

Anticipating, influencing, and implementing the use of the manual training curriculum in schools: Making a case for acknowledging missionary educators' accomplishments in Hawai'i

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Abstract

The purpose of this article is to demonstrate that the use of manual training curriculum in the schools of Hawaii anticipated, influenced, and implemented American use of this curricular practice continuously from 1835 until this curriculum was replaced by vocational education in the 1920s. The objective of this article is to fill a gap in American curriculum history and to promote the accomplishments of American missionary educators in Hawai'i.

Introduction

The thesis of this article is that for 85 years missionary educators anticipated and influenced the use of the manual training curriculum in schools of Hawai'i. This study will demonstrate that beginning in 1835 when American missionaries to Hawai'i introduced the manual training curriculum at the Hilo Boys' Boarding School, there has been a continuous use of this curriculum, which included influencing the development of industrial education in the United States, and expanding this curriculum to other missionary and public schools in Hawai'i until vocational education supplanted this form of education of the mind and hands in the 1920s. Education of the mind and hands is a general term used to encompass any of the following curricula: manual labor, industrial arts, industrial education, manual arts, manual training, vocational education (Hall 1973). However, when one investigates the history of manual training in the United States, there is no mention of its use in the Island kingdom or even after its annexation to the

United States in 1898. The objective of this article is to fill the gap in curriculum history by acknowledging the accomplishments of these missionary educators. In addition, it is this author's contention that this accomplishment should be considered a part of the American educational experience for two reasons. First, when Western education arrived in Hawai'i, the primary sponsors were American Protestant missionaries. They developed an educational system in Hawai'i that mirrored what was being used in the United States. Second, through letters (written and received) and subscribing to American education publications, or by their children's presence in the United States, where many were educated for their college education, the missionary educators shared what they were doing and kept abreast with the newest educational practices being implemented in the United States.

My research relies on substantial evidence, primary and secondary, demonstrating that the use of manual training in Hawai'i more than mirrored what was taking place in the United States, it anticipated and even influenced American use of this curricular practice. Moreover, it is the intention of this author to demonstrate that in using manual training, the educators in Hawai'i deserve to be recognized as not mere borrowers but innovators. Most of the implementation of manual training in Hawai'i was based on local conditions and, as such, anticipated on their own some of the same elements of this educational system in the United States and Europe.

In the 1880s, when a new form of manual training curriculum was spreading throughout the United States, it made its way to Hawai‘i. This version of manual training curriculum was a more systematic form. It had been developed in Sweden, Russian, and Finland (Vaughn and Mays 1924). While it was called manual training, it was meant to supplant earlier uses of this curriculum by providing manipulative experiences instead of learning just through the use of tools. As will be discussed in the section on upgrading manual training in Hawai‘i after the 1880s, educators in Hawai‘i were quick to adapt the new version by either adding elements to their existing use of manual training or in two cases (where they established new schools) by importing the new manual training curriculum wholesale. While the proponents of this new manual training were certainly aware that manual training had existed in the United States for a long time, they chose to ignore previous uses of manual training, which created the perception that their version of the manual training curriculum was new (Author 2010). Their version of manual training was promoted as the best way to provide the general industrial training that would meet the rapidly changing demands brought on by industrialization (Struck 1930). Calvin Woodward (1890b), one of its supporters, was particularly concerned that the usual method of education steered students away from employment requiring hard labor. Teaching character was an important component of manual training, as was the idea that schools provide real-life experiences and modify student conduct in accordance with predetermined aims and ideals (Vaughn and Mays 1924).

After the Hawaiian monarchy was overthrown in 1893, Hawai‘i was primarily under the control of the second-generation missionaries. Using the new focus on a more systematized

manual training, the second-generation missionaries involved in education revised and implemented this curriculum throughout the public schools of Hawai‘i. By the early years of the twentieth century and continuing through the 1920s, it was the preferred curriculum in both the private and public schools of Hawai‘i. As a result, in terms of length of time and continuity, the use of manual training in Hawai‘i was more preponderant than what was practiced in the United States.

Early History of Manual Training Curriculum

The manual training curriculum was widely used by educators in Europe as early as the eighteenth century. Johann Pestalozzi is generally credited as being the father of this curriculum (Barlow 1967; Bennett 1926; Comings 1915; Hall 1973; Keller 1948; Struck 1930; Vaughn & Mays 1924; Woodward 1890b). It was Pestalozzi’s philosophy of “learning by doing” that led him to sponsor a curriculum whereby books were supplemental to experience. This led him to create a form of instruction, which was based upon supplying the mind with ideas through both sense perception and observation and handling of objects. Pestalozzi contended that children developed mentally through impressions and experiences, not through words. According to Charles Bennett (1926), an early twentieth century proponent of manual training, Pestalozzi “took up the slogan, ‘back to nature,’ and demanded that objects and activities of all sorts be used to train the sense-perceptions, believing that all knowledge came through the senses” (22-23). Primarily, Pestalozzi’s desire to develop the manual training curriculum resulted as a reaction to the formal study of Latin and Greek grammar that predominated as the major form of education throughout the eighteenth century. Although this article is about the manual

training system, Pestalozzi advocated both manual labor and manual training systems. The manual labor system involved the inclusion of working with the hands as part of the curriculum; the manual training system involved instruction of the hands through the specific use of tools. Both systems were often referred to as education of the mind and hands. While other educators utilized these systems as a means to prepare students for profitable employment, Pestalozzi intended that these systems combine their special focus with moral and intellectual instruction. He was very aware of the need for education to connect to the advances being made by industry; nevertheless, he preferred an education where industry became a means to providing a general education (Barlow 1967).

The first opportunity to implement Pestalozzi's ideas on education occurred when Philip Emanuel von Fellenberg, an associate of Pestalozzi, established two schools in Hofwyl, Switzerland. His experiment elaborated on his mentor's philosophy by bringing together upper and lower class students. The Academy was intended for the sons of rich families; the Farm and Trade School provided instruction for poor children (Barlow 1967). While Fellenberg provided opportunities for the young people of the different social strata to get together, the education for each class was different. Manual labor was used as a means to provide physical training for his upper class students, and a means of paying for instruction and living expenses for his lower class students. The curriculum for the upper class students was a classical education; the curriculum for the lower class students involved using manual training instruction connected to agriculture and industry with a common school academic education (Keller 1948).

Manual Training in Hawai'i Prior to the 1880s

Western education arrived in Hawai'i with the advent of missionaries sent by the American Board of Commissioners for Foreign Missions (ABCFM) in 1820. At first, the American missionaries focused on educating adults in order to prepare them to accept Christianity and read the Bible for themselves. The missionaries preferred to provide an education based upon equal opportunity but due to the social structure of the Hawaiian culture, education was impacted by the students' social class. Thus, in 1831, Lahainaluna High School was established as a teacher-training center to both resolve the dilemma posed by the lack of adequately prepared teachers and to provide a school for the sons of chiefs. It was also determined that the school would use the manual labor system as far as possible. Thus, education of the mind and hands began in Hawai'i (Alexander 1902; Alexander and Atkinson 1888; Westervelt 1911).

During the second decade of the missionaries' presence in Hawai'i, they reorganized their educational endeavors by shifting from adult to child education and by improving the training of teachers (Frear 1920). In 1833, when the school system for adult Hawaiians began to fall apart, the missionaries at most of the stations began to create schools for adolescents. Two school systems evolved as the missionaries identified the need to remove the best adolescents from the common schools to special boarding schools. The rationale to create these boarding schools was to provide an education for select students under the continuous influence of the missionary educators. This decision arose as the result of arguments made by Reverends Richard Armstrong and David Lyman at the General Meeting of 1835. Both men believed that education needed to be both practical and delivered in an isolated environment away from the bad influences of other white men

and the Hawaiian culture. As a result, it was agreed to board students at the Hilo School, begin a boarding school for girls at Wailuku, Maui, and shift from educating adults in a day situation to children as boarders at Lahainaluna High School. The High School continued to educate members of the chiefly class but the best students from other schools could finish their education there as well (*Extracts* 1835).

Initially, all three schools had a common school curriculum in addition to using some form of manual labor and/or manual training system. When Armstrong and Lyman spoke about wanting a “practical” education at all the select schools, they were referring to using some form of education of the mind and hands. Consequently, it was hoped that the select schools would also implement this meaning of “practical” into their curriculum. Even though the curriculum at Lahainaluna High School included manual labor, in time its academics became formal. In 1837, mirroring the need to upgrade the curriculum of the school by introducing a formal school curriculum, the school was renamed to be a seminary so that preachers as well as teachers could be trained at the school. Eventually, students desiring to enter into the ministry were provided training in the classics after they had finished the required four-year course of instruction (Wist 1937).

When an economic depression hit the United States in 1839, the ABCFM could no longer finance all the endeavors of the Hawaiian mission. As a consequence, the Hawaiian government was given control over the common schools and most of the select schools to form the public school system. A few of the select schools, which received sufficient financial support and boarded students remained independent from the public school system and continued to be operated by the American missionaries (*Extracts*

1835). Six years later, when the ABCFM could no longer afford to finance Lahainaluna Seminary, the school was also turned over to the public school system. It continued to be a boarding school for the best public school students and until 1890 was the only public high school in the Kingdom (Lecker 1938).

Hilo Boys’ Boarding School was the first school in Hawai‘i to use the manual training curriculum. This school truly epitomized Pestalozzi’s model as it combined both the manual labor and manual training systems in its curriculum. David Beldon Lyman was the founder of the school. He arrived in Hawai‘i in 1832. Due to being the oldest of eight children born to a New England farm family, he was both religious and industrious. He graduated from Williams College and from Andover Theological Institute, where he experienced manual labor as a part of his education. Within three months after the ABCFM selected him, he married Sarah Joiner, and headed for Hawai‘i. In 1835, after preaching and teaching in the Hilo District, he decided it would be best to develop a boarding school for young students so that habits of Christianity and industry might be inculcated at an early age (*Missionary album* 1969; Gordon 1936). Mildred Gordon (1936) says he “was very practical, reserved in personality, a good farmer and carpenter who enjoyed seeing the practical results of his work” (18). His upbringing, education, and experiences led him to fit education to the ability of his students. For over fifty years under his leadership, Hilo Boarding School proved to be unique, not only in Hawai‘i, but worldwide; it was an early innovator in preparing students for a trade, in making the training of the hands as important as the training of the mind, and in introducing music as an important and natural part of school work (Gordon 1936).

The objective of Hilo Boys' Boarding School was to take commoner males and prepare them to be good teachers and preachers with both piety and good character. A pamphlet on the Hilo Boarding School summarized its mission:

It aimed to take Hawaiian youth in their natural uncultured state and by dint of unsparing painstaking effort to impart to them such mental and moral furnishing as they were able to receive and appropriate in combination with a wholesome physical training in the ways of social and civilized life (*Hilo Boarding* 1911, 8).

Throughout the entire history of the school, the manual labor and manual training curricula played a prominent role. Agriculture was included in the curriculum from the beginning to help the school be self-sufficient. The boys' involvement in raising their own food cut down on the expenses of the school, which often led to the school making money (Oleson 1911). But it was also believed that laboring in the fields was good education for the students. The argument for manual labor was "that such work was valuable not only for the health of the students, but contributed to the good discipline of the school, as well as being valuable in forming habits of thrift and industry" (Gordon 1936, 61). The curriculum kept the boys busy from morning until night (Lyman 1902).

Due to Lyman's ingenuity, the school acquired tools and instituted a form of manual training that involved designing and using tools to complete a project. Using tools to tend the farm at the school was the primary means to teach the boys how to use tools but eventually other manual training skills were added. In 1840 and 1844, tailoring and dairying were added to the curriculum. The school struggled financially after

1850, when the ABCFM withdrew its financial support (Terry 1911). An all-around training much like growing up on a farm was developed in order to compensate for the lack of funds to acquire machines and tools. This was accomplished through short courses offered by the Home Crafts Department, a curriculum entirely distinct from the school's manual labor courses. It included training in knot-making and splicing of ropes, window glazing, soldering, general repair work, care of horses, wagons and farm implements, leather work, sharpening tools, concrete work, laying water pipes, repairing faucets, and installing and repairing electrical lines (Lyman 1920).

The curriculum at the Hilo school had an impact on American education as early as the 1860s. The system to which the Lyman's combined manual labor and manual training into the curriculum at the Hilo school influenced the way Samuel Chapman Armstrong approached industrial education at Hampton Institute (Author 2007). Armstrong was born in Hawai'i to the missionary couple, Reverend Richard and Clarissa Chapman Armstrong. His education and experience in Hawai'i prepared him for the work he implemented at Hampton Institute primarily because he had firsthand experience with the Hilo school as his father's secretary. Richard Armstrong was the Minister of Public Instruction and Samuel kept the records for his father's observations during the official tours of the various schools of the Islands. Edith Talbot (1904), a biographer of Samuel Armstrong, stated that among all the schools he observed, the work being done by Reverend Lyman at Hilo Boys' Boarding School impressed him the most. In practice, the manual labor and manual training system at Hampton Institute was much like what Lyman had instituted at the Hilo Boys' Boarding School; it used manual labor to give students a

chance to meet bills for board and clothing, to develop high standards of discipline, and to enhance students' energy level. This system also helped students meet the mental rigors of the curriculum (Armstrong and Ludlow 1874).

Lahainaluna Seminary and Hilo Boys' Boarding Schools were not the only schools using some form of education of the mind and hands before the 1880s. The boys' schools at Waialua on the island of Oahu, Kohala on the island of Hawai'i, and Waioli on the island of Kauai were select schools whose founders continued to operate independently of the public school system with little support from the ABCFM (*Report of Kohala 1865-1870*; *Report of Waioli 1861*). Their education mirrored that of Hilo Boys' Boarding School since they used a common school academic curriculum along with education of the mind and hands. However, while they developed the same reliance on the manual labor system as the Hilo school, they did not acquire the tools and machinery necessary to incorporate the manual training system (Cheever 1856).

In addition, early in the promotion of select schools, there were two female schools that used the manual labor curriculum similar to what was practiced at the boys' schools: Wailuku Female Seminary and Hilo Girls' School; founded in 1835 and 1838 respectively (Coan 1840; *Extracts 1836*; Kleinberg 1990; Piercy 1992). Even though both schools were closed by 1850, beginning in the 1860s, four new female seminaries were established: Waialua and Kawaihahao on the island of Oahu, Kohala on the island of Hawai'i, and Maunaolu on the island of Maui. At this time the original Sandwich Island Mission, which was headquartered in Boston, was replaced by the Hawaiian Evangelical Association (HEA). Under this new organization, female seminaries were promoted based upon the model being used in the United States. The instruction

at these American female seminaries tended to be learning by doing in connection with practical arts of the household. Very often the schools included manual labor as a means to inculcate industriousness and to help defray the expenses of the school and/or the students. By the time the Hawaiian female seminaries were founded, American female seminaries were utilizing manual training in their curriculum as well (Author 2003).

The first female seminary to be established was the Ka'u Seminary located on the island of Hawai'i. Because of the isolated location of the seminary, it was difficult to attract many students to the school. As a consequence, tuition and board was free, as long as the girls were placed under the parental care of the teachers of the school until the girls were married or obtained employment (Annual Reports 1863; *Female Boarding 1871*). After struggling to fill the school, in 1865, the HEA decided to transplant the school to Waialua, Oahu. The school was designed to provide training, according to an instructor at the school, "to fit them [the girls] for missionaries and teachers, and to be the mothers of a part of the future redeemed Hawaiian nation" (Jones 1880, 436). The curriculum included geography, arithmetic, surveying, astronomy, singing, Bible history, and the Bible in general. Manual training consisted of instruction in cutting and sewing dresses, in washing, ironing, cooking, cleaning house, and painting (*Report of Education 1866*).

Based upon a report of the Education Committee of the HEA on the need for a female seminary in Honolulu, Kawaihahao Female Seminary was established in 1861. The authors of this report wanted this school to be primarily religious, a boarding school with a day school department, taught in both English and Hawaiian languages, supported by tuition paid by parents or

guardians of the students, and be a manual training school in order that the girls be trained and practice in all that pertains to housekeeping and the domestic arts (Report of Education 1866). Due to its location in Honolulu, private citizens, the ABCFM, the HEA, and the Hawaiian Mission Children's Society (HMCS) poured more money into the school. The Hawaiian Mission Children's Society had just been created to formalize the existence of the missionary faction (*Hawaiian Mission* 1854). New buildings were constructed, enabling the school to offer an industrial education program and increase its enrollment. Between 1881 and the end of the century, the enrollment grew from 57 to 127 students (*Kawaihāo Seminary* 1885). Originally, Kawaihāo Seminary was both a day and boarding school but from 1871 on, it became an exclusively a boarding school. At first the school was designed to prepare Hawaiian girls to become "suitable" wives for men who were at the same time preparing to become missionaries and work in the South Seas. This objective took the back seat to industrial education as new industrial departments were added. This included sewing, washing and ironing, dressmaking, domestic arts, and nursing. The mainstay of the curriculum involved furnishing complete elementary courses, including music, both vocal and instrumental, and training in the household arts (Chamberlain 1889).

The third female seminary for Hawaiians was established in Kohala on the west side of the island of Hawai'i. Originally, Reverend Elias Bond and his wife, Ellen Howell Bond, had founded both boys' and girls' boarding schools in Kohala during the 1840s. But due to the pressures of other work, they were both forced to close their respective schools (*Missionary album* 1969; Piercy 1992). When the Kohala Female Seminary was re-opened in the 1860s, the aims

and ideals of the school was to "furnish a wholesome Christian home training, together with a practical education such as will fit the girls to become housekeepers, wage earners, and generally good citizens" (K. Bond 1954, 1). The girls were allowed to do work in lieu of the tuition and room and board fees, which also minimized the costs for the school. The tuition was \$25 per semester throughout the nineteenth century. This involved washing and ironing clothes, cooking, baking taro twice a week, and raising the potatoes, taro, and other vegetables. The curriculum included arithmetic, history, language, geography, reading, spelling, civics, and the Bible. The industrial program included *lauhala* mat weaving, sewing, cooking, crafts, music, hygiene, and gymnastics (E. Bond 1923; K. Bond 1954). The graduates of the Kohala Female Seminary were preferred as employees by the manager of Parker Ranch, which once was the largest singly owned ranch in the United States (Williams 1923).

The last of the female seminaries that was begun by the missionaries was at first called the Makawao Family School. Reverend Claudius B. Andrews and his wife, Anne Seward Gilson Andrews, began it in 1861 in a location above Makawao Village on the island of Maui. When the site was changed, the school was renamed to be the Maunaolu Female Seminary. The founders wanted to create a school where the girls were taught as if they were their own daughters. Throughout the years, the curriculum included the usual academic courses in reading, mathematics, literature, history, language (all instruction was in English), geography, spelling, civics, and the Bible. The industrial departments included sewing, domestic arts, and culinary. During the last two decades of the nineteenth century, the school was nicknamed the Mt. Holyoke Seminary of the Hawaiian Islands due to the connection of

its instructors with that American seminary and the large number of Hawaiian minister's daughters in attendance (Turner 1929).

While the educators at these missionary schools were heavily involved in some aspect of education of the mind and hands, the public schools were primarily involved in training their students just to be literate. After 1850, as few Hawaiians were acquiring parcels of land under the *Māhele* land division, missionary and Hawaiian leaders agreed that in order to help Hawaiians become self-sufficient, independent, and economically successful, they also needed to be educated in the skills of agriculture and industry. In the Annual Reports of the HEA for 1855, the missionaries spelled out their understanding of the importance of teaching them industrial skills:

The connexion [sic] therefore between our schools and labor is most intimate and important. The two must go together. It is too often the case...that our native youth, both male and female, acquire some intelligence at school, and then at the age of fourteen or fifteen leave school only to live in idleness and vice. What is wanted is to introduce them to the useful trades; to induce them to engage in the cultivation of the soil, or some branch of regular and useful labor (5).

As a result, beginning in the 1850s, through successive Presidents of the Kingdom's Board of Education (a position that replaced the previous Minister of Public Instruction), manual labor and manual training was slowly infused into public school education. Due to the efforts being contingent on the availability of funding the results varied from school to school.

Manual Training Comes to Hawai'i in 1880s

Coinciding with the advent of the new form of manual training spreading throughout the United States, the missionary educators shifted from combining manual labor with manual training to strictly using the manual training system. All the missionary female seminaries expanded their use of industrial departments (Author 2003). Probably because they were incapable of making the transition, Kohala and Waioli Boys' School were released to join the other government English select schools (*Report of Kohala 1865-1870*; *Report of Waioli 1861*). Waiolua Boys' School had closed in 1845 (Armstrong 1846).

Upon the selection of Reverend William Oleson to become principal of the Hilo Boys' Boarding School, a more systematic version of manual training began to replace the previous curriculum. Oleson was the first new missionary recruited to Hawai'i in nearly 30 years. He was selected because he was knowledgeable of the manual training curriculum beginning to take hold in the United States. During his tenure as principal (1879-1887), the school began a new era. Under his leadership the endowment fund was increased, new industrial courses were added, and the first major new education building in 10 years was erected (Gordon 1936).

During the latter two decades of the nineteenth century, as the missionaries began to pursue a more systematic form of manual training, Hilo Boarding School truly became an industrial school. In 1886, William W. Hall gave the school carpenter tools. A year later, a printing press and a wood lathe were donated and the government appropriated \$1,500 for an industrial arts building. In 1890, funds for a blacksmith shop and three sewing machines were acquired. In 1892, Charles C. Kennedy donated a steam boiler and another party donated an engine lathe. That same year a fifteen light dynamo was

purchased for lighting, making the school buildings the first to have lights in all of Hilo. In 1894, the school started an ice plant. In 1895, the school added a coffee huller and pulper. Finally, after years of farming done entirely by hand, a plow and mower were purchased (Gordon 1936). Gordon (1936) highlights the advances that Hilo Boarding School promoted and the good it provided for Hilo:

In many ways the Hilo Boarding School was the advance guard for new industries in the community, such as printing, the making of ice, dairying, and the manufacture of electricity. The boys trained to take part in these new industries. When the community could take over an industry as a regular business enterprise, the school relinquished the project as a community enterprise (59).

Expanding Manual Training after the 1880s

During the last decade of the nineteenth century, manual training spread from its base at Hilo Boys' Boarding School to encompass two new manual training schools for boys and the spread of this form of curriculum to the public schools. The first effort in the diffusion of manual training was the establishment of the Kamehameha School for Boys.

Bernice Pauahi Bishop, heir to the vast lands of the Kamehameha dynasty, before her death in 1884, established through her will the design to create two private schools, one for boys and one for girls. The students were to be Hawaiians by preference. Instruction was to be in English. As per her wishes, the course of study required several hours of manual labor every day (Kamehameha's memorial 1895). The schools were considered an extension of the education work being done by the missionaries because

most of the people connected with it were members of the missionary faction, including its founders, board of directors, first president, and first and second principals. Reverend Oleson was recruited from the Hilo Boys' Boarding School to serve as the school's first principal. His first assignment was to study current educational methods in the United States, particularly those used at Hampton Institute (Kamehameha's memorial 1895). Due to the connection to which Samuel Armstrong maintained with educators in Hawai'i, he was asked to recruit staff members for the school. He discovered Theodore Richards at Camp Chocarun for Boys in New Hampshire. Richards would later become the second principal of the Kamehameha Boys' School (Thompson 1922). Calvin Woodward, one of the proponents of the new manual training in the United States was also involved in helping provide teachers as indicated by a letter exchanged between him and Armstrong (Woodward 1890a).

The school was commonly known as the Manual Department or "The Manual" due to its adherence to the manual training system. Several of the boys came over from Hilo Boarding School with their principal to provide a nucleus of boys familiar with his program. The academic department offered a common school curriculum, with special emphasis on language training. The six-year program included written and mental drill in arithmetic, algebra and geometry, language exercises in dictation, original composition, oral and written use of idioms, synonyms, business forms, orders, bills, and accounts. Other academic pursuits included physical geography, historical narratives, reading, and penmanship. There was also an emphasis on moral instruction. The industrial programs included free-hand drawing and designing, mechanical drawing, source and manufacture of useful articles, and machine use. In addition,

daily instruction was given in vocal music. Finally, the manual training department furnished a complete course of instruction in carpentry, black-smithing, piping, wood turning, and press work (Thompson 1892, 1893). Later, the school added a Normal Department due to the need for preparing Hawaiian teachers for positions in country districts where the need for teachers was the greatest (Thompson 1895).

The Kamehameha Girls' School was begun in 1894, seven years after the Boys' School was established. It was not technically a seminary or founded by missionaries, but all the girls enrolled were Hawaiian, and its curriculum was very similar to what was used at the missionary sponsored seminaries (Hudson 1935). At the end of the century, all the female seminaries began to lose students to the newly founded Kamehameha School for Girls.

At about the same time that the Kamehameha School for Boys was being established, second-generation missionaries were planning the Kauai Industrial School. This school was originally conceived as a coeducational industrial school, near the city of Lihue, on the island of Kauai, because this island did not have any school providing an industrial education like the rest of the major islands. Second-generation missionaries, Juliette Smith and her brother Jared Smith, were the founders of the school (Statement of Kauai 1900).

The school was to be built on 30 acres of land suitable for agriculture and housing 75 pupils. The staff was to include the principal, two teachers, a matron, and a superintendent of Manual and Mechanical Shop. Benefactors paid the salary of the teachers. Tuition for the students was 25 dollars per year (*Report of Kauai* 1900). The curriculum included the boys working in the schoolroom for five hours each day; one and a half hours were spent in the shop and three and

one half hours were spent working on the grounds. The latter time was spent chiefly in raising sweet potatoes, bananas, papayas, and sorghum. The main mechanical industries were blacksmithing and carpentry. By 1891, the school followed a more detailed curriculum for the three years enrolled. Each year students took courses in English, arithmetic, music, and recitations. The First Year added courses in physics and algebra, the Second Year added courses in printing and physiology, and the Third Year added a course in physiology. After school, all classes participated in baseball, croquet, or tennis (Smith 1889). Due to economic hardships to the sugar planters, the main philanthropists funding the school, and Jared Smith's death in 1898, the school closed in 1899 (Alexander 1898).

When the monarchy was overthrown in 1893, second-generation missionaries gained ultimate political power and as a result more members of the missionary faction became administrators and teachers in the public schools. Having learned the value of the manual training curriculum for educating Hawaiians throughout the nineteenth century, the second-generation missionary educators began to introduce a required manual training curriculum into the public schools as well. In 1894, William R. Castle became the first missionary son to serve as President of the Board of Education. In his report for that year, he discussed the effort to introduce manual training skills into the public schools without the acquisition of expensive tools and machinery (Castle 1894). By 1898, the Minister of Public Instruction (the Republic of Hawai'i officials changed the title of the education position back to what it had been before 1860), William D. Alexander (another missionary son), directed the public schools to follow a more extensive curriculum for manual training. He developed a curriculum for all students to receive

manual training from fourth through eighth grades. Similar to Castle, he preferred the course work of manual training, rather than a full-blown manual training program as was being followed at the female seminaries, Hilo Boys' Boarding School, the Kamehameha Schools, and Kauai Industrial School. This curriculum involved Hawaiian male students making and using weather vanes, seed envelopes, and agricultural tools and Hawaiian female students weaving baskets and sewing clothing. The purpose of the curriculum was to prepare its pupils for industrial or agricultural occupations (Alexander 1898).

The best example of missionary adherence to the manual training curriculum was the conversion of Lahainaluna Seminary from a formal school into a manual training school like the Kamehameha School for Boys. When the second-generation missionaries took control of the public schools, manual training was introduced at Lahainaluna Seminary. In 1899, William D. Alexander pronounced that the school was a manual training school. Money was appropriated to re-build the school since the original buildings were in disrepair and to construct the necessary shops to provide a top-notch manual training program. The new buildings were dedicated in 1904, and the school was officially re-named as Lahainaluna Technical High School. The once formal curriculum of the school was altered to include courses in bookkeeping, typewriting, mechanical and architectural drawings, sanitation and civics, commercial arithmetic and business English. Charles MacDonald, the principal of the school, stated, "the object of the manual training was to fit the lads to earn a living in the conditions obtaining in Hawai'i" (MacDonald 1931, 44). Alatau Atkinson (1905), one time Inspector General of the public schools, best exemplified the alteration of the training when he delivered

the address at the formal opening of Lahainaluna Technical High School in 1904:

Lahainaluna is essentially the training place for the poor man....To train a man we must not merely train his intellect, we must train his hand with equal care. We must make him understand the dignity of labor. We must teach him not theoretically, we must teach him practically (2-3).

Conclusion

This study establishes the important role played by missionary educators in Hawai'i in using the manual training curriculum. It should be quite apparent from this study that due to utilizing the manual training curriculum continuously over a long period of time the missionary educators in Hawai'i should be accorded a primary place in the history of this curriculum both in Hawai'i and the United States. Even when the manual training system was replaced in the public schools with vocational education and the female seminaries converted their curriculum to the academics of a private high school in the 1920s, Kamehameha Schools, Hilo Boys' Boarding School, and the Lahainaluna Technical High School continued to utilize manual training well into the 1960s.

One of the most vital elements of this evidence is the fact that Samuel Chapman Armstrong borrowed his initial ideas for his industrial education system at Hampton Institute from the Hilo model. What was practiced at the Hilo school and designed by Reverend David Lyman in the 1830s was unique in comparison to what was being done at this time in the United States. Until Hampton Institute was begun in 1865, no other experiments in the United States even came close to matching the work being accomplished at Hilo Boys' Boarding School. In

addition, the symbiotic relationship of preparing the best students at the Hilo school to be further trained at Lahainaluna Seminary was also unique in comparison to what was being done at this time in the United States. In fact, it was more like what Fellenberg had introduced in Hofwyl, Switzerland. The experiments with manual labor, manual training, and a common school curriculum at Hilo Boys' Boarding School for commoner students (equivalent to the lower class) and the experiments with manual labor and a formal curriculum at Lahainaluna Seminary for the sons of chiefs (equivalent to the upper class) mirrored Fellenberg's schools for the lower and upper classes. Furthermore, Lahainaluna Seminary was like academies in the United States where formal education was combined with a manual labor system to train its brightest members to serve as missionaries. While the female seminaries for Hawaiian girls were not unique to Hawai'i, the efforts by missionary educators in Hawai'i served as another example of how they learned and modified what was taking place elsewhere to meet the educational needs of their Hawaiian students.

Manual training arrived in Hawai'i many years before it began to spread throughout the United States in the 1880s. However, the new version of manual training arrived in Hawai'i at about the same time that it was being promoted in the United States. The systematizing of manual training at Hilo Boys' Boarding School, the establishment of manual training at both the Kamehameha School for Boys and the Kauai Industrial School, the addition of manual training departments at the female seminaries and the Kamehameha School for Girls, the shift in curriculum that led to formation of the Lahainaluna Technical High School, and the introduction of manual training into the public schools are examples of this diffusion. Through

all these efforts, the educators borrowed ideas solicited by reading literature, visiting schools, or communicating with the practitioners of manual training in the United States.

Compared to most school systems in America, the program in the Islands was implementing a more extensive use of manual training. Even when some American school districts were committed to manual training, at most, they only had one high school offering that curriculum. During the early years of the twentieth century, Hawai'i could claim six manual training private schools: two male schools (Kamehameha School for Boys and the Hilo Boys' Boarding School) and four female schools (Kawaiaha'o, Kohala, and Maunaloa Female Seminaries and the Kamehameha School for Girls). The Kamehameha Schools were the best financed and made the most extensive use of the manual training model current in the United States. It is apparent how more advanced this curricular practice was in Hawai'i when Lahainaluna Technical High School, a public school, is added to the six private schools, and one takes into account the required teaching of manual training skills to all students in the public schools of the Territory of Hawai'i.

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