Western Michigan State’s Curriculum Bureau in 1922 was a research based facility and only changed to a pre-service emphasis in 1939. Teachers College’s Bureau of Elementary Curriculum Research at Columbia University, opened in 1924, but, as with Western Michigan, changed its emphasis and name to a Curriculum Construction Laboratory in 1928. Both illustrate the importance of a shifting understanding of teacher education and the students’ and teachers’ participation and responsibility for curriculum develop-

ment for their students. It was not an overnight happening but a gradual change in how teachers were best able to develop the pedagogical needs for their students.

Conclusion

A variety of materials were used when preparing to instruct students throughout history, as evidenced with the tactile tablets found in Pompeii, which was buried by the volcanic ash in 79 AD. This journey from Pompeii to the current vision of Curriculum Materials Centers has traveled on many avenues, arriving in the twentieth century with 145 curriculum center by the 1940s. Teachers and faculty have continued to acknowledge the need for hands-on materials and the need to preview other materials in the classroom. The purchasing or making their own devices so to have these tools of their trade was one avenue. But traveling private collections were cumbersome, expensive, and, at times, duplicated by other teachers.

Gradually, school administrators, board members, and faculty in teacher preparation programs realized the importance of resources beyond textbooks and provided financial support for the purchase of these materials. This trend toward using materials in the classroom parallels the increased awareness and views held by educators and the public for quality pre-service education. As educators, community leaders, and national leaders realized the need for well trained and certified teachers, they called for laboratories, centers, or libraries at teacher training institutes where pre-service teachers could gain the necessary skills to develop their own materials and incorporate a variety of media to motivate student engagement.

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