

A PRACTITIONER'S INQUIRY INTO THE IMPACT OF THE KAUHALE:

KAMEHAMEHA SCHOOLS - KAPĀLAMA HIGH SCHOOL'S

NINTH GRADE TRANSITION PROGRAM

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Dedication

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Abstract

The transition to high school poses many social and academic challenges for students. Many schools around the country have implemented different types of programs to help students with this transition. This study documents and analyzes the implementation of the ninth-grade transition pilot program at Kamehameha High School at Kapālama on the Hawaiian Island of O‘ahu. Multimethod qualitative methods were used to explore the impact of the program that was designed with a Smaller Learning Community (SLC) organizational model and Hawaiian Culture Based Education (HCBE) as the foundations. The transition program, Kauhale, consisted of four teachers from different disciplines who shared 83 students. The curriculum the teachers created was thematic and interdisciplinary while still adhering to their content requirements. Analysis of the findings from the climate survey, student work samples, existing school data and teacher focus group interviews provided evidence of the program’s success in achieving: 1) the goals of creating meaningful relationships between peers and teachers, 2) preparing the students for their high school career, 3) as well as helping them understand their identity as a Hawaiian. The notable benefits of the Kauhale program include the challenging HCBE curriculum that led to meaningful experiences and correlated with 21st century skills.

Chapter One

Introduction

“Hei ka lā‘au i ke ao uhiwai e ‘uluwehiwehi, ke pāmalō e mae auane ‘i”

Enveloped by heavy mist, the plants will thrive and flourish,
in times of drought, plants will wither quickly.

This metaphor illustrates the role of a thick mist that blankets a forest to the educational well-being of a child. Mist is the best type of rain for trees. The uhiwai (heavy mist) permeates every part of the tree: the leaves, the branches as it seeps into its roots. It also allows the right amount of sunlight to penetrate through to the foliage. The trees need the thick mist to roll in every so often to create a healthy balance of water and sunlight required to grow. Too much rain would cause the water to run through the forest, not allowing penetration into the leaves or soil. Too little rain would cause the plants out to dry out.

Metaphorically, the uhiwai symbolizes our kūpuna (ancestors) who provide life, nourishment, and knowledge to the lā‘au (forest, trees, plants) that represent the keiki (children). Hawaiians understand these aspects are needed to create the kahua (foundation) of aloha first to make progress. One needs to have positive relationships of aloha for the ‘āina (land) and one another to flourish. This metaphor relates to the way I see education. The forest trees are the students, the mist is the aloha and the sunlight is the ‘ike (knowledge) a child needs in order to succeed; but when aloha and ‘ike are not present students’ self-worth can decline. Sometimes there is too much ‘ike (sunlight) and little aloha (rain) which creates an imbalance and causes distress to the trees (children). The mist creates the environment that allows the forest to thrive, just as the school has the potential to create the learning environment for students to learn.

This study explores how a Kamehameha School program is transforming its learning environment to increase aloha and ‘ike for their students as they enter high school. Smaller

Learning Communities (SLC) have become one approach in the United States to address the nationwide problem of high school transition (Bernstein, Millsap, Schimmenti, & Page, 2008). Kamehameha Schools – Kapālama is addressing similar issues with transition and also implementing the Smaller Learning Community organizational model within the high school. To provide more support for freshmen as they transition to high school, Kamehameha Schools – Kapālama high school created a pilot program that explored Smaller Learning Communities while continuing their pursuit of Hawaiian Cultural Based Education (HCBE¹). This chapter presents the objectives and research questions of the study and an outline of what is to follow.

Problem of Practice

There are several transitions students go through during their academic career; moving from sixth to seventh grade, eighth to ninth, and graduating from high school and entering college or the workforce. By far, the most difficult transition is from middle school to high school (Habeb, 2013, p. 19). The shift from a smaller middle school to a large comprehensive high school poses many tribulations for 13 year olds. Several studies (Butts & Cruzeiro, 2005; Neild, 2009; Roybal, Thornton, & Usinger, 2014) reported students become disconnected with their new school due to an impersonal environment, high teacher expectations, structure of the school system and different school culture. When students are unable to relate to their new school, their academic performance starts to suffer (Roybal, Thornton, & Usinger, 2014, p. 4). Students not academically prepared for the workload and high expectations, more distractions with social interactions, physical maturation, attending a school in a different district, transferring from a private to public school, and more freedom from parents can contribute to the

¹ Hawaiian Culture Based Education refers to “teaching and learning that are grounded in a cultural worldview, from whose lens are taught the skills, knowledge, content, and values what students need in our modern, global society” (Kana‘iaupuni & Kawai‘ae‘a, 2008 p. 71).

difficult transition (Butts & Cruzeiro, 2005; Cauley & Jovanovich, 2006; Habeeb, Moore, & Seibert, 2008; Neild, 2009). As a result, “more students fail ninth grade than any other grade of school” (Cauley & Jovanovich, 2006, p. 15), “among the 14 and 15 year olds who struggle with basic reading and math skills, 20% drop out of school within 2 years” (Cauley & Jovanovich, 2006, p. 15) as well as “the highest rates of truancy, discipline referrals, failures and retentions” (Habeeb, 2013, p. 19).

To support freshmen through this transition, schools across the country have implemented freshman transition programs such as the Smaller Learning Community, a school organizational model.

Smaller learning community (SLC). Since the 1990’s, many low performing schools in urban districts were facing “restructuring” under the No Child Left Behind Act (No Child Left Behind Act of 2001, 2002). District and school administrators searched for solutions and turned towards an alternative model called Smaller Learning Communities. This model reorganizes the large school into smaller units. The SLC model was created to include characteristics of a small school such as a personalized atmosphere, rigorous and relevant coursework and teacher collaboration (David, 2008, p. 84), all of which are aspects that are missing from large comprehensive schools. The U.S. Department of Education (USDOE) authorized funding under the Elementary and Secondary Education Act, for large high schools that sought to plan, implement or expand the SLC program (Bernstein et al., 2008). Studies including the USDOE’s Implementation Study of Smaller Learning Communities (Bernstein et al., 2008) have shown schools that converted to the SLC model reported an increase in positive relationships among students and among teachers which led to higher attendance and higher course grades but did not improve test scores on the high stakes achievement tests (David, 2008, p. 85). Additional

findings from the USDOE's study reported the increase of students in extracurricular activities, increase in promotion rate of students to 10th grade, growth in students attending two- or four-year colleges, and a decrease in school violence (Bernstein et al., 2008). By most accounts, SLCs were improving academic and social student life.

Smaller learning communities at Kamehameha schools – Kapālama. Kamehameha Schools at Kapālama (KSK) is a large comprehensive independent school that has found similar conclusions in their study with The Evaluation Center of Western Michigan University in 2007. This external organization was hired by Kamehameha Schools (KS) to consult with KS community stakeholders to determine a future vision for Kamehameha Schools as an educational organization. Their findings showed a need for more opportunities to build student – student and student – teacher relationships as well as build more support for students as they transition to high school (Kamehameha Schools High School, 2009).

KSK has a rigorous competitive admissions process which includes providing evidence of academic achievement. Therefore, students who attend Kamehameha mostly do well academically. Overall, students attend classes, there are small numbers of discipline referrals, and the majority of the students are in good academic standing. However, even with this extensive selection process, KSK found their students struggling with adjusting to high school life similar to the students in the studies done by Butts & Cruzeiro (2005), Cauley & Jovanovich (2006), Habeeb, Moore, & Seibert (2008), and Neild (2009), as well as schools in the USDOE report. Some of the challenges they face include difficulties with keeping up with the rigorous curriculum, time management and organization, math skills, and not being fully prepared in writing/reading comprehension.

According to a longitudinal school study completed at KSK, the central problem is the school is very large and students are not feeling connected to their teachers, school and/or peers (Ewald, 2002; Ewald, 2010), which according to Roybal, Thornton & Usinger (2014), can lead to lower academic performance. This was echoed in KSK's recent 2010 WASC accreditation self-study, in which only 58% of the students stated they agree or strongly agree with the statement: "I often feel successful in school". Also, only half of the teachers, administrators or adult staff members knew the students well. About 75% of the students felt that they knew their classmates well. The outcomes of the self-study, the results from the consultancy company, and the longitudinal study led to the development of an SLC as a Freshman Transition Program. It was believed that the SLC could address the shortcomings identified in these findings, especially if it was paired with Hawaiian Culture Based Education (HCBE), which is a goal in the schools' strategic plan.

After eight years of discussing this educational reform, KSK began implementing the new progressive modification to their high school program. For the school year 2016 – 2017, a pilot program called the Kauhale was realized. A kauhale is a traditional Hawaiian living environment, where family groups raise their children together. In this educational context, the four teachers in the SLC are raising their 83 students, hence the name, Kauhale. The Kauhale is a fusion of an SLC and Hawaiian Culture Based Education (HCBE) as a transition program to support the freshmen.

Hawaiian Culture Based Education

Western influence and American colonization suppressed the Hawaiian culture and language, this led to the decline in the Native Hawaiian people's self-identity. The systematic oppression of all things Hawaiian decreased the overall health of the Hawaiian society. Today,

schools across the state are implementing Hawaiian culture based education as a way to counter the effects of colonization. HCBE is a pedagogical approach in which “the grounding of instruction and student learning in these [cultural] ways, including the values, norms, knowledge, beliefs, practices, experiences, and language that are the foundation of a(n indigenous) culture” (Kana‘iaupuni, 2007, p. 1), in this case Hawaiian culture. The reason for this cultural approach is to reduce educational disparities of Native Hawaiian students due to western culture based education. A study conducted by Kana‘iaupuni, Ledward, and Jensen (2010) found a link between using HCBE and positively impacting student socio-emotional well-being which in turn affected their math and reading test scores (p. 1). They additionally found high rates of community attachment, giveback (p. 12) and school engagement (p. 13). This approach is discussed further in chapter four.

Project Objective

- To learn about students’ experiences in the Kauhale pilot program as a way to deepen the understanding of high school transition at KSK.

Research Question

- How did the Kauhale pilot program support student transition to KSK?

Sub Research Questions

- How is the Kauhale program impacting students and teachers?
- What are the differences in perception of school between past freshmen and 2016-2017 Kauhale freshmen?
- What can we learn about the relationship between student learning experiences in the Kauhale program and their sense of Hawaiian identity?

As a multimethod study, both qualitative and quantitative approaches were used in this study. A multimethod design is when two or more research methods are used, each conducted simultaneously or sequential and complete in itself, in one project (Morse, 2003, p. 190). The qualitative data sources for this study were (a) survey with open-ended questions, (b) daily and weekly student reflections, (d) student work samples and (e) focus group discussions with the Kauhale teachers. The quantitative data sources were (a) survey with closed-ended questions, (b) existing school data – NWEA reading and math scores, student GPA and students on academic probation (AP).

An inductive theoretical drive approach was used in analyzing the data. This is used when a researcher's goal is to generate a theory (Hesse-Biber, Rodriguez, & Frost, 2015) or find answers to problems such as: What is going on? What is happening? (Morse, 2003). To solve or explain the problem, the researcher looks for general themes or patterns in the data (Hesse-Biber, Rodriguez, & Frost, 2015, p. 5) then utilizes the various sources of evidence to support the themes that emerged.

The qualitative and quantitative research for this study was conducted simultaneously, and in this case, the qualitative methods formed the basis of the emerging themes. I performed an in-depth look into the climate survey student responses as it allowed me to view the multiple perspectives of their experiences. I also read through five student reflective journals. Out of the 83 students I chose these five as they were representative of the different student demographics: new to Kamehameha, continuing from Kamehameha middle school, from a neighbor island and boarding on campus, high achieving and academic challenges. The information from these two data sources generated the major themes. The themes emerged through the coding of common topics and perspectives amongst students. The other qualitative data sources (student work

samples and teacher focus group discussions) were analyzed to validate the emerging themes. The findings from the quantitative methods were triangulated to form a comprehensive look at the impact of the Kauhale on the students from a different aspect, which was the comparison of freshmen experiences with either non-Kauhale students or previous freshmen (Morse, 2003, p. 190).

Organization of This Paper

This paper is organized through the Hawaiian word, ao. There are five different ways of spelling ao: ao, a‘o, ‘ao, ‘a‘o, and ho‘ā‘o, but there are many more meanings of it. The meanings vary from ao – cloud, to marry, world, realm, a kind of fine mat, a kind of fish, and a‘o – teach, learn to ‘a‘o – shearwater puffin. I have used some of the meanings of ao that were meaningful to my research as a way to categorize my chapters. This chapter began with a metaphor about the heavy mist creating a cloud of nourishment for the trees. Ao, in this case, is translated to cloud. Chapter two describes my journey to create a more decolonized self-awareness for myself. This chapter is ao, meaning enlightenment. Chapter three is ho‘ā‘o which means to try, taste or experiment, this chapter describes the experiment or study that I conducted to increase the support for students. Ki‘ina a‘o meaning the art of teaching describes the fourth chapter as it explains the curriculum of the Kauhale program. The fifth chapter refers to ‘ao, a bud or new shoot of a kalo plant. The ‘ao in the chapter are the students and their journey through the Kauhale program. The last chapter is Ke ao hou, a new day, world or realm. This chapter will describe the outcomes and implications of the Kauhale program and it’s implications for the rest of the high school’s reform.

Chapter Two

Ko‘u huaka‘i ao

“Ua ao Hawai‘i ke ‘ōlino nei malamalama”

Hawai‘i is enlightened, for the brightness of day is here. (Pukui, 1983, p. 305)

This chapter describes my struggles to understand my identity through my familial and educational experiences. Native Hawaiians have experienced great strife to keep their identity. Learning this history has led me to contemplate the way I grew up with the realization that I was taught through a colonized paradigm, a western education lens. As I became a teacher, I decided that I wanted to change this. I began to methodically create my own curriculum to provide the students with the perspective of the people we were learning about, depending on which history I was teaching. This chapter is my journey to enlightenment: ko‘u huaka‘i ao, my journey to enlightenment.

Confused Identity

My huaka‘i (journey) to being an enlightened Native Hawaiian and professionally as a Native Hawaiian educator has evolved throughout my life. It all began in Kahalu‘u on the windward side of O‘ahu where I was born and raised in an ordinary middle-class family. My dad listened to Hawaiian music. My Japanese grandpa would fish and dive for *tako*. My grandmother made feather lei, and my great grandparents spoke Hawaiian to each other, but never to their grandchildren and great grandchildren. Even though I grew up with others doing Hawaiian things, I didn’t know how I fit in as a Hawaiian. I didn’t grow up in the Hawaiian cultural lifestyle, and my parents didn’t either. My parents and grandparents grew up in a time of active assimilation to American culture by way of Hawai‘i’s public educational system. My primary

and secondary educational career at Kamehameha Schools had a sprinkling of Hawaiian history, culture, and language; this led me to want to learn more.

My grandparents, who were a mixture of Japanese, Chinese and Hawaiian, lived in a time when “the purpose of schools as expanding Hawai‘i’s industrial base and, so, supported the opening of high schools to instruct the non-haole² population in manual labor and agricultural industry. This would maintain a source of labor for the plantations. Americanization, specifically the proper use of Standard English, was a key focus” (Nee-Benham & Heck, 1998, p. 151). My parents grew up in post-World War II Hawai‘i. At this time, minorities needed to demonstrate their unwavering patriotism to the United States and educational policies such as “mandated teacher neutrality toward controversial issues, a mandatory amount of time to be spent studying United States history and restricted foreign language to students who were English proficient” (Nee-Benham & Heck, 1998, p. 161) were put into place. Unfortunately, this led to at least two generations of Hawai‘i citizens that were denied learning the history, culture and language of Hawai‘i as it wasn’t taught in the public schools.

I was my Japanese grandfather’s favorite grandchild. He would give me spending money; he would make me breakfast every morning before school; he even bought me my first car. I always thought it was interesting that he called me by my English name, Kimberly, when everyone called me by my Hawaiian name, Kēhau. It was a little embarrassing because I never felt like a Kimberly. He called all my cousins by their Hawaiian name. When I was young, he paid for a concrete slab that went around the perimeter of our house, and he wrote in the concrete, “Kimie June 1985,” which I thought was odd because no one called me Kimie. I still look at it every time I go outside of the house. Unconsciously, these actions instilled shame in

² Haole refers to a caucasian person.

me for being Hawaiian. I'm not exactly sure why, and I can't pinpoint what he did or what he said, but I just knew that he was not very fond of Hawaiians, even though he married my grandmother, who was Hawaiian. Maybe he bought into the stereotypes that Hawaiians were lazy, dumb and stupid and he didn't want me to be like that, so he called me by my English name to suppress the "Hawaiian-ness." My grandpa never meant to be mean to me; he probably thought what he was doing was the right thing. Leaving me to question, who am I?

Decolonizing Through Education

As I started to study Hawaiian language, culture and history at the University of Hawai'i at Mānoa in 1994, I was astonished by the intelligence, ingenuity and flexibility of our kūpuna. When Europeans introduced new ideas to Hawai'i, our ali'i incorporated the ideas into the fabric of Hawaiian society. For example, American missionaries arrived in Hawai'i in 1820 and soon learned the oral Hawaiian language and created the written language to teach the native people to read the Bible. Make-shift schools popped up in every community where Native Hawaiian men who were taught by the missionaries conducted classes to the common people in learning the written word (Au & Kaomea, 2009, p. 575). Many of the first Hawaiian students were offspring of ali'i and kahuna i.e. David Malo, Samuel Kamakau, John Papa 'I'i, etc. In 1868, embracing the advancement of education, Kamehameha III, Kamehameha III, Kamehameha III, Kauikeaouli, proclaimed "He aupuni palapala ko'u" "My kingdom shall be a kingdom of learning" (Puuohau, 1868). This led to general school laws creating "the government common schools, staffed entirely by Native Hawaiians, taught reading and writing [in the Hawaiian language] to tens of thousands of children with missionary primers as their texts" (Au & Kaomea, 2009, p. 575).

According to Nee-Benham and Heck (1998) as a result of the commitment of the Hawaiian kingdom government, the literacy of the Native Hawaiian population over the age of

16 years reached as high as 75% in 1853 (as cited in Schmitt, 1977). This made Hawai‘i one of the most literate nations in the world at this time. As a result of the high literacy rate and the latest technology, the printing press, over 100 Hawaiian language newspapers were in circulation. From the 1860s into the early 1900s, “Hawaiian speakers filled more than 100,000 pages with their writings” (Nogelmeier, 2003, p. xii). The high Native Hawaiian readership suggested the Hawaiian people’s love of learning. The latest political and global events, Hawaiian mo‘olelo and genealogies, and western stories were amongst the many topics covered in the Hawaiian language newspapers. Some newspaper editors used this medium to promote Hawaiian nationalism and “focused on the more plausible goals of strengthening their people’s pride in their Hawaiian heritage, preserving valuable traditional knowledge, and providing a space for Hawaiians to contest the oppressive acts of the colonizers” (Au & Kaomea, 2009, p. 577). By this time, Hawaiians understood the oppression that was put upon them and they recognized the need to incorporate new western ideas to keep their sovereignty. Native Hawaiians especially the King realized the importance of embracing new global ideas regarding political, economic and social arenas, therefore, they accepted western ideas (constitutional government, capitalism, literacy, etc.) but still kept their identity as Hawaiians (their language and various ways of conducting themselves).

Hawaiian medium schools quickly appeared, but after sixty years of success, they began to disappear as the government started to pay English speaking teachers ten times more than Hawaiian speaking teachers as they “viewed English as a language far superior to Hawaiian and saw literacy in English as the ultimate goal” (Au & Kaomea, 2009, p. 575). Also, many missionary descendants and settlers wanted to do away with the Hawaiian language as most business transactions and government business were done in English (Lucas, 2000). In 1893, the

Hawaiian Kingdom was overthrown by sugar business owners. English-only advocates pursued their efforts to exterminate Hawaiian language and targeted education to do so (Lucas, 2000, p. 8). In 1896, the Republic of Hawai'i passed Act 57 eliminating instruction through the Hawaiian language in public schools (Grenoble & Whaley, 2006, p. 95). Once the government prioritized English medium schools over Hawaiian medium, the enthusiasm for learning declined in the native population. This language ban was meant to assimilate the citizens of Hawai'i into American society, further dispossessing them from their native heritage (Nee-Benham & Heck, 1998). This was the continuation of colonization and oppression, which started with the proselytizing of the native people to Christianity. According to Nee-Benham and Heck (1998):

The eradication of ceremony, identity, culture and language that led to the dysfunctional character of Native Hawaiians would also be the same journey that Native Americans traveled. The driving ideology was to replace Native thinking with Western thought. In this way, the Native would come to see the White man as kind, just, and civilized and would recognize in himself his own debasement and savagery. Working hard and speaking English would be the Native road to civilization (p. 103).

Students were forbidden to speak their native language at school and were shamed if they did. According to Kanahale (1986), as individuals and as a group, the Hawaiian people were traumatized by a compelling sense of inferiority. Feeling as if their culture was substandard, even mākua and kūpuna refused to talk to their children/grandchildren in Hawaiian, thinking it was better for them to learn the western way. "Psychologically, many Hawaiians were being crippled, having lost much of their sense of identity and self-esteem. They had been stereotyped as lazy, promiscuous, and dumb, the descendants of an uncivilized, savage and pagan civilization" (p. 171). The Native Hawaiian identity was deteriorating. Once the sense of self/identity was

systematically replaced with Americanization and along with other imperialistic impacts, the Hawaiian people declined on many socio-economic indicators (Au & Kaomea, 2009; Nee-Benham & Heck, 1998).

Throughout the 1960s and 70s, a resurgence of Hawaiian culture and resistance to native oppression brought forth a renewed sense of pride for the Native Hawaiian people. Events such as the protecting of Kaho‘olawe against the U.S. military training, the creation and voyages of Hōkūle‘a, the resistance to Hawaiians being evicted from their land, and the bringing back of Hawaiian language started the time of renaissance for Hawaiians. Fortunately, these events have changed the paradigm in the views of the Hawaiian people today and there was an ever-growing realization among both Hawaiians and non-Hawaiians about the primary host culture of Hawai‘i. As a result, through the constitutional convention in 1978, Hawaiian history and culture were again taught in Hawai‘i’s schools.

After graduating from the University of Hawai‘i at Mānoa with a degree in Hawaiian Studies, I felt honored that I was able to learn about my kūpuna and their significant accomplishments and challenges. Realizing I grew up in a colonized fashion, I wanted to attempt a new journey in decolonizing myself by speaking ‘ōlelo Hawai‘i, having my children attend a kula kaiapuni, participating in more Hawaiian cultural activities and teaching Hawai‘i’s students, Hawaiian history from a Hawaiian perspective. Native Hawaiian scholar Manulani Meyer (2003) explains through her qualitative study,

culture strengthens identity. Hawaiian culture strengthens Hawaiian identity. Most mentors during the interview believed that cultural practices, values and beliefs are fundamental to restoring, maintaining and advancing a Hawaiian sense of health, identity

and efficacy. Mentors also assumed that a strong identity linked positively with all facets of knowledge, understanding and learning. (p. 144)

This understanding of how identity supports a healthy lifestyle is what I wanted for myself, my family and students. But this does not mean to return to a traditional life style and denouncing all things western or American. According to Linda Tuhiwai Smith (2013), a prominent researcher on indigenous methodologies stated:

Decolonization ... does not mean and has not meant a total rejection of all theory or research or Western knowledge. Rather, it is about centering our concerns and world views and then coming to know and understand theory and research from our own perspectives and for our own purposes. (p. 39)

This definition of decolonization runs parallel with the ideology of the Hawaiian ali‘i: Embracing new ideas and technology through the perspective of the Hawaiian worldview. Lilikalā Kame‘eleihiwa (1992) writes, “the past is referred to as ka wā ma mua, or ‘the time in front or before.’ Whereas the future, when thought of at all, is ka wā ma hope, or ‘the time which comes after or behind’”. The idea of decolonization, today, is what the ali‘i were doing to avoid colonization in the 1800s. Therefore, to decolonize we should learn from the past what Hawaiians did to avoid losing their sovereignty. The Hawaiian chiefs had a bombardment of western technology and ideas coming to the islands. They knew they needed to incorporate these new features in their society in order to keep up with the rest of the world. King Kamehameha III Kaikeaouli transformed his government from an absolute monarchy to a constitutional monarchy. He modeled the Hawaiian constitution after the American constitution. Another example was after the death of Kamehameha V Lot Kapuāiwa with no heir, Hawai‘i had their

first democratic election of Hawaiian ali‘i. Keeping within the Hawaiian traditions, the candidates were of chiefly rank and had the genealogy to become the ruling monarch.

King Kalākaua understood he needed to learn more about the major world powers so he sent 17 Native Hawaiian men and one Native Hawaiian woman abroad to learn the western ways to bring back to Hawai‘i to hold prominent government positions. Kalākaua, himself, went around the world to see firsthand what the world had to offer. He was able to make diplomatic relationships and share Hawaiian culture with heads of state all over the world (Schweizer, 1991). These are examples of how our ali‘i incorporate western ideas into the Hawaiian society while still keeping their Hawaiian identity and values. Today, we are moving towards balancing the western education with a Hawaiian perspective.

This understanding of Hawaiian history through the Hawaiian lens instead of a western lens has led me to self-determination. I recognize that I, for the most part, had an American upbringing and I would like my children to attain a Hawaiian focused education. This self-determination connects with Smith’s (2013) decolonizing methodologies in that the purpose of education for me is

recovering our own stories of the past. This is inextricably bound to a recovery of our language and epistemological foundations. It is also about reconciling and reprioritizing what is really important about the past with what is important about the present. (p. 39)

This is what I do for my family and with my teaching.

Moving Forward

The year is 2005. I’m kneeling near the front of the stage at the Waikīkī Shell, trying not to block the audience members seated behind me. It’s the first time my son, Ka‘io, is performing in the Ho‘omau concert, the Hawaiian medium schools fundraising concert. My camera is ready

to record as he and his classmates from Pūnana Leo ‘o Samuel M. Kamakau enter the stage. The preschoolers are all in position in their cute matching Manuheali‘i uniforms and they start to sing their two rehearsed Hawaiian mele (songs). I start to cry. I try to hold back, but I end up bawling. My emotions are strong and overwhelming because I know that Ka‘io is going to learn in a way that I didn’t. He will learn through Hawaiian culture and language. Ka‘io will know who he is as a Hawaiian, what it means to be of these islands, and be able to think through a Hawaiian worldview. As I understand my own identity and creating a Hawaiian environment for my own children, I also transformed the way I approached teaching.

Who am I as an Educator?

I am determined to teach young Hawaiians their history to help them understand how events in the past have shaped their current situation. I also wanted them to be proud to be Hawaiian because of the accomplishments of their kūpuna rather than victims of oppression, as Hawaiians are often thought of.

My first teaching position was at Kailua High School in 2003. Teaching at Kailua allowed me to accomplish my goal as the school had a 50% Hawaiian, part-Hawaiian student population and I was hired to teach Modern Hawaiian History. While there, I was also fortunate to co-create a new course called ethnic studies with a social studies colleague. The development of this course was through the partnership of Kailua High School and the University of Hawai‘i at Mānoa’s Asian Pacific Islander Youth Violence Prevention Center. The purpose of this particular ethnic studies course was to promote a more positive school climate (Makaiau, 2010, p. 15). The discipline of ethnic studies was born out of the 1960s American civil rights movement as students at UC Berkeley demanded courses in “understudied histories and situations of African Americans, Asian Americans, Chicanos, and Native Americans” (UC

Berkeley, 2014, para. 1). The ethnic studies course we created was a mixture of understanding history from eyes of the minorities as well as helping students to articulate their identity through a self-concept essay unit. It was my dream curriculum as it reflected why I became a teacher. This perspective and reflection are what I was missing as I was growing up which left me with a void. Being involved in this ethnic studies course helped me feel as if I could now provide a strong sense of ethnic identity for future generations of students. Due to the importance of this course, the principal made it a graduation requirement for Kailua High School students. It became the school's "transition program" for freshmen as it was taught at the freshmen level.

After several years of teaching ethnic studies, the culture of the school began to transform into the intended outcome of the course, a more positive school climate. So much so that the Dalai Lama visited Kailua in 2012 to recognize the school's goal of a compassion and violence free campus (Chapman, 2012, para. 1).

Leaving Kailua was difficult but I was very fortunate to be able to return to Kamehameha Schools as a teacher in 2010. I can give back to Ke Ali'i Pauahi, who has given me the gift of education and I am able to teach a student body that are all ethnically Native Hawaiian. I am able to teach them their history and culture so they can be proud of who they are.

More recently, I moved into a new teaching position of creating and implementing the Kauhale, Kamehameha's ninth grade transition program which combines a Smaller Learning Community model with Hawaiian culture based education. I was able to apply my knowledge and experiences gained through teaching ethnic studies in addition to my Hawaiian studies background to the Kauhale program.

Becoming a Research Practitioner

This study has allowed me to continue to grow and extend myself as an educator. This inquiry is grounded in my practice to assess the impacts of the Kauhale program as well as inform further reform efforts for Kamehameha high school.

As a teacher of the Kauhale program, taking on the role of practitioner researcher gave me a unique positionality in the research design and implementation. I had the ability to access and collect authentic data from students as well as from the school. There is a possibility of researcher bias as I have a personal investment in my study and for my profession, therefore being aware of the potential for confirmation bias was essential throughout the study. This is when a researcher uses only data that supports their hypothesis while possibly dismissing unsupportive data. While this seems only natural to do, to prevent this bias, I was objective in considering all data as I analyzed the effect the program had on the students. Being a reflective practitioner, using the data that is both affirming as well as critical of the curriculum, I knew would only help in improving the program.

Ua ao Hawai‘i ke ‘ōlino nei malamalama, Hawai‘i is enlightened, for the brightness of day is here (Pukui, 1983, p. 305)

This ‘ōlelo no‘eau describes my huaka‘i as I have been enlightened and live with full awareness of who I am. I have much more to learn but at least I don’t have the feeling of emptiness anymore. My children attend a Hawaiian medium charter school where they are learning via their native language, focusing on global topics through the Hawaiian worldview, and practicing Hawaiian traditions. As an educator, I’m providing this for my students at Kamehameha to the extent of my ability.

This chapter allowed me to share my journey to understand my identity, frame my outlook on education and explain why I chose to research the Kauhale project that is part of Kamehameha School's new educational reform movement.

Chapter Three

Ho‘ā‘o

“Ho‘ā‘o i nā ala like‘ole e ‘imi i ka wailele”

Try different paths to find the waterfall

This chapter starts with a short description of educational reform at Kamehameha Schools. I share the mo‘olelo (story) of how Kamehameha Schools was started with Ke Ali‘i Pauahi. Next, I describe the current educational reform the school is going through called Kalamakūali‘i, of which the Kauhale, the ninth grade transition program, is the context of this study. The chapter continues with the methodology of this study including description of participants, research design, procedures, data collection and analysis, research assumptions, and limitations.

Educational Reform at Kamehameha

As an educational institution, KS has gone through several modifications to educate Hawaiian children in an ever changing society. It is important to understand the history of the school because it is the only school in the world with a preference admissions policy for Native Hawaiians. Many people feel KS has a kuleana (responsibility) to educate Native Hawaiian children to become productive citizens and even leaders of their communities. There is a substantial burden on KS as there are many schools of thought of what an “educated” Hawaiian looks like. During the 1980s at KS, kindergarten students were admitted through a lottery and then needed to test and interview to get into the 7th grade to continue until 12th grade. Eventually, KS changed the policy back to testing children to get into kindergarten and once they were accepted, they didn’t need to test again. I was one of the kindergartners that was accepted through the earlier process, therefore needed to test in 7th grade to continue. I didn’t pass the 7th

grade test so I had to leave Kamehameha. Those who were accepted to stay as well as those who left, were devastated, as we all grew a close relationship and were sad that we were not going to continue our educational journey together. I attended Kawanānakoā Middle School for two years. Fortunately I was accepted back into KS in 9th grade and graduated in 1994. My experience demonstrates the various changes that KS has gone through in educational reform with the mandate to educate Native Hawaiian children. One of the last Hawaiian monarchs, Ke Ali‘i Pauahi, dedicated her legacy to educate Native Hawaiian children.

A Princess' Legacy

When contemplating who to leave her wealth and land to in 1883, Ke Ali‘i Pauahi reflected on what she wanted her legacy to be. She narrowed it down to health or education for her people. She watched the devastation of diseases that was inflicted on her people by foreigners. She was comforted by the efforts of Queen Emma and King Kamehameha IV Alexander Liholiho, who had recently established Queen’s Hospital. Thus, Pauahi focused on education, "a natural if not inevitable choice for Pauahi. If education fundamentally involves the development of the person by the acquisition of knowledge, wisdom, and skills, her life reflected its value" (Kanahele, 1986, p. 169). Ke Ali‘i Pauahi was a lifelong learner and according to Native Hawaiian scholar George Kanahele (1986):

She demonstrated this aim in her lifelong habit of reading extensively; her continual involvement in discussion groups; her participation in the work of various organizations, invariably in leadership roles; her travels, which were educational as well as pleasurable; and her own teaching activities, whether in music, sewing, or Sunday School. For Pauahi, education did not take place only within the walls of a classroom; learning was an endless pursuit in the school of real life experiences. While such thinking would have been

considered progressive by educational theorists of the time, in a very real sense Pauahi was only emulating a philosophy of education followed for centuries in traditional Hawai‘i (pp. 169-170).

In 1887, Kamehameha Schools opened its doors to Native Hawaiian children. Ke Ali‘i Pauahi believed education would lift up her people and restore their pride and hope for their future (Kanahele, 1986). In her will she directed the trustees of her estate to use the revenue made from her lands, “to devote a portion of each years income to the support and education of orphans, and others in indigent circumstances, giving preference to Hawaiians of pure or part aboriginal blood” (Bishop, 1883, Art. 13). She also wrote: “I desire my trustees to provide first and chiefly a good education in the common English branches, and also instruction in morals and in such useful knowledge as may tend to make good and industrious men and women” (Bishop, 1883, Art. 13).

Today, KSK has 3,200 students, kindergarten through 12th grade with 1,800 students in the high school. Admission to KSK is very competitive; thousands of students apply annually hoping to be selected for one of a few hundred openings (Kamehameha Schools, 2017). Students come from O‘ahu as well as neighboring islands and the U.S. continent. There is a boarding program for the students that live off island. Kamehameha Schools subsidizes 85% of all students’ tuition, and still 65% of the students are on partial or full financial aid. A recent change in admissions and in curriculum happened in the 2000s; the school made two major educational shifts:

1. Increased the quota of orphan and indigent students to 25% of all new invitees.
2. Incorporated ‘ike Hawai‘i (includes Hawaiian culture, values, history, language, oral traditions, etc.)

The increase in orphan and indigent students. Starting with the fiscal year 2004, KS set a goal to increase their low-income student numbers to 25 percent, with no limit on the orphan population. Previously, the target quota was set at 10% for both orphaned and indigent children. The increase was prompted by the school's vice president for campus strategies, questioning if the school was honoring Ke Ali'i Pauahi's will. Again, her will states: "I direct my trustees...to devote a portion of each, years income to the support and education of orphans, and others in indigent circumstances, giving the preference to Hawaiians of pure or part aboriginal blood..." (Bishop, 1883, Article 13).

The vice president for campus strategies believed this increase in students with diverse socio-economic backgrounds may give students different life perspectives and would break the cycle of poverty. Offering an educational opportunity to more low-income students would help them find academic success and be "well prepared to become good and industrious men and women" (Kamehameha Schools Community Relations and Communication Group, 2008, p. 10). A committee of high school science teachers in 2007 researched how the change in demographics would affect the academic performance of students, especially in science at the high school. The science teachers were hesitant towards the policy as they reported there may be a lower level of academic preparation due to possible unstable home environments. They mentioned that Native Hawaiian students are susceptible to negative self-perceptions, which coincides with lower academic expectations for themselves (Arce, Javellana, Nishimura, & Young, 2007). Additional support and professional development for teachers were needed to support the students appropriately.

Kula Hawai'i. During KS 1999-2000 strategic planning cycle, feedback from teachers, administrators, parents, students and community members felt the direction of the schools should

prioritize Hawaiian language and culture as they move forward in their strategic planning. Realizing this kuleana (responsibility), KS' third goal in the strategic plan was: Kamehameha Schools will cultivate, nurture, perpetuate, and practice 'ike Hawai'i (which includes Hawaiian culture, values, history, language, oral traditions, literature, and wahi pana – significant cultural or historical places – etc.) (Kamehameha Schools, 2015).

This change shifted the direction of KS from assimilating Native Hawaiian children into American society to embracing and cultivating their Hawaiian identity. The school recognized this change of vision in their Kula Hawai'i (Hawaiian school) statement:

For the first 75 years or so of its existence, Kamehameha has seen as its primary role assimilation of its students into mainstream western and American culture. Integral to this was an effort to disconnect them from Hawaiian language and culture. This approach was used to prepare them well to succeed in the western world in the belief that they could not do so as bilingual and bicultural graduates. We know differently now (Kamehameha Schools, 2010).

To rectify the past, the Kula Hawai'i statement goes on to state,

our mission is to improve the capability and well-being of Native Hawaiians, and we recognize that vibrancy of language and culture is vital to the total well-being of our people. We accept Kamehameha's special kuleana as a Hawaiian institution for renewing this vibrancy. (Kamehameha Schools, 2010)

In addition to these significant changes, KSK high school started addressing student issues of transition to high school.

Kamalakūali‘i

As stated earlier, KSK high school is currently going through their own educational reform. They have embarked on new progressive modifications to their high school program called Kalamakūali‘i meaning the ali‘i’s torch/light, to address the findings of the studies previously mentioned in chapter one to support the new demographics of indigent and orphaned students and to incorporate kula Hawai‘i into the school-wide curriculum. Kalamakūali‘i has three components; 9th-grade transition program, pathways to graduation program, and an ‘ohana advisory program.

Kauhale. The Kauhale program is the 9th-grade transition program created by colleagues and I that is the focus of this study. This vision of the high school leadership is the center of this study. The program and curriculum are discussed further in chapter four.

Theory of Change

For my study, I took into account the history of reform at KSK and created the following theory of change. This flowchart supports the success of a student if the right steps are taken according to the path KS has chosen to follow.

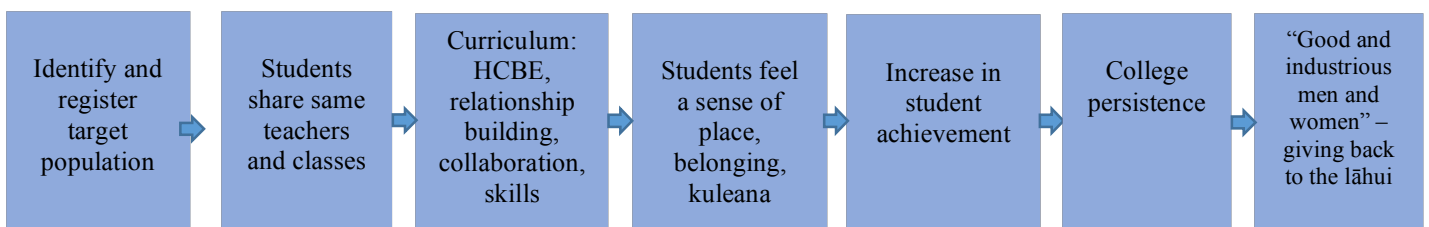


Figure 1: Theory of Change

The flowchart starts with Kamehameha Schools identifying a cohort of students that would benefit from being in a smaller setting where they would share the same four teachers. This kind of setting can lead to meaningful student-student relationships as well as stronger student-teacher relationships. The aim of this structure is to create a student that is a productive citizen that gives back to their community.

Sharing the same four teachers is significant since the students will see the same students in these classes and be able to develop a relationship with them. In the traditional system, students have different teachers and different students in each class, therefore limiting their time together to create a bond.

The curriculum of the four teachers share a foundation of HCBE, relationship building, and transferable life skills. The purpose of this foundation is to give the students a sense of belonging and support that leads to increased self-esteem. This confidence can improve their academic achievement and feeling of cultural connection. With this foundation, it is also hoped that students would be able to persist through the university system with tenacity, and ultimately enter adulthood as a culturally connected productive citizen that wants to give back to their Hawaiian community as “good and industrious men and women” (Bishop, 1883, Art. 13).

This theory of change fits into my passion for educating Hawaiians to be a part of positive change for the Hawaiian people and to support Pauahi’s mission. I was excited to be a part of the new Kauhale program and actually apply the theory of change. This dissertation allowed me to be a part of the new path KSK is taking by studying the Kauhale program and understanding the impact it has on Native Hawaiian students. The next section will describe my study’s methodology including participants, research design, data collection, data analysis, research assumptions and limitations.

Methodology

Our Students

KSK high school has 450 students per graduating class, 1,800 students in the entire high school. The students are a mixture of students from Kamehameha middle school and new students just accepted into Kamehameha. Approximately 300 students from the middle school

and 150 new invitees make up the freshmen class. The target population for the pilot study included 83 Kamehameha freshmen, ages 13 – 14 years old. Table 1 displays the demographics of our students in the Kauhale. Of the 83 students: 39 are males, 44 are females; 46 are new students to KS, 37 returning students from the middle school; 15 students live on campus as boarders, and 68 students are day students that reside on O‘ahu. The boarding students live on the neighbor islands and well as O‘ahu.

Table 1

Kauhale Student Demographics

	Fall (August- Dec 2016)
Number of Students	83
Number of Students that left	1 (male)
Females	44
Males	39
From KMS	37
New Invitees	46
Boarder New Invitees	12
Day New Invitee	34
Total Day Students	68
Total Boarders	15
Boarders from Outer Island	13
Boarders from Oahu	2 (1 male, 1 female)
Boarders from Kauai	3 (1 female, 2 males)
Boarders from Molokai	2 (females)
Boarders from Big Island	7 (5 females, 2 Males)

The process of selecting the students was an arduous one that started in November 2015 and ended August 2016. My Kauhale colleagues and I discussed in length which

students would be right for the pilot program. Initially, the pilot would be tailored for the lower performing students. It was quickly realized support services were already provided by the school for students that fit into that category. The high performing students didn't need this type of program as they were somewhat in their own SLC. The students that needed this program the most were the students in the middle "track" who made up the largest population of the graduating class and there was no special program for them. Therefore, a heterogeneous population that composed of students from the "middle track" was the target population for the Kauhale Small Learning Community pilot project.

The four teachers chosen for this project was based on their willingness to pilot the program. Decisions about what classes were to be taught were not given, except that the classes needed to be freshmen level. Therefore, as a team, we decided what we were capable of and what we wanted to teach. This was particularly important in math due to the many entry points. Jacob Pacarro, the math teacher, decided to teach Algebra 1A/1B and Algebra 1B/Geometry 1A, where most of the freshmen class fell. We also decided to add honors English and honors social studies to make sure the classes were heterogeneous and instead of having a separate class for honors, the "honors" students were dispersed throughout the "regular" English and social studies classes. We all agreed that Hawaiian culture based education was going to be the foundation for our curriculum to support kula Hawai'i.

Next, the team of teachers presented the Kauhale program at the 8th grade registration night to the parents and again to all the 8th graders in school during their registration time. All students filled out a questionnaire asking four short answer questions about their accomplishments, challenges and moments of compassion. The fourth question asked them if they were interested in being in the Kauhale, why or why not? This question revealed a

variety of responses. Only a third of the class were interested in being in the program, and this questionnaire provided data on reasons students were not interested in being in the Kauhale. Of the 100 8th grade students that were interested, the list was narrowed down to 45 students. These students fit the course criteria and answered genuinely on the questionnaire. For example, “I like working in teams” or “I would like the extra help in my first year of high school.” Responses such as “I wanna be in it because I want to be with my friends” or “it sounds easier” were eliminated as signs that the students were not seriously interested in the program.

Once students were identified to participate in Kauhale, the focus turned to the students that would be new to Kamehameha. We did a short presentation at their welcome orientation and fielded any questions from parents. Then as they registered one on one with a counselor, students who were taking all the classes offered in the Kauhale were automatically put into the Kauhale. All the students that were selected for the Kauhale participated in the new program, the rest of the freshmen had a traditional class schedule. Students in the Kauhale were registered for:

- English - Hawaiian Pacific Literature (HPL) English 9 or Honors HPL English
- Social Studies - Hawaiian culture/Hawaiian history or Honors Hawaiian culture/Hawaiian history
- Science - Biology
- Math - Algebra 1A/1B or Algebra 1B/Geometry 1A

Research Design

To inquire into the impact of the Kauhale on the students who participated in the program, I constructed a multimethod study. It was intended to optimize a number of perspectives on the program and to obtain a complete understanding using a variety of methods to focus on how the pilot program and curriculum revisions impacted student learning. “Multiple

methods are used in a research program when a series of projects are interrelated within a broad topic and designed to solve an overall research problem” (Tashakkori & Teddlie, 2010, p. 196).

In this study, qualitative and quantitative data were collected and examined from student surveys which included open and closed ended questions, student journals, teacher focus groups and existing school data (number of academic probations, number of conduct probations, GPA). This was done to capture the voices and progress of the students to examine the effect the program was having on their transition into high school.

Procedures

After receiving IRB approval from the university, approval was also needed by Kamehameha Schools – Ho‘olaukoa division, the department in charge of educational research at the school. After applying and receiving permission to conduct my research, the consent and assent forms (see appendix D & E) were given to the students and their parents at the first day of school where the parents accompanied their child to all of their classes to meet their teachers. Within a few weeks, all forms were turned in with approval to conduct the research using their child’s course work and to administer the survey. A consent form (see appendix F) was also given to the other Kauhale teachers to interview them in a focus group. All three forms were signed and received. All three agreed to have their real names appear in this study. Students were given pseudonyms.

Data Collection

Survey. The data collection instrument that was used was a climate survey developed by Mark Ewald, a math teacher at KSK. He conducted a quantitative study to understand the students’ perspectives of their education at Kamehameha and to assess the school’s organization and its ability to meet the needs of its students (Ewald, 2002). He again surveyed

students in 2004 and 2010 with the same survey to compare the results. I used Ewald's survey questions to extend his study to compare the results from 2001, 2004 and 2010 with my study's data from the survey I administered to the Kauhale students in December 2016. Ewald's climate surveys were administered at the end of the school years in May, the climate survey administered for this study was administered at the end of the first semester in December to leave sufficient time to analyze the data during the second semester. This timing may have affected the results as the Kauhale students were reflecting on only half the year whereas the other years, students reflected on the whole year.

Students were given ample time to complete the survey in class on December 13, 2016. It was administered in class via an online educational platform called Blackboard. Although the surveys were anonymous, Blackboard provides a report to the teacher indicating which students completed and submitted the survey. One student didn't properly submit their survey. Therefore, it wasn't recorded and saved. The students did not receive monetary compensation for completing the survey, but they earned ten points as an assignment for its completion. This was to ensure all the students completed the survey and viewed the survey as if it was a class assignment that needed thought and effort put into it.

Before the students started the survey, I asked for their honest opinions as their results would help the school improve the Kauhale program and their answers were anonymous. This was to encourage truthful and authentic answers. Of the thirty-two questions, twenty-one were closed ended questions, and five open ended questions were identified as questions concerning transition and Hawaiian identity. Students rated themselves on a Likert scale: I strongly agree, I agree, I don't know or uncertain, I disagree, I strongly disagree, not applicable. The sixteen general statements were:

- I often feel successful at school.
- Many teachers, administrators, or adult staff members know me well.
- I can talk about anything to teachers, administrators, or adult staff members.
- My teachers care about me being successful.
- Many teachers will go out of their way to help me be successful.
- Many KHS students know me well.
- I know many KHS students well.
- The subjects I study in school are interesting to me.
- I believe that the work I do in school is important.
- My teachers require me to think creatively and to produce original work.
- The work, my teachers, have me do is challenging.
- I often talk about the work I do in school with my family and friends.
- Other students help me to succeed in school.
- KS prepares me to embrace my identity as a Hawaiian.
- Think about the class you are most successful. Why do you think you do well in this class?
- Think about the class you are least successful. Why do you think you do not do well in this class?

There were also ten items focused on components related to Kauhale participation:

- Choose all of the statements that apply to you regarding your Kauhale classes.
- Please add any comments you wish on any of the reasons you do well in Kauhale.
- Think about a class you are least successful in. Why do you think you do not do well in your Kauhale classes (Select ALL that apply).
- Please add any comments you wish on any of the reasons you do not do well in these classes.
- Have you learned the following transitional skills this semester? Check all that apply.
- What did you learn about yourself and time management (in class and/or on your own) and how did you apply this knowledge? How can the kumu support you next semester in this area?
- Do you feel your transition to Kamehameha was a smooth one?
- Explain why you think your transition to high school was smooth or not. Please use examples to explain.
- I am beginning to understand who I am as a Hawaiian.
- What moment(s) helped you think deeper about being Hawaiian.

The first set of questions were chosen as transitional because they dealt with relationship building, their perspective about success in school, and their perceived reasons for their academic ability. The second set of questions were specific to the Kauhale students. These

questions were created to collect the thoughts and voices of the students on their transition and Hawaiian identity.

Student reflection journals. In addition to the survey, the students were required to complete a journal every day during the first quarter, then weekly during the second quarter. The journal topics were assigned and completed on Blackboard. Journals started on September 21, 2016, and students were required to journal every day they had my class, which could be up to 3 times a week depending on the week's schedule. The journal questions were broad and general, providing flexibility for the students to write what they wanted. "Every social studies class day, write 2 -3 things you learned in your Kauhale classes. What are the reasons these topics/skills stuck out to you? What are the reasons they are important to you and your learning?" Students complained that it was difficult to write so often on the same topic every class day. Listening to their suggestions, on October 24, I revised the assignment to be once a week with three different questions:

1. If you were to speak at piko, what would you tell your classmates about your takeaways and/or new insights from this week? Explain.
2. What connections do you see between your four Kauhale classes, other classes, and/or life?
3. What were some challenges you had this week? How did you persevere through those challenges?

These open-ended journal questions allowed the students to write about the topic of their choosing that dealt with what they were learning and experiencing in school. These journals gave me an opportunity to see what the students were thinking about. All students completed these journals as a required assignment. For my study, I chose five students of different backgrounds

to analyze the impact of the program from each of their perspectives. This purposive sampling was to build trustworthiness into the study as reflected in the diversity of participants.

- A new student to Kamehameha Schools
- A student from the Kamehameha Middle School
- A student from a neighbor island
- A high achieving student
- A struggling student

Focus group discussion. On February 9, 2017 at a team meeting, the Kauhale teachers answered three questions about their understanding of HCBE and transition skills and how they were incorporating these components into their curriculum. The meeting lasted about an hour. The main discussion was around the changes in each teacher's curriculum regarding transitional skills as well as Hawaiian culture based education.

Existing school data. The existing school data was collected from various school officials. Academic probation (AP) refers to the students who earned two Ds and one F, two Fs or lower than a 2.0-grade point average (GPA) in a quarter. This information was collected from the study hall supervisor. Grade point average (GPA) is the numeric score of the grades earned in the school year. The grade level counselors provided the list of students' fall semester GPAs. The Northwest Evaluation Association (NWEA) test scores were provided by one of the high school curriculum coordinators. The students took the reading and math tests in September and again in April.

Data Analysis

Once the surveys were completed, I followed the steps laid out by Glesne (2015) on how to code data. I read through all of the student responses for each open-ended question and as I

read them, I looked for common topics that were being discussed. This is called “open coding” when “reading the data and developing your coding categories, based on what data seem necessary. Coding labels these data segments and groups them by category; they are then examined and compared, both within and between categories” (Maxwell, 2012, p. 107). As I read the responses, I wrote many memos by each response as according to Maxwell (2012) writing “memos not only capture your analytic thinking about your data but also facilitate such thinking, stimulating analytic insights” (p. 105). After repeating the same process for each open-ended response, I created categories from each response and combined the related categories. For example, categories that emerged were friends helped out each other when they struggled, made a lot of friends, and bonding with classmates. These groups were merged to one theme, building meaningful peer to peer relationships. Other major themes that surfaced were appreciation of teacher support, pressures of challenging work and feeling inadequate in their academic abilities as well as developing their Hawaiian identity. These are substantive categories which are primarily descriptive and come from the participants’ concepts and beliefs (Maxwell, 2012, p. 108). I then looked at the other data sources for evidence to support the major themes.

Because this study focuses on student transition, it was important to concentrate on the statements that asked about a student’s transition. The quantitative percentages from the identified transition statements on the climate survey were inputted into a table (see Table 8). Next, with the same identified transition statements, I added the percentages that were “I agree” and “I strongly agree” and created another table. By adding these percentages, it was easier to see on a table the percentage of students that were agreeable to each statement. This table compared previous years’ surveys “I agree” and “I strongly agree” percentages with the Kauhale

percentages (see Table 9). This allowed for a comparison of percentages from the three previous times the survey was given.

The existing school data was used to compare the Kauhale students with the rest of the freshmen class to see if there was an impact on the students' GPA and test scores as a result of being in the Kauhale program. The results of the analysis provided evidence of the impact of the Kauhale program on students as they transitioned to high school. These results are presented in chapter five.

Research Assumptions, Limitations

One research assumption was that the students would benefit from the Kauhale program. There were a couple of negative comments about the program made by students in the climate survey. I was unable to follow up with students because it was anonymous. However, I was glad the students felt comfortable enough to answer truthfully, which led me to believe all the other comments were honest and authentic. My analysis is based on a second assumption which was that the students responded to the survey as well as the journals honestly and to best of their abilities. Due to the positive relationships I built with the students, I believe the students genuinely answered the survey and completed their journals frankly as they wanted to support me and improve the program.

As the teacher, my positionality “shapes how classroom dynamics unfold and how knowledge is constructed in a learning environment” (Taylor, Tisdell, & Hanley, 2000, p. 2). As a Native Hawaiian woman and graduate of Kamehameha Schools, my positionality affects my teaching and how my students relate to me as they may see me as have had the same experience they are having. Through my position, I was able to share my thoughts as well as my experiences with the students, gaining their trust throughout the year. I presume the students understood my

passion for teaching them, for Hawaiian history and culture, and our school, therefore, they would reciprocate with honesty to improve our program, in turn improving our school.

One limitation of the study was the small sample size. This was unavoidable as the pilot only had 83 students, but ideally, I would've liked to survey the whole freshmen class to compare the results with our students' counterparts not in the Kauhale. But the results of this study allowed me to understand the direct impacts on my students.

Another limitation was the boundary of time. The climate survey was conducted at the end of the first semester to allow ample time to analyze the results during the second semester. I would've preferred to survey the students at the end of the year to have them assess their full year of being in high school. Also, the previous climate surveys were done at the end of the year; therefore, the comparison would've been reasonably compared.

Before reporting the results, as a practitioner researcher, it was important first to discuss the logistics of the program as well as samples of the interdisciplinary and individual content area lessons to show what kind of program the students experienced in order to build in reliability in the study's findings. It is useful for practitioners or administrators that are interested in implementing the SLC model as well as HCBE to view curriculum that has been developed and piloted. The next chapter describes the program, explains the logistics and provides lessons.

Chapter Four

Ki'ina a'o: Kauhale Curriculum

“O ke kauhale nō a 'e ao ke ki'ina a'o”

The pedagogy is the image of a kauhale

Chapter four introduces the logistics and curriculum created for the Kauhale. It is organized first with the metaphors used to create the program. These metaphors were important for the teachers to visualize what the program would look like. Next, the details on setting up the Kauhale are provided. Implementing this type of project involved school program changes and physical space challenges. Then, sample lessons from the interdisciplinary units and from each content area for each quarter theme are provided. And lastly, the chapter ends with the impact the program had on its teachers.

Metaphors

A kauhale is a cluster of houses that creates a Hawaiian home. In a kauhale there would be a sleeping house, men's house, women's house, cook house, canoe house, etc. Hawaiian families didn't live with just their nuclear family; life included their extended family. This environment fostered the “it takes a village to raise a child” mentality. There are no traditional words for aunty or uncle in Hawaiian. They were all mākua (parents and relatives in the parent's generation) that took care of all the family members. A kauhale is the relational and physical environments that we wanted to create for our students. The four teachers are the mākua, and the students are the keiki, the students. This nurturing atmosphere is the reason we called the program Kauhale.

Another metaphor the team used for the 9th-grade transition program was muliwai. The muliwai is the mouth of a river, an estuary, and area of brackish water, where the fresh water

from the mountains meet the salt water of the ocean. It is an ecosystem that supports growth, provides protection for sea life to acclimate before going into the open ocean. According to the National Ocean and Atmospheric Administration (NOAA) (2012), the muliwai is one of the most productive ecosystems in the world. The wai (fresh water) from different sources come together in a stream that opens into the muliwai then transitions into the open ocean. The Kauhale students come from different communities and different schools and they all meet in 9th grade at Kamehameha Schools in the Kauhale program where they prepare and get accustomed to high school life. These two metaphors guided the program and provided a vision of what we wanted it to look like.

Transition Issues

Moving into the realm of high school is a scary transition for many students. Middle or intermediate schools are usually small in population. Often students move to large comprehensive high schools. The jump from 8th to 9th grade presents many issues; difficulties establishing meaningful relationships with peers and school adults (Armstead, Bessell, & Sembiente, 2010; Butts & Cruzeiro, 2005; Cauley & Jovanovich, 2006; David, 2008; Habeeb, 2013); lack of academic skills (reading comprehension, writing skills, math, analytical skills) (Neild, 2009; Cauley & Jovanovich, 2006); and the lack of executive functions (impulse and emotional control, flexible thinking, working memory, self-monitoring, planning/prioritizing, task initiation and organization) (Cauley & Jovanovich, 2006). Habeeb, Moore, & Seibert (2008) state in their book, *The Ninth Grade Opportunity*, “if a school trains its ninth graders in the ways of success, then in four short years the entire atmosphere of a school can be positively altered” (p. 140). This success was evident at Kailua High School. A positive school climate was created due to school improvement changes such as adopting the Advancement Via Individual

Determination (AVID) program and the required ethnic studies class as mentioned in chapter two. According to Kailua High School's School Quality Survey in 2003, the percent of positive responses to student safety and well-being statements was 61% of teachers, 55% of parents and only 36% of students (Hawai'i State Department of Education, 2005). In 2015, the percentage of positive responses jumped up to 87% of teachers, 80% of parents and 77% of students (Hawai'i State Department of Education, 2016). These results confirm what Habeeb, Moore, & Seibert (2008) reported. They further claim,

by taking the right courses, learning the proper study habits, figuring out how to succeed socially, and by becoming involved properly in their schools, ninth graders can lay a foundation upon which a tremendous house can be built. How important it is that the freshman opportunity is not wasted. (p. 140)

Kamehameha students are experiencing similar issues according to the data collected from previous climate surveys. Results have shown a mediocre percentage of students that have built meaningful relationships with their teachers. The surveys have also shown that less than half of the freshmen felt successful at school. Teachers have expressed the lack of skills students have which led to poor academic performance for some students. The Kauhale program was created to address these issues and hopefully result in positive school change similar to Kailua High School's success.

Transition Programs

Chapter one introduced the national concern of transitioning to high school. Schools across the country have found the most alarming statistics in the freshmen class including high rates of retention, drop outs, truancy, discipline referrals and course failures. High schools have been implementing different models of transition programs as well as transition strategies to

support freshmen as they transition. Figure 2 (Bernstein, Millsap, Schimmenti, & Page, 2008, p. 2) illustrates the difference between transition programs and transition strategies. All the transition programs in the figure are referred to as Smaller Learning Communities because they are programs that break up the large school into smaller units. Figure 2 mentions some of the strategies that are used by schools, Cauley and Jovanovich (2006) offer much more based on the issue or concern the school is having. For example, if a school has a problem with students that are academically challenged, strategies they suggest are providing a coping skills curriculum: good study skills, organization skills, etc. or hosting an open house for students and parents to showcase student work (p. 20). Studies have found the schools that implemented numerous different intervention strategies as part of their transition program, had a higher rate of success (Butts & Cruzeiro, 2005). Some researchers argue at least five strategies should be used to combat all of the possible negative impacts of transition. But they all agree, using only one or two intervention strategies would not be sufficient to create a sustainable, effective transition program (Roybal, Thornton, & Usinger, 2014, p. 480).

Smaller Learning Community Structures and Strategies

SLC Structures (Comprehensive Restructuring)

Career Academies are one type of school-within-a-school that organizes curricula around one or more careers or occupations. They integrate academic and occupation-related classes.

Freshman Academies, as called Ninth Grade Academies, are designed to bridge middle and high school. They respond to the high ninth-grade dropout rate in some schools.

House Plans are composed of students assembled across all grades or by grade level (e.g., all 11th – and 12th-graders) with their own disciplinary policy, student activity program, student government, and social activities.

Schools-Within-a-School break large schools into individual schools, which are multiage and may be theme-oriented; they are separate and autonomous units with their own personnel, budgets, and programs.

Magnet Schools generally have a core focus (e.g. math and science, the arts). They usually draw their students from the entire district.

SLC Strategies (Complement Structures or Implemented Alone)

Block Scheduling: Class time is extended to blocks of 80 – 90 minutes, allowing teachers to provide individual attention and to work together in an interdisciplinary fashion on a greater variety of learning activities.

Career Clusters, Pathways, and Majors: These are broad areas that identify academic and technical skills students need as they transition from high school to postsecondary education and employment.

Adult Advocates or Mentors: Trained adult advocates meet with students individually or in small groups on a regular basis over several years, providing support and academic and personal guidance.

Teacher Advisory Program: The homeroom period is changed to a teacher advisory period, assigning teachers to a small number of students for whom they are responsible over three or four years of high school.

Teacher Teams: Academic teaming organizes teachers across subjects, so that teacher teams share responsibility for curriculum, instruction, evaluation, and discipline for the same group of 100 to 150 students.

Peer Support Programs: Peer mentoring program in which upperclassmen are assigned to support a group of freshmen students.

Figure 2

Smaller Learning Communities (SLC)

Smaller Learning Communities is an educational term that refers to the “practice of organizing high schools into smaller units” (Oxley, 2007, p. 1). The purpose according to Armstead, Bessell, & Sembiente (2010), is for large schools to convert to a smaller “more personalized learning environment is supposed to enable teachers to personalize instruction so students’ individual learning needs are met, and they are better prepared for post-secondary schooling and careers” (pp. 365-366). Due to federal and private funding, many schools adopted the SLC model and had completed evaluations on their programs. Some studies have shown limited impacts and difficulties with sustained implementation (Oxley & Luers, 2010). Others have shown some improvements in student achievement but not in high stakes tests (Armstead, Bessell, & Sembiente, 2010). All studies gave recommendations on strategies to support the program. Strategies such as (a) teacher teams, (b) flexibility – allowing students to opt into the program, (c) block schedules, (d) involvement of parents in high school activities, and (e) incentive programs for attendance, grade and citizenship (Armstead, Bessell, & Sembiente, 2010; Roybal, Thornton, & Usinger, 2014).

Hawaiian Culture Based Education (HCBE)

After the arrival of Europeans to Hawai‘i and the acceptance by Hawai‘i’s citizens of western ways, the well-being of the Hawaiian community diminished in the face of “high rates of poverty, substance abuse, juvenile deviance and criminal activity, teenage pregnancies, poor educational outcomes, domestic abuse, depression, and suicide” (Kana‘iaupuni, Ledward, & Jensen, 2010, p. 3). These negative statistics were the result of colonization and forced assimilation. Educating Hawaiian children through their culture is an act of social justice. As students learn about their history, culture and traditions, they gain a sense of kuleana

(responsibility) to their lāhui (Hawaiian nation) to give back and/or teach others. HCBE has been utilized in Hawaiian focused public charter schools since 2000 and started at KS in 2008. There are many approaches of HCBE such as pedagogy, epistemology, content, and frameworks.

Hawaiian Culture Based Education refers to the “grounding of instruction and student learning in the values, norms, knowledge, beliefs, practices, experiences, places, and language” (Kana‘iaupuni & Kawai‘ae‘a, 2008, p. 71) that are the foundation of a cultural group, in this case, Native Hawaiians. The approaches used for this study were the Hawaiian Indigenous Education Teaching Framework that identifies five critical components in the school setting: language, family and community, content, context, and assessment (Kana‘iaupuni & Kawai‘ae‘a, 2008) and Kamehameha Schools’ own framework called E Ola! Learner Outcomes at Kamehameha (see appendix G).

I used the Hawaiian Indigenous Education Teaching framework because it was created in collaboration with individuals from many different Hawaiian organizations: Nā Lei Na‘auao Native Hawaiian Charter School Alliance, Kamehameha Schools, University of Hawai‘i at Mānoa and Hilo, Hawai‘i State Department of Business, Economic Development and Tourism, ‘Aha Pūnana Leo and the Hawai‘i Department of Education. These organizations gave a variety of viewpoints on the historical and educational aspects of the framework and were created in collaboration from a variety of perspectives to answer their guiding question, “if we were to observe teaching and learning in a Hawaiian indigenous educational setting, what would it look like?” From this research, a rubric was created as a tool to gauge where a teacher was on their HCBE journey (see appendix H rubric). According to Kana‘iaupuni & Kawai‘ae‘a (2008),

HCBE is identifiable by five critical components:

- Language – Recognizing and using native or heritage language.
- Family and Community – Actively involving family and community in the development of curricula, everyday learning, and leadership.
- Content – Making learning meaningful and relevant through culturally grounded content and assessment.
- Context – Structuring school, classroom, and other learning interactions in culturally appropriate ways.
- Assessment and Accountability – Gathering and maintaining data using various methods to ensure student progress in culturally responsible ways.

Using the framework as a way to use HCBE in our curriculum, we also used Kamehameha’s “E ola!” Learner Outcomes at Kamehameha (see appendix G) to create the HCBE objectives of our curriculum and program. “E ola!” promotes the practice and perpetuation of Hawaiian worldviews, culture and ‘ōlelo through:

Learners’ Strong Foundation

1. ‘Ike Kūpuna (Ancestral experiences, insights, perspectives, knowledge, and practices)
2. Aloha ‘Āina (Hawaiian patriotism; love for the land and its people)
3. Kūpono (Honorable character founded on Hawaiian and Christian values)

Learners’ Native Hawaiian Identity

1. Mālama and Kuleana (social agency, community consciousness)
2. Alaka‘i Lawelawe (Servant Leadership)
3. Kūlia (Excellence)

Learners' Productive Courses of Action

1. Academic Competence
2. Growth Mindset
3. Self-efficacy
4. Problem solving
5. Innovation and Creativity
6. Collaboration
7. Global Competence

Kauhale Teachers

I would like to introduce the Kauhale team members as they were an integral part of the development of the Kauhale. These teachers took a risk and accepted this special assignment to take on the task of changing the school system. They are an excellent, creative, amazing group to work with. Lea Arce is the biology teacher. Ryan Oishi teaches English, Language Arts and Jake Pacarro teaches math. I am the social studies teacher.

None of us were on the leadership team or the ad hoc committees that researched SLCs; therefore, we had to start at the beginning which began with a vision statement to help us focus and make sure we had guiding principles.

Our vision for our Kauhale 1 team is to empower our Native Hawaiian students through an interdisciplinary approach that values Hawaiian and global thinking/epistemology and nurtures resiliency, relationships, critical and creative thinking through a thematic learning environment.

Using this vision, we created a program to replicate a traditional kauhale system, as illustrated in the metaphor at the beginning of this chapter. Our classrooms were situated in the same building for the ease of communication and movement of students and teachers. We shared the same students and common planning time during the school day to discuss student progress and concerns, hold parent/teacher meetings, plan curriculum, etc. To create the muliwai

environment, the team created student expectation norms like a common late work policy, homework expectations and student responsibilities. In addition to the student expectations, there were several changes that needed to be completed in order for the environment to be ideal for the students.

Conditions for a Successful Kauhale

Heterogeneous groupings. Typically, all the honors students are in one period of their own. Therefore, teachers could teach two honors classes separately from their two general education classes. The Kauhale teachers decided to disseminate the “honors” students throughout the four English classes and the four social studies classes. This was done to create a heterogeneous environment. Our definition of heterogeneous grouping is an educational setting “that includes students with a wide variety of instructional levels” (Lewis, 2016, para. 1). The purpose of heterogeneous grouping “stems from the education precept that a positive interdependence can arise from students with varied learning levels working together and helping each other to reach an instructional goal” (Lewis, 2016, para. 1). The purpose for this adaptation is due to the main goal of a smaller learning community which is to create and develop relationships. Heterogeneous groupings also allow for different perspectives from a variety of academic levels, which gives a different insight and adds to the richness of the student’s experience.

Another unique change the Kauhale incorporated was the option for students that were classified as general education to gain the honors credit. After introducing the theme of growth mindset and creating a foundation for the first quarter, students were informed of their ability to earn an honors credit through their perseverance and strong work ethic. Requirements were given

to obtain the credit and the students needed to complete them to earn the credit. In social studies, over thirty students pursued the credit and seven students actually achieved it.

A few adjustments to the regular school structures also needed to occur for the program to be successful. Modifications were made to all four Kauhale classes and only to the Kauhale classes.

Adjustments in social studies. The social studies course taught at the freshman level is Hawaiian culture. This is a one semester course. Social studies needed one more course to fill the second half of the year to keep the students together the whole year. Traditionally, at Kamehameha, Hawaiian history is taught at the junior/senior level. The Kauhale teachers requested to move it down to be taught at the freshman level for the Kauhale students. The move was needed for several reasons:

1. As stated above, Hawaiian culture, the freshman social studies course, is one-semester. Therefore, another one semester course was needed to complete a year of social studies. If kept at status quo, I would've received a new group of students the second semester for all four of my classes, which would've defeated the purpose of the Kauhale program as the curriculum from the other classes would continue as I started all over again. We would've also had to start building relationships with a new group of students.
2. The Kauhale was developed with Hawaiian culture based education as its foundation. It made sense to teach Hawaiian culture and Hawaiian history together. This foundation would give the students a greater sense of themselves as Hawaiians and as they continue through their high school career, they are able to make connections to what they were learning. As the students move on to the next history courses (U.S. and world history), they will be able to relate and connect to what they've learned in Hawaiian history and

gain different perspectives on the historical events. For example, when learning about imperialism in world history, one perspective is imperialism was needed to create globalization to spread capitalism and democracy. The students would have a personal connection to imperialism as America colonized Hawai'i. They would be able to give evidence on the effects of imperialism on Hawai'i and offer a different perspective.

3. The Kauhale classes had many interdisciplinary lessons that were interdependent with each course. Individual Hawaiian historical events or cultural understandings were taught in social studies to gain a deeper knowledge in the English novel that was being read or to help them relate to a science concept that was being taught.
4. Taking Hawaiian history their freshman year would free up the student's schedule to take a class of their choice their junior or senior year, which could be geared towards their desired career choice.

The Hawaiian history course move was made only for the students in Kauhale. Students not in Kauhale would need to take the course their junior or senior year. If changed for all freshmen, there would be implications for all of our Hawaiian history teachers at the junior/senior level.

Adjustments in science. The school year 2016-2017 was the first time Kamehameha Schools did not offer Concepts in Biology. This course was eliminated as it did not meet the requirements for National Collegiate Athletic Association (NCAA). This course was usually provided to the students that struggle in science and are in a lower math class. This change was welcomed by the Kauhale as the goal was to have heterogeneous classes and this helped to reach that vision. Lea Arce, the Kauhale Biology teacher, spoke about the various adjustments she made to her curriculum and the heterogeneous classes during the focus group discussion. She

kept her scope and sequence of her class and felt it was great to have the support of the other Kauhale classes for some of her main projects.

For example, typically, when she teaches about pH levels, acidity and conducting experiments, she takes students to Papahana Kuaola, a non-profit organization that maintains a traditional lo'i system, to carry out the water experiments. Because she and her science department have been working for the past several years to incorporate HCBE into their curriculum, she also teaches the students a Hawaiian chant about water and the parts of the lo'i system. Since I taught Hawaiian culture and history, I was able to take the cultural portion from her and she had more time to concentrate on the science portion. I taught the students the chant, the significance of the chant, the different parts of the lo'i system, told mo'olelo or stories about the area and the different parts of the ahupua'a. When we went on the field trip, we both taught the students separately and together so they could see the lessons were interdisciplinary.

To support all learners in her class, Arce added a variety of diverse activities which included collaborative projects to help her students understand the content and helped them recognize the practical connections of science to their life. She also added more practice tests, enforced binder organization, and provided a lot of study help to help with the content (L. Arce, personal communication, February 9, 2017).

Adjustments in math. Usually, students are grouped by their ability, where the whole class is at the same ability level. The Kauhale offered three heterogeneous math classes, Algebra 1A/1B, which had both lower level ability students as well as general education students. In addition, one class of Algebra 1B/Geometry 1A was offered separately to offer a higher math to the students that already passed Algebra 1A.

Jake Pacarro, the Kauhale math teacher, explained the adjustments he made for the Kauhale classes. The main difference in content was the deviation from the typical scope and sequence of the algebra classes. He re-sequenced to support the Kauhale thematic units and the biology classes. For example, during the third quarter, while the students were writing their science fiction mo‘olelo in English, Pacarro taught the unit on exponential growth to help the students add to their mo‘olelo if they wanted to write about population growth or effects of diseases, etc. Pacarro also explained he knew what was being taught in the other classes so he was able to tie in the math perspective and he also felt empowered to talk to the students about relationships because he knew they were talking about it in English or Hawaiian history because of the content in my class (J. Pacarro, personal communication, February 9, 2017).

Another adjustment was the building of relationships with the students. He was able to get to know the students a lot better and have an opportunity to talk to the other Kauhale teachers to better understand our students.

Adjustments in language arts. The Kauhale English classes focused on Hawaiian Pacific Literature. Classes were also heterogeneous with a mixture of all ability levels: honors, general education and lower level. Ryan Oishi, the English teacher, discussed the importance of finding the right text for the students. Because in social studies, I was teaching about the different creation mo‘olelo, Hawaiian island geography and Hawaiian akua in the first quarter, Oishi picked the mo‘olelo of Hi‘iaka. This Hawaiian story describes Pele’s infamous volcanic activities and Hi‘iaka’s journey to retrieve Pele’s lover. He explained how the story needs to have “the sweet spot where it’s intellectual...there’s depth to it for analysis...hopefully the storyline can engage them” (R. Oishi, personal communication, February 9, 2017). Oishi found the students very engaged with the story because they were making connections with the content

in my class with the story. He used short stories and other texts such as *The Healers* by Kimo Armitage (2016) and *1984* (Orwell, 1949).

Class schedule. To manipulate class time, we needed to teach class blocks that were consecutive, meaning one block after another. We decided on teaching periods 3, 6, 7, and 8. This allowed us to have two class blocks in the morning on one day then two class blocks in the afternoon. Periods 1, 2, 4 and 5 were used as prep time, grading and more importantly planning time together. It was important to have time during the school day to meet for planning and discussing students. Normally, teachers have a designated time for class preparation. Sometimes this designated time is during the school day. When I was at Kailua high school, the preparation time was before or after school. KSK allowed us to have not only our individual class preparation time but also time to plan together as a team. According to Habeeb, Moore and Seibert (2008), a study in 2003 by the Principal's Partnership reported the most important factor determining if a teacher team would have a positive impact on student achievement was whether or not they had enough planning time together and how well the team worked together (p. 285). Therefore, this common planning time as a team was crucial to the success of the program. We also had our Kauhale students in our homeroom period which allowed us to use that time if we needed it. Teaching during these periods allowed us to creatively use the daily schedule to meet the learning activities.

Here are some ways we restructured the bell schedule:

- During period 3 on 8 period days, all students took a class exam from one of our content areas, then combined periods 6-8 for group activities.
- Used homeroom blocks for instructional time.

- Shuffled weekly schedule to teach English/Hawaiian Studies daily for a week, then Math/Science daily for the next week.
- On campus field trips during two periods, homeroom and lunch so students would not miss their other classes.

8 period days	A day	B day	C day	D day
1	1	2	3	8
2	5	4	7	6
3	HR	HR	HR	HR
4	Lunch	Lunch	Lunch	Lunch
5	7	6	5	4
6	3	8	1	2
7				
8				

Figure 3: Kamehameha High School Bell Schedule for School Year 2016-2017

Note: Shaded blocks are the periods taught in the Kauhale

Classroom arrangement. It was essential for our four classrooms to be close in proximity. This allowed for easy face-to-face communication, informal meetings, and easy accessibility for study help for students. We were able to get all of our classrooms in one building but we were on different floors. We were able to talk a lot throughout the year to discuss student concerns, plan curriculum and just getting to know each other because we were in the same vicinity. Another helpful arrangement was having one classroom with only our classes taught in it. Oishi was the only teacher that used his room; therefore the other four periods that he did not teach was open for students to come in for study help or as a place to relax during their free periods. We would normally have team meetings in his room as the other

Kauhale teachers had to share rooms with other teachers. We had so many students coming in during their free period there wasn't enough tables and chairs, they ended up sitting on the floor. This time also allowed us to get to know our students more personally, not in an academic setting.

We also had challenges finding spaces that would fit all 83 students at one time. Throughout the year, we used most of the large group space on the high school campus. There were limitations to many of the spaces as some didn't have adequate square footage, proper acoustics, and/or ample desk space. We also had to juggle the availability issues of the different rooms.

From Theory to Practice

In this section, I described how the components of the HCBE approach outlined in chapter three were used to design the curriculum for the Kauhale. Each quarter, the Kauhale curriculum had a theme that the all the teachers tied their lessons to:

1. Growth Mindset/Creating a Foundation/Identity
2. Proximity of Aloha/Aloha Kekahi I Kekahi
3. Problem-solving and the Praxis of Pono
4. Kahiau (giving generously without the expectation of something in return)

Table 2 shares lessons from each content area that corresponds with the quarterly theme. Some activities were one quarter long. Other activities required the whole semester.

Table 2

Examples of content area lessons within the overarching quarterly theme

Content	Quarter I Theme: Growth Mindset/Creating a Foundation/Identity	Quarter II Theme: Proximity of Aloha/ Aloha Kekahi I Kekahi	Quarter III Theme: Problem Solving and the Praxis of Pono	Quarter IV Theme: Kahiau
Language Arts	Hi‘iaka and “Growth Mindset” Healers: Lei Mana‘o Activity	Makawalu	Sci Fi Mo‘olelo Unit (see appendix L)	Independent Reading Unit: Intellectual Genealogy as a Reader “Growth as a Writer” Essay
Social Studies	One Hānau/Ahupua‘a website Cultural Practitioner Project (see appendix I)		Looking at the ali‘i through the “problems” they had and how the students would solve the situation.	Kahiau - Giving back project
Math	Hawaiian Mathematician Discussion Desmos (see appendix J) Art=Math Project	Think Wa`a. Navigation and the Star Compass.	Problem Solving & the Praxis of Pono Reflection Paper. Two-Column Math Proof: Hawaii = 50th state?	Is College worth it? Activity
Science	Plant Growth Lab Pedigree/Genealogy Inquiry and Formal Lab Report (see appendix K)	Water Quality using Waters of Kane Lab & Community Service (see appendix M)	Biotechnology Debate DNA & Genetics in Society	Create an action plan to help biosecurity Biodiversity of Coral Reef vs. Fishpond

Interdisciplinary lessons. In addition to our own content curriculum aligning to the Kauhale themes, we created interdisciplinary lessons where more than one content area worked together on a lesson addressing the theme. Some examples of lessons were social studies and science working together on a field trip to Papahana Kuaola (see appendix L). Lessons where math and English combined to discuss growth mindset and how it applied to students’ lives.

Pacarro discussed the growth slope and how to increase the slope and Oishi taught how the characters in *The Healers* (2016) could be illustrated on the growth slope. Then the students took their own character traits and plotted it on a growth slope. All content areas worked on the science fiction mo‘olelo (see appendix K). Table 3 presents some of the interdisciplinary lessons that were created.

Table 3

Interdisciplinary lessons that correspond with the quarterly themes

Content	Quarter I Theme: Identity and Growth Mindset	Quarter II Theme: Aloha kekahi i kekahi	Quarter III Theme: Problem Solving and the Praxis of Pono	Quarter IV Theme: Kahiau
Inter-disciplinary Lessons	Field trips: Papahana Kuaola and Ka‘iwakīloumo ku (Māla and Wa‘a Topia lesson)	Proximity of Aloha lesson: Learning the habits of aloha and ways students intend to build aloha in each area of proximity (myself, family, community, lāhui)	Science Fiction: Mo‘olelo that integrated the four disciplines to connect to their stories Field trip to Honolulu Museum of Art: Contact 3017 Math/LA – growth slopes and growth in characters	Field trips to Loko Ea Fishpond and Pua‘ena Point Keanamanō Kahiau project: entrepreneurial group project that fundraises money to donate to a world organization and biosecurity action plan

The next section illustrates how the Kamehameha School Kauhale implemented HCBE practices both pedagogically and through the content that was selected. The tables below represent what HCBE looked like in Language Arts, Social Studies, Math, and Science in this context.

English/Language Arts

Table 4

Examples of language arts lessons

HCBE Component	Transition skills	Lesson/Unit
Language Content Context	Strengthening reading comprehension Building relationships	<p>Hawaiian text - The Mo‘olelo of Hi‘iaka</p> <p>Learning activities Taunting Poem Activity (Hi‘iaka vs. Pana‘ewa) Psychoanalytic Sofa: “What do you think the mo‘o represent about Hi‘iaka’s <i>internal</i> journey?” Support your views with specific examples from the text. Press Conference Activity: Hi‘iaka, Pele, Lohi‘au, Wahineoma‘o Facebook Characterization Project Elegy/Love Poem Assignment (Jamaica Osorio's "No Seed Left Unturned," W.H. Auden's "Funeral Blues") Makawalu discussions: Why was Hi‘iaka able to defeat/stand up to Pele? What key scenes allowed her to grow to this point? Lei Mana‘o Activity: One of the big ideas/takeaways deals with love and forgiveness. Like Hi‘iaka, have you had an experience where you had to forgive someone? How do we transform anger to forgiveness? What role does love play in this process? Other takeaways?</p>

Ryan Oishi has been teaching at Kamehameha for almost ten years. He usually teaches tenth-grade language arts, general education and honors classes. He participated in the standards based Kula Hawai‘i workshops, where the language arts teachers worked together to incorporate HCBE into their common curriculum. Within the discipline of language arts, there are a number of ways that HCBE can be practiced both pedagogically and through content. One example illustrated in Table 4 is what Oishi calls a Makawalu strategy. Pedagogically, Oishi uses makawalu (multiple perspectives) as the foundation of his curriculum. Makawalu helps students analyze multiple perspectives of the characters they are reading about. Oishi’s class is organized with discussion at the center of the lessons. After a reading, students complete a visual reading response, where they take a line or a part of the reading and create a visual representation. In

class, the students share their visual with their classmates. Their peers then have an opportunity to comment or ask questions to inquire more of what the student was thinking. The next student that follows builds off of what the previous student shared. Oishi (2017) explains:

It's powerful because the kids feel it when we discuss things. They understand the value of hearing their classmates. Listening connects with that idea of love as well. All that stuff, I love because we're teaching them what it means to be a good person. Makawalu can flow in two different directions as a process. The sources that you look at, that's where "Nānā i ke kumu" comes in. How you honor those sources, protocol, which is much richer than saying "Oh, you have to cite your sources using MLA." It gives you the why, because you honor the source of knowledge. It's a gift and you have a responsibility with that knowledge and then after it flows through the makawalu I think synthesis is such a vital thing for our students, our Kamehameha students.

This quote shows through HCBE, students are able to understand a cultural as well as a western meaning of honoring your sources. Oishi was able to provide HCBE through a variety of approaches. The texts he chose provided Hawaiian content and context. The makawalu strategy was a HCBE assessment and the Hawaiian language was interspersed throughout the text and discussion.

The next section provides examples of biology HCBE lessons as well as aligned with the quarterly themes.

Biology

Table 5

Examples of science lessons

HCBE Component	Transition skills	Lesson/Unit
Language Community Content Context	Critical Thinking Communication Collaboration Note taking Strengthening Writing	<ol style="list-style-type: none"> 1. Acquiring water samples from different parts of the lo'i system. 2. Using pH paper, students will determine the pH level of each sample. 3. Using the appropriate test, students will be able to measure the amount of phosphate, nitrate and dissolved oxygen in the water samples. 4. They will compare data with other students and chart their data. 5. Complete a lab report with their analysis of the data. 6. Participate in community service to learn about giving back, taking care of the environment and sustainability.
Language Family Content Context	Critical Thinking Communication Strengthening Writing	<ol style="list-style-type: none"> 1. Using the knowledge students learned in social studies about genealogies, students researched into their own families. 2. In addition to naming their family members, students were to find a genetic trait they could trace. 3. Students wrote a lab report on their results.
Language Community Content Context	Critical Thinking Communication Collaboration Creativity Strengthening Writing Note taking	<p>Field Trip to Keanamanō (garden at the school's front gate)</p> <ol style="list-style-type: none"> 1. Native Hawaiian scientists spoke to the students about biodiversity and the threat to our environment. <ol style="list-style-type: none"> a. Rapid 'Ōhi'a death b. Decline of Hawaiian tree snails c. Learnings from Hōkūle'a's travels around the world about biosecurity 2. In groups, students created action plans to protect our environment.

Lea Arce has been teaching biology at Kamehameha Schools for over ten years. Over the past five years, Arce has been working together with her department to incorporate HCBE into the biology curriculum. She has been a pro at connecting science concepts with Hawaiian culture and taking students on field trips to experience science in the Hawaiian environment. It helps the students to understand why science is important and how important it was to our kūpuna. For example, in Table 5, it describes how the students went on a field trip to the garden at the school's main gate called Keanamanō. Students were learning how globalization is having an impact on our environment. At Keanamanō, the students were very fortunate to hear from three Native Hawaiian scientists that are actively working to protect Hawai'i's fragile ecosystem. An expert from the Lyon Arboretum spoke about Rapid 'Ōhi'a Death and the toll it is taking on our 'Ōhi'a forest. The students learned in Hawaiian culture and Language Arts the importance of the 'Ōhi'a forest from a cultural point of view, they also learned in biology it's significance in the rain forest landscape. This devastating fungus that is killing the 'Ōhi'a trees is a direct effect of globalization and is a concern in biosecurity. Because the students were able to make a cultural connection with the 'Ōhi'a forests they understood the urgency of the situation.

Another Native Hawaiian scientist spoke to the students about the Hawaiian tree snails. He explained their evolution from millions of years ago and how they arrived in Hawai'i. He described the effects of globalization has led to the tree snail populations to decline drastically to the endangered status.

The last guest speaker was a member of the Hōkūle'a crew, who has sailed several legs of the Mālama Honua trip. He spoke of the biosecurity measures other countries take to preserve their environment from invasive species.

After hearing from the guests, in groups, they created action plans to help protect our delicate environment. This unit incorporated all of the components of the HCBE framework, which were language, community, content, context and assessment. This field trip also exposed the students to scientists that work in Hawai‘i and had incorporated science and Hawaiian culture, showing them science related occupational opportunities.

Algebra 1

Table 6

Examples of math lessons

HCBE Component	Transition Skills	Lesson/Unit
Content Context	Critical Thinking Communication Collaboration Note taking Writing	1. Discussion on the topic, “were our Hawaiian ancestors great mathematicians? Why or why not? 2. Students wrote down initial thoughts. 3. Listened and discussed with others. 4. Wrote their new understandings or revised their thoughts.
Language Content	Critical Thinking Creativity/Innovation	Using the online application Desmo, students were able to draw out an illustration of the cultural practice they were doing for their social studies class cultural practitioner project.
Context Assessment and Accountability	Critical Thinking Test taking skills	Students take a series of math tests throughout the year and chart their growth in each concept. Each test has the same concepts. As students learn the concepts and past ones are reinforced, they are able to visually see their growth throughout the year.

Jake Pacarro has been in various job roles at Kamehameha over the past 16 years. He spent some time as a dorm advisor, math tutor in the student support center and now a math teacher. Pacarro brings with him a background in history and counseling, which helped him in reinforcing the history that was being taught in my class and building relationships with the

students. Pacarro encourages students to “Kūlia i ka nu‘u (strive for the summit)” (Pukui, 1983, p. 205) This ‘ōlelo no‘eau instills perseverance in the students and creates the growth mindset. To promote this, Pacarro gives students variations of the math final exam many times throughout the year. Each set of questions is titled with the concept the student is being tested on. This non-graded “exam” is graded by the student and they chart their progress on each of the concepts. Each time the student takes the “exam” they are able to visually see their growth. This ingenious strategy impresses on the student that they are in control of their learning and they are competing against themselves. “Kūlia i ka nu‘u” was prevalent in the Hawaiian society as they were always striving to create the best products whether it’s makaloa mats, lo‘i (taro patches), loko i‘a (fishpond) or lei hulu (feather lei).

Hawaiian Culture/Hawaiian History

Table 7

Examples of social studies lessons

HCBE Component	Transition Skills	Lesson/Unit
Language Family and Community Content Context Assessment/Accountability	Communication Collaboration Creativity Strengthening writing Creating a presentation	Cultural Practitioner Project 1. Pick cultural practice. a. If student has a family practice, they picked that. 2. Spend at least 5 – 10 hours with practitioner to learn the skills in a semester. 3. Ask questions. 4. Hands-on learning. 5. Create a hō'ike to show learning. 6. Write an essay.
Context		Teaching students a variety of oli and the appropriate time to use it. Oli Kāhea – to ask permission to enter E hōmai – focus, ask for knowledge from kūpuna
Language Community Content	Communication Collaboration Creativity Research skills Note taking	One Hānau website project Students researched their ahupua'a they live in; place and feature names, ancient stories, traditional features (heiau, fishponds, etc.). Students created a website and shared with their classmates.

I've been at Kamehameha for seven years teaching world history, advanced placement world history, Hawaiian history and psychology. This past year was the first time in a long time that I taught freshmen which was a big adjustment for me in addition to developing the curriculum for the newly created combined Hawaiian culture and Hawaiian history course. One example from Table 7 that illustrates HCBE and transition skills is the semester project called the Cultural Practitioner Project. Students spent at least ten hours of their own time with a cultural practitioner of their choice to observe, learn, apply the practice. They built a relationship

with the practitioner to create a safe place where the practitioner was able to share their practice. Students were advised to learn from a family practitioner if they had one to carry on their family practices. If they didn't have one, they picked a practice that interested them. After logging in their 10 hours, they needed to show their learning in the form of a hō'ike. Many students created a video of themselves performing the cultural practice or they performed for their classmates in class. Lastly, they wrote an essay. The focus question was "How did the cultural practitioner project help you to reach 'E ola?" The honors students had an additional prompt which was "If it is true the practice you learned has survived for generations, does that imply it will continue for more generations?" Students used the social studies essay writing format that was developed by the KSK social studies teachers to answer the focus question. This project had all of the five critical components of the Hawaiian Indigenous Education Teaching Framework as well as a variety of transitional skills. See appendix I for a student example of the essay.

Group bonding experiences. To reach our goals of relationship building, Hawaiian identity, and to ease the student's transition to high school, we engaged in many activities as a large group. Here are some examples we did as a Kauhale:

- We had piko on Fridays during our homeroom time to end the week together; we sang Hawai'i Pono'ī, one student was picked or volunteered to share mana'o (thoughts) for the week. We ended with Ho'onani, the Doxology. Piko means navel or umbilical cord in Hawaiian. The piko connects the child with their parents as well as their kūpuna (ancestors). This time together is called piko as it unites us with each other as well as with our kūpuna.
- We held a hō'ike (showcase) for the parents to celebrate the learnings of their child and pā'ina (eat) together. This student driven hō'ike showcased their work, the students'

talents in singing, hula, kanikapila (playing music). We had student emcees and student keynote speakers that the students voted for. As teachers, we celebrated the successes of eight students by rewarding them with awards for Kūlia i ka Nu`u (two students that continued to strive for excellence), Ke ulu nei (two students that grew academically), Aloha ‘Āina (two students that embrace their Hawaiian identity and are learning more about it), and Aloha kekahi i kekahi (two students that have shown love to their peers, teachers and school). We had a hō‘ike at the end of each semester. Both were held in the evening to allow parent participation.

- We went on a field trip to Papahana Kuaola, a cultural site with lo‘i (taro patch), kahawai (stream), punawai (spring), hale pili (grass thatch house), ahu (stone structure) surrounded by native and Polynesian introduced plants. Students learned the chant, Ka Wai A Kāne. This chant describes all the places one would find fresh water. They learned about the lo‘i systems and the importance of taking care of the land to ensure the health of the system. For biology, students took water samples and measured their PH levels and other chemicals found in water. The last half the day, we participated in helping clean the individual lo‘i by weeding and removing the debris from the auwai as an act of appreciation and giving back to the place and the ‘āina.
- Another field trip we organized was to the state capitol to participate in the opening of the legislature. Students helped open the day with oli and mele then went on a walking tour of the wahi pana (special places) of the area. We visited Washington Place, St. Andrew’s Cathedral, ‘Iolani Palace, Pohukaina, Honolulu Hale, Lunalilo Crypt, Kawaiaha‘o Church, Mission Houses, and Ali‘iolani Hale. At each place, students did an oli, two students gave a speech on the significance of the place and gave lei to honor the place.

We also visited the Judiciary History Center, where the students learned about land issues and role played an actual court case from the 1800s. We ended the day at the Capitol by visiting their representatives and inquiring about issues in their community.

- An on-campus field trip was to Midkiff Learning Center to orient the students to the learning center, which we did through the theme of Kumulipo. Before going to Midkiff, the students learned about the Kumulipo and the different wā (era) in my class. This was to prepare them for the activities in Midkiff. Students were split into groups and rotated amongst the different kauno‘o (learning activities):
 - Toured the art gallery of different students and community artists’ interpretation of a wā
 - Discussions with various teachers about various aspects of the Kumulipo
 - Create individual black out poems
 - Used photography to illustrate their understanding of a wā
 - Create a video about the Kumulipo
 - Create an illustration using Adobe Illustrator about the Kumulipo

Intentional teaching of transition skills. The first skill the team addressed was organization. We created a Kauhale planner for each student. The planner was specifically designed according to the high school bell schedule. This helped the students to write down their assignments and to plan their study time. In addition to the planner, Arce explicitly taught the students how to organize their school binder and I taught them how to organize their computer files. I also had a lesson on the importance of using the planner for time management and prioritizing assignments. Many students had mentioned they never had a lesson specifically on

how to time manage and it helped them to realize they had enough time but needed to plan and not to procrastinate.

The next skill was note taking. Oishi taught students how to annotate their readings and it was reinforced in the other Kauhale classes. I explained how to take notes using the Cornell note taking style when reading a textbook or listening to a lecture.

For test taking skills, Arce created practice quizzes and Oishi taught test taking strategies such as understanding the question, eliminating distractor choices, etc. In Pacarro's class, the students did their growth assessment as explained previously. Students were able to see what skill they were deficit in and put more effort into studying those skills. I asked the students to share their strategy to give ideas to others and also discussed the ineffective strategies that didn't work because it may work for another. Therefore, trying out different methods and find the one that worked for them.

All of these skills were regularly discussed in our classes. This was a new approach in our team. We had previously made the assumption that the students knew how to do these skills. This collective curriculum was created to give students in the Kauhale program a fulfilling freshman experience. The goal was that they would learn to understand who they are as Hawaiians and as global citizens. We also wanted them to gain skills to be successful in their personal and academic life. Oishi (personal communication, February 9, 2017) said it so proudly when he stated:

[The students] are at their best, searching... when they find that exquisite equilibrium between a Hawaiian perspective, a global perspective, a perspective that values tradition and history and culture and also 21st century...All of these things...I look at synthesis for

our Kamehameha students, that is their advantage. And part of that is being a Hawaiian student.

Impact on the Teachers

On many occasions during informal conversations, the Kauhale teachers mentioned this school year has been the best professional development they ever had. We were able to learn from each other every day. We were able to create lessons together, teach the lesson, reflect on the lesson, and follow up on the lesson. We also discussed the reactions of the students to the lesson. We were able to do this on a consistent basis. Pacarro (personal communication, February 2, 2017) explained during the focus group discussion that there is a difference when one works alone or works in a team,

I think the typical teacher would teach, go to their desk, grade papers, kind of sit in their bubble and then out of sight, out of mind, but I think when you're in a team, everything's always visible. Everything's always out because you're always engaging in conversations about students and curriculum and what are you doing, what's working, what's not working. For me, I think, this is the most, out of my 16 years here at KS, I probably grew the most as a teacher this year, I can honestly say that.

Habeeb, Moore, & Seibert (2008) affirm Pacarro's statement in that they believe teachers working together is key to a successful program. Allowing teachers to work together empowers them as they are able to grow and develop their teaching skills. Habeeb et al. (2008) wrote,

any attempt at high school reform or school improvement must focus, first and foremost, on ways to strengthen the teacher's ability to have an impact in the classroom. A team of teachers sharing students and sharing a vision can turn the ninth-grade year into a

successful year of transition more effectively than individual teachers working to achieve the same goal on their own. (p. 184)

This has been our experience working as a team this past year in the Kauhale program. This year was a challenge, yet very rewarding. I was able to extend myself as a teacher because of working in a team and creating interdisciplinary lessons. We all felt the students were great and benefited from the program. The students enjoyed the field trips and the interdisciplinary lessons where they were able to be with each other. In class, students were able to refer to other Kauhale classes or field trips to explain their opinion or to extend what they were learning in my class. The next chapter will share the study's findings through the Kauhale students' voices and experiences.

Chapter Five

‘Ao; Kauhale Students

“‘O nā ‘ao ka hanauna a Hāloa”

The off shoots are the future generations of Hāloa

From a Hawaiian mo‘olelo (story), Hawaiian gods Wākea and Ho‘ohōkūkalani had a stillborn baby named Hāloanakalaukapalili and he buried it in the ground. From that burial site grew the first kalo plant, a staple food of the Hawaiians. They had a second child named Hāloa, in honor of his older sibling that past. He became the first Hawaiian and ancestor for all Hawaiian people (Kame‘eleihiwa, 1992). The metaphor for this chapter is ‘O nā ‘ao ka hanauna a Hāloa. The off shoots are the future generations of Hāloa, which describes the Native Hawaiian children of Hāloanakalaukapalili and Hāloa. This section will describe the impact the Kauhale had on the students through the multi-methods analysis consisting of data set of the climate survey, student reflection journals and course work, existing school data and a teacher focus group discussion. There is also a comparison of the Kauhale students versus the non-Kauhale students regarding test scores, students on academic probation and their grade point averages. Lastly, another comparison of climate survey results between the Kauhale students and with freshmen from previous years. *Relationships, academics, confidence* and *Hawaiian identity* were themes that emerged from the findings. But first, the words straight from the students in Kauhale when asked: “What do you appreciate most about the Kauhale?” The students are the heart and soul of the program. They have not only grown academically but socially and emotionally. The name of this chapter is ‘ao meaning the new bud or off shoot of a kalo plant, metaphorically the students of Hāloanakalaukapalili (the first kalo plant) and Hāloa (the first Hawaiian person).

Student Voices

I am thankful for the Kauhale because we can build strong relationships with our peers because we see each other most of the time. I am also grateful for the teachers who try to coordinate due dates and projects so the students can present their best foot forward (personal communication, December 7, 2016).

Something that I appreciate about Kauhale is that everyone is nice and supportive and that we all are like one big family (personal communication, December 7, 2016).

The transition from my old school was hard because I thought that I was going to fail because this school's pretty hard, but coming into this program pushed me to strive and complete my goals. Also, being a boarder, being away from home for a while, this program treated me like family and I'm happy to have people to keep me happy and full of joy each and every day (personal communication, December 7, 2016).

Findings

According to the open-ended responses on the survey, there were few students, a small minority, that were not having a positive experience. However, the majority of students enjoyed their time in the Kauhale. Many conclusions were made using a wide variety of data sources. To narrow down the findings, I merged the similar conclusions together to create themes. There were four major themes focusing on the majority of the students' experiences: a) relationships; b) academics; c) confidence and d) Hawaiian identity that emerged from my research.

- Students were able to develop meaningful relationships with their peers as well as with their teachers.

- Students were academically challenged.
- Students were not feeling confident in their academic abilities.
- Students expressed a deeper understanding of who they are as Hawaiians.

On Table 8, I separated the survey statements into three groups that related to transition:

a) relationship building, b) academic confidence and c) feeling supported. These categories aligned similarly to the finding themes.

In the relationship building question set, more than half of the students felt they knew each other well, but less than half believed they had a connection with any teacher, administrators or adult staff member. In the academic confidence question set, the majority of the students agree they are challenged academically where they are required to think creatively and produce original work. Interestingly, only 48% of the students felt successful. The last question set asked students about feeling supported. A high percentage of students felt supported by their teachers, family and friends.

Table 8

Survey results regarding transitional issues

N=82

Survey question	I strongly agree	I agree	Don't know or uncertain	I disagree	I strongly disagree
Questions on relationship building					
1. Many of my classmates know me well.	19.7%	54.3%	14.8%	8.6%	1.2%
2. I know many of my classmates well.	14.8%	50.1%	21%	7.4%	4.9%
3. I can talk about anything to teachers, administrators, or adult staff members.	10%	30.1%	27.2%	24.7%	6.2%
4. Many teachers, administrators, or adult staff members know me well.	3.7%	31%	45.7%	14.8%	4.9%
Questions on academic confidence					
5. My teachers require me to think creatively and to produce original work.	40.7%	54.3%	4.9%	0	0
6. The work, my teachers, have me do is challenging.	28.4%	63%	7.4%	1.2%	0
7. I believe that the work I do in school is important.	22.2%	61.2%	7.4%	4.9%	1.2%
8. The subjects I study in school are interesting to me.	7.4%	56.8%	19.7%	11.1%	4.9%
9. I often feel successful at school.	3.7%	44.4%	35%	10%	7%
Questions on feeling supported					
10. My teachers care about me being successful.	32.1%	48.1%	16%	2.5%	1.2%
11. Other students help me to succeed in school.	16%	60.5%	16%	6.2%	1.2%
12. I often talk about the work I do in school with my family and friends.	19.8%	55.6%	7.4%	9.9%	6.2%
13. Many teachers will go out their way to help me be successful.	18.5%	51.9%	22.2%	6.2%	1.2%

Table 9

Comparative climate survey data from 2001, 2004, 2010 and 2016.

Questions from climate survey that relate with transitioning	Results from 2001 9th grade n=374	Percentage change from 2001 to 2004	Results from 2004 9th grade n=320	Percentage change from 2004 to 2010	Results from 2010 9th grade n=95	Percentage change from 2010 to 2016	Results from 2016 Kauhale only n = 81
Questions on Academic Confidence							
I often feel successful at school.	44%	+5%	49%	+3%	+52%	-4%	48%
The subjects I study in school are interesting to me.	58%	+12%	70%	n/a	n/a	-6%*	64%
I believe that the work I do in school is important.	80%	-2%	78%	n/a	n/a	+8%*	86%
My teachers require me to think creatively and to produce original work.	75%	-1%	74%	n/a	n/a	+21%*	95%
The work, my teachers, have me do is challenging.	80%	+1%	81%	n/a	n/a	+10%*	91%
Questions on Relationship Building							
Many teachers, administrators, or adult staff members know me well.	28%	+5%	33%	+7%	39%	-5%	34%
I can talk about anything to teachers, administrators, or adult staff members.	15%	+4%	19%	+8%	27%	+13%	40%
Many KHS (or KMS) students know me well.	63%	+6%	69%	+11%	80%	-6%	74%
I know many KHS (or KMS) students well.	69%	+8%	77%	+4%	81%	-16%	65%
Questions on Feeling Supported							
My teachers care about me being successful.	53%	+2%	55%	+7%	62%	+18%	80%
Many teachers will go out their way to help me be successful.	39%	+8%	47%	+8%	55%	+15%	70%
I often talk about the work I do in school with my family and friends	n/a		58%		n/a	+17%*	75%
Other students help me to succeed in school	n/a		81%		n/a	+14%*	76%

Note. The surveys completed in 2001, 2004 and 2010 were administered at the end of the school year whereas, the 2016 surveys were completed at the end of the Fall semester.
*calculations made with 2004 data not 2010.

Table 10

Student perceptions of being successful or not: Kauhale vs. previous freshmen

Survey Question: Think about the class you are most successful. Why do you think you do well in this class?

Survey Year	First top choice	Second top choice	Third top choice
2001	I have a good teacher.	The subject is interesting	I like the teacher
2004	I have a good teacher.	The subject is interesting	I like the teacher
2016	The work is challenging. 85%	I have good teachers. 74%	I like my teachers. 65%

Survey Question: Think about the class you are least successful. Why do you think you do not do well in this class?

2001	The subject is boring.	The work in class is boring.	I am not good at the subject.
2004	The subject is boring.	I am not good at this subject.	The work in the class is boring.
2016	I am not good at the subjects. 73%	The subjects are boring. 48%	The work in the class is boring. 47%

Note. No percentages were provided for 2001 and 2004. No data from 2010.

Meaningful relationship with peers. The first theme that emerged from the findings was the ability of students to build relationships. In a study reported in the book, *The Ninth Grade Opportunity* (2008), the only significant conclusion found when asked what was most important to students as they transitioned to high school was developing close friendships. The importance of friendships was the number one item mentioned in my results, which correlates with this statement. A survey response from a student commenting on their transition to high school was:

I think I transitioned to Kamehameha very well. I love being around all my peers and they make me happy. I was able to make a lot of friends thanks to Kauhale and as I created my friends in Kauhale, I was able to branch out to people that weren't in it, and now I have friends that I can always hang around and have a good time with. (personal communication, December 13, 2016)

There were many statements similar to this one. Additionally, analysis of the data from the climate survey revealed that over 65% of the students responded positively for knowing their classmates in questions 1 and 2.

Students also wrote in their reflection journals about their positive relationships. Their prompt was "If you were to speak at piko, what would you tell your classmates about your takeaways and/or new insights from this week? Explain." The following responses are from the students that were selected for analysis. The selected students were: a new student to KSK – Lei; a high achieving student – Kaleo; a boarder - Kapua; a student from Kamehameha Middle School – Lehua and a student that struggled academically – Kalani. All student names are pseudonyms for this study.

Lei's response to the prompt was:

I would firstly mention all the assignments [are] due so soon. I'd mentioned how stressful it is and say that you're not alone. I'd give motivation to try their best to finish the projects as soon as we can, so we don't have to stress anymore. I'm someone [that would] try to give them a helping hand by saying they shouldn't feel alone with all the information that will be going over in the next couple weeks. (personal communication, December 2, 2016)

The boarder, Kapua, showed aloha to her classmates by supporting them. In her journal, she writes:

I would ask them how many of us did good on the tests and how many wishes they would've done better. I would support everyone that needs help and tell them to come to anyone of your other classmates we can help each other and we should help each other. I would also relate "helping each other" to "aloha," we need to aloha every single person in Kauhale including the teachers. (Kapua, personal communication, November 10, 2016)

The student from KS middle school, Lehua, encouraged others to use the relationships they have built in the Kauhale to ask for support and help in their classes. She writes:

If I were to speak at piko, I would tell my classmates about persevering through these hard challenges of tests and finals and have them believe in themselves. I would also tell them about the importance of letting others help you and the support I was well as the other around can help them. (personal communication, December 12, 2016)

Kalani, the student who was academically struggling, wrote a short and concise sentence to motivate his classmates.

If I were to talk at Piko, I would talk about how close we are to a break and that we need to persevere during this last week of finals. I would talk about what we need to do and try to motivate my classmates to finish hard. I would also talk about turn[ing] in all your late work by the end of the quarter. (personal communication, December 9, 2016)

These comments show the positive relationships the students have created with each other and their genuine encouragement to help their classmates succeed and their willingness to help one another.

Students made similar statements in their open-ended response to the survey question, “What reasons do you do well in the Kauhale?” One student responded:

I believe I do well in Kauhale because it is easier for me to be with my friends. It sounds counter-intuitive, but when my friends all have the same classes it helps me work much easier. For example, I had done much better on a personal health project with Keahi than a Hawaiian culture project by myself. (personal communication, December 13, 2016)

Another student wrote, “I do well in Kauhale because I have friends who also find the work challenging and we can do the work together to alleviate stress” (personal communication, December 13, 2016). Students realize they can ask each other for support with their course work. One student sums this up perfectly: “I think I do well in Kauhale because all of us act like family. We’re all super close and we all work really well together. We’re comfortable around each other so it’s easy to ask for help” (personal communication, December 13, 2016).

Despite the positive responses, three out of the four relationship building responses for the Kauhale students were lower than their counterparts in previous years according to Table 9, perhaps due to the different timing of the surveys as the former freshmen were able to bond with their peers a full semester more before taking the survey. But the question regarding students

able to talk about anything to their teachers, administrators or staff members had a 13% increase, which leads to the second part of the first theme of creating meaningful relationships, which is the relationships built with their teachers.

Relationship with teachers. Interestingly, only 34% of the students agreed with the statement that the teachers, administrators or adult staff member know them well and 40% felt they could talk to one of the adults. But, when compared with the previous years, the Kauhale students had a 13% increase in their ability to talk to an adult at school. These low percentages are interesting because many of the student responses mentioned their appreciation for their teacher support and coordination in helping them be successful. Approximately 46% of the replies to the question, “Please add any comments you wish on any of the reasons you do well in the Kauhale” included references to teacher support and care for students. Support came in the form of helping students with assignments to pushing back deadlines to give students more time. Some responses were: “I do well in Kauhale because my teachers really try to help me with my work and support me” (personal communication, December 13, 2016). Another student wrote:

Some reasons why I do well in Kauhale is because my teachers communicate with each other. They get to help us out because if one class has a lot of work, another teacher can know that. So, they have an understanding of what is our work, amount and level.

(personal communication, December 13, 2016)

Positive teacher-student relationships are important in that they “enable students to feel safe and secure in their learning environments and provide scaffolding for important social and academic skills” (Gallagher, 2017, p. 1). Positive teacher-student relationships are classified as the presence of closeness, warmth, and positivity. Gallagher’s (2017) essay explains a positive teacher-student relationship is important particularly for low-income students because often there

is no support at home. This support is needed to help them through high school. Often low-income students do not have the same access to information for post-secondary education options. Having a relationship where students feel both cared for and expected to succeed is valuable for students (Gallagher, 2017). Students in this study affirmed these claims as they wrote:

I think I am doing well because I feel that Kauhale is a very safe place. I feel that the teachers are very kind and supportive, and the students that make up the Kauhale are very friendly people. Also, I feel that most of the assignments that we receive in Kauhale are new and creative, but they still challenge to improve my academic skill. (personal communication, December 13, 2016)

Another student stated, “some of the teachers are really supportive in all we do. S/he never is underestimating us and is always searching for ways to help their students” (personal communication, December 13, 2016). The climate survey showed 80% of the students responding positively when asked “my teachers really care about me being successful” and 70% of the students felt the teachers go out of their way to help them be successful.

Intriguingly, Gallagher’s (2017) article claims the relationship between the teacher and students can significantly affect the student’s acceptance of their peers. The way a teacher interacts with a student can influence the way their peers perceive them (Gallagher, 2017). The Kauhale teachers made an effort to get to know the students by created bonding activities that involved both faculty and students. Teachers spending time talking to students during their free period could have influenced more positive peer relationships.

Academically challenged. Students being challenged academically was the second theme identified in the study. Survey statements #5 – 8 inquired on how the students felt about

their academics. Questions 5 and 6 showed 91% of the students positively responded to doing challenging work and 95% agreed they were required to think creatively and produce original work. The Kauhale students had a double-digit percentage increase from the last time the survey was given, which, I suggest supports the rigor of the Kauhale curriculum.

According to the study by Armstead, Bessell, & Sembiente (2010), students do not separate a “caring” teacher from a “challenging” teacher. The study claims “students learn substantially more when they experience intellectually difficult courses with strong social supports” (p. 373). The students in their study felt their teachers cared for them because they cared about what they learned and how they learned.

Our students echoed this finding because they had many comments in the survey about the challenging work and the Kauhale teachers being supportive. One student stated:

I think I am doing well because I feel that Kauhale is a very safe place. I feel that the teachers are very kind and supportive, and the students that make up the Kauhale are very friendly people. Also, I feel that most of the assignments that we receive in Kauhale are new and creative, but they still challenge to improve my academic skills. (personal communication, December 13, 2016)

Another student wrote:

I usually try and put my best work out all the time and challenging myself is the only way to get better. So, the deep thinking involved in Kauhale classes has helped me get one step closer to reaching that goal. (personal communication, December 13, 2016)

One student felt the work was too challenging, this student candidly wrote:

I honestly wish that I just took regular classes instead of being in Kauhale because I feel like Kauhale is harder than being in regular classes and I believe that some if not most of

my peers in the Kauhale agree with me as well from what I've heard. (personal communication, December 13, 2016)

Student perseverance contributed to their and growth mindset in tackling the challenging work in the Kauhale. This student stated he/she does well in the Kauhale because, "of the effort, hard work and perseverance that I put in, to getting and striving for great grades" (personal communication, December 13, 2016).

Other students stated:

Kauhale prepares my intellectual knowledge in both education and schooling and also life sequences. They have taught life values to love and cherish because it'll reflect our personalities and perspectives on things. For example, having a growth mindset, meaning to go beyond your goals and to aim for higher achievement. When people say I'm an over achiever, I take it as a compliment because it shows off my growth mindset not only to myself but also to my classmates, teachers, staff admin. (personal communication, December 13, 2016)

I hope to develop skills for later on in life. Skills such as patience, kindness, generosity, love, time-management, servant leadership etc. I want more opportunities to be opened for me so I can succeed and go beyond things I could imagine or see for myself, I desire to adventure out and get involved with more hands-on things that are fun and relaxing in an educational way. (personal communication, December 13, 2016)

To add to the stimulating content curriculum, transitional skills were also explicitly taught, meaning, we had lessons on how to do each of these skills, which enhanced the rigor of

the course. Eight skills were named as shown in Table 11 and 63% or more of the students acknowledged they learned all eight.

Table 11

Transition skills students reported learning

Transition Skills	Percentage of students who selected this skill
Good relationships with other students	90%
Organization	81%
Improving your writing skills	79%
Improving your reading comprehension	78%
Time Management	77%
Communicating with your teachers	74%
Annotations	74%
Note-taking	63%

Perhaps another indicator that shows the students were academically challenged was the national test given to all freshmen. This national Northwest Evaluation Association (NWEA) test is a measurement that Kamehameha Schools uses to help with evaluating the achievements of its students. The freshmen took their initial test at the beginning of the year and then again at the end of the school year, April 2017. Preliminary results showed growth by all of the freshmen and our Kauhale freshmen had tremendous growth in both math and English. The NWEA created the RIT score which measures student performance in equal intervals, regardless of a student’s grade or performance and it remains stable over time. It gives an accurate measure of student performance (Northwest Evaluation Association, 2017).

Table 12 illustrates the RIT score in the fall and spring and the average amount of growth in both English and math. The table is separated into the Kauhale students scores and growth compared with the rest of the freshmen class and the last row is the freshmen class as a whole. The national student norm for reading in 2015 started with a score of 220.2 at the beginning of the year and ended the year with a norm score of 221.9. The mean score for Kamehameha

freshmen at the start of this year was 229.6 and finished with an average score of 233.3, an 11.4-point difference. The average growth for the Kamehameha freshmen was 3.7 points, for the Kauhale freshmen there was a 6.6-point growth.

There was also a tremendous increase in the math scores. KS students had an average growth of 4.3-points, and the Kauhale students increasing by 5 points. Nationally, freshmen averaged a 3-point growth. Our students also started at a higher score of 244 while the national freshmen started at 230 (Northwest Evaluation Association, 2017). The students would not have been able to accomplish this kind of growth if their coursework was not challenging and there were supports put into place to help them achieve such a change. The Kauhale teachers were ecstatic that we were able to deliver a culture based education and the students were able to achieve great test scores, which I suggest is evidence of how HCBE can impact student achievement.

Table 12

Comparison of NWEA scores: Kauhale vs. non-Kauhale vs. freshman class vs. national

		NWEA English RIT Score Fall 2016	NWEA English RIT Score Spring 2017	Average Growth English RIT Score	NWEA Math RIT Score Fall 2016	NWEA Math RIT Score Spring 2017	Average Growth Math RIT Score
N=83 students	Average Kauhale	227.82	234.475	6.57	241.85	247.173	5.062
N=357 students	Non-Kauhale Students	229.94	233.21	3.067	244.608	248.872	4.281
N=446 students	Freshman Class	229.58	233.31	3.658	244.08	248.432	4.365
N=n/a	National	220.2	221.9	1.7	230.3	233.4	3.1

Lack of academic confidence. The third theme of lack of academic confidence showed that only 48% of the students felt successful at school according to the climate survey question #9. This was surprising based on the increase in student GPAs as seen in the previous section. Unfortunately, the climate survey also revealed 73% of our students felt they were not successful in one or more of their classes because they felt they were not good at the subject (See Table 13).

Indicated in Table 9, the Kauhale had similar results with the previous freshmen in their expression of success in school – only around 40% of the students feeling successful.

In Table 10, the difference in perception is evident in that the 2016 Kauhale survey provides evidence the students felt challenged, which was the reason they were successful and yet felt they were not good at the subjects they were studying which made them unsuccessful.

The previous years survey findings were consistent in students giving evidence that they believed they had good teachers and that this reason they were successful. However, students also indicated the subjects they were learning as boring.

Even though some of the Kauhale students felt that their academic efforts were futile, there were no students that failed the semester. However, there were two students that were on academic probation after the first quarter as shown in Table 14 (with two Ds or one F grade).

Students responses affirm the contradiction between their perception of their academic abilities and what the data shows as evidence of their academic growth. A comment from one student shows this: “Most of the time I just don’t understand what we are doing and I’m just not good at it” (personal communication, December 13, 2016). Another student stated, “The reason I don’t do well in Kauhale is because some of the subjects I’m not good in. Science is one of them because there’s a lot of things to know just like what’s in a cell” (personal communication, December 13, 2016). Another student expressed “I’m not familiar in this subject. It seems kind

of hard” (personal communication, December 13, 2016). All of these students showed considerable growth and academic achievement in Kauhale, yet their comments show a lack of confidence in their academic abilities. Students may be feeling this way because they have a preconceived notion that they are not good at certain subjects such as science and math, therefore, bringing their confidence down. Students start to think they are not good at a subject when they haven’t learned it yet or they are not picking it up fast. Students could feel it is easier to blame their inability to comprehend the topic.

Table 13

Responses on why they felt they did not do well in their Kauhale classes

I am not good at the subjects	73%
The subjects are boring	48%
The work in classes are boring	47%
My friends do not do well in these classes	30%
I do not like my teachers	21%

Lack in academic skills. Students deficient in academic skills was a foreseeable finding in that it was one of the reasons for creating a smaller learning community. When students don’t have the appropriate skills to succeed, they will struggle in their classes. Students are also not connecting the various skills such as note taking, study skills, organization, time management to their classes even though these skills were taught to them. For example, responses below show frustration that students expressed about their academic abilities. “I sometimes don’t understand and get confused,” “The teacher explains things and teaches us things but when the test comes I have not ever seen or heard about that thing in some questions” and “I think I do not do well in some classes because I do not study hard enough and I sometimes forget to write down homework and I forget” (personal communication, December 13, 2016). The lack of confidence could stem from their lack of skills.

Lastly, the comments in this theme revealed weaknesses in the teachers' curriculum. As educators, we are consumed with the department expectations, school initiatives and our own favorite projects or topics we love to teach every year. As a result, as the teacher, we forget we are only one class of the student's full schedule of six classes. Students wrote candidly: "We don't really have a lot of time for some of the subjects that we learn. I also feel as if we move too fast when moving onto a new subject" (personal communication, December 13, 2016); And

The certain class that I struggle with the most provides an overload of homework and overcomplicates their teaching strategy, homework, quizzes, and tests and moves a little too fast. It's extremely overcomplicated that when the students study for the tests, the day the test is given it is reworded for us to not understand directly and confuses us: (personal communication, December 13, 2016)

And "I don't think I do well in this class because everything moves very fast and it's a lot of information" (personal communication, December 13, 2016).

Arce recognized this issue in our focus group discussion. She stated her frustration with her science department expectations and the amount of content that needed to be covered in a year. She expressed "I think we do give them enough inquiry to be able to do stuff but unfortunately you have to move on to the next topic so that it can build on the next subject". She also felt pressured to cover all the content. Part of this pressure came from her colleagues in the higher levels of science who expect the students to have some degree of knowledge of all the topics in biology. The students' lack of academic confidence correlated with their lack of skills and the scope and sequence of the curriculum. This gave the teachers of Kauhale much to reflect upon to improve for next school year.

Struggles with time management. As part of the students' shortage of academic skills, students realized their absence in time management has led to academic frustrations. A skill that plagued a lot of students was time management. In their responses, some wrote: "I have horrible time management and struggle to prioritize work," "I do not do well in some classes because sometimes I think some assignments are boring and so I have trouble with time management and prioritizing," and "I feel that there are a lot of students who try to get help but find themselves not managing their time wisely to ask or get help from the teacher" (personal communication, December 13, 2016).

All of the student reflections discussed their challenges with time management. A couple of students discussed their frustrations with having a long school day then going to an extracurricular activity, getting home tired, and not wanting to complete homework.

Lei, the new student, wrote about how she procrastinated on doing her Personal Health project and needed to stay up all night to complete it. She stressed herself out and didn't get enough sleep.

Kaleo, the high achiever, also mentioned that with sports it's difficult to complete all the work and stays up late but is really tired in school.

Kapua, the boarder, wrote, "this week I didn't really have any challenges it was a pretty good week. I had a lot of time to do my assignments and homework, everything that needed to be done this week, I was able to get done."

The fact that Kapua struggled less with time management may have had something to do with support for those students who live on campus. They have mandatory assignments where the students have to write down their assignments for each class in their planner and the dorm advisors check their planners. They also have mandatory study hall where everyone in the dorm

is studying. Also living on campus, there is no traveling time so they have more time to complete their assignments. This is the ideal situation but unfortunately, many students don't have the same supports at their home.

Understanding their Hawaiian identity. The last theme that emerged was students' expressions that indicated they were beginning to understand who they are as Hawaiians. The number two chosen answer for why they decided to attend Kamehameha was to learn their Hawaiian culture after the first reasons as *getting a good education*.

Most of the comments from the student survey validated previous studies that showed the impact of giving the students cultural experiences to motivate them to learn (Kamehameha Schools, 2006). According to the climate survey, Tables 14 and 15 show the students are developing their identity as Hawaiians. A high percentage of Kauhale students believe they are beginning to understand who they are as a Hawaiian and it correlates with the second question that was asked on a Likert scale, 88% of the students answered, "I strongly agree" and "I agree."

Table 14

Students' perception of KSK's ability to inculcate their Hawaiian identity

	I strongly agree	I agree	Don't know or uncertain	I disagree	I strongly disagree
Kamehameha Schools prepares me to embrace my identity as a Hawaiian.	44.4%	44.4%	6.2%	2.5%	1.2%

Table 15

Student responses to a Hawaiian identity statement

<i>"I am beginning to understand who I am as a Hawaiian?"</i>	
True	89%
False	9%
Unanswered	1%

The Kauhale teachers made a concerted effort to teach through Hawaiian culture based education in many different ways. This included through content, pedagogy, and/or Hawaiian epistemology as described in chapter four. In the responses from the students in the climate survey when asked “What moment(s) helped you to think deeper about being Hawaiian?” students answered with tangible and distinct ways of knowing as I describe next.

The majority of the comments about their Hawaiian identity described their learning in huaka‘i (field trips) to Papahana Kuaola where they learned about the ahupua‘a and lo‘i systems and worked in the lo‘i. Additionally, working in the māla at Ka‘iwakīloumoku, Kamehameha School’s cultural center provided hands-on application of caring for the ‘āina. One student commented, “The best one was really when I went to the lo‘i at Papahana Kuaola. That was really an instance in which we showed appreciation for the culture and demonstrated key traits that our ancestors did. We mālama the ‘āina” (personal communication, December 13, 2016).

There were 29 comments made about the cultural practitioner project they completed in Hawaiian culture class. This student explained what they did for the project and how it affected him/her:

One moment that really deepens my knowledge was the Hawaiian practitioner project. We individually go to meet a Hawaiian practitioner who studies a traditional Hawaiian subject for example, I got to learn and create my own piece of kapa. Before the actual process of beating and designing the kapa, I needed to learn about its use in the olden days and its purpose in Hawaiian culture. In the end, I was intellectually rewarded and physically rewarded with my own home-made kapa piece. (personal communication, December 13, 2016)

There were 22 comments made about the content they were learning in their classes that related or connected to Hawaiian culture and/or history. A student mentioned the HCBE strategy Oishi uses in English, that was referred to in chapter four, that helped them deepen their understanding of being Hawaiian. “In our English makawalu discussions, it has really helped me to look at things with multiple perspectives which then helps me to look at things and find a deeper meaning” (personal communication, December 13, 2016). Another student wrote,

I think the culture practitioner project was what really made me dig deeper as my identity of being Hawaiian. Also the mo‘olelo we learned in English and Hawaiian culture helped me. And math helped me because he put it in a Hawaiian perspective which made it fun. (personal communication, December 13, 2016)

These last two responses show students are still searching for who they are as Hawaiians. This is very appropriate. We didn’t expect them to understand their Hawaiian identity in one year. They have started the process of understanding who they are as Hawaiians. One student wrote,

I guess when someone asked me “Who are you?” And “What are you doing to affect our Hawaiian culture in a good way?” I took that to heart, and decided I needed to find out who I was and find my place in society better understand being a Hawaiian. And have a POSITIVE impact on other Hawaiians across Hawai‘i. (personal communication, December 13, 2016)

Sadly, a student wrote,

When I found myself lost and feeling empty, that is where I really stopped for a moment to see where I am. It was sad and disappointing and really got me down, I thought quite

often in hope I would know. I thought I knew but really I didn't so I wanted to go and find myself as a Hawaiian. (personal communication, December 13, 2016)

This student felt the same way I felt but as an adult. However, I see the benefit in this earlier start to them questioning now so they can consciously form their Hawaiian identity with the guidance of their kumu.

Kauhale students vs. non-Kauhale students. To make sure the Kauhale students had a similar academic experience to the non-Kauhale students, I compared a few educational indicators: the academic probation statistics and the GPAs. These data sources contradicted the student perceptions about their academic abilities.

The total enrollment in the Fall of 2016 for the freshmen class of 2020 was 467 students. 25 students withdrew from Kamehameha during the school year and the ending count was 442 students.

Students on academic probation (AP) received either two Ds or one F, two or more Fs or earned a grade point average under 2.0 in their classes. Students on AP report to study hall during their free period to provide a mandatory study place for them. The ninth-grade study hall supervisor provided the AP data. Two Kauhale students were on AP in the second quarter and 22 non-Kauhale students. While this study focused on the first semester (1st and 2nd quarters), the numbers of students on AP in the third and fourth quarters were much lower than non-Kauhale students. Overall, the percentage of Kauhale students on AP was 11.1% compared with the non-Kauhale students at 31.1% as seen in Table 16.

Although 73% of the Kauhale students felt they were not good at the class subjects and 48% felt their subjects and the work in the classes were boring, a vast majority of them persevered and received grades that were C or higher.

Table 16

Academic Probation rates: Kauhale vs. non-Kauhale vs. freshmen Class

	Kauhale N= 81	Non-Kauhale N=384	Total Freshmen Class N= 467	Total Freshmen AP Per Quarter
Quarter 2 <i>Category 1 (2D, 1F)</i>	2 (KMS)	22	24	26
Quarter 2 <i>Category 2 (2+F)</i>	0	2	2	
Quarter 2 <i>GPA (Below 2.0)</i>	0	0	0	
Quarter 3 <i>Category 1 (2D, 1F)</i>	2 (KMS) 1 (New/Boarder)	40	43	55
Quarter 3 <i>Category 2 (2+F)</i>	0	9	9	
Quarter 3 <i>GPA (Below 2.0)</i>	1 (KMS)	2	3	
Quarter 4 <i>Category 1 (2D, 1F)</i>	1 (New/Day) 1 (KMS)	26	28	48
Quarter 4 <i>Category 2 (2+F)</i>	1 KMS	15	16	
Quarter 4 <i>GPA (Below 2.0)</i>	0	4	4	
Total Students in Grade 9 in AP for the Year	9 11.1% (9/81)	120 31.3% (120/384)		129 27.6% (129/467)
Students that were in Academic Probation for all three quarters	1 1.23% (1/81)	14 3.64% (14/384)		15 3.63% (15/467)

A student's grade point average (GPA) is a score earned from the grades received. The cumulative GPA is the combination of first and second quarter grades. The averaged cumulative GPA for the students in Kauhale was 3.20 for the first semester, with the highest Kauhale student earning a 4.14 and the lowest 1.8. This information shows the Kauhale students fall in the middle of the freshmen class where the highest was 4.3 and the lowest was 0.957 as illustrated in Table 17. The Kauhale students performed similarly to the rest of the freshmen class as the average GPA was 3.2. This information shows the Kauhale program students were on par academically with their counterparts. Academics was not a reason for creating the Kauhale because KS students normally perform well in their classes. This data was included to demonstrate the Kauhale had a positive academic impact on most students who participated in it.

Table 17

Comparative First Semester GPA: Kauhale vs. non-Kauhale vs. freshmen class

	Cumulative S1 GPA	Highest	Lowest
Average Kauhale	3.1953	4.136	1.757
Non-Kauhale	3.248	4.3	0.957
Freshmen Class	3.239	4.3	0.957

In conclusion, this chapter explained how our students were impacted their first semester at Kamehameha and in the Kauhale program. By the end of the first semester the students were building meaningful relationships with their peers and teachers. The relationships were established enough that students were able to ask for help when struggling in their classes, even though they still felt their peers and teachers didn't know them that well yet. The students felt challenged academically which may have led to their lack in confidence of themselves. This was the opposite of how previous freshmen felt. Although in reality, the Kauhale students did well with only a few students on academic probation after each quarter. The results from the data also showed the students were beginning to understand who they are as Hawaiians.

Chapter Six

“Ke Ao Hou”

A New Realm

This chapter is entitled Ke Ao Hou meaning “A New Realm” as Kamehameha Schools moves into their next phase of educational reform and I enter the future of my career as a teacher. Following the recommendations of the recent WASC report and the school’s own inquiry into what their future should look like, the Kauhale was created to help support the freshman transition to Kamehameha as well as to help them begin to understand their Hawaiian identity. This chapter summarizes the results of this study on the Kauhale, the impact on students and teachers, my personal impact of this experience. Lastly, I discuss the study’s implications and suggestions for further research.

Ka po‘e Hawai‘i, the Hawaiian people, were complex and multifaceted. Their society thrived and continuously improved itself with new learnings from the outside world. This study uses the intricate use of the Hawaiian word ao to explain the complexity of education. Ao can be vastly similar to the mist like cloud that envelops the forest to provide the valuable resource of water for the trees. This ao metaphorically explains the aloha we have for our keiki to provide them with a healthy balanced education. This cloud of aloha has provided me with my own ao, enlightenment. Education has led me to enlighten myself in my personal and professional life. This has led me to my passion of teaching Hawaiian children through HCBE.

In order to be enlightened, one needs to try new things; this is ho‘ā‘o in Hawaiian. Kamehameha Schools – Kapālama took a risk on four teachers and created a new path for us to explore. The new path we explored was ki‘ina a‘o, the art of teaching. We were able to improve our own teaching practices by working together to develop the Kauhale. Our ki‘ina a‘o created

‘ao, new shoots of kalo. In Hawaiian culture, Hawaiians are connected to the kalo as it is our older sibling; therefore we were metaphorically developing a new generation of Hawaiians, which will lead us into ke ao hou, a new era. The development of culturally aware Hawaiians that also have academic skills and a positive Hawaiian identity will result in academic success and the Hawaiian lāhui will thrive with “good and industrious” productive citizens that can be leaders in their community.

To recap, chapter one introduced the problem of freshman transition nationwide. The transition from eighth grade to ninth grade has presented many challenges for 13 – 14 year-old students. Some of these challenges include the difficulties of creating meaningful relationships with peers and teachers when the school is really large (Roybal, Thornton, & Usinger, 2014). Students may not share classes or have other time during the school day to develop relationships. Students have also complained about the rigor of the high school work either from the sheer amount of workload or the lack of their academic skills to complete assignments (Roybal, Thornton, & Usinger, 2014).

Freshman year is a crucial year where students may feel successful or unsuccessful leading to adverse effects. These challenges have led to many detrimental statistics for freshmen such as the highest dropout rate, truancy, discipline referrals, failures and retentions (Habeeb, 2013). One way to answer this problem is implementing a freshman transition program. One, in particular, the Smaller Learning Community model, was successful in many schools when accompanied with other intervention strategies (Roybal, Thornton, & Usinger, 2014). This study was conducted to explore the impact of the pilot freshman transition program on its students and teachers. The pilot program utilized the smaller learning community organization model with Hawaiian culture based education as the foundation of its curriculum.

Chapter three explained a similar problem of practice facing Kamehameha Schools at Kapālama. Because KSK is a large high school with 450 students in one graduating class spread over a couple of hundred acres of land, students feel lost in the shuffle. They were having difficulties creating relationships with peers and teachers and are struggling to keep up with the workload. KSK implemented the Kauhale freshman transition program to address these issues. Chapter four describes the needed program changes and curriculum created for the Kauhale. The focus of the study was the students, presented in chapter five. Their experiences were documented and analyzed to comprehend the impact the program had on them.

Coding the open-ended responses and student reflection journals was completed to “discern themes, pattern, processes, and to make comparisons and build theoretical explanations” (Glesne, 2015, p. 194). Through the coding, four main conclusions were exposed. Triangulation of the qualitative and quantitative were merged to verify the results.

The four major findings of this study were a) students have developed meaningful relationships with their peers and teachers, b) students were academically challenged, c) students were not academically confident, and d) students responded positively to beginning to understand their Native Hawaiian identity.

Summary of Overall Results of the Research Study

Impact on students. The results of this inquiry showed the progress made during Kauhale’s initial implementation towards realizing its goals. The students were able to build supportive relationships with their peers as well as with their teachers. These relationships were essential as they felt the academics in the Kauhale was challenging and they needed support and encouragement from their peers and their teachers. The students also expressed through the study, their lack of academic confidence in themselves. Reasons for this could be increase of

rigor from their classes, their lack of academic skills, and/or their lack of time management skills. Students also seemed to have had a preconceived idea about a subject based how they did in past classes. They seemed to carry this belief into the new class, which I suggest put them at a disadvantage from the start. Although the students indicated that they did not feel successful, my data showed otherwise. Very few students ended up on academic probation, the average GPA was 3.2, and their NWEA scores were higher than the national average. In addition to their educational experience, the students were able to gain a deeper understanding of their Hawaiian identity through the Hawaiian culture based education that was the foundation of the Kauhale curriculum.

Impact on Kauhale teachers. Allowing the teachers to imagine and produce their vision seemed to have empowered them. During many team meetings, as a team we reflected on how this program has been the best professional development we have had because we were always learning from each other either with content and pedagogy. The book called *The Ninth Grade Opportunity: Transforming Schools from the Bottom Up* (2008) explains, “team teachers will be working harder, teaching more effectively, and help more students experience success” (ch. 11, para. 42). My team and I wholeheartedly agree with this statement. We have expressed to each other that we are exhausted because we were doing more than we normally would do outside the team, but are delighted with the outcome and the effects the program has had on the students. We have much to reflect on and to adjust for next year, but for the first year, we feel it was a success.

Personal impact. Personally, I feel we were able to instill a positive Hawaiian identity with many of our students. The students are proud of the accomplishments of their kūpuna and would like to develop their lawena kūpuna Hawai‘i (way of Hawaiian ancestors). They will shape their own Hawaiian identity with what they have learned from Kamehameha as their

foundation. My goal was to teach Hawaiians about their history and culture, so they are fully informed; so they can make pono decisions that deal with their communities and ‘ohana. I feel I was able to do this in the Kauhale.

What Does This Study Mean?

The findings from this study shows students are doing well and thriving in Kauhale much like other students in schools that have used SLC (Cauley & Jovanovich, 2006; Habeeb, Moore, & Seibert, 2008; Roybal, Thornton, & Usinger, 2014). Findings suggest that the HCBE foundation positively impacted students (Kana‘iaupuni, Ledward, & Jensen, 2010). Studies have been done on schools implementing SLC and separately there have been studies on schools that implemented HCBE. However, it seems as if this is the first study to implement both an SLC and HCBE as a freshman transition program. Not only did the students gain academic skills, arguably more importantly, they gained a greater sense of their identity. This is important to note because there are culture based education critics who feel there is little evidence that CBE improves student achievement (Zehr, 2008). This study showed both student achievement and the students’ socio-emotional well-being improved. The student outcomes displayed in this study contradicts the critic’s claims as it shows remarkable growth amongst both the Kauhale and non-Kauhale students according to an NWEA MAP test which is used by high schools across the country.

The Kauhale and HCBE have shown improved student achievement, but more importantly, when students receive a “culture-based education they can make connections to the land, culture, and community” (Kana‘iaupuni, Ledward, & Jensen, 2010). This was evident in the findings of this study. Students responded numerous times on how they were able to connect with their kūpuna through the activities we did in our curriculum. Kana‘iaupuni, Ledward, and Jensen (2010) further explain “these connections generate a sense of kuleana (responsibility) and

love for learning in students who come to understand what who they are is the foundation with when they learn to engage with the global community” (p. 3-4). At all of the huaka‘i, the students and teacher participated in community service at the site. The students enjoy this time in the ‘āina that they did community service on their own time. The total number of community service hours done by our students this year was 1013. The understanding of who they are and their desire to give back aligns with Kamehameha Schools’ learner outcomes.

This study adds to the scholarship of creating a new academic look at freshman transition programs incorporating culture based education.

Roybal, Thornton, & Usinger (2014) strongly suggest applying more than three strategies when creating a freshman program. Their suggestions include involvement of parents in high school activities, assistance for students with homework, incentive programs for attendance, grade and citizenship, block schedules, etc. Our Kauhale has incorporated the majority of these strategies and more importantly the HCBE component. Perhaps next steps will be to strengthen these areas.

The HCBE approach adds another dimension to the student experience. The majority of the students were able to gain a better understanding of who they are as a Hawaiian. This connection allows the students to have a “positive socio-emotional well-being (e.g. identity, self-efficacy, social relationships)” (Kana‘iaupuni, Ledward, & Jensen, 2010, p. 1). This, in turn, affects students positively in their academics. This study affirms this finding from Kana‘iaupuni, Ledward, and Jensen (2010) through the students’ growth on the NWEA scores and their GPAs.

This study shows students are able to thrive in a teacher created Hawaiian culture learning environment and learn valuable transitional skills at the same time. A surprising outcome of the study showed the conditions and curriculum of the Kauhale also allowed the

students to gain 21st-century skills. 21st-century skills refer to the general set of competencies, work habits, traits, students today would need to be successful in higher education programs or the work force (Abbott, 2014). The National Education Association (2012) partnered with other national educational groups which include the National Council for the Social Studies (NCSS), National Council of Teachers of English (NCTE), Mathematical Association of America (MAA), National Council of Teachers of Mathematics (NCTM), National Science Teachers Association (NSTA) etc. to develop “Preparing 21st century students for a global society: An Educator’s Guide to the “Four Cs.” The four Cs are:

1. Critical Thinking and Problem Solving
2. Communication
3. Collaboration
4. Creativity and Innovation

After reviewing our curriculum that was created, these four “Cs” were incorporated, and from the results of the data, the students were applying them to their academic and social lives. This shows teaching through HCBE should be considered an effective approach to teaching students 21st-century skills.

The Kauhale breaks away from the traditional western style format of instruction in silos at the secondary levels. Traditionally, disciplines have been taught separately from each other with little or no articulation between the teachers that teach the same grade level. This academic freedom allowed the Kauhale to be semi-autonomous. The teachers were able to manipulate the bell schedule because the four teachers had all the students during the same time. Therefore, we could deviate from the standard school day bell schedule. We sporadically used the time to conduct team building activities. This helped the students to synthesize their learnings from the four content classes and also gave them opportunities to get to know each other better. This allowed the students to have more than usual learning experiences. There was articulation

between the four teachers which helped with the students' workload, common language to reinforce skills, and a combined communication with parents. This study showed there is unlimited amount of possibilities when empowering teachers with time, resources and an educational goal.

Implications

Although a single study cannot provide a sound basis for creating a Kauhale for all freshmen, this study shows transitional support can be given to assist the students in high school with the appropriate teachers and curricular system.

This study has shown there is a strong case to support curriculum development in HCBE for all teachers that teach in Hawai'i including prospective teachers in Teacher Education Programs. Helping students understand their identity, and the importance of knowing about the place they live will lead to positive socio-emotional well being. Having a positive outlook of who they are can result in improved academic output. Hawai'i is a unique place to live, and students would be proud and appreciative if they learned more about it and was able to connect with the host culture.

Freshman transition programs, when implemented carefully, have shown to make a difference for freshmen. Students have had an increase in academic success and less anxiety. Programs with at least five or more transitional support activities tended to have the most success (Cauley & Jovanovich, 2006). The Kauhale has implemented many intervention activities as indicated in chapter four and has much success as stated in chapter five. This study would suggest that freshman transition programs would benefit the students that are in the middle track meaning not the honors students and not the lowest achieving students as this is the group that was in the study and was targeted.

Further Research

In order to assess the success of the program, further research needs to be done as the students continue in their high school career. A longitudinal study should be done to track the students to see if the students are utilizing the transition skills they learned in the Kauhale. The study would also monitor their academic performance.

Next school year 2017-2018, KSK will be adding a second Kauhale with social studies, language arts, Hawaiian language and physical education/personal health classes. Another study on this Kauhale would be helpful to see if the formula of a semi-autonomous program is also successful in helping the students to transition as well as gain academic skills and a deeper understanding of their Hawaiian identity. The results of this study and future studies would be helpful in guiding the rest of the high school into their part of educational reform.

Concluding Remarks

As I reflect back on the last two years, it has been a whirlwind, going from not knowing anything about the school reform to conducting a research project and writing a dissertation on it. Writing about my own personal experiences has helped me to clarify and articulate the purpose of my goals. It has also centered me in my growth as a teacher. I have grown tremendously as a professional. I am clear in the reasons why I use certain pedagogical strategies. I know I enjoy collaborating with other teachers that have the same goals. I am proud of my students and what they were able to accomplish.

Writing the brief history of Hawai‘i has reignited the fire I have for teaching Hawaiian history through the Hawaiian lens. It is important for Native Hawaiian students to understand their own history through the eyes of their kūpuna. I firmly believe that HCBE is the appropriate approach to instilling a positive socio-emotional well-being in students. The students enjoy this

approach to learning, and they are gaining a sense of kuleana to their lāhui and ‘āina. This study provides evidence of the alignment of HCBE and student achievement.

I am also confident the students gained academic and transitional skills to be successful next year and the rest of their academic careers. Only time will tell if they were able to transfer their knowledge from this past year to the upcoming school years. I’m sure I could speak for my team in that we will be there if they falter and need continued support.

I am grateful and honored to have been a part of the creation of this new progressive education model at Kamehameha. I hope the foundation we have built will sustain and continue to grow and improve upon itself. Now that I have experienced this type of teaching environment, I would not want to go back to the traditional way of instruction. As the high school continues its reform for the rest of the grade levels, I hope my research will help as they shape their decisions. Empowering teachers, allowing flexibility in curriculum and in the school structures created a positive environment where the teams was able to do their best work, in turn benefitting the students.

I would like to end with a student quote as I feel the student genuinely expresses their feelings on being in the Kauhale and it touches on every aspect we were striving for. The quote also exemplifies my educational philosophy that was illustrated in chapter one, where the ao (education) provides the balance of rain (aloha/love) and light (‘ike/knowledge) for the trees (students):

Kauhale is a wonderful opportunity for students to learn how to live life as a good and industrious men or women while taking care of their other needs. The Kauhale teaches us many core values that are very important in life, such as, Kūlia i ka nu‘u, Aloha kekahi i kekahi, growth mindset, and many more. The Kauhale is an awesome way how to

enhance the learning of a child. Although it is like the team system the middle school uses, Kauhale is way way way waaaaayyyy better than middle school because high school gives you more freedom for us to do things and to prepare for any class we have coming up. Those are some reasons why I am excelling in Kauhale. Another reason why I love Kauhale is because I am able to embrace my Hawaiian identity with the opportunities they give to me or I choose to do. Hawaiian Culture is a huge class that is important to me because I can learn so much more about the Hawaiian Culture than what I already know and with the mixture of Hawaiian History, I am able to process more information. But all in all, Mahalo for all the opportunities the Kauhale has given me. (personal communication, December 13, 2016)

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Appendix A



UNIVERSITY
of HAWAII®
MĀNOA

Office of Research Compliance
Human Studies Program

REVISED June 1, 2016

TO: Kimberly Glassco
Makalapua Alencastre, Ph.D.
Principal Investigators
College of Education

FROM: Denise A. Lin-DeShetler, MPH, MA
Director

A handwritten signature in black ink, appearing to read 'Denise A. Lin-DeShetler'.

SUBJECT: CHS #24030 - "Implementing and Evaluating a Hawaiian Cultural Based Education
Interdisciplinary Curriculum in a Smaller Learning Community
(Kauhale) to Support Freshmen Transition at Kamehameha Schools -
Kapālama"

This letter is your record of the Human Studies Program approval of this study as exempt.

On May 23, 2016, the University of Hawai'i (UH) Human Studies Program approved this study as exempt from federal regulations pertaining to the protection of human research participants. The authority for the exemption applicable to your study is documented in the Code of Federal Regulations at 45 CFR 46.101(b) (Category 1).

Exempt studies are subject to the ethical principles articulated in The Belmont Report, found at the OHRP Website www.hhs.gov/ohrp/humansubjects/guidance/belmont.html.

Exempt studies do not require regular continuing review by the Human Studies Program. However, if you propose to modify your study, you must receive approval from the Human Studies Program prior to implementing any changes. You can submit your proposed changes via email at uhirb@hawaii.edu. (The subject line should read: Exempt Study Modification.) The Human Studies Program may review the exempt status at that time and request an application for approval as non-exempt research.

In order to protect the confidentiality of research participants, we encourage you to destroy private information which can be linked to the identities of individuals as soon as it is reasonable to do so. Signed consent forms, as applicable to your study, should be maintained for at least the duration of your project.

This approval does not expire. However, please notify the Human Studies Program when your study is complete. Upon notification, we will close our files pertaining to your study.

If you have any questions relating to the protection of human research participants, please contact the Human Studies Program at 956-5007 or uhirb@hawaii.edu. We wish you success in carrying out your research project.

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Appendix B

Survey Questions

1. Why did you choose to attend Kamehameha Schools? (Choose ALL that apply.)
 - A. To prepare me for college.
 - B. To learn my Hawaiian culture.
 - C. To learn my Hawaiian language.
 - D. To get a good education.
 - E. For the co- and extra-curricular activities.
 - F. For the sports and athletic opportunities.
 - G. To acquire the skills needed to be a leader.
 - H. It is the most affordable private school.
 - I. My family made me.
 - J. Other
2. Choose ONE of the following that is your PRIMARY reason for attending Kamehameha Schools.
 - A. To prepare me for college.
 - B. To learn my Hawaiian culture.
 - C. To learn my Hawaiian language.
 - D. To get a good education.
 - E. For the co- and extra-curricular activities.
 - F. For the sports and athletic opportunities.
 - G. It is the most affordable private school.
 - H. To acquire the skills to be a leader.
 - I. My family made me.
 - J. Other.

INDICATE HOW STRONGLY YOU AGREE OR DISAGREE WITH EACH STATEMENT. USE THE SCALE BELOW.

- A. I strongly agree.
 - B. I agree.
 - C. Don't know or uncertain.
 - D. I disagree.
 - E. I strongly disagree.
3. The subjects I study in school are INTERESTING to me.
 4. I believe that the work I do in school is IMPORTANT.
 5. My teachers require me to THINK and PRODUCE original work.
 6. The work my teachers have me do is CHALLENGING.
 7. I often feel SUCCESSFUL at school.
 8. My teachers, administrators, or adult staff members KNOW ME WELL.
 9. I KNOW WELL my teachers, administrators, or adult staff members.

10. I can TALK about anything WITH my teachers, administrators, or ADULT STAFF members.
11. Many TEACHERS will go out of their way to HELP ME be successful.
12. My TEACHERS really CARE about me being successful.
13. Kamehameha School ADMINISTRATORS will go out of their way to HELP ME be successful.
14. Many of my classmates KNOW ME WELL.
15. I KNOW WELL many of my classmates.
16. Other STUDENTS HELP ME to succeed in school.
17. Kamehameha Schools PREPARES me to embrace my identity as a HAWAIIAN.
18. Kamehameha Schools PREPARES me to live by CHRISTIAN VALUES.
19. Kamehameha Schools PREPARES me to live a GOOD AND INDUSTRIOUS life.
20. I often TALK ABOUT the work I do in SCHOOL with my family and friends.
21. My FAMILY is HAPPY that I attend Kamehameha.
22. My FAMILY and SUPPORTS my work at Kamehameha.
23. My FRIENDS who don't go to Kamehameha are HAPPY for me that I attend Kamehameha.
24. Think about the class you are most successful in. Why do you think you do well in this class? (Check ALL that apply.)

- | | | |
|--|---|---|
| <input type="checkbox"/> The subject is interesting. | <input type="checkbox"/> I have a good teacher. | <input type="checkbox"/> My family feels it is important I do well. |
| <input type="checkbox"/> The work in class is interesting. | <input type="checkbox"/> I like the teacher. | <input type="checkbox"/> I need this class for college. |
| <input type="checkbox"/> The work is challenging. | <input type="checkbox"/> The teacher likes me. | <input type="checkbox"/> All my friends do well in this class. |
| <input type="checkbox"/> I am good at this subject. | <input type="checkbox"/> The teacher helps me. | <input type="checkbox"/> My friends help me. |
| <input type="checkbox"/> This class is important to me. | <input type="checkbox"/> I have previous knowledge of this subject. | |
| <input type="checkbox"/> Learning is fun in this class. | <input type="checkbox"/> Other | |

25. Please add any comments you wish on any of the reasons you do well in Kauhale.
26. Think about the class you are least successful in. Why do you think you do not do well in this class? (Check ALL that apply.)

- | | | |
|---|---|--|
| <input type="checkbox"/> The subject is boring. | <input type="checkbox"/> The teacher does not like me. | <input type="checkbox"/> My friends cannot help me. |
| <input type="checkbox"/> The work in class is boring. | <input type="checkbox"/> The teacher never helps me. | <input type="checkbox"/> I do not need this class for college. |
| <input type="checkbox"/> The work does not challenge me. | <input type="checkbox"/> My friends do not do well in this class. | |
| <input type="checkbox"/> I am not good at this subject. | <input type="checkbox"/> My family does not care if I do well or not. | |
| <input type="checkbox"/> This class is not important to me. | <input type="checkbox"/> I am not going to college so I do not need to do well. | |
| <input type="checkbox"/> I do not like the teacher. | <input type="checkbox"/> Other | |

27. Please add any comments you wish on any of the reasons you do not do well in Kauhale.
28. Which transitional skills did you learn this semester?

- | | | |
|---|--|---|
| <input type="checkbox"/> Note-taking | <input type="checkbox"/> Time Management | <input type="checkbox"/> Organization |
| <input type="checkbox"/> Communicating with your teachers | <input type="checkbox"/> Improving your writing skills | <input type="checkbox"/> Improving your reading comprehension |
| <input type="checkbox"/> Creating relationships with other students | <input type="checkbox"/> Annotations | |

29. What did you learn about yourself and time management (in class and/or on your own) and how did you apply this knowledge? How can the kumu support you next semester in this area?
30. Do you feel your transition to Kamehameha was a smooth one? Yes, No, So so
31. Explain why you think your transition to high school was smooth or not. Please use examples to explain.
32. I am beginning to understand who I am as a Hawaiian. True or False
33. What moment(s) helped you to think deeper about being Hawaiian.

Appendix C

Teacher Focus Group Discussion Questions

1. What have you done differently with this year's class than you've done in the past?
2. What transitional skills do you think you explicitly are teaching the students?
3. What is your understanding of Hawaiian culture based education? How are you implementing it in your class?

Appendix D

University of Hawai'i Assent for Child to Participate in Research Project:

Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.

Aloha, I'm Kumu Kēhau Glassco and I am a graduate doctoral student at the University of Hawai'i, in the Department of Education. One requirement for earning my Doctorate degree is to do a research project. I am doing a research project to see if the curriculum that was created for the smaller learning committee is achieving its goal of supporting you with your transition to high school at Kamehameha Schools – Kapālama.

What do I need to do?

ALL students in the class will be participating in the curriculum, regardless of whether or not you choose to sign this assent form. I need your permission to use your work (classwork/homework assignments and surveys) from this school year for my study. If you chose not to be in my study, I will not use your responses and course work as a part of my dissertation.

I am also asking for permission to access your previous grades, attendance, and referrals, detentions from Kamehameha's administration to help evaluate the new curriculum. I am looking at your class as a whole not at individual data, so I will not know your previous grades, attendance etc. If you chose not to be in my study, I will not use your information as a part of my dissertation.

Benefits and Risks: There may be no direct benefits to you for participating in my research project. The results of this project are intended to help me, other teachers, and researchers learn more on how to support freshman as they transition to high school and how to effectively integrate Hawaiian culture based education. I believe there is little or no risk to you in participating in this project.

Confidentiality and Privacy: All the information collected (surveys, grades, attendance etc.) will be kept private. Only my University of Hawai'i advisor and I will be able to see the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

After I complete my dissertation, I will destroy any student work used in my study. When I report the results of my research project in my dissertation, I will not use your name or any other personal information that would identify you. Instead, I will use a pseudonym (fake name) for you. If you would like a copy of my final report, please contact me at the number listed near the end of this consent form.

Voluntary Participation: Participation in this research project is voluntary. You can choose freely to participate or not to participate. Your parents can choose freely whether or not you may participate in this project. At any point during this project, you can withdraw your permission and stop participating without any loss of benefits. I understand that I am the researcher in this project and, at the same time, your teacher. I will make sure that your participation or non-participation in my research project does not affect your grades, or our teacher-to-student relationship at Kamehameha High School.

Questions: If you have any questions about this project, contact me, Kumu Kēhau Glassco, by phone (808) 255-5448 or e-mail (glassco@hawaii.edu).

You can also call my advisor at the University of Hawai‘i, Dr. Makalapua Alencastre, at (808) 932-7411 or by e-mail at kaawa@hawaii.edu.

If you have questions about your rights, contact the University of Hawaii, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep the section above for your records.

If you assent to be in this project, please sign the signature section below and return it to Kumu Kēhau Glassco.

Tear or cut here

Signature(s) for Assent:

I give my permission to join the research project entitled, *“Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.”*

I understand that I must agree to join this study. I understand that my parent(s) must also agree for me to join this project too. I understand that I can change my mind about being in the study at any time. I understand that my parent(s) may also change their mind about being in the study. I understand that I must tell the researcher of our decision to stop being in this project.

Name of Child (Print): _____

Child’s Signature: _____

Date: _____

Appendix E

University of Hawai'i Parental/Guardian's Consent for Child to Participate in Research Project:

Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.

Aloha, I'm Kumu Kēhau Glassco and I am a graduate student at the University of Hawai'i, in the Department of Education. One requirement for earning my Doctorate degree is to do a research project. I am doing a research project to see if the curriculum that was created for the smaller learning committee is achieving its goal of supporting students with their transition to high school at Kamehameha Schools – Kapālama.

What does my child need to do?

ALL students in the class will be participating in the curriculum, regardless of whether or not you choose to sign the consent. This form is asking permission to use your child's work (classwork/homework assignments and surveys) from this school year to use for my research. If you do not want your child to participate my study, I will not use their responses and course work as a part of my dissertation.

I am also asking for permission to access your child's previous grades, attendance, and referrals, detentions from Kamehameha's administration to help evaluate the new curriculum. I am looking at the class as a whole not at individual data, so I will not know your child's previous grades, attendance etc. If you do not want your child to participate in my study, I will not use their information as a part of my dissertation.

Benefits and Risks: There may be no direct benefits to your child for participating in my research project. The results of this project will help myself as well as other teachers and researchers learn more on how to support freshman transition into high school and how to effectively integrate Hawaiian culture based education. I believe there is little or no risk to your child in participating in this project. Your child may also withdraw from the project altogether, which would mean your child's survey responses, student work and data (grades, attendance, referrals etc.) will not be used in my study.

Confidentiality and Privacy: All the data collected (surveys, grades, attendance etc.) will be kept private. Only my University of Hawai'i advisor and I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

After I complete my dissertation, I will destroy any student work used in my study. When I report the results of my research project in my dissertation, I will not use your child's name or any other personal information that would identify your child. Instead, I will use a pseudonym (fake name) for your child. If you would like a copy of my final report, please contact me at the number listed near the end of this consent form.

Voluntary Participation: Participation in this research project is voluntary. Your child can choose freely to participate or not to participate. You can choose freely whether or not your child may participate in this project. At any point during this project, you can withdraw your permission, and your child can stop participating without any loss of benefits. I recognize that I am the researcher in this project and, at the same time, your child's teacher. I will ensure that your child's participation or non-participation in my research project does not impact his/her grades or our teacher-to-student relationship at Kamehameha High School.

Questions: If you have any questions about this project, contact me, Kēhau Glassco, by phone (808) 255-5448 or e-mail (glassco@hawaii.edu).

You can also call my advisor at the University of Hawaii, Dr. Makalapua Alencastre, at (808) 932-7411 or by e-mail at kaawa@hawaii.edu.

If you have questions about your rights, or your child's rights, contact the University of Hawai'i, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep the section above for your records.

If you consent for your child to be in this project, please sign the signature section below and return it to Kumu Kēhau Glassco.

Tear or cut here

Signature(s) for Consent:

I give permission for my child to join the research project entitled, *“Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.”* I understand my child will be participating in the new curriculum all school year. I understand my child's work will be used for this research project. I understand that I must agree for my child to join this study. I understand that my child must agree to join this project too. I understand that my child changes his or her mind about being in the study at any time. I understand that I may change my mind about my child being in the study. I understand that I must tell the researcher of our decision to end stop being in this project.

Name of Child (Print): _____

Name of Parent/Guardian (Print): _____

Parent/Guardian's Signature: _____

Date: _____

Appendix F

University of Hawai'i Adults Assent to Participate in Research Project:

Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.

Aloha, I'm Kēhau Glassco and I am a graduate doctoral student at the University of Hawai'i, in the Department College of Education. One requirement for earning my Doctorate degree is to do a research project. I am doing a research project to see if the curriculum that was created for the smaller learning committee is achieving its goal of supporting students with their transition to high school at Kamehameha Schools – Kapālama.

What activities will you do in the study and how long will the activities last?

We will work collaboratively in creating a pedagogy grounded in Hawaiian epistemology as the foundation for our interdisciplinary units. Throughout the summer and fall semester of 2016, you will be requested to write several journal entries reflecting on your teaching practice using the created pedagogy verses your normal teaching process.

Benefits and Risks: There may be no direct benefits to you for participating in my research project. The results of this project are intended to help us, other teachers, and researchers learn more on how to support freshman transition into high school and how to effectively integrate Hawaiian culture based education. I believe there is little or no risk to you in participating in this project. There is a possibility you may become uncomfortable or stressed by implementing a different pedagogy. If that happens, we will take a break. You may also withdraw from the study altogether.

Confidentiality and Privacy: All the data collected will be anonymous. Only my University of Hawai'i advisor and I will have access to the information. Other agencies that have legal permission have the right to review research, which include records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

When I report the results of my research project in my dissertation, I will not use your name or any other personal information that would identify you. Instead, I will use a pseudonym (fake name) for you. If you would like a copy of my final report, please contact me at the number listed near the end of this consent form.

Voluntary Participation: Participation in this research project is voluntary. You can choose freely to participate or not to participate. I recognize that I am the researcher in this project and, at the same time, your colleague. I will ensure that your participation or non-participation in my research project does not impact our work relationship at Kamehameha High School.

Questions: If you have any questions about this project, contact me, Kēhau Glassco, by phone (808)255-5448 or e-mail (glassco@hawaii.edu).

You can also call my advisor at the University of Hawaii, Dr. Makalapua Alencastre, at (808)932-7411 or by e-mail at kaawa@hawaii.edu.

If you have questions about your rights, contact the University of Hawaii, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep the section above for your records.

If you agree to be in this project, please sign the signature section below and return it to Kēhau Glassco.

Tear or cut here

Signature(s) for Consent:

I give my permission to participate the research project entitled, *“Implementing and evaluating a Hawaiian cultural based education interdisciplinary curriculum in a Smaller Learning Community (Kauhale) to Support Freshman transition at Kamehameha Schools – Kapālama.”*
I understand that I must agree to join this study. I understand that I must tell the researcher of my decision to end stop being in this project.

Name of adult (Print): _____

Adult’s Signature: _____

Date: _____

Appendix G

Kamehameha Schools Learner Outcomes – “E Ola!”

Learners’ Strong Foundation

1. ‘Ike Kūpuna (Ancestral experiences, insights, perspectives, knowledge, and practices): Students develop understandings of the achievements of their kūpuna and recognize that ‘ike kūpuna to shape their growth. Students develop facility in ‘ōlelo Hawai‘i to access deeper levels of ‘ike kūpuna and connect more strongly to a community of similarity nurtured individuals.
2. Aloha ‘Āina (Hawaiian patriotism; love for the land and its people): Students develop an in-depth relationship with places and communities that hold significance to them and strive to improve the well-being of such places, engaging in experiences that foster aloha for and lifelong allegiance to ka Lāhui Hawai‘i (Hawaiian nation, people) and ka pae ‘āina o Hawai‘i (Hawaiian island archipelago).
3. Kūpono (Honorable character founded on Hawaiian and Christian values): Students live by Hawaiian and Christian values such as extending aloha to others, taking responsibility for their actions, caring for others and themselves, and making ethical decisions.

Learners’ Native Hawaiian Identity

4. Mālama and Kuleana (social agency, community consciousness): Students develop a passion for and the skills needed to engage with their ‘ohana, communities, and others to achieve Hawaiian cultural vitality, political and social justice, environmental sustainability, and the overall well-being of their communities and in the larger global context.
5. Alaka‘i Lawelawe (Servant Leadership): Students practice being servant leaders by fulfilling their kuleana (earned roles and responsibilities), engaging collaborative approaches, and knowing when to provide direction, when to follow others, and when to empower others.
6. Kūlia (Excellence): Students develop a desire to achieve excellence in all their endeavors, carefully consider and choose appropriate courses of action that build their mana, and demonstrate a mindfulness of how their excellence brings mana to their Lāhui, their community, their ‘ohana, and themselves.

Learners’ Productive Courses Of Action

8. Academic Competence: Students develop academic competence, fostering the multidimensional characteristics of a learner.

9. Growth Mindset: Students learn to be goal oriented, resilient, and to view hard work, challenges, new experiences, learning, and perseverance as stepping stones to growth.
10. Self-efficacy: Students develop a strong, positive self-image and gain confidence in their ability to set and achieve goals.
11. Problem solving: Students develop skills in identifying, articulating, and solving problems.
12. Innovation and Creativity: Students learn to innovate and generate new ideas, processes, activities, and solutions, and apply these to achieve productive outcomes.
13. Collaboration: Students collaborate and work effectively with others to achieve shared goals.
14. Global Competence: Students develop knowledge, understanding, and intercultural communication skills to interact effectively in an interdependent world.

E Ola!: Students cultivate their own well-being – cultural, spiritual, social, economic, physical, emotional, and cognitive – so they can thrive and help to ensure the vibrancy of their ‘ohana, community, ka Lāhui Hawai‘i, ka pae ‘āina o Hawai‘i, and ka honua.

Appendix H

The Hawaiian Indigenous Education Rubric

TABLE 1 The Hawaiian Indigenous Education Rubric (HIER): Full detail

I. Language: Use of Heritage Language in Teaching				
	None	Emerging	Developing	Enacting
Critical indicators	I do not have use for Hawaiian language in my class.	I use simple Hawaiian words and/or songs to expose my students to Hawaiian language.	I speak and display Hawaiian language in the learning environment, using phrases and simple language exchanges.	I teach and communicate with my students in 'ōlelo Hawai'i (Hawaiian language).
(a) Integration of Hawaiian language in class				
(b) Hawaiian language materials and resources (e.g., books, electronic media, audio/visual technology, kūpuna, community members)	I have no Hawaiian language materials or resources in my classroom.	I occasionally use Hawaiian language materials in my teaching.	I use Hawaiian language materials in my teaching fairly often.	I use Hawaiian language materials in my teaching all the time.
Philosophy on language	Hawaiian language is less relevant to core academic subjects like math, English, science, and social studies.	I believe it is important for all students to be exposed to Hawaiian language.	My teaching is grounded in the belief that all students should have a basic level of competency in the Hawaiian language.	My teaching is grounded in the belief that all students should be proficient in Hawaiian language to achieve our vision for a Hawaiian-speaking community.
II. 'Ohana and Community Involvement				
	None	Emerging	Developing	Enacting
Critical indicators	I don't expect families to actively contribute to my class or my students' learning.	I provide students' family members with information about ways they can support their child's learning at home.	I develop homework assignments and activities that require the active participation of family members.	I integrate 'ohana, community members, and kūpuna into the learning experience.
(a) Integration of 'ohana/community in curriculum				
(b) Communication between 'ohana and teachers	Most of my contact with students' families occurs through open houses and school events.	I contact family members (e.g., by phone, in person, by e-mail) when their children are having problems in my class.	I frequently contact family members about a variety of student matters, both good and bad.	I work closely with 'ohana to support their children's growth and success in and out of school.
(c) Relationship between 'ohana and teachers	As a teacher, my relationship with students does not extend beyond the classroom.	I talk with my students about their home lives but maintain appropriate physical and emotional boundaries.	I invite students' family members into the learning environment to create a sense of 'ohana.	I work hard to get to know my students, their families, and their community through interactions outside of school.
III. Content: Culture- and Place-Based				
	None	Emerging	Developing	Enacting
Culture-based	I use vendor-developed textbooks and materials for my class to ensure that the content and quality meet state standards or other benchmarks and guidelines.	I use readily available curricula and materials and try to interject Hawaiian or "local" examples where relevant.	I use culturally appropriate curricula and materials that include some Hawaiian cultural content.	I embed Hawaiian knowledge, practices, values, behaviors, language, and spirituality into the content and materials of my class.
Critical indicators (a) Curriculum (b) Content				
Place-based	I use textbook-based lectures and discussions in my class.	I use hands-on learning activities outside the classroom.	I relate my coursework and content to the local (but not necessarily Hawaiian) community and my students apply what they have learned to community settings.	I use the community as a setting for student learning that is responsive to community needs and grounded in the Hawaiian knowledge, practices, and history associated with a place.
Critical indicators (c) Experiential (d) Community-based (e) Place-based				
Philosophy on culture in class	I try to keep my class neutral and free of cultural references so that no students feel left out.	I design my class to support the diverse cultural backgrounds of my students.	I incorporate Hawaiian culture in my teaching to better engage students.	My ultimate goal in working with students is to preserve and perpetuate Hawaiian culture for generations to come.

IV. Context				
	None	Emerging	Developing	Enacting
Critical indicators				
(a) Culturally grounded context	My teaching methods and delivery have little to do with Hawaiian culture, practices, values, or beliefs.	In my teaching, I incorporate universal values, couched in Hawaiian terms such as 'ohana and <i>lōkahi</i> (unity, harmony).	I integrate Hawaiian practices, rituals, and protocol as part of the learning experience for my students.	The learning environment and daily practices of my class grow from my fundamental Hawaiian beliefs and native spirituality.
(b) Culturally relevant community of learners	I lead class discussions that give individual students a chance to be heard when called on.	I facilitate student discussions and group interactions using a free-flowing, "talk story" structure that is collaborative in nature.	I encourage students to teach and learn from each other.	I create opportunities for intergenerational learning, where students learn from each other, from teachers, and from kūpuna.
(c) Community well-being, <i>kuleana</i> (responsibility)	I define and direct my students' roles and responsibilities.	I teach my students to recognize their responsibilities and the importance of their roles.	I expect my students to recognize and carry out their roles and responsibilities on their own.	I encourage my students to initiate and lead community projects to promote greater community well-being.
Philosophy on the role of teacher	My primary goal in teaching is to improve my students' academic achievement.	I am just as responsible for my students' social and emotional growth as I am for their academic achievement.	As a teacher, building cultural identity and self-worth in my students is as important to me as increasing their academic achievement.	I am responsible for ensuring that my students have a strong cultural identity, sense of place, and academic achievement.

V. Assessment and Accountability

	None	Emerging	Developing	Enacting
Indigenous assessment	I use multiple-choice and other paper-and-pencil tests to assess students.	I assess my students by having them engage in projects or performances that:	I assess my students by having them engage in projects or performances that:	I assess my students by having them engage in projects or performances that:
Critical indicators				
(a) Demonstrate knowledge/skills		(1) Require a range of knowledge and skills.	(1) Require a range of knowledge and skills, AND	(1) Require a range of knowledge and skills, AND
(b) Application			(2) Demonstrate a meaningful understanding of the material including the ability to problem-solve and creatively adapt knowledge to different situations.	(2) Demonstrate a meaningful understanding of the material including the ability to problem-solve and creatively adapt knowledge to different situations, AND
(c) Value to community, culture				(3) Are culturally purposeful and useful (i.e., have real value to the community and to Hawaiian culture).

Appendix I

Social studies student work sample: Essay for cultural practitioner project

Period 8

12/5/16

Cultural Practitioner Project

Many people feel disconnected from their ancestral roots. With this “new” version of our society, we miss out on our identity of where we come from and where our ancestors come from. This is why as a freshman in Hawaiian Culture, I did a cultural practitioner project where they learned about a certain practice from a practitioner to gain knowledge. The preferred practice that the teachers wanted was a practice that your family has. My family makes [REDACTED] Ukulele so for my project I made an ‘ukulele. My project helped me to reach E ola through a strong foundation, Native Hawaiian identity, productive courses of action, and continuing my family’s legacy. My project emphasized a strong foundation through ‘ike kūpuna, how I gained a sense of Native Hawaiian identity through mālama and kuleana, and productive courses of action through growth mindset.

My project of making an Ukulele can relate to a strong foundation through ‘Ike Kūpuna. ‘Ike Kūpuna is the ancestral experiences perspectives, knowledges, and practices. My great grandfather started the [REDACTED] Ukulele business and ever since the legacy has been passed down to the next generation. The business started with my great grandfather Samuel [REDACTED] I’m learning how to make an Ukulele from my Uncle, Casey [REDACTED], who is the third generation of the business. All the techniques that are used are still very similar to those that my great grandfather used. Technology was a game changer to making the process shorter, but the concept of that step is still the same as they were back then. For example, when it comes to come bending

the wood, my great grandfather would use a heated metal pipe and bend it by hand. Now we use this machine that applies heat to the piece of wood. Using the machine is a lot more safe because when you would use the heated pipe, burning your hand was something that happened a lot. In addition to learning about 'Ike Kūpuna, making an ukulele also taught me about Mālama and Kuleana.

Making an Ukulele helped me find Hawaiian identify through Mālama and Kuleana and also Kūlia . Mālama and kuleana is social agency and community consciousness. My project of making an Ukulele doesn't necessarily relate to mālama 'āina, caring for the land, but more like caring for the family legacy. My family's ukulele company has been around for one hundred years. My family's ukulele company has been around for one hundred years now and if there were no sense of mālama or kuleana, the business might not be here, it's a tradition of sorts. If the older generation doesn't teach the younger generation to make an Ukulele, then the tradition will not continue. The same goes if the younger generation doesn't want to learn how to make an Ukulele. Kūlia means to strive. A popular 'Ōlelo No'eau, or a Hawaiian proverb, is "Kūlia i ka nu'u". This means to strive for the summit. Kūlia is very important to my family and making their ukulele. My family does their absolute best to make sure the ukulele looks nice and is made with love. This is because they want to do their best to represent their kūpuna and make them proud. Making an Ukulele that is sloppy wouldn't represent my family and doesn't respect the tradition and reputation that they have set. A few other lessons that I learned through this project is Growth Mindset, Innovation and Creativity, and Collaboration.

My project relates to Growth Mindset because the process of making an Ukulele is not easy. It takes perseverance to go through with it. Making a finished Ukulele takes months to make and it's very easy to give up. Sometimes you just have to be patient and work hard.

My project also relates to being innovative and creative because of designing an Ukulele. My family made and changed things to the design of a certain type of Ukulele, that took creativity. The whole process has been perfected over the years. When my uncle gave me the tour of the work area, he walked me through the process to where the Ukulele would go for each stage of being made. Drying the wood is very important, if it has too much water in the wood, the ukulele could warp. If the wood is too dry, then the wood could crack and there goes all your hard work. Collaboration was something I observed during my time at the factory, everyone has their own job at the factory. The factory is fairly small and has to make a couple hundred ukuleles per month. In the factory, there are a couple workers that work on one step in the overall process. This helps the process easier on everyone and helps to get the ukulele done faster.

My family, in the past, made sure that 'ukulele making in our family will continue by teaching the next generation. It was similar to how our kūpuna used to do things. If your family were fisherman, you would be a fisherman. If your family were fisherman, you would be a fisherman. If your family were farmers, then you would be a farmer. In my family, if you were a boy born into the family, you would more than likely work at the family business. I think there is a small concern right now because none of my cousins or first cousins have come in to learn how to make an Ukulele. The workers aren't all my family, but the leaders of the company are. But, even though none of my cousins have come in except me, that doesn't mean that no one else will. Hopefully, by learning and talking to my cousins about it, I could inspire them to want to make one.

My project helped me to reach E ola through a strong foundation, Native Hawaiian identity, productive courses of action, and continuing my family's legacy. I have gone over how my project gave me a strong foundation through 'ike kūpuna, how I gained a sense of Native

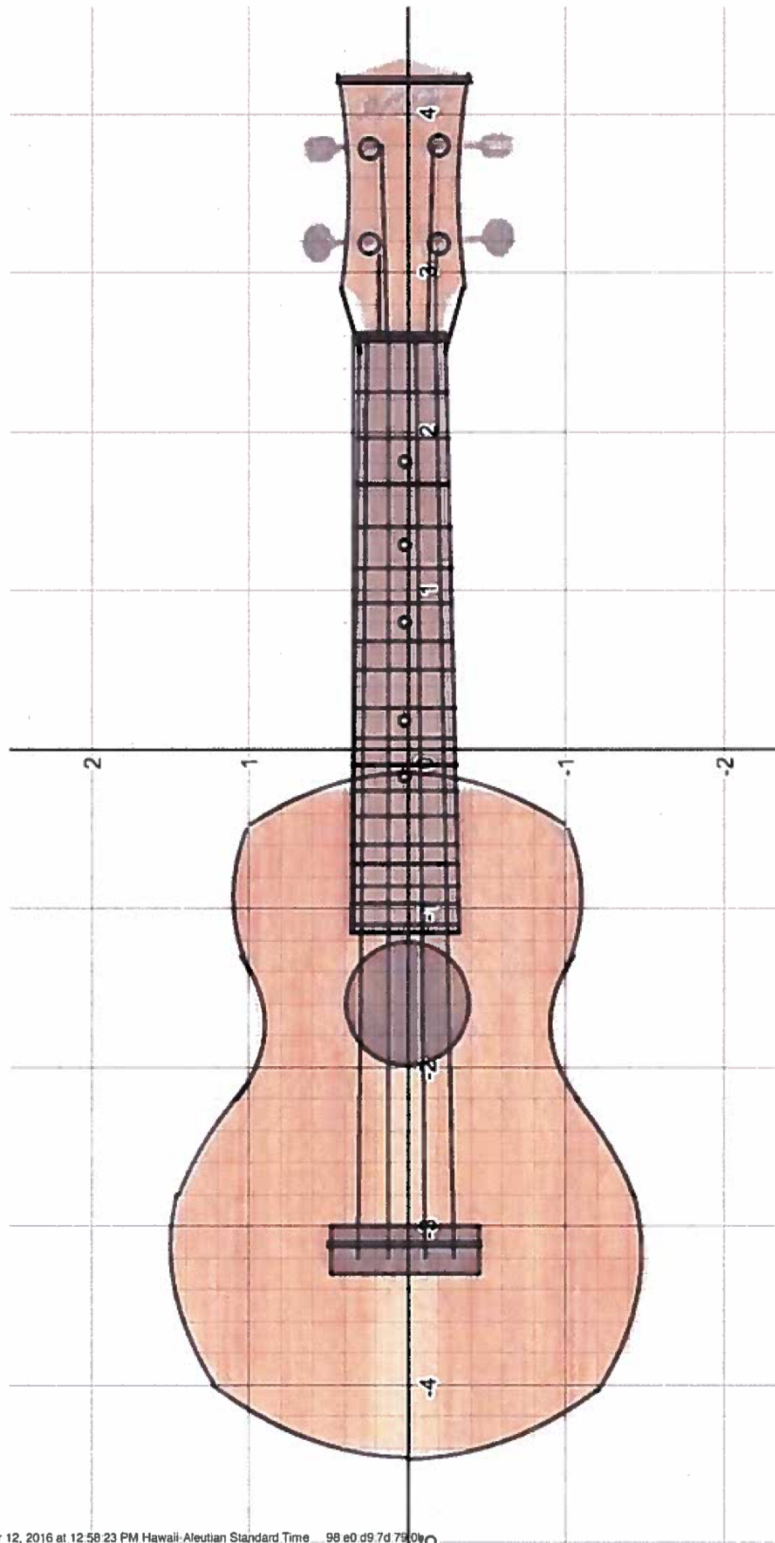
Hawaiian identity through mālama and kuleana, and productive courses of action through growth mindset. Even though I don't plan on becoming an Ukulele maker, this experience and lesson it has taught me will stay with me for the rest of my life.

Hour Log:

<u>Date and times</u>	<u>Describe what you did?</u>	<u>Reflection: How did you feel? How are you growing as a person, as a Hawaiian?</u>
11/28 (3 hours)	Tour of the Factory, bending and working on sides of the Ukulele, sanding front and bottom pieces, and sanding.	I felt a little strange. I hadn't been in the shop. I'm not great working in new spaces. It was cool that my uncle talked a little bit of the techniques that he used.
12/3 (6 hours)	Glued slit wood piece into the sides for support, gluing the sides, and working on the neck and assembly.	I really didn't seem a lot of improvement until today. The last time I went in I knew I started and had something, but now I really have a vision of the finished product.
12/4 (1 hour)	Sanding and cleaning up dried glue.	My uncle couldn't meet with me today so he told me to sand everything and clean up scratches. I feel like that I'm really starting to connect to my roots and now I see how special ukulele making is to my family.

Appendix J

Math student work sample: Draw a Hawaiian cultural item using the Desmo program



Appendix K

Science student work sample: Genealogy/Pedigree Lab

Name: _____ Period: 3 Date: 4-11-17

Genealogy/Pedigree Lab Project Reflection

DUE: Tomorrow

10/10

1. What new things did you learn about your family in this project?

Some new things that I learned about my family in this project was that straight hair is a dominant trait in my family and the definition of both recessive and dominant and the impact that it can have in some families. Recessive is a trait that skips a generation and dominant is a trait in every generation. I also learned that my family tree is basically made of straight haired people.

2. What did you learn about your Cultural Heritage in this project?

I learned that cultural heritage is important. It helps us to show power, by knowing our genealogy and ancestors. It also is a huge health benefit. Knowing your hereditary and genealogy can help you find or prevent any health problems such as cancer, diabetes, heart problems, high cholesterol, etc... Learning more about my cultural heritage also helped me to connect with my ancestors and compare my traits with theirs & learn my cultural heritage stories.

3. What did you learn about Mendel's Law of Genetics Genetics & Inheritance?

I learned that you can either inherit traits from your family or those traits can skip a generation called recessive. Dominant is that it's always in your family and that trait that you selected is more than other traits in your family tree. I also learned that each pair of alleles segregates independently of the other pairs of alleles during gamete formation. Genes for different traits can segregate independently during the formation of gametes.

4. Explain the trait that you chose in the project, how it was inherited, and how it affects you and your family?

The trait that I decided to research was my straight hair gene. Straight hair was inherited from both my mom and dad's side of my family. Basically everyone in my family has straight hair, so we always try to curl it or give it some type of texture. Having straight hair can also be a blessing, because it's easier to tame and I personally think you look more clean and neat.

5. Explain how this project was relevant to real-life?

This project is relevant to real-life because it helps you to learn more about your heritage and connect with your kupuna. Doing this project I got to speak with my grandparents and learn more not just about them but also my great grandparents and other grandparents that passed away before I could meet them. Doing this project can also help your health. You can prevent chances of you getting a serious health issue by checking in with the doctors and telling them your cultural heritage.

6. Name and explain 2-3 challenges about the project and how did you overcome it?
(Family members list, interview, trait, genotypes/genetics, lab report, graphs, data, etc).

Some challenges that I had with this project was finding the time to interview my grandparents, but I overcame it by canceling some things and missing practices, but it was worth learning more about my grandparents and my ancestry. Another challenge I had was trying to find out my great grandparents, because my family didn't know their family tree, but a way I overcame this was digging even deeper into my family tree.

7. How did this genealogy project connect with what you learned in Social Studies, Math, or English class (interdisciplinary classes)?

This genealogy project connected with my social studies class, because we were learning about mo'okuahau and geneology of Kamehameha and why it's so important to know your geneology. It also connects with math, because for our data we had to gather up our information and convert the fractions in percentages. For English this projects connects because we learned about the importance of family and how we need to know our background in order to know ourselves.

8. What can be done to improve this project? Do you feel you were given enough time for the project? Was the project divided up properly to meet check points so that the task was doable or was it overwhelming? Explain.

Something that can be improved on this project is better teaching on the pedigree chart. Other than that it was good. I do feel that the students were given ample time to complete the assignment and task that was asked. I do feel that the project was divided up good and met the check points and wasn't overwhelming. We had time in class to do our posters & lab reports & had time to ask Ms. Arce for help or ask for clearer directions.

Appendix L

Language arts student work sample: Science fiction mo'olelo

Ascender

By: Student A



Student A

Ryan Oishi

HPL English 9

17th April, 2017

Ascender

The persistent ringing in Kealoha's ears bloomed into a pulverizing migraine that engulfed his disarranged memories. He awoke to a subtle chime over a speaker system that was followed by a soothing voice, "Aloha soldiers, welcome to Pū'ali, local time is 5:34 pm, and the current temperature is 29 degrees celsius, we will be arriving shortly". Kealoha's mind already flooding with bewilderment, vacuously examined the tenebrous cylinder like-room. His flitting eye caught onto a familiar face of comfort, who was sitting just 3 rows away, Kani.

She was Kealoha's childhood friend, who grew up together in the same 'ili. Not only did they share the same birthday, but concurrently, the same vehement love for their Hawaiian Culture. He walked over to her seat inquisitively, yearning to understand what was happening. "Kani, it's me Kealoha, from Kapa'akea 'ili, at Waikīkī ahupua'a, in Kona moku, on O'ahu moku-puni", Kealoha interrupts as she was reading the designs on her hala bracelet.

"Kealoha! I was looking for you. Oh and Happy 20th Birthday, well, it's actually everyone's 20th birthday on this air-marine craft. But here's your birthday gift, sorry I didn't have time to wrap it" Kani apologizes as she hands over her delicately entwined hala bracelet.

"Mahalo for this, but what are we doing here, I can't remember anything" Kealoha cries. Feeling as if there's an impalpable prison immuring his memories in a cell of insanity.

"We are on a flight to Pū'ali in accordance to the national service law, there's nothing to worry about Kealoha, you're probably just sensitive to the sleeping medicine. Try and focus on

your family like Pualani and ‘Oke, it helped me to conciliate my thoughts” Kani reassures him. As soon as Kani mentioned Pualani and ‘Oke, his memory gradually began to ooze back into his consciousness like their names were a key to his cell of insanity. The last memory he could recall of Pualani his 16-year-old sister and ‘Oke his 12-year-old brother was from this morning. They came racing to Kealoha, who was sitting in the backyard, both in their hands carrying an elegantly wrapped present attempting to wish him a Happy 20th Birthday as they gasp for air like fish out of water. ‘Oke caught a vibrant golden anole and Pualani had cooked a homemade bottle of silky kukui nut oil both for Kealoha, but when he opened the present it reeked of death. The golden gecko had guzzled the potent kukui nut oil that formed a pool of quietus in which it laid lifelessly in, reflecting the faces of Pualani and ‘Oke’s despondency. Yet remembering his siblings and the fervent everlasting love he held in his heart for them suppressed their very faces of despair and gave Kealoha a hope that strengthened him and gave him confidence in the uncertainty of his journey that laid ahead.

The air-marine craft had finally arrived at Pū‘ali as everyone eagerly gazed out their windows in astonishment for no one has ever seen the newest island to the Hawaiian archipelago. You couldn’t see any land for it was sheltered by the canopy of an overgrown Hawaiian forest with Pia and Wauke growing under the protection of the mammoth Koa trees that guarded over this jungle; this island seemed to be untouched by the claws of technology and free from the death grips of urbanization for there were no visible signs of machinery. Another chime echoes throughout the craft, stealing everyone’s attention, “This is your captain speaking, we have arrived at our destination Pū‘ali also known as soldier island. If you haven’t known, Pū‘ali has been bought by the Hawaiian Armed Forces strictly for the training of our nation’s brave hybridized soldiers. Now please, buckle your air and marine safety belts we will be landing

shortly. And on behalf of Makani airlines and our crew today, we thank you for your national service, mahalo”. The clinking clamor of clattering safety belts instructed Kealoha that something drastic was about to happen; then, just a few minutes later the captain began to count down with anticipation growing in his voice, “5,4,3 begin marine descent”. Kealoha could see with his peripheral vision the wings of the air-marine craft folding inwards like a bird preparing to land. The craft then began to plunge downwards to the depths of the glassy sapphire ocean below. Kealoha was sinking into his chair from the invisible force of the veritable freefall dive like a rocket racing to the stars. The cabin surprisingly quiet, was motionless. The pure terror emitting from the expressions in the cabin were louder than a millions shrieks of horror. Then, the air-marine craft collided into the ocean creating ripples of tsunamis that bursted in every direction with the craft at the eye of the storm. It soon began to cautiously sink downwards to the sea floor like they were falling in an ocean of thick honey. The air-marine craft swiftly swam to a colossal underwater cave in which the craft navigated through a perplexing highway of tunnels; along the way, honu and other native fish gaped with peculiarity at this foreign piece of technology invading their home.

Finally, they surfaced to a pocket of air in the subaqueous cave where everyone got off and were sternly directed to enter through a metal door that read “Government Property”. The door led to an eerie hallway of squeaking doors where Kealoha was assigned a room number, 5-12-13. The room was entombed in darkness with the only source of feeble light being a table with a computer screen, illuminating a chair. Immediately after Kealoha had sat on the chair an amiable voice pleasantly requested for him, “Please state your verbal signature to begin the vertex assigning process” the computer asked.

“My name is Kealoha Ho‘opili and I authorize this confirmation” he responded with assertiveness and pride exuding from his voice. An equilateral triangle then formed on the table with a word contained in each of its vertices. The bottom right vertex read assailant, the bottom left vertex read mender, and the pinnacle of the triangle's top vertex read ascender. The computer asked Kealoha to place his palms onto the frigid unwelcoming screen for DNA sampling. In seconds the computer measured his blood pressure, approximate height, weight, age, heart rate, and took blood samples while it entered his DNA into the Hawaiian Armed Forces system and the triangle to be classified. Kealoha curiously stared at the triangle when it suddenly lit up the ascender vertex glowing like a firefly frozen in the darkness of incertitude. The computer then asked again, “Please state your verbal signature to corroborate your vertex classification.”

“My name is Kealoha Ho‘opili and I authorize this confirmation” he responded, this time with a sense of dubiety. A woman dressed in a blinding snowy lab coat then gracefully walked into the room clacking her high heels with every step.

“Aloha Kealoha, I know you must be certainly quite confused about everything but all will be explained shortly. But for now allow me to introduce myself” as she tries to quickly change the subject, “my name is Wahea and I’m currently the head geneticist of this hybridizing department. This branch is truly my baby, I have nursed it to health and watched it grow into such a beautiful and accomplished organization and you are the key to my child’s continued success, Kealoha” as she incorporates a more solemnly serious tone in her voice. “That triangle displayed in front of you is an indispensable aspect to our nation's army and liberation, this triangle helped us to secede from the United States of America and regain our independence, our country, our own sovereignty back” she says, now steaming with indignation and raising her voice. “Sorry about that, I let my pride get to me sometimes” she apologizes, “where were we,

ahh yes the vertex assigning process, let me explain this to you. Our advanced technology can know trace back a soldier's genealogy just from a blood sample of DNA. From this vast database of information, we are able to discover if you have a family 'aumākua or if you ancestors were kumu la'au lapa'au of ancient Hawai'i. From there we classify which vertex your DNA naturally belongs to base upon your family pedigree. If we find an 'aumākua in your genealogy you will be systematized as an assailant, our faces in war and defenders in battle who use the power of the animal kingdom. However, if we find a kumu la'au lapa'au in your genealogy you will be categorized as a mender, our healers for the assailants who use the power of mother nature. With this in mind, you must be wondering what's an ascender? Well the ascender is just as equally crucial as all the other vertices because each vertex must be perfectly equiangular and equidistant in order for there to be absolute balance. However, there can only be one ascender per lifetime, who has both an 'aumākua and kumu la'au lapa'au in their blood; this means that an ascender can absorb any soldiers power for a short amount of time with a single touch. And you Kealoha are our nation's newest ascender" Wahea announces with triumph, "But with this demanding responsibility it is pivotal that you understand that an ascender never fights or heals, they only instruct the army how to use their powers like a teacher of war" she says with a smirk carved onto her face.

Another scientist suspiciously marched into the room and whispers into Wahea's ear like leaves susurrating in the wind. When the scientist left, Wahea's comportment had entirely changed, "I'm so sorry to inform you Kealoha, but your siblings, Pualani and 'Oke had drowned today at 3:45pm at Kapa'akea beach. Their dead bodies were found washed upon the shoreline" she said sorrowfully.

“NO! This can’t be true, I taught them how to swim, they are not dead, not my brother and sister, you are a liar. My name is Kealoha Ho‘opili and I do not authorize this confirmation”, Kealoha howls with tears streaming down the valleys of his face like a cascade of waterfalls gushing out of a broken fire hydrant. Kealoha’s heart became as gelid as the icecaps aloft Maunakea with acts of retribution clouding his mind. The love for his brother and sister gave him hope and powered his strength to continue on this journey but know his love is slowly dwindling like an ember aflame dancing through the snowy chill of the winter, facing it’s inevitable death.

The same scientist ambles back into the room, holding in his hands a tray with a vial and an intimidating interminable syringe. Wahea punctures the vial to extract the mauve serum that will activate his ascender genes and insensitively jabs the needle down Kealoha’s spine, inserting the medicine for an agonizing 60 seconds. He then swoons into a deep slumber.

Kealoha wakes up to find himself in a different, more tender yet fairly small room. There is only one cramped futon laid onto a bed platform and a computer flushed to the surface of the wall. It calls to Kealoha, “Good morning Mr. Ho‘opili, every day I am programmed to remind you of your dutiful responsibility to this nation. As ascender, your sole purpose is to inculcate the soldiers of the Hawaiian Armed Forces, both assailant and mender in discovering strength in their powers so that they may protect our nation with morality and prosperity for the future. Do you corroborate with your mission Mr. Ho‘opili?” the voice solicits.

“My name is Kealoha Ho‘opili and I authorize this confirmation” he replies with honor. Kealoha puts on Kani’s hala bracelet and stumbles out of his lodge, following the fragrance of morning breakfast to the dining hall. After he gets his tray of bacon and rice he finds Kani sitting by herself, so he walks over to her table to sit down with her.

Before Kealoha gets to sit down, Kani turns around in astonishment, “Is that really you Kealoha? You’re not dead? You’re still alive!” she says in complete bliss. “Those imbecile scientists told me you had died because your body rejected the serum. But I didn’t believe them, I told them that he was the strongest one here and I was right, you are alive”.

“But why did they tell you I died? And how did you know it was me without even seeing me?” Kealoha asked in awe.

“I have no idea why they faked your death. But I guess I’m an assailant now and after they injected me with the activation serum I received the power of enhanced hearing from my ‘aumākua the pūpalō or Hawaiian deer. So when I heard my dangling hala bracelet I knew it had to be you. Kealoha, promise you will never leave me again” she said as she lost herself in Kealoha’s hazelnut eyes. Before Kealoha could say anything, Kani lunged forward kissing Kealoha’s lips, painting words of that the heart cannot express. In an instant, their souls were united in the spirit of pure love carried in one breath. Kani and Kealoha together, instilled love back into their frigid hearts and uncovered the pristine feeling of hope once again. Along with Kani’s established and Kealoha’s newfound love, Kealoha acquired her power of enhanced hearing through their kiss.

He could hear the most minute noise from a mile away, focusing on each uniquely different. He was a part of every discussion in the military base, listening to everyone's words, breathes, and movements. Bouncing from conversation to conversation in a mess of cacophony he recognized one voice, Wahea. He could hear her talking to the military generals in the next wing. “Every soldier has been successfully hybridized General” she says with satisfaction.

“Good work Wahea, and have you integrated the heart process” the general says in a low voice.

“Yes sir, it was actually quite easy to do with these credulous fragile hearts. Our technology can also sense their source of love, and with our beautifully composed heartbreaking stories, there is a 100% guarantee that we have exterminated all love from their life. I give you the world’s finest hybridized, heartless, killing machines” she says with delight.

Kealoha was speechless, all he could think of was the fact that Pualani and ‘Oke are still alive. Then, a surge of exasperation raged through his veins, “how could they lie straight to our faces, destroy our sense of love just to make us better soldiers. They are demoralizing our sense of humanity; this is will only lead to the annihilation of our own people” as he argues to nothing but the emptiness of the air. Then a wave of enlightenment washes over Kealoha as he remembers his mission as an ascender. Kealoha stands up on the table. “Your first lesson begins now” Kealoha strongly roars. “As ascender, I am here to inculcate all of you in discovering strength in your powers so that you may protect our nation with morality and prosperity for the future. But first, to do this I must give you back your morality of love; they lied to you all, feeding you stories of how your loved ones have died. Soldiers, do not eat these fabrications blindly for they are deceiving you. The absence of love does not fortify your ability to fight, it does not anneal your sense of sympathy and remorse. Love is alive, like the electricity that flows throughout the pond of hope after it has been struck by the lightning of empowerment. It is the very foundation in which hope is built upon and only through this realization may you find strength in your capabilities. Listen to my words if you too, will fight to ensure the well-being and future generations of our people”.

Kealoha leaves the dining hall with everyone in tears and strides back to his lodge with reassurance in his lesson. He blithely falls onto his bed as the computer seeks him “Aloha Mr. Ho‘opili, are you fulfilling your dutiful responsibility to this nation. As ascender, your sole

purpose is to inculcate the soldiers of the Hawaiian Armed Forces, both assailant and mender in discovering strength in their powers so that they may protect our nation with morality and prosperity for the future”.

“My name is Kealoha Ho‘opili and I authorize this confirmation” Kealoha says as he envisions a new future for Hawai‘i prevailing, ascending.

Name: Student A
Period: 7

25% of 4th Qtr. Grade

Sci Fi Mo'olelo Process Reflection

1. **Plot Preview:** Duncan Jones is considering your story as a potential script for his next Sci-Fi film. In a well-developed paragraph, give a compelling Plot Preview that captures the essence of your story.



In the future, Hawai'i has successfully seceded from the United States of America but is now faced with a prodigious dilemma, their military power. Because of Hawaii's small population, every citizen in the country must abide by the National Service Law which requires citizens of Hawai'i to join the Hawaiian Armed Forces as soon as they turn 20 years old. Kealoha, the protagonist of this story, has just turned 20 and has found himself on an air-marine craft to Pū'ali the newest island in the Hawaiian archipelago that was strictly designated for the training of Hawai'i's hybridized soldiers. The air-marine craft takes everyone to an underwater passage that leads to multiple rooms. Kealoha is assigned a room and in each room is a table and chair. The table acts as a computer that categorizes what responsibility Kealoha will have in the army either assailant, mender, or ascender. According to the vertex assigning triangle and his genealogy, Kealoha is chosen as the next ascender who unlike the assailants who has animal powers and menders who have plant powers, he can absorb any soldier's powers by a single touch. However, before he receives the serum to activate his powers, his geneticist Wahea, informs him of the death of his little brother and sister, Pualani and 'Oke. From this he loses his sense of love and becomes cold and heartless. After the serum is injected into him he falls asleep and wakes up in the military barracks. He then finds an old childhood friend that he met on the air-marine craft, her name is Kani. As they continue to talk, Kani confesses her love for Kealoha through a kiss in which Kealoha falls in love with her and receives her power of enhanced hearing. From this power, he overhears Wahea's conversation with the generals about how she tricked all the soldiers into breaking their hearts so that they become better soldiers. Kealoha gets extremely mad and teaches all the soldiers about the significance of love and how it helps one to find hope and inner strength.

2. **Kauhale Connections:** In a well-developed paragraph for each subject, discuss the meaningful/insightful/surprising connections to each of your Kauhale classes.

a. English:

Ascender connects to what I have learned in English class by incorporating aspects of foreshadowing, poetry, and grammar into the writing and plot of this story. Through the multiple books, passages, and inspiring films we have watch throughout this school year, I have noticed that most of the authors and directors have put in hints of foreshadowing into their plot to create a greater interest in their story. I was able to take this idea of foreshadowing and apply it into my story through the flash back scene Kealoha has on the air-marine craft while its arriving to Pū'ali. Kealoha is reminded by Kani about his family especially Pualani and 'Oke his little siblings. The last memory he can recall of them was from that morning when they gave him his birthday present. 'Oke had got him a golden gecko and Pualani had cooked him a bottle of kukui nut oil, however, when Kealoha opened the present the gecko had drank the kukui nut oil and died. In the pool of kukui nut oil showed the reflection of Pualani and 'Oke which was supposed to foreshadow their death later on in the story. In this mo'olelo, I also wanted to add in some aspects of poetry such as similes, metaphors, onomatopoeia, and alliteration to give a sense of depth and detail to my imagery. For instance, I was trying to show alliteration when I wrote, "The clinking clamor of clattering safety belts". Lastly, I incorporated grammar into my story because throughout English class I have been learning how to properly use semi-colons and I believed that this would be a perfect opportunity to showcase my newfound knowledge of this grammar technique. For example, I used a semi-colon when I wrote, "They are demoralizing our sense of humanity; this is will only lead to the annihilation of our own people".

b. Science:

Ascender connects to what I have learned in Biology class by incorporating the concepts of DNA, genealogy, and pedigree. I was able to use DNA in my story in the hybridizing process in which the soldiers would either be spliced with animal or plant DNA to give them the powers of that subject. For the genealogy and pedigree aspect, I used that to decide whether the soldiers in my story would be assailants, warriors who are hybridized with an animal power, or menders, healers who are hybridized with a plant power, or an ascender who has the ability to take on any power through touch. The soldier's genealogy decided whether they were either an assailant, mender, or ascender because the computers would trace back each soldier's genealogy and pedigree to find if they either had a family 'aumākua or had ancestors that were kumu la'au lapa'au. If their genealogy related to an 'aumākua then they will receive an animal power and become an assailant. If their genealogy related to a kumu la'a lapa'au ancestor, then they will receive a plant power and become a mender. However, if their genealogy traces back both an 'aumākua and a kumu la'au lapa'au which is extremely rare and was the case for Kealoha, then you become the ascender who can take any power.

c. Hawaiian Culture:

Ascender connects to what I've learned in Hawaiian Culture by including aspects of Native Hawaiian plants/animals, la'au lapa'au, and the Hawaiian way of land division. This story connects to what we learned in Hawaiian culture about Native Hawaiian plants because I talk about in the story the different types of Hawaiian plants when the air-marine craft flies over Pū'ali. Everyone sees the different types of Native Hawaiian plants that were brought to Hawai'i from Tahiti and Marquesas such as the Koa tree, pia (arrow root) and wauke (mulberry) plants. Ascendor also used la'au lapa'au which is Hawaiian plant medicine that was used by in ancient Hawai'i by Kumu la'au lapa'au who would use plant to help cure ailments. I incorporated this element into my mo'olelo by making soldiers whose genealogy traces back to a kumu la'au lapa'au have them become the menders who have plant powers to heal like their ancestors before them. Lastly, I used the Hawaiian land division method from the smallest to biggest, starting from an 'ili, then ahupua'a, then mokupuni, and finally moku when Kealoha was describing where he was from to Kani his childhood friend. In the story he described each land division by saying, "Kani, it's me Kealoha, from Kapa'akea 'ili, at Waikīkī ahupua'a, in Kona moku, on O'ahu mokupuni".

d. Math:

Ascender also connects to what I've learned in geometry class by incorporating elements of Pythagorean triplets, equilateral triangle, and triangle sum theorem. Firstly, a Pythagorean triplet is a set of 3 numbers representing side lengths of a triangle that will always form a perfect right triangle. There are multiple Pythagorean triplets such as 12, 16, and 20 which were the numbers I used to establish the ages of Pualani (16), 'Oke (12), and Kealoha (20). I also used a Pythagorean triplet in the times which was 3, 4, and 5. The time when the air-marine craft was arriving at Pū'ali was 5:34 and the time Pualani and Kealoha had died was at 3:45. Furthermore, the room number that Kealoha was assigned to 5, 12, 13 is also another Pythagorean triplet. I was able to use the equilateral triangle in the vertex assigning process area of my story. The equilateral triangle organized and classified all the soldiers into either an assailant, mender, or ascender. Then I tied in the triangle sum theorem to this triangle by explaining how each vertex is equal and it is crucial that they must be kept equidistant and equiangular to keep the balance.

3. **Growth as a Writer:** In a well-developed paragraph, share a particular element (or two) from your story that you are especially proud of (ex.: *characterization, plot, style (surprising adjectives and active verbs, imagery and figurative language, sentence variety), foreshadowing, etc.*). Why are you proud of this aspect of your story? How does it represent your growth as a writer?



One particular element from my story that I am especially proud of is my execution of plot. I am proud of this aspect in my story because I feel that my plot connects everything together in an almost effortless way. The plot in my story doesn't abruptly introduce new scenes or characters but it contains small supporting scenes to help the major events flow together smoothly. I am also proud of my plot because it didn't flow as well when I first drafted my story. Some areas of my mo'olelo didn't connect or transition into other scenes and the climaxes were short and non-descriptive. However, my final plot in this story truly represents my growth as a writer because I have learned from my previous mistakes on my early drafts and was able to reshape the concepts to blend and incorporate a more engaging and interesting plot into my story.

4. **Profound Insight/Real World Problem:** Circling back to Solomon's mana'o from Monday, write a short letter to your great-great-great-great-great-great-great-great grandchild. What Profound Insight or Real World Problem were you trying to show through your story? How did your Sci-Fi Mo'olelo show this idea? Were you successful?



Dear great-great-great-great-great-great-great-great grandchild,

Throughout life you will experience and encounter numerous morals and insights that you believe to be true. I hope that when you read my story, Ascender, that you will gain my profound insight that I portrayed through this story to carry with you throughout your life too. However, if you could not grasp the meaning behind my story or comprehend the theme that I synthesized, I will explain it to you now. In my sci-fi story, Ascender, I talk about the journey of Kealoha on his National Service mission. Through his journey he has gone through multiple experiences that have helped shaped his morals and view on his entire situation. He has been heartbroken when he heard about the death of his siblings, he had fallen in love when Kani kissed him and he has felt extreme anger when he overheard Wahea's conversation. However, through all of these times he had realized the significance love has played in those situations. These experiences helped him to illuminate his own realization that love is the foundation for hope in which one can discover their inner strength. When he was heartbroken he realized how precious his love was for his siblings and that without it his hope slowly diminished too. When he fell in love with Kani he cherished his newfound love as it instilled hope back into his heart. And finally, when he overheard Wahea's conversation he was enraged yet he preached about how Wahea was wrong in destroying love for love builds hope which in return empowers one's strength. And with this I leave you my view on the world to take and apply in your life.

Sincerely,
Your ancestor

Appendix M

Science/social studies student work sample: Field trip to Papahana Kuaola

Name: Clayton Hartley

Period: 5

Date: 1/20/16

65.5
70

Papahana Kuaola (Waipao)

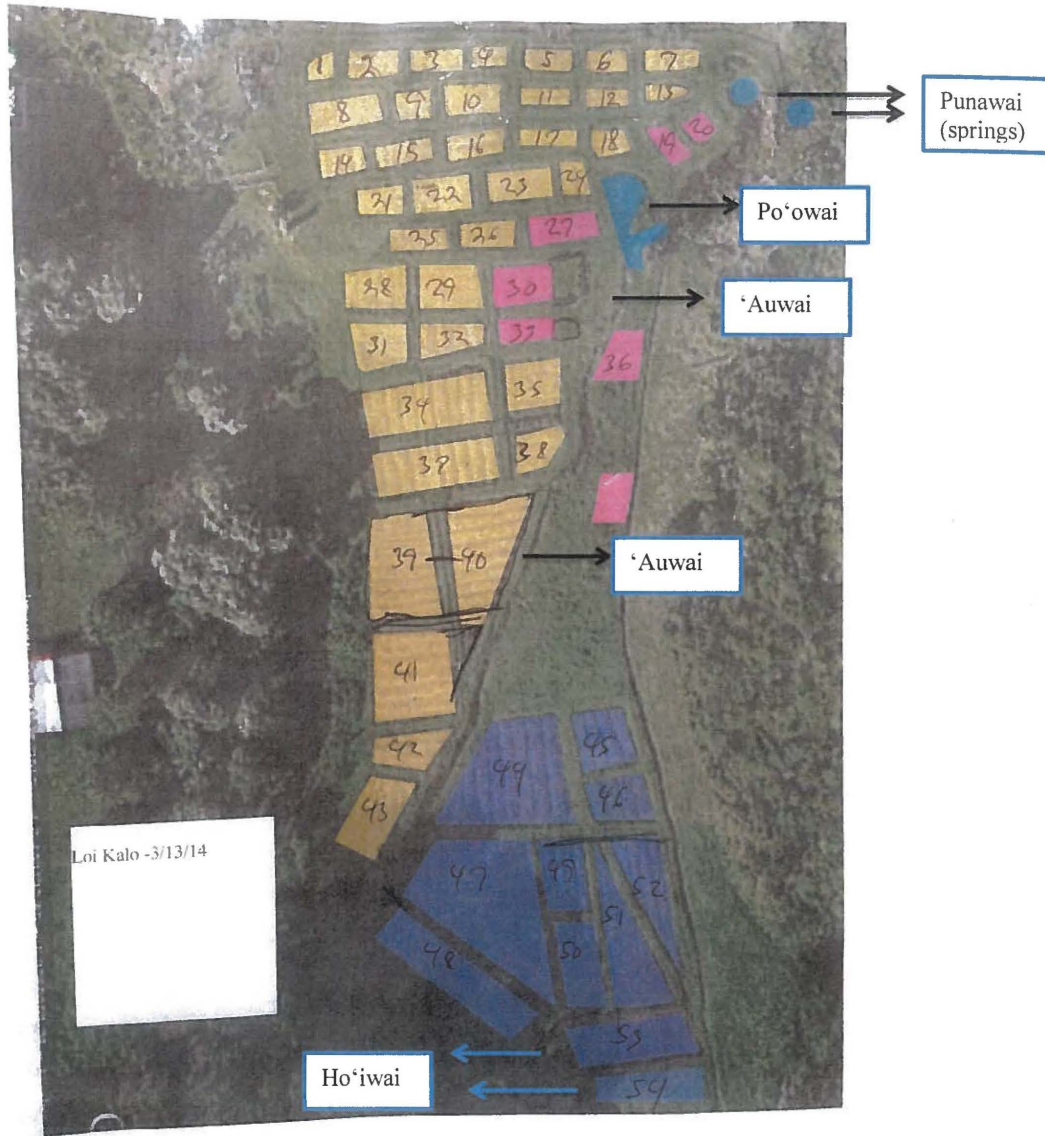
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Ahupua'a of He'eia

Oct 20-21, 2016

Lo'i Map of Papahana Kuaola



Answer the questions below in complete sentences:

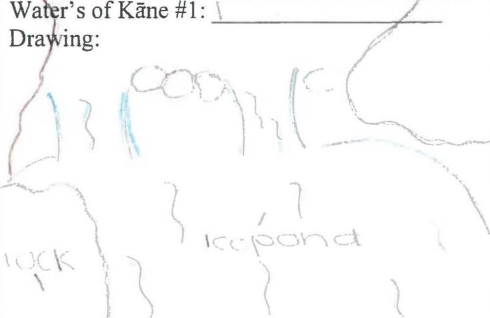
1. Describe **two** Mo'olelo that was explained during the tour that has connection to Water's of Kāne of Papahana Kuaola.

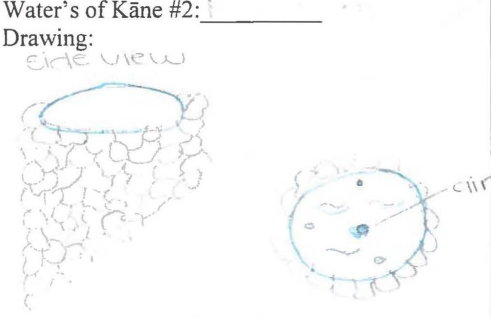
One of the mo'olelo that was explained during the tour was about a woman named Kani. One of her favorite activities was to go to the icepond of Papahāna Kūaola. She would walk through the icepond all the way down to the bottom. She would then walk back up and crabs would be clinging on to her. As she walked with the crabs came off and into the icepond. The people would know she passed through because there would be a trail of crabs in the ice pond.

The second mo'olelo was about 1015 fast traveling. I'm not 100% positive but here is what I remembered. There were 4 rat sisters - 3 girls and 1 boy. He was able to shoot them. But, he shot them from the ocean and they turned into the mountain.

Another mo'olelo is about Kane and Kani. Kane dug a hole deep enough for water to come out of the ground.

2. Observe and find **six** different Water's of Kāne that were found at Papahana Kuaola. Identify the water type, then draw the water using colored pencil, and describe its purpose and function.

Water's of Kāne #1: _____
 Drawing:

 Description and purpose:
 Mainly used to wash off after a hard day work. It also can be used as a reward.
 turns to stream for who works living through -5

Water's of Kāne #2: _____
 Drawing:
 side view

 top view
 Description and purpose:
 A spring of water that comes out of the ground. The person who finds water to the top.

Water's of Kāne #3: _____
 Drawing:

Description and purpose: *hoi*
 The circular cistern
 the water from it
 is used to irrigate
 the lo'i
 into the different
 lo'i.

Water's of Kāne #4: _____
 Drawing:

Description and purpose:
 being it is a
 able to control the
 water that flows
 into the water
 which is used to
 flow into the
 different lo'i.

Water's of Kāne #5: _____
 Drawing:

Description and purpose:
 the water that
 that begins to
 flow down
 the side of
 the mountain
 and is used
 to irrigate the
 lo'i.

*also provide home
 to many living
 things -5*

Water's of Kāne #6: _____
 Drawing:

Description and purpose:
 this is where
 the water is
 used to irrigate
 the lo'i and
 the kōweli.

also kōweli

Station 2: Water Quality of Papahana Kuaola

Parts of the Lo'i water system

Punawai- The punawai is a spring source of water that comes from under ground. This source of water is very uncommon for lo'i, however, at Papahana Kuaola, the punawai is the main water source of the lo'i.

Kahawai - The kahawai is a stream, a source of water that begins in the mountains. In the same way one cuts a fish from tail to head, water cuts through the valley; it provides water for the lo'i, and empties into the sea.

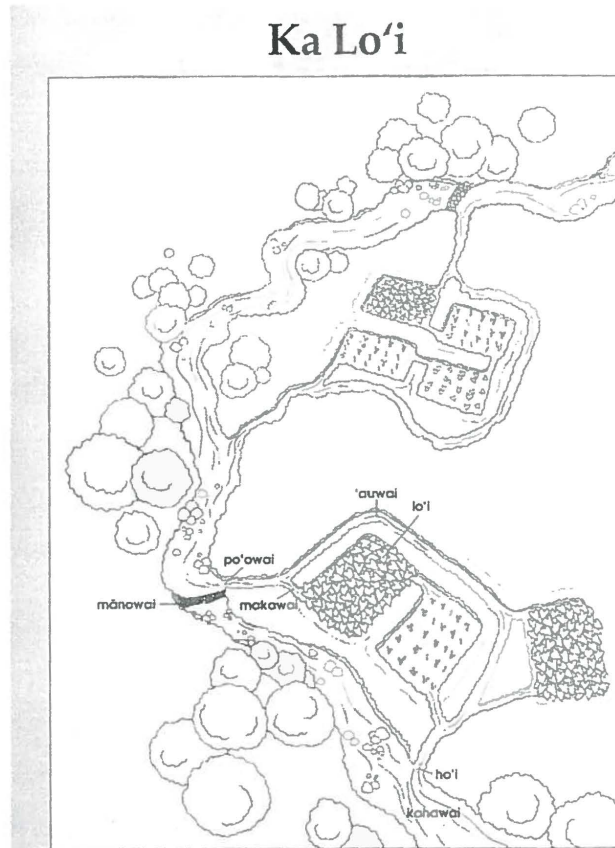
Mānowai - This refers to the rock structure that does not dam the water, but slows the water to help channel it. Water flows down in one piece, and upon flowing over the mānowai, breaks into many pieces.

po'owai - The po'owai is the headwater where water enters into irrigated ditches where it flows until reaching the lo'i. It is from this point that the amount of water flowing into the lo'i can be controlled.

'auwai - The 'auwai is an irrigated ditch used to transport water. It is the 'auwai that carries water from one place to another. In the lo'i system, it is what carries water from the stream to the lo'i.

makawai - The makawai are the openings in the banks of the lo'i where water enters and exits each lo'i.

ho'i wai - The ho'i wai is the place where the water leaves the lo'i and returns to the kahawai.



Water Quality Experiment

Instructions: You will conduct an experiment with a group that will test the water quality of Waipao.

Research Question:

What is the water quality of various water systems at Waipao? (Kahawai, Punawai, Po'owai, 'Auwai, Ho'i wai, Ice ponds, etc.)

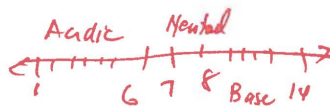
Hypothesis: The group believes Po'owai will have the best water quality because it comes straight from the ground. Ho'i wai will have the worst water quality because it is the last place the wai passes through.

Variables and Controls:

- **Independent variable:** type of water
- **Dependent variable:** quality of water (ph/pphm, nitrate, dissolved oxygen)
- **Controlled variables:** same city, same time, same location, and same
- **Control Group:** tap water
- **Experimental Group:** different waters

Materials

- Water types (Po'owai, Punawai, Kahawai, 'Auwai, Ho'i wai, Ice pond, etc.).
- Six 10mL graduated cylinder
- Six 200 mL beakers labeled
- Six pipettes
- Gloves
- Water quality test kits (pH, phosphate, nitrate, and dissolved oxygen)
- Sharpie Pen for labeling
- Waste Bin
- Green Tub



Methods/Procedures:

1. pH Test- determines if the liquid is an acid, neutral, or base. (Acid= 0-6, Neutral=7, Base= 8-14)

---Note: Test two waters at a time using two different vials to save time, if available.

1. Use pH paper to determine pH.
2. Dip pH paper in test water.
3. Allow to dry then match the color with pH number
 - a. Normal for freshwater= 6.5-7.5
 - b. Normal for brackish water= 7.5-8
 - c. Normal for seawater= 8.1-8.5
4. Record result in data table



2. Phosphate (PO₄)- measures the amount of phosphorus in the water. Levels must be kept to a minimum, even though phosphate is a major nutrient for corals.

---Note: Test two waters at a time using two different vials to save time.

1. Fill the vial with 5mL of test water
2. Add 6 drops of Bottle 1
3. Add 6 drop of Bottle 2
4. Close and shake vial vigorously
5. Allow to sit for 3 minutes
6. Look at ppm using chart
 - a. Ideal phosphate levels should < 0.2ppm for fish systems or <0.01 ppm for coral reef *good*
 - b. If over > 0.2 ppm then algae will grow more often and can lead to eutrophication.
 - c. Record result in data table
6. Rinse vial and repeat procedure for each test water.



3. Nitrate (NO₃)- Nitrate is a major ingredient of farm fertilizer and is necessary for crop production. Nitrates stimulate the growth of plankton and waterweeds that provide food for fish. This may increase the fish population. However, if algae grow too wildly, oxygen levels will be reduced and fish will die.

---Note: Test two waters at a time using two different vials to save time.

1. Fill the vial with 5mL of test water
2. Add the following to the test water
 - a. Add 10 drops of Bottle 1
 - b. Add 10 drops of Bottle 2
3. Place the cover on the vials and shake vigorously for 20 seconds.
4. Allow to sit for 5 minutes
5. Look for color using chart *of Freshwater*
 - a. Normal for Seawater= Below 12.5 g/mL is good
 - b. 25-50 g/mL is ok for fishes, but not good for invertebrates
 - c. Above 50 g/mL deadly for organisms
 - d. Record result in data table
6. Rinse vial and repeat procedure for each test water



4. Dissolved Oxygen (O₂): Dissolved oxygen analysis measures the amount of gaseous oxygen (O₂) dissolved in an aqueous solution

1. Fill 25 mL of test water sample in the dissolved oxygen round vial
2. Obtain a clear/light yellow dissolved oxygen glass pipette. It should be inside of your Dissolved Oxygen kit.
3. Place the pointed tip of the clear/light yellow dissolved oxygen glass pipette in the bottom of the vial.
4. Break the tip of the glass pipette while in the vial.
5. Wait 2 minutes. (You should see that the vial water has increased and turned to blue color).
6. Flip pipette tube upside to so that you can match the dissolved oxygen kit to determine level dissolved oxygen levels.
7. Dispose the glass pipette in the glass box and rinse the vial.
8. Record result on data table
9. Repeat procedure for each test water.
 - a. As dissolved oxygen levels in water drop below 5.0 mg/L, aquatic life is put under stress. The lower the concentration, the greater the stress.
 - b. Oxygen levels that remain below 1-2 mg/L for a few hours can result in large fish kills.



Data/Results: *measure, do for 2/1/11 11:11*

Table 1- Ice Pond Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	6	0.25ppm	0g/mL	6mg/L
Team 2	7	0.25ppm	0g/mL	6mg/L
Average	6.5	0.25ppm	0g/mL	6mg/L

Table 2- Kahawai (Stream) Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	6	0.25ppm	0g/mL	6mg/L
Team 2	7	0.25ppm	0g/mL	6mg/L
Average	6.5	0.25ppm	0g/mL	6mg/L

Table 3- Punawai (spring) Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	8	0.5ppm	0 g/mL	8 mg/L
Team 2	8	0.0ppm	0 g/mL	7 mg/L
Average	8	0.25ppm	0 g/mL	7.5mg/L

Table 4- Po'owai Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	8	0.25ppm	0 g/mL	5mg/L
Team 2	8	0.25ppm	0 g/mL	8mg/L
Average	8	0.375ppm	0 g/mL	6.5mg/L

Table 5- 'Auwai Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	6	0.25ppm	2 g/mL	5 mg/L
Team 2	6	0.25ppm	0 g/mL	6 mg/L
Average	6	0.25 ppm	1 g/mL	5.5 mg/L

Table 6- Ho'i wai Water Quality

	pH	Phosphate (ppm)	Nitrate (g/mL)	Dissolved Oxygen (mg/L)
Team 1	6	0.25 ppm	2	6 mg/L
Team 2	6	0ppm	0	8 mg/L
Average	6	0.125ppm	1 g/mL	7 mg/L

Continue Data/Results:

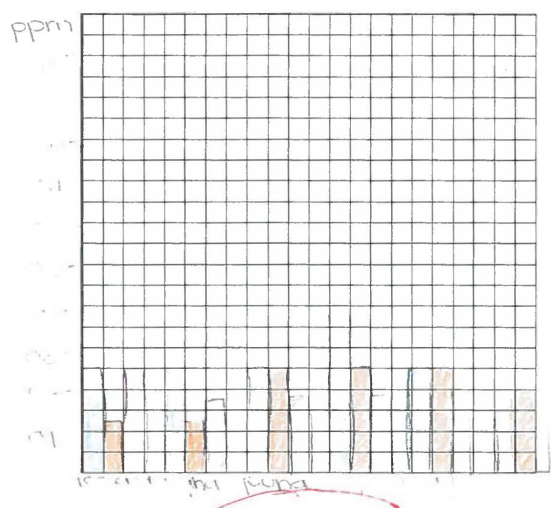
1. Create a bar graph for each test. Use averages to plot data. There will be four different bar graphs but each will have six colors. Each color will represent each water type (ice pond, kahawai, punawai, 'auwai, po'owai, ho'i wai).

KEY	
Blue	PH. AVER.
Orange	TEMP. AVER.
Green	PHOS. AVER.
Yellow	NITR. AVER.
Purple	OXYG. AVER.
Light Blue	...

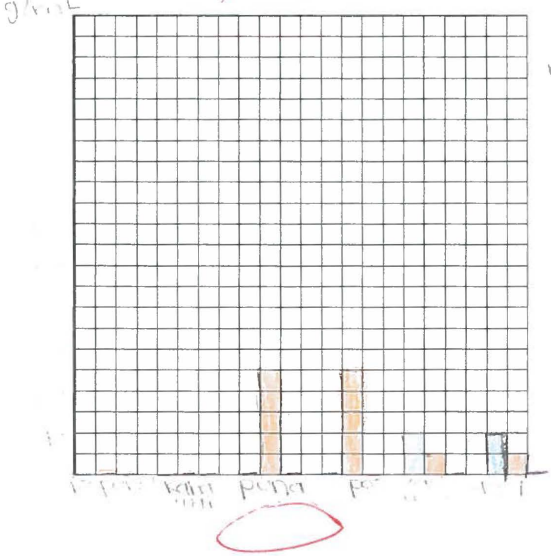
pH levels of Various Water's in Waipao



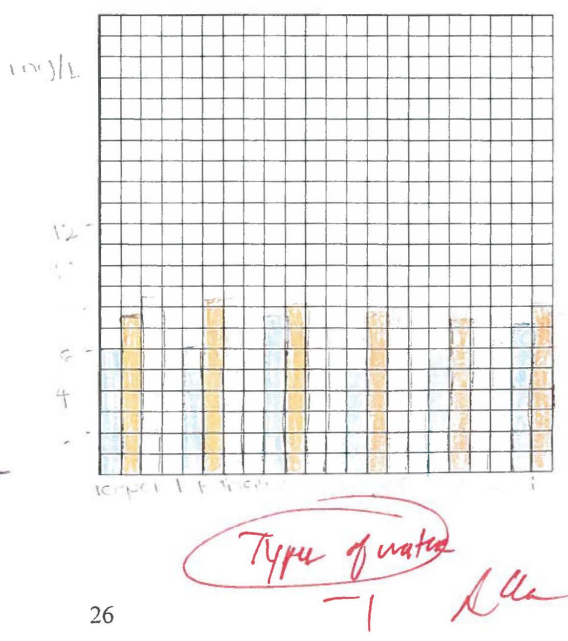
Phosphate levels of Various Water's in Waipao



Nitrate levels of Various Water's in Waipao



Oxygen levels of Various Water's in Waipao



Analysis/Conclusion: Write in complete sentences.
(Do not use I, my, our, we, us, he/she, you, etc.). Use 3rd person.

1. Restate each ^{day} average pH level for each water system and explain what it means? Are these levels normal or a concern, explain?

The pH level for the Ikepōnd water system for Thursday was 6.5 and for Friday was 6.5. The pH level for the Kahawai water system for Thursday was 6.5 and for Friday was 6.5. The pH level for the Punawai water system for Thursday was 6.5 and for Friday was 6.5. The pH level for the Parawai water system for Thursday was 6.5 and for Friday was 6.5. The pH level for the Auwai water system for Thursday was 6.5 and for Friday was 6.5. The pH level for the Ho'iwai water system for Thursday was 6.5 and for Friday was 6.5. These pH levels are neutral and normal.

2. Restate each ^{day} average phosphate level for each water system and explain what it means? Are these levels normal or a concern, explain?

The Ikepōnd phosphate level for Thursday was 0.125, this is normal. The Ikepōnd phosphate level for Friday was 0.25, this is a concern. The Kahawai phosphate level for Thursday was 0.125 and for Friday was 0.1875. These levels are normal. The Punawai phosphate level for Thursday was 0.125, this is normal. The Punawai phosphate level for Friday was 0.125, this is normal. The Parawai phosphate level for Thursday was 0.125, this is a concern. The Parawai phosphate level for Friday was 0.1875, this is normal. The Auwai phosphate level for Thursday was 0.25, this is normal. The Auwai phosphate level for Friday was 0.125, this is normal. The Ho'iwai phosphate level for Thursday was 0.1875 and for Friday was 0.125. These levels are normal.

3. Restate each average ^{Nitrate} phosphate level for each water system and explain what it means? Are these levels normal or a concern, explain?

The Ikepōnd nitrate level for Thursday and Friday were both 0. The Kahawai nitrate level for Thursday and Friday were both 0. The Punawai nitrate level for Thursday was 2.5 and for Friday was 0. The Parawai nitrate level for Thursday was 2.5 and for Friday was 0. The Auwai and Ho'iwai nitrate level had the same results for Thursday of 0.5 and Friday 0. All of these were normal because they were all below 12.5.

4. Restate each average oxygen level for each water system and explain what it means? Are these levels normal or a concern, explain?

The ice pond oxygen level for Thursday was 7.5 and for Friday was 8.5. The Kahaui oxygen level for Thursday was 8.25 and for Friday was 8.25. The Punaui oxygen level for Thursday was 8 and for Friday was 7.5. The Po'ouali oxygen level for Thursday was 7.5 and for Friday was 8.75. The Auwahi oxygen level for Thursday was 7.25 and for Friday was 8.25. The Haliwai oxygen level for Thursday was 8 and for Friday was 7.5. All of these levels are normal and neutral.

5. Summarize the water quality findings in a paragraph, include quantitative data (numbers), and explain if these numbers affect people, living things, fishes, etc.?

In our water quality test, we tested for pH, phosphate, nitrate, and dissolved oxygen. Overall, most were neutral and normal but, there were some that was a concern and slightly acidic. For pH the normal for freshwater water is 6.5-7.5. According to the data Punaui Friday, 5.25 and Haliwai for Friday, 5.75 was a concern. For phosphate, the good/normal level is $< 0.2 \mu\text{M}$. Anything above that is a concern. According to the data ice pond Friday, Punaui Thursday, Po'ouali Thursday, and Auwahi Thursday had 2.6. This is a concern. For nitrate below 12.5g/mi. is good/normal and according to the data there were no concerns. For dissolved oxygen it is a trap below 5.0mg/L and remain 1-2mg/L. According to the data there were no concerns. If it is a concerned number it can have a big effect. If the water levels are not normal it can affect the fishes and plants in the stream or lot. The algae provides for us if we consume these we are able to get very sick.

6. Restate the hypothesis and explain if it was hypotheses supported or not by the data?

~~The~~ hypothesis stated, ~~that~~ the group predicts Po'ouali will have the best water quality because it is straight from the ground. The group also predicted that Haliwai will have the worst water quality because it is the water that the water passes through. The hypothesis is not supported according to the data. Po'ouali actually had the worst water quality on Thursday the phosphate level was 2.6 μM because it was 0.25 (above 0.2). On Friday the pH level was 5.75 being a concern and slightly acidic. Haliwai was one of the best water qualities because all data was neutral and normal. *Why like? -5*

7. Name two sources of error(s) were present in the experiment and how you would improve it?

One source of error was on Friday it rained and Thursday didn't. When it rained it affected the water quality. You can't really improve it because you aren't able to control the rain. But, doing the experiment on two days that were both sunny and not raining could improve it.

Another source of error was people measured wrong and recorded the wrong data. You can improve this by double checking and asking another person what color the water fills upon.

Station 3: Community Service

Instructions: You will be helping out in various community service projects throughout Papahāna Kūaola. Please be mindful of where you step. Follow instructions and be careful using the tools.

Analysis Questions: Answer using complete sentences!

1. What did you learn about the amount of work it takes to up keep Papahāna Kūaola?

I've learned a lot about it. It takes a lot of work to keep it. There is so much work that I like you would put into it. You always need to pull out anything to be found, in the mountains, in the pit. One of the things I learned is that it's not just about the land, it's about the people. It is also about the people who are in the land. It is about everyone else is in the land. It is about the land and the people.

2. Why is Papahāna Kūaola an important piece of the learning and practicing traditional Hawaiian practices?

I really love Papahāna Kūaola because it is a very important place for us. It is a very important place for us to learn about the land and how to take care of the land. They are also a very important place for us because they practice traditional Hawaiian practices. It is important to teach these things to our children so that they can keep our culture alive.

3. How is Papahāna Kūaola a good example of sustainability? (Be specific and give examples).

Papahāna Kūaola is a great example of sustainability. They use the resources around them and they are very careful. For example, when we pull weeds in the land we take off all the dirt on the weed and put it back in the land. Another example is that they use the land because after we pull the weeds out and use the land it returns to the land.

4. How did Papahāna Kūaola affect you as a Hawaiian and your kuleāna to take care of the 'āina? How did it teach you to be resourceful and sustainable?

Papahāna Kūaola affected me as a Hawaiian by teaching me about the land and the people. It taught me to be resourceful and sustainable. It taught me to take care of the land and the people. It taught me to be a good person and to be a good citizen. It taught me to be a good person and to be a good citizen. It taught me to be a good person and to be a good citizen.

Papahana Kuaola Reflection

Papahana Kuaola was a wonderful experience and I'm glad I gained more knowledge about my Hawaiian culture. The field trip was divided into 4 sections and I learned more about the waters of Kāne, water quality of Papahana Kuaola, community service, and la`au Lapa`au.

While at Papahana Kuaola, I was able to identify six different water's of Kāne and further my mana`o and learn their purpose. The six different water's of Kāne I found were ice ponds, punawai (spring), `auwai, po`owai, kahawai, and ho`iwai. The ice ponds are mainly used to wash off after a hard day's work but, can also be used as a reward. The punawai is water that comes from underground and provides water for the lo`i. At Papahana Kuaola, the punawai is one of their main sources of water. The `auwai carries the water from the punawai and transport it into the different lo`i. Using the po`owai, you are able to control the water that flows into the lo`i. Water enters a ditch where it then flows reaching the different lo`i. The kahawai is a stream that begins from the mountains. It goes down the valley, giving water to the lo`i and empties into the ocean. The ho`iwai is where the water leaves the lo`i and returns back to the kahawai. All of these water's of Kāne are important because they play an important role in this system.

I found the water quality test very interesting because of how you are able to tell if the water is normal or if it's a concern. In our water quality test, we tested for pH, phosphate, nitrate, and dissolved oxygen. I learned how to use the Science equipment in order to test these different things. This test takes quite a while and I remember Ms. Arce saying they test the water quality every day because of the effect it can give if the water is a concern. Knowing if it is a concern can be very important because it affects fishes, living things, people, etc. For example, testing the dissolved oxygen is relevant because if the levels remain below 1-2 mg/L for a few hours, it will result in large fish kills. The ā`ina provides for us and fish is one of the foods that feeds us. Fish kills not only can affect us but it will affect the ecosystem in the ocean. If everything in the ocean dies we have a chance of dying with one of our main food sources gone. This was cruel to the Hawaiians back then because they didn't have countries importing their goods for us. As for water quality testing I learned the significance of it and why we need to have it.

*good
But need
data
from what
you found
-2*

Working at Papahana Kuaola was a great and memorable experience. Going in and actually working in the lo`i was not only fun but, it had an effect on me as a Hawaiian. I love how at Papahana Kuaola the kids have to earn their lo`i patch and they only get it when the Kumu feel they can handle. At Papahana they teach the kids about traditional Hawaiian practices. The kids are the next generation and if the younger generation don't know how to do these things our culture could die forever. While going in hands-on I realized my kuleāna to take care of the ā`ina and provide back for our kupuna.

La`au Lapa`au means medicine and at Papahana Kuaola we were able to learn about many different types of plants and their use. We learned about noni, olena, kukui, and awa.. The noni plant has small white flowers and the yellow-green-white fruit. The fruit is used for many health related problems such as diabetes, high blood pressure, aches, and pains. The bark can treat bacterial infections, cough, and stomach ailments. The flowers can treat sores, irritated eyes, mouth and throat infections, and more. The little root olena plant was one of the two dozen plants brought to Hawai`i. The root is thick and has an orange-yellow color on the inside. The dyes from these roots and the juice of the crushed roots were used to color tapa cloth. It is also used for

medicine. When the roots are pounded and extracted into a juice after being mixed with water it helps with many different things. The astringent qualities of olena are useful in cases of colds, asthma, tuberculosis, and bronchitis. Topically it can be helpful with pimples or to stop bleeding. The kukui plant or sometimes called the candlenut tree has many uses especially the kukui nut. The oil of the white kernels being extracted for use in stone lamps and in ti leader sheath torches. The nuts are traditional used in a lei including the flowers. The bark, flowers, and nuts are all used for medicine as well. The white flowers were chewed by the parents of a young child and given to a child to aide healing or sores in the mouth and the tongue. The juicy sap is applied with the finger and rubbed inside of the mouth or tongue. The sap is also used for chapped lips, cold sores and mild sunburn. Lastly, the awa is valued as an intoxicating drink, used for sacred plant for prayers and as a medicine. As a medicine, the roots, leaves, stems, and bark are used for chills colds, headaches, lung, and other respiratory diseases.

As a Hawaiian you have an opportunity to learn about your culture. Some cultures don't even have the privilege to say that. We should take these opportunities like the one today at Papahana Kuaola and take the time/effort to learn from kupunas, work in the ā`ina, learn about native plants, and give back to the community. Our kupunas were very akamai and it's important we learn from them. They are the ones who made mistakes and learned from them, the ones who observed, and the ones with more knowledge. Not many realize but, the ā`ina is also our kupuna. The ā`ina provides plenty for us and it's important to work, contribute and give back to the ā`ina. The ā`ina provides for us and then we provide for the ā`ina. Learning about our native plants is equally as important as well. When you learn about them you are not only able to see how our kupunas were sustainable but what the plants can provide for us.

Going to Papahana Kuaola has been a great experience and I've learned many new skills, lessons, and Hawaiian values that I'll be able to apply into my own life. I will continue this new information in my daily life style by going to community events and opportunities. For example, going to the lo`i and being able to learn more. I will also practice these values throughout my character traits and work ethics.

Observing the WEO, I noticed almost all WEO's related to what our field trip at Papahana Kuaola achieved. One of the WEO I believed this field trip achieved was, Nānā i ke kumu – Look to the source. The description of this states, "utilize various sources(i.e. kupuna, kumu, loea, mo`olelo, wahi pana, mo`omehau) to foster inquiry and seek knowledge." I feel the field trip achieved this because we were able to use our resources or more specifically the ā`ina and apply traditional Hawaiian practices. Another WEO I believe this field trip achieved was, He aupuni palapala ko`u: `o ke kanaka pono `o ia ko`u kanaka- Mine is a kingdom of education, the righteous man in my man. The description of this states, "seek and apply knowledge ethically." Up coming and going into the field trip we brought a seek for knowledge. Kind of like the E Ho Mai chant we do in Kumu Glassco's class before learning anything new. We also applied this knowledge by doing this packet.

Overall, Papahana Kuola was a great learning experience and I've enjoyed gaining more knowledge about my Hawaiian culture.

Awesome reflection