

CARL KALANI BEYER

Manual and Industrial Education for Hawaiians During the 19th Century

INTRODUCTION

The purpose of this article is to make the case for the importance of the use of manual and industrial education in educating Hawaiians in the history of this curricular practice. The term manual and industrial education refers to either the manual labor system and/or manual training system in vogue during the 19th century. Charles Bennett, the most prolific researcher of this form of education, coined this term. Manual and industrial education emphasized a curriculum where learning was accomplished by both the hands and the mind. After becoming institutionalized in Europe, it next took root in the United States.¹

When one investigates the history of manual and industrial education in the U.S., there is little mention of its use in educating Hawaiians during the 19th century.² Since the primary sponsors of education for Hawaiians were either American Protestant missionaries or their children, who usually returned to the U.S. for their college education, it is apparent that Hawaiian education had an American influence. My research reveals substantial evidence, demonstrating that

Carl Kalani Beyer, Ph.D., is an associate professor in the Teacher Education Department at Concordia University, River Forest, Illinois. Dr. Beyer is a graduate of the Kamehameha Schools and Beloit College, has masters' degrees from Northern Illinois University and Benedictine University, and a doctorate from the University of Illinois at Chicago. He has published widely in this field, including in The Hawaiian Journal of History in 2003.

The Hawaiian Journal of History, vol. 38 (2004)

especially in the use of manual and industrial education the efforts of the missionaries deserve a major place in the history of American education. Not only did the use of manual and industrial education mirror 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 article to prove that in using manual and industrial education, the educators in Hawai'i deserve to be recognized as not mere borrowers but innovators. Most of the implementation of manual and industrial education 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. Furthermore, the missionary educators in Hawai'i began to use manual and industrial education in the 1830s as one of several curricular alternatives; after mid-century, they began to steer all of the schools they controlled or influenced towards some form of this educational system. By the early years of the 20th century, 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, it was more preponderant than what was practiced in the U.S.

The organization of this paper consists of three sections. The first section identifies the foundations of manual and industrial education in Europe and its use in the United States. The second section investigates the use of manual and industrial education in Hawai'i before the 1880s. The final section examines the arrival in Hawai'i of a more systematic form of manual and industrial education, known as manual training, during the latter two decades of the 19th century.

THE EARLY HISTORY OF MANUAL AND INDUSTRIAL EDUCATION

Manual and industrial education resulted as a reaction to the formal study of Latin and Greek grammar that predominated as the major form of education through the 18th century. Most scholars credit Johann Pestalozzi for fathering this form of education.³ Pestalozzi was a Swiss education reformer who in the last quarter of the 18th century came to advocate both manual labor and manual training systems. While the manual labor system involved the inclusion of work-

ing 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 combined their special focus with moral and intellectual instruction. In Pestalozzi's thinking, neither system should lead to vocational education, which was a form of education that trained students for profitable employment. He preferred an education where industry became a means to providing a general education.⁴ According to Bennett, "Pestalozzi believed that children in school should learn to work, not only because of the economic value of skill and habit of labor, but because it was the basis of knowledge. He recognized the fact that 'doing leads to knowing'."⁵

Philip Emanuel von Fellenberg, an associate of Pestalozzi, organized and conducted the first manual and industrial education schools based on his mentor's philosophy. He contributed three types of institutions: the agricultural school, the industrial reform school, and the manual labor school. At his academy in Hofwyl, Switzerland, he organized and conducted a variety of educational activities. He brought 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.⁶ Fellenberg wanted to bring together young people of different social strata. Nevertheless, 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 was agricultural, technical, with a common school academic education. This action combined both the manual labor and manual training systems.⁷

Pestalozzi's manual and industrial education first made its way to the United States in 1809, when the first Pestalozzian school was opened in Philadelphia through the philanthropy of William Maclure. The philanthropist had been in Paris when he met Francis Joseph Nichols Neef, who had trained under Pestalozzi. Maclure convinced Neef to come to America and help establish a school. In 1820, after moving this school several times, Neef and Maclure collaborated to help organize a manual labor movement.⁸ In 1826, Neef and Maclure formed a partnership with Robert Dale Owen. At that time,

they joined their philosophies in developing the education system at the commune in New Harmony, Indiana.⁹ The school they developed was organized along the lines suggested by Pestalozzi; physical labor was combined with moral and intellectual culture.¹⁰

Manual and industrial education was a curriculum that also developed in the United States independent of Pestalozzi's influence. The first system in the U.S. to use any form of manual and industrial education were the schools for Native Americans. Colonial Indian education aimed to make converts, to train missionaries, and to produce laborers skilled in European work techniques. Academic instruction was reserved for students training for the ministry. One of the schools practicing an early form of manual and industrial education was Moor's Charity School for Indians. In 1755, Reverend Eleazer Wheelock founded this school at Lebanon, Connecticut; in 1769, he moved it to Dartmouth College. The purpose of the school was to train Native American men to become missionaries. The curriculum included reading, writing, arithmetic, English, Greek, and Latin. The use of a manual labor system was minimized to having the boys do some work around the school. Indian girls lived in homes in the neighborhood to learn housekeeping and sewing, and went to school one day a week to learn to read and write. It was the intent of the educators that the girls would also become missionaries and that the education of both genders would prevent them from reverting to tribal ways when they returned to their people.¹¹

After the American Revolution, mission schools began to stress inculcating Native American students in industriousness. Little success occurred until the newly established American Board of Commissioners for Foreign Missions (ABCFM) introduced the Lancastrian system. In 1798, Joseph Lancaster had introduced this system in England. According to Ronald Raymond, "the fundamental premise of Lancaster's system revolved around mass public education utilizing older or more advanced students, or 'monitors', as instructors."¹² Located in Tennessee, Brainerd School for Native Americans was the first school where the ABCFM sponsored the Lancastrian system. The school also used the manual labor system. Through the influence of Cyrus Kingsbury, secretary of ABCFM, other schools were eventually established based on both these systems. In subsequent years, the

reliance on the Lancastrian system waned while the use of the manual labor system grew.¹³

After 1835, due to the insistence of the federal government, the manual labor model was introduced into all Native American schools financed by the federal government and operated by missionaries. By mid-century, education at Indian schools consisted of common school academic subjects (English, arithmetic, history, geography, religion) and manual labor appropriate to proper gender roles. Boys learned such skills as blacksmithing, woodwork, and agriculture. The girls learned civilized cooking, dressmaking, and other domestic arts.¹⁴ These manual labor schools would be the predominate institution to educate Native Americans until the 1880s.¹⁵

Even while manual labor was being established among Native American schools, Fellenberg's Academy was furnishing as well the inspiration for a manual labor movement among Whites in America. According to Bennett, it began in the years from 1825 to 1830, reached its height about 1834, and in less than 10 years had spent its force as an educational movement. In certain schools, it left a type of work, which grew and became permanent. He delineates the way Fellenberg's system was used in the United States.

In Fellenberg's academy for the upper classes of society, manual labor was used as a means of physical training. In Fellenberg's farm and trade school, manual labor was a means of paying for instruction and living expenses. In democratic America these two aims were combined.¹⁶

Bennett purports that the theological seminaries took the lead in this movement. The rise of the American Education Society in 1815 helped promote the use of manual labor among the theological seminaries.¹⁷ David Allmendinger provides the motivation for this move. This organization wanted to tap young men from lower class Protestant families to fill an increasing number of vacant pulpits. Manual labor was deemed as a means of helping to support these students at seminaries.¹⁸ Bennett discovers that up to 1829, the most successful manual labor experiment was the one at the Andover Theological Seminary at Andover, Massachusetts. Its voluntary program based upon mechanical labor became the model for other seminaries. In

many other schools, it was largely agricultural, and, in the most successful schools, it was compulsory. Maine Wesleyan Seminary went one step further by uniting manual labor with academics. The purpose was to help three classes of young men: the “worthy poor” who wanted an education; the “idle well-to-do” who needed proper motives to industry to keep them from dissipation; and the “especially talented” students who needed exercise for the good of their health.¹⁹ Other locations for theological seminaries that used manual labor included the following: Auburn, New York; Maryville, Tennessee; South Hadley, Massachusetts; Lane, Ohio; Bowdoin, Maine; and Middlebury, Vermont.²⁰

Manual and industrial education was also used to educate Blacks in the United States. During the period from 1830 to 1860, Northern philanthropists started manual and industrial education schools for free Blacks. These schools were established for the following reasons: opposition from White skilled mechanics to apprentice Blacks; as a way to offer Blacks a common school education; and to make it possible for Black students to support themselves by working at an occupation while attending classes. While the program at these schools had a vocational focus, they also relied on both manual labor and manual training systems.²¹

The general aim of the manual and industrial education programs in Black institutions was to dignify labor, to train skilled workers, and to prepare industrial teachers. The majority of the students at these institutions paid a part of their school expenses by working at their trade for wages while at school. The main reason for the failure of these schools was their being located in rural areas, which did not afford markets for the students to either sell their trade or the products of their labor. Two schools were more successful. Begun in 1834, the Peterboro Manual Labor School in Madison County, New York, provided a common school education along with manual training. This training was used not to learn a trade but to support the students at school. At the Institute for Colored Youths, begun in 1852, instruction was provided in mechanic arts. This instruction was free to persons of good moral character who were 16 years of age or older. All pupils were first instructed in the use of tools, materials, simple operations, and then they advanced by progressive stages until all operations in their trade were thoroughly mastered.²²

MANUAL AND INDUSTRIAL EDUCATION IN HAWAI'I PRIOR TO 1880

The American Protestant missionaries, who arrived in Hawai'i in 1820, were the primary curriculum developers who introduced this form of education. In this study, the term "missionary" refers to ordained ministers, men and women who were not ordained but served the mission, the ministers' wives and children, those men who resigned from the mission but stayed in Hawai'i, and missionary allies. Throughout this study the word missionary refers to all the people in this group.²³

The missionaries were sent by the ABCFM, a Calvinist organization developed after the Great Awakening of 1800, to spread their brand of Christianity. For these missionaries, Hawai'i became one of many frontiers for their religion and culture. Their adherence to an aggressive brand of Calvinism and New England values led to a two-fold mission: converting Hawaiians to Christianity and remolding the Hawaiian society into the image of New England.

Over the next 20 years, the missionaries implemented an educational program in five steps. The first step was developing English schools for the *ali'i* (chiefs, nobility). The second step was to translate reading material into the Hawaiian language once it became clear how difficult it was to teach literacy in the English language. As *ali'i* gave the missionaries permission to approach the *maka'ainana* (commoners) and required that they attend to the *palapala* (the act of learning to read), the task of making over 50,000 adults literate seemed more surmountable if the instruction was in the vernacular. The third step was to send the best students from the school for *ali'i* to act as teachers at schools for commoners throughout the district. This system involved some training of *ali'i* teachers. At most of the mission stations, the plan brought teachers together from all parts of the district for a period of several weeks or months to receive special instructions designed to make them more effective teachers.²⁴ The annual report of the ABCFM for 1832 demonstrates that they understood the Lancastrian monitorial system.²⁵ The process was highly successful in making a large number of people literate in a very short time. From the point of view of the missionaries, education was playing an important part in the transformation of Hawai'i.

Between 1824 and 1827, nearly the entire adult population of the Hawaiian Islands went to school. This missionary educational system reached the peak of its development in 1832, when more than 53,000 pupils were enrolled in 900 schools, the equivalent of 40 percent of the total Hawaiian population. But few of the students were children.²⁶

The establishment of Lahainaluna High School in 1831 as a teacher-training center resolved the dilemma posed by inadequately prepared teachers. This was the fourth step in the development of an educational system by the missionaries during the early years. The purpose of the school was to prepare young men to become teachers in the common schools or assistant teachers of religion. It was also determined that the school would use the manual labor system as far as possible.²⁷ Thus, manual and industrial education began in Hawai'i.

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. In 1833, when the school system for adult Hawaiians began to fall apart, the missionaries at most of the stations began to create select schools for adolescents. Select or station schools were day schools developed for the best students from the district common schools. In order to enhance the development of select schools, the missionaries voted at the 1836 general meeting to erect as soon as practical one model school house at each station at the expense not exceeding \$200 and appropriated \$100 to \$150 to pay graduates of Lahainaluna High School as teachers at these schools.²⁸ In addition, in 1837, the American board sent its next company of missionaries, eight qualified teachers, to help with these schools. This was the fifth, and final, step in the missionaries educational program.²⁹ When an economic depression hit the United States, the American Board 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.

Coinciding with the development of select schools was the beginning of the special schools. Special schools were those select schools receiving sufficient financial support to remain independent from

the public school system and boarded their students. Boarding students provided more opportunities for the educators to experiment with some form of manual and industrial education. 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 select 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.³⁰ All these innovations were considered to be experimental.

Initially, all three schools had a common school curriculum in addition to using some form of manual and industrial education. When Armstrong and Lyman spoke about wanting a “practical” education at all the select schools, they were referring to using some form of manual and industrial education. Consequently, it was hoped that the select schools would also implement this meaning of “practical” into their curriculum. Even though the curriculum at the high school included manual labor, in time its academics became formal. In contrast to a common school curriculum, a formal school curriculum was at this time the equivalent of a high school or academy curriculum. 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.³¹

Lahainaluna High School was the premier educational institution for Hawaiians for over 40 years.³² Education provided at the high school level was a very new phenomenon, even in the United States. The first high school in the U.S. was founded in Boston in 1821. By the time Lahainaluna was begun, there were no more than 10 high schools in the whole country. But Lahainaluna High School was also a teacher training school. In that regard, it preceded the first American normal school by eight years.³³

The founder of Lahainaluna High School, Reverend Lorrin Andrews, arrived in Hawai‘i in 1828. He was educated at Jefferson College and Princeton Theological Seminary, schools that required

manual labor of their students.³⁴ In a letter to the ABCFM, he summarizes the expectations the missionaries had for the school: “Here in almost savage ignorance, without the least vestige of civilization, are the future lawyers and doctors and school masters and preachers of the Sandwich Islands.”³⁵ These expectations were warranted because students admitted to the high school were the best teachers from the various station schools. They were also for the most part *kaukau ali'i*, a class of Hawaiians who were used to serving and following the orders of the *ali'i nui* (high chiefs). When the *ali'i nui* wanted the *palapala* to be successful, they ordered their servers to go to Lahainaluna to learn. This group of men, who were thoroughly educated in the knowledge of the traditional culture and the select among students of the missionary station schools, represented the educated elite of the Hawaiian Kingdom.³⁶ By necessity, the school was a day school since all the students were adults, many with wives and children. The students and their families were given plots of land to build shelters and raise food. Although the education during the first year was rudimentary due to the lack of materials, Andrews reports that attendance was good, the scholars were obedient and well behaved, and evinced an anxious desire to learn.³⁷

By intention and due to lack of funds, the scholars at the school were expected to do manual labor to provide for their housing and food. In fact, every scholar entered the school with full understanding that manual labor was part of the business of the school. The general meeting of 1832 agreed that Andrews should start a manual labor department and voted \$150 for the purpose of procuring tools and materials. At this time, tools and turning lathes were donated. The lathe allowed the manufacture of other tools. Andrews hoped to hire an artisan to help create a manual labor department, and this employee's wife would run a school for the wives of the scholars.³⁸

Until the general meeting of 1834, Lahainaluna High School was an experiment. The progress made under Andrews' leadership convinced the missionaries that they needed to enlarge the school and give it permanent status.³⁹ They acquired a printing press—a hand-operated model that could print about 100 sheets per hour—and machinery for binding books.⁴⁰ In addition, they designated a place for a distinct library, built a church on campus, again requested an instructor of manual arts, and charged a tuition of one dollar per

month with manual labor canceling the tuition. By this time, the American Board had agreed that the school should be placed on a permanent basis.⁴¹

While training teachers was the initial purpose for founding the high school, ultimately the American Board intended it to be a seminary. Thus, in 1837, the board insisted the name of the school be changed to Lahainaluna Seminary.⁴² As such, its graduates would be trained as preachers of the gospel for Hawaiians and other islands of the Pacific Ocean. In keeping with this design, Andrews began to teach the Greek language to a select group of students. Both the general meeting of that year and the American Board approved this action. Primarily, Andrews' action was motivated by his desire to have his scholars read the Bible in its original language. But Andrews was not content in just having the school be a seminary. He envisioned that with more funds, the school could be a college or university. This vision was based on his observation that at least half of the scholars were already equivalent to sophomores in colleges in the United States. The mission decided that in the 1836–1837 school year, all new students would be boys between the ages of seven and 17, and they would be boarders. As the result of this new policy, for the next three years there were two distinct schools: one for the adults who were day students, and another for boys who were boarders. While the adults who performed manual labor did so voluntarily to cover the tuition expense, the boys were required to labor three hours a day as part of their curriculum.⁴³

With government help and finances in order, the attention of the school turned towards raising its standards. In the general meeting of 1844, the missionaries now believed the school could produce legislators, judges, secretaries, and other government agents and be more likely to furnish clergymen, lawyers, and physicians for Hawaiian society.⁴⁴ The report of the minister of public instruction for 1846 summarizes the results of the first 15 years of the school's existence: out of the total number of students enrolled at Lahainaluna, 297 had left the institution, 42 had died, 108 were employed as teachers, 45 were in government service, and 31 in other useful services. The ABCFM had contributed \$68,500 towards the school through this 15-year period.⁴⁵

In spite of the commitment of the ABCFM, in 1846 the mission

transferred the seminary to the government due to the inability of the American Board to continue financing the school.⁴⁶ The government assumed its maintenance, including salaries, and agreed not to interfere with religious teaching. Even though the school was technically a public school—the only high school among the public schools—it continued to provide the American Protestant churches in Hawai‘i with ministers and missionaries as well as training the most prominent and influential members of the kingdom.⁴⁷ Graduates of Lahainaluna Seminary served as school superintendents, principals, and teachers, licensed preachers and ordained ministers, choir leaders, legislators (leading members in both the House of Nobles and the House of Representatives), cabinet officials, privy councilors, governors, circuit and district judges, lawyers, surveyors, tax assessors and collectors, historians, writers, orators, translators, journalists, compilers, various governmental officers, and civil servants.⁴⁸

While Lahainaluna Seminary was primarily a formal school using manual labor to help defray the costs of the school, Hilo Boys’ Boarding School epitomized Pestalozzi’s model as it combined manual labor and manual training in its curriculum. More than any other person, David Beldon Lyman was the heart, hands, and mind behind the Hilo Boarding School. He arrived in Hawai‘i in 1832. He was the oldest of eight children born to a New England farm family. His household was 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 American Board selected him, he married Sarah Joiner and headed for Hawai‘i. Upon his arrival in Hawai‘i, he spent two months in Honolulu before assignment to Hilo. During his four years of 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.⁴⁹ Mildred Gordon says he “was very practical, reserved in personality, a good farmer and carpenter who enjoyed seeing the practical results of his work.”⁵⁰ Consequently, he did not follow the scholastic traditions of his day. His main goal was to fit the education to the ability of his students. Based on his leadership for over 50 years (fig. 1), 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.⁵¹

The objective of the school was to develop good teachers and preachers with both piety and good character. "Habits of industry, thrift, and morality based on the principles of the Gospel were considered" by missionaries at the school "as most essential for these fun-loving, easy-going Hawaiians."⁵² A pamphlet on the Hilo Boarding School summarizes 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.⁵³

Throughout the entire history of the school, manual and industrial education 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. In 1884, Reverend William Oleson, the principal, reported that



FIG. 1. David Lyman, Sarah Lyman and children, Hilo, in 1853. Lyman introduced Western manual and industrial education into the Hilo Boarding School. Hawaiian Mission Children's Society Library.

\$3,500 was raised annually from the sale of farm products. But it was also believed that laboring in the fields was good education for the students. Even when the boys and/or their parents asked to be released from manual labor, the instructors refused their request. They were "convinced 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."⁵⁴ The curriculum kept the boys busy from morning until night (fig. 2). Francis Lyman, one of David Lyman's sons, portrayed just how exacting the curriculum was:

From the beginning of the school up to the present time, the scholars have raised the kalo, bananas, sugar cane, and other vegetables for their living, making their own poi, and doing all the work on their farm, and keeping the school premises in order, working morning and evening. Besides being taught in the class-room in books and in vocal and instrumental music, from four to five hours each day, for five days in the week, they were taught to be self-supporting youth while at school,

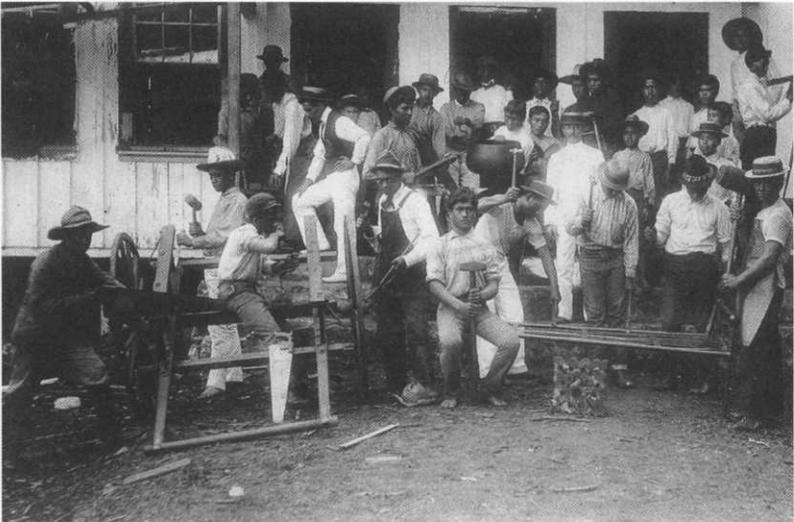


FIG. 2. Students in the Hilo Boarding School Shop, Class of June 1901, displaying their work. Courtesy of Lyman Museum.

by the work of their hands, farming, tailoring, house painting, stone work, cooking, etc, and to become good reliable Christian men, and loyal citizens, not ashamed to work.⁵⁵

Using his experiences from his farm background and education, David Lyman developed an educational system that mirrored the connection Pestalozzi made between both learning by the hands and the mind and the use of manual labor and manual training. According to Levi Lyman, another son of David and Sarah Lyman, the following are the six values of the manual and industrial education system that his father instituted at Hilo Boys' Boarding School:

First, there was the need to solve the daily food. D. Lyman made food production a condition of entrance into the Hilo Boarding School. If a boy did not work, he did not eat. He soon learned by experience, the value of industry. Second, he learned further that his work must be productive, that he should not only put in time, but that the larger quantity of food he helped produce, the better his table was supplied. Third, work must be up to a certain standard of perfection or it will not pass. Fourth, they learn that when an order is taken to be filled at a certain time, this must be ready on time. Fifth, by their extra labor many of the boys earn enough to cover their school fee, and some enough to buy in addition all their books, clothing and incidentals, and the more thrifty are able to open up a bank account. This provided early life lessons in self-reliance. Sixth, each one must do his part, and do it well, whether interested in it or not.⁵⁶

As Lyman was able to acquire tools, he instituted a form of manual training that involved designing and using tools to complete a project. The school was still primarily interested in training teachers for the common schools and, when it switched to English instruction, its graduates were also being trained for the English select schools. In 1840 and 1844, tailoring and dairying were added to the manual and industrial education curriculum. Furthermore, drawing on the Hawaiian love of music, the instructors made singing in the European manner a requirement, and, as they acquired instruments, orchestral music became a regular part of the curriculum. The school struggled financially after 1850, when the American Board withdrew its financial support.⁵⁷ The school's instructors devised and furnished an all-

around training much like growing up on a farm in order to compensate for the lack of funds to acquire machines and tools. This was done 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.⁵⁸

In 1860, a transfer of the school to the government was proposed. The trustees stipulated that instruction be given by men who would be approved by the American Board and by the HEA and that it continue as a school of high caliber to qualify men for teaching, the ministry, and professional and business life. It is unclear why, but the transfer never took place. As a consequence, the missionaries were able to continue experimenting with manual and industrial education for male students.⁵⁹

The work being done at Hilo Boys' Boarding School did not go entirely unnoticed. The Hilo school influenced the way Samuel Chapman Armstrong approached industrial education when he began Hampton Institute in 1865. 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 well for the work he implemented at Hampton Institute. Of primary importance was his accompanying his father, who as the minister of public instruction made official tours of various schools of the Islands. Among all the schools observed by Samuel Armstrong, the work being done by Reverend Lyman at Hilo Boys' Boarding School impressed him the most.⁶⁰ In practice, the manual and industrial education 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 to meet the mental rigors of the curriculum.⁶¹

Lahainaluna Seminary and Hilo Boys' Boarding Schools were not the only schools using some form of manual and industrial education

before the 1880s. The boys' schools at Waialua on the island of O'ahu, Kohala on the island of Hawai'i, and Waioli on the island of Kaua'i were select schools whose founders continued to operate independently of the public school system with little support from the Sandwich Islands Mission (SIM). Their education mirrored that of Hilo Boys' Boarding School since they used a common school academic curriculum along with manual and industrial education. However, while they developed the same reliance on the manual labor system as the Hilo school, they never did incorporate the manual training system. Even though these schools never had the same impact as Hilo Boys' Boarding School, they demonstrate the wide use of manual and industrial education among the missionary special schools.⁶²

In addition, early in the promotion of select schools, there were two female schools: Wailuku Female Seminary and Hilo Girls' School; founded in 1835 and 1838 respectively. Even though both schools were closed by 1850, beginning in the 1860s, four new female seminaries were established: Waialua and Kawaiaha'o on the island of O'ahu, Kohala on the island of Hawai'i, and Mauna'olu on the island of Maui. The latter three survived well into the 20th century. All of these female schools included common school academics and relied upon manual labor to help develop industriousness in the students and defray the costs of operating the school.⁶³

While the missionary special schools were heavily involved in some aspect of manual and industrial education, 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 minutes of the meeting of the HEA for 1855, the missionaries spelled out their understanding of the importance of manual labor to this endeavor:

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.⁶⁴

This interest translated into both chiefs and missionaries encouraging the merits of manual labor even in government schools. An editorial in a Hawaiian journal exemplifies this belief when it proclaims, "it would be hardly possible to overestimate the importance of manual labor in all schools for Hawaiians. We believe that the scholars in all Government schools should be obliged to 'mahi ai' [work] vigorously two or three hours a day."⁶⁵ Samuel T. Alexander, a second-generation missionary, echoed these sentiments. He admonished the government to provide each school with a small plot of land for each pupil to "mahi ai for two to three hours each day and have girls learn sewing or braiding mats and hats."⁶⁶

As the minister of public instruction and former missionary, Richard Armstrong greatly influenced both the government schools and the missionary special schools. He stressed vocational experience and the lessons of manual labor in both roles. Armstrong imposed manual labor in the curriculum of the public schools well ahead of schools in the United States. Whenever Principal Lyman was in Honolulu, he was sure to meet with Armstrong at his home. They discussed the advantages of manual labor and worked on ideas that could be implemented at the Hilo school.⁶⁷

As the result of Richard Armstrong's untimely death and the missionaries being at odds with the Hawaiian monarchs after 1854, the missionaries had less and less influence over decisions involving the public schools. However, when H. Rexford Hitchcock, the son of missionaries, replaced Abraham Fornander as inspector general of the schools in 1870, and when Charles R. Bishop assumed the presidency of the board of education in 1874, missionary influence over the public schools began to return.⁶⁸

One of the first innovations under this new leadership was the establishment of the Haleakala Boys' School. The school's principal and main teacher were missionaries Robert W. Andrews and Mrs. Samuel A. Thurston. It represented one of the few schools attempting to provide instruction in both the English and Hawaiian languages. While the academic curriculum was common school, its main focus

was agriculture. Eventually, it concentrated on the dairy industry. In the 1874 biennial report, Charles R. Bishop states "no school under the control of government possesses so great advantages, as this institution, for development into a practical, industrial school, at which the mechanical trades in common demand may be taught to the youth of this Kingdom."⁶⁹ Due to the rising expenses of the school and inadequate government finances and dairy profits, the school closed in 1880.⁷⁰

In 1878, based upon the initial experience at Haleakala Boys' School, the Legislature made it lawful for the board of education to include agricultural and industrial education in public school instruction.⁷¹ The law provided that the teachers receive four-fifths and the students receive one-fifth of the net profits from the work. Where manual labor was practiced, Bishop relates, it involved two to five hours of daily agricultural labor. The proceeds helped pay the expenses of books and gave the pupils habits of industry.⁷²

MANUAL TRAINING IN THE UNITED STATES AND HAWAII

In the 1880s, a new form of manual and industrial education spreading throughout the U.S. made its way to Hawai'i. This version of manual and industrial education was a more systematic form. It was called manual training and was a form of curriculum based on providing manipulative experiences. It emphasized developing students through instruction based on handwork, and providing general industrial training to meet the rapidly changing demands brought on by industrialization.⁷³ In part, this curriculum was intended to offer an alternative to the almost exclusively academic education common at this time in the United States. Calvin Woodward, one of its supporters, was particularly concerned that the usual method of education steered students away from employment requiring hard labor.⁷⁴ 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.⁷⁵

At this time, the missionaries shifted from the manual labor form of manual and industrial education to the manual training form. All the missionary female seminaries introduced industrial depart-

ments.⁷⁶ Probably because they were incapable of making the transition, Kohala and Waioli Boys' School were released to join the other government English select schools.⁷⁷ Waialua Boys' School had closed in 1845.⁷⁸

When Reverend William Oleson became the principal of the Hilo Boys' Boarding School, manual and industrial education took on a more systematic form. Although Oleson was new to the Islands, he was knowledgeable of the manual training curriculum beginning to take hold in the United States. Under his leadership (1879–1887), the school began a new era. He increased the endowment fund and added new industrial courses. The first major new education building in 10 years was erected and a house for the principal was built. A paved roadway was begun and completed by 1880. An iron cookhouse and a student bathhouse were constructed. In 1884, a classroom and two dormitories were completed. In 1886, a two-story building was completed that contained a floor for a dining hall and another floor for a dormitory.⁷⁹ In essence, Hilo Boys' Boarding School, the guiding light for manual training in Hawai'i, was being re-organized to be more like the new manual training schools in the United States.

During the latter two decades of the 19th 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 15-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.⁸⁰ Gordon 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.⁸¹

Hilo Boarding School was unique in many regards. It is one of the oldest schools in Hawai'i. Its agricultural curriculum began 26 years before the Congress of the United States made federal land grants available to found similar schools in 1862. Its elementary tool work and industrial training began 40 years before the founding of the first manual training school in the United States at Boston in 1878.⁸² The school was credited for "serving well in the early days in educating leaders among the Hawaiian race, producing what was most needed among them, teachers, preachers, and intelligent agriculturist, and homemakers".⁸³ In tribute to its founder, Reverend Oleson states, "it was a well-deserved tribute paid to a notable educator when General (Samuel) Armstrong said that, when he wished to make Hampton the best kind of school for the freedman, he took Father Lyman's Hilo School as his pattern."⁸⁴

During the latter two decades of the 19th century, manual training spread from its base at Hilo Boys' Boarding School to encompass two new manual training schools for boys, the inclusion of manual training at all the female seminaries, 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 (fig. 3).

Before her death in 1884, Bernice Pauahi Bishop, heir to the vast lands of the Kamehameha dynasty, 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.⁸⁵ Even though the school was not officially a missionary school, since most of the people connected with it were members of the missionary party, including its founders, board of directors, first president, and first and second principals, it was considered an extension of the education work being done by the missionaries. Once it was decided that the principal and his associates were to be chosen according to how well they knew the Hawaiian character and could provide religious and moral training, Rev-

erend Oleson was chosen to be the school's first principal. He was sent to the United States to study current educational methods, particularly those used at Hampton Institute.⁸⁶ While Oleson was doing this work, Samuel Armstrong was recruiting 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 School for Boys.⁸⁷

Thirty-seven boys passed the entrance examinations to become the first class at the Kamehameha School for Boys. The school was commonly known as the Manual Department or "The Manual." 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



FIG. 3. Students working in the Carpentry Shop, Kamehameha School for Boys, 1890, (right) Rev. Wm. Oleson, Principal, (far left) Charles E. King. Kamehameha Schools Photo Archives, Luryier Diamond, photo archivist.

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. (Figs. 4 and 5)⁸⁸ By the 1890s, 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.⁸⁹

At about the same time that the Kamehameha School for Boys was being established, second generation missionaries were beginning the Kaua'i Industrial School. This school was originally conceived as a coeducational industrial school, near the city of Līhu'e, on the



FIG. 4. Carpentry Shop students building a school cottage 1902–1903, Kamehameha School for Boys. (left to right, first row) Charles Brickwood Lyman (1904), Kaumu Hanchett (1904); (second row) Mr. Ira Eskew, Instructor, David Desha (1905), Arthur Arnold (1905); (third row) Stephen Desha (1903). Kamehameha Schools Photo Archives. Luryier Diamond, photo archivist.

island of Kaua'i, because this island did not have any school providing an industrial education like the rest of the major islands. Juliette Smith and her brother Jared Smith were the founders of the school.⁹⁰

The plans for the school included cultivating 30 acres of land to yield part of the food necessary for 75 pupils. Besides the principal and the two teachers, the staff included a matron and a superintendent of the Manual and Mechanical Shop. Benefactors like William Waterhouse, George Wilcox, and Abner Wilcox each paid the salary of one of the teachers. Tuition for the students was \$25 per year. The average number of pupils was 24 although there were accommodations for 40 pupils. Other benefactors paid the tuition for three-fourths of the pupils.⁹¹ Once the school was in operation, the boys worked 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

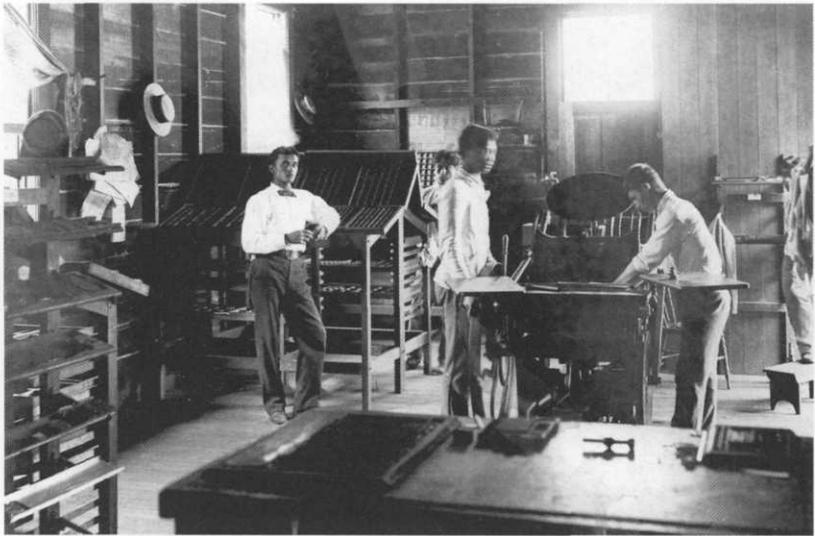


FIG. 5. Kamehameha School for Boys Print Shop, 1897. Kamehameha Schools Photo Archives. Luryier Diamond, photo archivist.

followed a more detailed curriculum for the three classes enrolled. Each class took courses in English, arithmetic, music, and recitations. The First Class added courses in physics and algebra, the Second Class added courses in printing and physiology, and the Third Class added a course in physiology. After school, all classes participated in baseball, croquet, or tennis.⁹² 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 1899.⁹³

During the same time period that manual training was being systematized at Hilo Boys' Boarding School and instituted at Kamehameha School for Boys and Kaua'i Industrial School, the three surviving female seminaries and, after 1894, the Kamehameha School for Girls were adding industrial departments for the purpose of offering manual training to Hawaiian girls. Whereas education for females once focused on preparing wives for the educated Hawaiian men, it was becoming important to the leaders of Hawai'i that there was a need to train Hawaiian women for careers in the emerging plantation economy.⁹⁴

Once the monarchy was overthrown in 1893 and the missionaries gained ultimate political power, more missionaries became administrators and teachers in the public schools. Eventually, missionary sons controlled all the major positions in the public school system. With this power, they began to introduce manual training there 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 discusses the effort to introduce manual training into the public schools.⁹⁵ By 1898, Minister of Public Instruction William D. Alexander (another missionary son), directed the public schools to follow a more extensive curriculum for manual training. He developed a five-year manual training curriculum. 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, Kaua'i Industrial School, and Lahainaluna Seminary. 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.⁹⁶

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 missionaries regained 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 rebuild 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 renamed 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. In the past, its best graduates were expected to become leaders, but now they were being steered by their education to serve as bookkeepers or technicians. Charles MacDonald says, "the object of the manual training was to fit the lads to earn a living in the conditions obtaining in Hawaii."⁹⁷ Alatau Atkinson, former inspector general of the public schools, best exemplifies 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.⁹⁸

CONCLUSION

This study establishes the important role played by missionary use of manual and industrial education for Hawaiians both to the history of Hawaiian and American education. One of the most important points 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 *maka'āinana* 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 *maka'āinana* (equivalent to the lower class) and the experiments with manual labor and a formal curriculum at Lahainaluna Seminary for *kaukau ali'i* (equivalent to the upper class) mirrored Fellenberg's schools for the lower and upper classes. Furthermore, Lahainaluna Seminary was like Moor's Charity School for Indians, the first Indian academy. At both institutions, formal education was combined with a manual labor system to train its brightest members to serve as missionaries.

During the 19th century, the missionaries' use of manual labor in schools for Hawaiians paralleled how it was used among Native Americans. Since members of the American Board were involved with both educating Indians and Hawaiians, this is not surprising. Many of the missionaries had experienced manual labor at the colleges or seminaries they attended. There they experienced manual labor as exercise, to lessen their expenses, and as a means to enhance morals, promote habits of industry, and independence of character and originality. Initially, the financial needs of the schools for Hawaiians warranted using manual labor to defray the expenses. The missionaries did not have to be told by the government to use manual labor, as was the case with educating Native Americans in the United States. It was apparent to them that manual labor combined goals of Christianity and civilization by developing virtues of labor, industry, and economy—all essential in a person with good character and "civilized" deportment. As a consequence, manual labor was a requirement of all students. The Hawaiian and Native American schools were also very similar in their common school curriculum and the manual training skills that each taught: blacksmithing, wood working, and agriculture for boys, and cooking, dressmaking, and domestic arts for girls.

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. The systematizing of manual training at Hilo Boys' Boarding School, the establishment of manual training at both the Kamehameha School for Boys and the Kaua'i Industrial School, the addition of manual training departments at the female seminaries and the Kamehameha School for Girls (fig. 6), 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 man-



FIG. 6. Kamehameha School for Girls sewing class, late 1890s. Kamehameha Schools Photo Archives. Luryier Diamond, photo archivist.

ual training, at most, they only had one high school offering that curriculum. In 1899, Hawai'i could claim six manual training schools among the special schools: two male schools (Kamehameha School for Boys and the Hilo Boys' Boarding School) and four female schools (Kawaiaha'o, Kohala, and Mauna'olu 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. All these schools were private schools. 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 use of manual training among all the other public schools.

NOTES

- ¹ See Charles A. Bennett, *History of Manual and Industrial Education up to 1870* (Peoria, IL: Charles A. Bennett Co., 1926).
- ² See Melvin L. Barlow, *History of Industrial Education in the United States* (Peoria, IL: Chas. A. Bennett Co., 1967); Charles A. Bennett, *The Manual Arts* (Peoria, IL: The Manual Arts P, 1917); Bennett, *History of Manual and Industrial Education*; Stuart H. Comings, *Industrial and Vocational Education: Universal and Self Sustaining, 2nd ed.* (Boston: Christopher Publishing House, 1915); Clyde W. Hall, "A Survey of Industrial Education for Negroes in the United States up to 1917," (Ph.D. diss, Bradley U, 1953); Charles H. Ham, *Manual Training: The Solution of Social and Industrial Problems* (New York, NY: Harper & Brothers, 1896); Frank J. Keller, *Principles of Vocational Education* (Boston, MA: D.C. Heath and Co., 1948); F. Theodore Struck, *Foundations of Industrial Education* (New York, NY: John Wiley and Sons, 1930); Samuel J. Vaughn and Arthur B. Mays, *Content and Methods of the Industrial Arts* (New York, NY: Century Co., 1924); Calvin M. Woodward, *Manual Training in Education* (London: Walter Scott, 1890).
- ³ Barlow, *History of Industrial Education* 128; Bennett, *History of Manual and Industrial Education* 106–107; Charles H. Ham, *Manual Training* 245; Vaughn and Mays, *Content and Methods* 22–23.
- ⁴ Barlow, *History of Industrial Education* 22.
- ⁵ Bennett, *History of Manual and Industrial Education* 120.
- ⁶ Barlow, *History of Industrial Education* 31–32.
- ⁷ Keller, *Principles of Vocational Education* 5–11.
- ⁸ Bennett, *History of Manual and Industrial Education* 120; Keller, *Principles of Vocational Education* 5–11; Struck, *Foundations of Industrial Education* 16.
- ⁹ Bennett, *History of Manual and Industrial Education* 120.

- ¹⁰ Barlow, *History of Industrial Education* 31–32.
- ¹¹ Evelyn C. Adams, *American Indian Education* (Morningside Heights, NJ: King's Crown P, 1946) 19–23.
- ¹² Ronald Raymond, "Joseph Lancaster's Monitorial System of Instruction and American Indian Education, 1815–1838," *History of Education Quarterly* XXI, Winter (1981) 395.
- ¹³ Raymond, "Joseph Lancaster's Monitorial System" 395; Joel Spring, *The Cultural Transformation of a Native American Family and Its Tribe 1763–1995* (Mahwah, NJ: Lawrence Erlbaum Associates, 1996) 28–36.
- ¹⁴ Michael C. Coleman, *American Indian Children at School, 1850–1930* (Jackson, MS: U P of Mississippi, 1993) 16–17.
- ¹⁵ Adams, *American Indian Education* 51.
- ¹⁶ Bennett, *History* 183.
- ¹⁷ *Ibid.*
- ¹⁸ David F. Allmendinger, Jr., "The Strangeness of the American Education Society: Indigent Students and the New Charity, 1815–1840," *History of Education Quarterly* XI, no. 1 (1971) 3.
- ¹⁹ Bennett, *History* 185.
- ²⁰ Barlow, *History of Industrial Education* 26–27.
- ²¹ Hall, "A Survey of Industrial Education" 8–12.
- ²² Hall, "A Survey of Industrial Education" 15.
- ²³ This meaning of the term missionary relates to its common use by *kama'aina* (Hawaiian Islands born). Reverend Sereno Bishop, a missionary, confirms this usage of the term missionary. He says, "that was the name for all among the whites who represented the active Protestant Evangelical Christianity planted here [Hawai'i], and by more latitude was applied to all who stood for morality and decorum against prevalent lewdness, obscene *hula* dances, drunkenness, opium and the lottery, as espoused by the Royal court and reckless whites." Sereno E. Bishop, "Are Missionaries' sons tending to America a stolen Kingdom?," *F*, 52, no. 1 (1894) 2.
- ²⁴ William D. Alexander, "The Development of Education in Hawaii," *F*, LIX (December 1902) 22–24; William D. Alexander and Alatau T. Atkinson, *An Historical Sketch of Education in the Hawaiian Islands* (Honolulu, HI: Board of Education of the Hawaiian Kingdom, 1888) 1–21; William Westervelt, "The First Twenty Years of Education in the Hawaiian Islands," (Honolulu: Annual Report of the H H S (19th), 1911) 16–26.
- ²⁵ *Annual Report and Minutes of the ABCFM, 1832* (Boston, MA: ABCFM, 1832) 77.
- ²⁶ Walter P. Frear, *A Century of Achievement* (Honolulu, HI: Hawaiian Mission Association, 1920) 12–13.
- ²⁷ Frear, *A Century of Achievement* 22–33; Westervelt, "First Twenty Years" 16–26.
- ²⁸ *Extracts from the Minutes of the General Meeting of the SIM, 1835* (Honolulu, HI: SIM, 1835) 10–11.

- ²⁹ Alexander, "Development" 24; Alexander and Atkinson, *Historical Sketch* 21; Westervelt, "First Twenty Years" 26.
- ³⁰ *Extracts, 1832* 14-16.
- ³¹ Bernard O. Wist, "American Foundations of Public Education in Hawaii: The Socio-Economic Factors Which Were Influential in the Shaping of an American Public School System in Hawaii" (Ph.D. diss, Yale U, 1937) 32-34.
- ³² George T. Lecker, "Lahainaluna" (Ph.D. diss, U of Hawaii, 1938) xii.
- ³³ Wist, "American Foundations" 32-34.
- ³⁴ *Missionary Album: Portraits and Bibliographical Sketches of the American Protestant Missionaries to the Hawaiian Island*, (Honolulu, HI: HMCS, 1969) 24-25; Barlow, *History of Industrial Education* 26-27.
- ³⁵ "Unpublished Letters from Members of the Sandwich Islands Mission to the American Board of Commissioners for Foreign Missions, Volume I," in *SIM, HMCS* (Honolulu, HI: 1838) 185.
- ³⁶ George Kanalu Young, a descendent of *kaukau ali'i*, reports this connection that previous studies had omitted. According to other studies, the most talented Hawaiian men were sent to the high school. Young investigated the geneology of the students to discover their class connections. See George T.K. Young, "Mo'olelo Kaukau Ali'i: The Dynamics of Chiefly Service and Identity in 'Oiwi Society" (Ph.D. diss, U of Hawai'i, Mānoa, 1995).
- ³⁷ *Annual Report and Minutes of the ABCFM, 1835* (Boston, MA: ABCFM, 1835) 27-35.
- ³⁸ *Extracts from the Minutes of the General Meeting of the SIM, 1832* (Honolulu, HI: SIM, 1832) 28.
- ³⁹ Henry P. Judd, "The Founders of Lahainaluna," *F, CL*, no. 7 (1931) 150-152.
- ⁴⁰ On February 14, 1834, the school's printing presses published the Kingdom's first newspaper, the *Kalama Hawai'i (The Hawaiian Luminary)*. The objectives for this publication were to show scholars how information of various kinds was circulated through the medium of a periodical, to communicate to them ideas on many subjects directly and indirectly, and to give them the experience of communicating their own opinions freely on any subject they chose. The newspaper was printed only for circulation within the school, but, in fact, it was the first newspaper within the confines of the United States west of the Missouri River. Lecker, "Lahainaluna" 66-72.
- ⁴¹ *Extracts from the Minutes of the General Meeting of the SIM, 1834* (Honolulu, HI: SIM, 1834) 17-19.
- ⁴² *Annual Report and Minutes of the ABCFM, 1837* (Boston, MA: ABCFM, 1837) 7-8; *Extracts from the Minutes of the General Meeting of SIM, 1837* (Honolulu, HI: 1837) 276-277.
- ⁴³ Ephraim W. Clark, "The Origin, Progress and Importance of the Mission Seminary at Lahainaluna, Maui," *Hawaiian Spectator* I, October (1838) 337-351.
- ⁴⁴ *Extracts from the Minutes of the General Meeting of SIM, 1844* (Honolulu, HI: SIM, 1844) 15-16.

- ⁴⁵ Richard Armstrong, *Report of the Minister of Public Education to the Legislature of 1846* (Honolulu, HI: Hawaiian Government, 1846) 52–53.
- ⁴⁶ Armstrong, *Report of 1846* 52–53.
- ⁴⁷ Andrews, “Lahainaluna Seminary” 24.
- ⁴⁸ Lecker, “Lahainaluna” 483–485.
- ⁴⁹ *Missionary Album*, 142–143; Mildred O. Gordon, “A History of the Hilo Boarding School” (M.A. thesis, U of Hawaii, 1936) 153.
- ⁵⁰ Gordon, “A History of the Hilo Boarding School” 18.
- ⁵¹ Gordon, “A History of the Hilo Boarding School” 59.
- ⁵² Gordon, “A History of the Hilo Boarding School” 24.
- ⁵³ *Hilo Boarding School for Boys: Seventy Five Years of Progress* (Hilo: HHS, 1911) 8.
- ⁵⁴ Gordon, “A History of the Hilo Boarding School” 61.
- ⁵⁵ Francis S. Lyman, “The Hilo Boys’ Boarding School,” *F*, LIX (December 1902): 25.
- ⁵⁶ Levi Lyman, “Industrial Training,” *F*, LXXVII, no. 5 (1920) 115.
- ⁵⁷ William S. Terry, “The Financial Side of Hilo Boarding School,” in *Hilo Boarding School for Boys: Seventy Five Years of Progress*, ed. HHS (Hilo, HI: HHS, 1911) 21–25.
- ⁵⁸ Lyman, “Industrial Training” 114–115.
- ⁵⁹ *Minutes of the Meeting of the HEA for 1860* (Honolulu, HI: HEA, 1860) 5–6.
- ⁶⁰ Talbot, *Samuel Chapman Armstrong* 42.
- ⁶¹ Armstrong and Ludlow, *Hampton and Its Students* 22–23, 38–39; Francis G. Peabody, *Education for Life; the Story of Hampton Institute* (Garden City, NY: Double Day, Page & Co., 1918) 89, 181–183; Talbot, *Samuel Chapman Armstrong* 34–36, 42.
- ⁶² Henry T. Cheever, *Life in the Sandwich Islands: The Heart of the Pacific as it was and is* (New York, NY: A. S. Barnes & Co., 1856) 273; Ethel M. Damon, “Father and Mother Bond,” *F*, XCIII, no. 7 (1923) 164.; Ethel M. Damon, *Father Bond of Kohala* (Honolulu, HI: F) 87–88; Ethel M. Damon, “The Story of Waioli Mission,” *F*, XC (1921): 254–264; Sheldon Dibble, *History of Sandwich Islands* (Honolulu, HI: T. G. Thrum, 1854) 352.
- ⁶³ For a more in depth discussion of these female seminaries, see Carl Kalani Beyer, “Female Seminaries in America and Hawai’i During the 19th Century,” *HJH*, 37 (2003) 91–118.
- ⁶⁴ *Minutes of the Meeting of the HEA for 1855* (Honolulu, HI: HEA, 1855) 5.
- ⁶⁵ “Manual Labor,” *P*, XVI, no. 43 (1860): 2.
- ⁶⁶ Samuel T. Alexander, “President’s Address before the HMCS on Hawaiians and Their Educational Needs, Twelfth Annual Report (June 20, 1864),” (Honolulu, HI: 1864) 112.
- ⁶⁷ Damon, “Father and Mother Bond” 164.
- ⁶⁸ Charles R. Bishop, *Biennial Report of President of the Board of Education to Legislature of 1874* (Honolulu, HI: Hawaiian Government, 1874) 1–18; Samuel Kama-kau, *Biennial Report of President of the Board of Education to Legislature of 1870* (Honolulu, HI: Hawaiian Government, 1870) 1–14. Although Charles Bishop

was not a member of the ABCFM, he was considered by both the missionary and anti-missionary factions as a nominal member of the missionary group.

- ⁶⁹ Bishop, *Biennial Report of 1874* 24.
- ⁷⁰ Charles R. Bishop, *Biennial Report of President of the Board of Education to Legislature of 1880* (Honolulu, HI: Hawaiian Government, 1880) 10.
- ⁷¹ Bernice E. Nichols, "The History of Public Education of the Hawaiian Islands During the Period of the Monarch" (M.A. thesis, U of Southern California, 1923) 24.
- ⁷² Charles R. Bishop, *Biennial Report of President of the Board of Education to Legislature of 1882* (Honolulu, HI: Hawaiian Government, 1882) 5-8.
- ⁷³ Struck, *Foundations of Industrial Education* 63-67.
- ⁷⁴ Woodward, *Manual Training in Education* 5.
- ⁷⁵ Vaughn and Mays, *Content and Methods of the Industrial Arts* 4.
- ⁷⁶ Beyer, "Female Seminaries" 11-112, 114.
- ⁷⁷ Damon, "Father and Mother Bond" 164; Damon, *Father Bond of Kohala* 87-88; Damon, "Story of Waioli" 263-264; *Reports of Kohala Boys' School, 1865-1870*, Unpublished ms., Schools-Hawaiian-Kohala, HMCS Collection; *Reports of Waioli Boys' School, 1861-1868*, Unpublished ms., Schools-Hawaiian-Waioli, HMCS Collection.
- ⁷⁸ Armstrong, *Report of 1846* 54.
- ⁷⁹ Gordon, "A History of the Hilo Boarding School" 58-59.
- ⁸⁰ Gordon, "A History of the Hilo Boarding School" 58-59.
- ⁸¹ Gordon, "A History of the Hilo Boarding School" 59.
- ⁸² Ethel M. Damon, "Hilo Boarding School," *F*, XCIII, no. 7 (1923): 168-170; William B. Oleson, "A Notable Educator," in *Hilo Boarding School for Boys: Seventy Five Years of Progress*, ed. HHS (Hilo, HI: HHS, 1911) 13-15.
- ⁸³ *Hilo Boarding School for Boys* 15.
- ⁸⁴ Oleson, "Notable Educator" 17.
- ⁸⁵ "Kamehameha's Memorial," *PP* (1895): 69-70.
- ⁸⁶ "Kamehameha's Memorial" 69-70.
- ⁸⁷ Uldrich Thompson, *Reminiscences of Kamehameha Schools* (Honolulu, HI: Bishop Museum P, 1922) 33-34.
- ⁸⁸ Uldrich Thompson, "Argument for Enlarged Studies," *Handicraft* IV, no. 9 (1892): 1-4; Uldrich Thompson, "On Manual Training and Apprenticeship," *Handicraft* V, no. 6 (1893): 1-4.
- ⁸⁹ Uldrich Thompson, "Normal Department," *Handicraft* VII, no. 4 (1895): 1-4.
- ⁹⁰ *Statement of Kauai Industrial School Board to the President of the Hawaiian Board*, Unpublished ms., Smith Papers, HMCS Collection.
- ⁹¹ *Report of the Kauai Industrial School*, Unpublished ms., Smith Papers, HMCS Collection.
- ⁹² Jarett Smith, *Closing Exercises of Kauai Industrial School*, Unpublished ms., Smith Papers, HMCS Collection.
- ⁹³ William D. Alexander, *Report of the Minister of Public Instruction of 1898* (Honolulu, HI: Territory of Hawaii, 1900) 61-64.

- ⁹⁴ Beyer, "Female Seminaries" 111-112, 114.
- ⁹⁵ William R. Castle, *Biennial Report of President of the Board of Education to Legislature of 1894* (Honolulu, HI: Republic of Hawaii, 1894) 87-90.
- ⁹⁶ William D. Alexander, *Report of the Minister of Public Instruction of 1898* (Honolulu, HI: Territory of Hawaii, 1898) 50-52.
- ⁹⁷ Charles A. MacDonald, "The Vocational-Trade School," in *Ka Lama Hawaii: The Centennial Yearbook of the Lahainaluna Technical High School* (Lahaina, HI: Territory of Hawaii, 1931) 44.
- ⁹⁸ Alatau T. Atkinson, *Address Delivered at the Formal Opening of the New Lahainaluna School* (Lahaina, HI: Lahainaluna P, 1905) 2-3.