Hui Ulana

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Native Hawaiian Education Council

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Native Hawaiian Education Evaluation Framework

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Executive Summary

Native Hawaiian Education Council

Beginning in the Fall 2017 semester, the Native Hawaiian Education Council (NHEC) consulted with Hui Ulana, a team of doctoral students to develop a process for studying the collective impact of Native Hawaiian Education in Hawai‘i. As a federally established organization under the Native Hawaiian Education Act (NHEA), the council’s statutory responsibilities are “to coordinate, assess, and report and make recommendations on the effectiveness of existing education programs for Native Hawaiians, the state of present Native Hawaiian education efforts, and improvements that may be made to existing programs, policies and procedures to improve the educational attainment of Native Hawaiians” (“Strategic Plan 2020”, n.d.). With thirty plus years of federal funding under the NH Education Act, the council as well as the U.S. Department of Education were interested in studying the effectiveness and collective impact of Native Hawaiian education in the State of Hawai‘i, utilizing developmental evaluation and collective impact frameworks. The council discussed the magnitude of such a study and decided to adjust the focus of our work. Although the goal of integrating a developmental evaluation approach into a collective impact framework was initially intended for this study, the final work of the team, with guidance from the council was 1) a definition of Hawaiian Culture-Based Education (HCBE), and 2) a Native Hawaiian Education Evaluation framework.

Literature Reviews

Research questions.

The original question was based on the initial request by the council which asked: what is the collective impact of Native Hawaiian Education in the State of Hawai‘i? We were to design an evaluation that could be used to answer this question. In researching the literature, we initially focused on the following guiding questions:

- What is Hawaiian culture-based education?
- What is developmental evaluation?
- What makes an evaluation culturally responsive?
- What is systems thinking?

In July of 2018, the council revised their request to Hui Ulana, which was to define Hawaiian culture-based education and to develop a Native Hawaiian education framework. This allowed us to focus in on the following two questions:

- How do we define Hawaiian culture-based education?
- What are the components of Hawaiian culture-based education?

Literature reviews and analysis.

The literature reviews were expressly commissioned due to their inherent relatedness, which is further illuminated when considering the statutory responsibilities of the Council, when attempting to understand the collective impact of Native Hawaiian education. Foundational to understanding impact, is developing a common understanding of HCBE. The definition of HCBE derived from a review of the literature has served as a primary impetus for the creation of the Niho Framework. The remaining reviews helped to inform considerations and
recommendations for the application of the framework in understanding and driving innovations related to Native Hawaiian education. Culturally responsive evaluation (CRE), for example, values ‘ōiwi epistemology in helping to paint the picture of the evaluand and considers holistic, contextualized experiences of the evaluand that are rooted in place and epoch, and informed by history. In a similar manner, developmental evaluation (DE) seeks to understand the evaluand from an insider’s perspective, to engage those immersed in the day to day doing of the work, those that understand the intricate nuances of a program in helping to provide the clearest possible picture to convey what is truly occurring. The review of the literature on systems thinking (ST) highlights the importance of discrete synergistic and analytic skills that allow for a deeper understanding of actors within a system and their behaviors, and support the introduction of innovations to induce desired changes.

A core feature of CRE, DE and ST is that the evaluator possesses strong connections to the evaluand and that philosophically, the evaluation is highly participatory in nature, prioritizing a for-us, by-us mindset. The researcher as practitioner, in addition to practicality in developing the most accurate snapshot of an evaluand, aligns with and is affirmed by ‘ōiwi mindset, which values sources and appropriate use of ‘ike. As it would seem quite odd and principally inappropriate from an ‘ōiwi research perspective to evaluate a system with no prior pilina with or kuleana to the evaluand, tenets of CRE, DE, and ST that prioritize inclusivity and agency of the evaluand are further validated by indigenous, namely ‘ōiwi Hawai‘i epistemological approaches.

Niho Framework

The Niho framework represents education in Hawai‘i that occurred pre-foreign contact, that is, education up to 1778. Within this time period all aspects of education, though possibly differing across the islands, were innately Hawaiian. Some of these aspects include: language, worldview, identity, and political philosophy. The aspects explored below are included intentionally without the mindset aimed towards correcting the injustices done to Hawaii and its people through interaction with foreign entities nor is it intended to correct the current state of Hawaiians in education. This framework reflects the characteristics of Hawaiian education prevalent during the time period previously discussed so it can be utilized in the analysis of Native Hawaiian education and Hawaiian culture-based educational programs.

The intent of this framework is not to render judgement as to a program’s or system’s quality or ‘Hawaiian-ness’. Rather, this framework serves to drive further analysis and conversation for state- and community-wide education systems and individual program contributors to those systems around the services and impact that they collectively have on Native Hawaiian education. While current academic measures are commonly viewed as determinants for individual and/or collective impact, this framework may be used to reposition traditional, Native Hawaiian education elements and the degree to which we nourish, celebrate, and proliferate our mauli Hawai‘i as determinants of collective impact; reclaiming educational ea and defining for ourselves from a strengths-based perspective, impact that we value most.

Framework structure and niho metaphor.

The framework is divided into three clusters or Niho; No ke Kumu, No ka Piko, No ke Aʻo. Each Niho is further divided into several Hiʻohiʻona, which collectively seek to define aspects of each respective Niho.
Together, the Niho form the vertices of a triangle with our definition of Native Hawaiian culture-based education (NHCBE) positioned at its center; each Niho with its Hiʻohiʻona plays an important role in supporting the definition of NHCBE. The inherent strength that triangles possess as well as their ability to interlock tightly with other like triangles inspired the metaphor of ‘Hoʻoniho’, to set stones in an interlocking manner. As we look to understanding how our education systems support the advancement and betterment of our haumāna, we envision the necessity for all individual contributors within these systems to know intimately, each other’s work, priorities and contributions. The Niho Framework therefore provides common elements around which everyone contributing to Native Hawaiian education might join in discussion, calibration and collective effort, each piece fitting tightly with the next to ensure a system that is paʻa in advancing the mauli Hawaiʻi-centric drivers for our kānaka.

Each niho section of the framework includes descriptions of the niho and each hiʻohiʻona. The section also includes a continuum of hiʻohiʻona usage in a program or system divided into four levels starting at the left of the document with Kahua or foundational, continuing with Paipai or to build, Halihali or to transport, and ending at the right with ‘A ohe or not present. These levels represent the stages of house foundation construction, further expanding on our metaphor of niho.

**Application Considerations / Recommendations**

We have identified the following considerations for application of the Niho Framework in program or systems evaluation and in driving innovation. These considerations collectively highlight the importance of ʻumia ka hanu, hoʻokāhi ka umauma ke kipoʻohiwi i ke kipoʻohiwi, and alu like, being of one accord, standing abreast shoulder to shoulder, in exerting great effort toward a task, and working together.

First, the Niho Framework provides a means by which to understand the prevalence of valued features of HCBE. It is not intended to place judgement on a program or system’s quality. Rather, by examining systems in light of the level of prevalence of features across the Niho, members begin to develop inquiry foci around which to structure discussions and planning related to innovations intended to ensure an appropriate distribution of these features across educational programs. This leads to the greater benefit of ensuring that as a collective, the larger system is attending to these Niho in multiple ways, and contributing to the nourishment of the mauli of our learners.

Second, the framework supports the calibration of HCBE practices within and across systems. The Niho, No Ke Kumu, for example stresses the value of knowledge from a variety of sources, including ancestral and ʻohana wisdom, ʻāina and content experts. At the Kahua level of the continuum, we recognize that learning is inextricably connected to these sources, and that these kumu are regularly engaged as a valued feature of Native Hawaiian education. The framework therefore provides a means for dialogue around the capacity of our system to promote and incorporate these kumu, not just as sources of knowledge, but in helping to build the identity of learners as members of a moʻokūʻauhau of ʻike, from which they gain agency for independently accessing and then assume kuleana for shepherding as they develop expertise and begin to develop new innovations, insights and understanding.

A third consideration for the framework is in its potential reposition traditional, Native Hawaiian education elements and the degree to which we nourish, celebrate, and proliferate our mauli Hawaiʻi as determinants of collective impact. The framework provides a structure that
paves the path toward the reclamation of educational ea and defining for ourselves from a strengths-based perspective, impact that we value most. While emphasis on standardized assessments has been a pillar within the current structure of education evaluation, which attempts to illuminate learners’ growth or proficiency pertaining to specific content areas like math and English language arts, we recognize that there is a greater need, particularly as it relates to Native Hawaiian communities, to understand the extent to which learners are proficient at accessing and applying various types of knowledge, whether content-specific or more universal in nature such as persevering in solving problems locally and globally. Academic competence therefore becomes one of several determinants of college, career and life readiness as opposed to the sole or primary determinant.

Finally, by identifying valued features of HCBE, the framework may also be applied when considering the distribution of resources and supports across a system. Understanding the presence of these features within and across systems and areas in which these features are thriving or perhaps not fully present, helps in the deployment of appropriate resources, including funding and the establishment and support for learning and innovation partnerships to specific areas, to ensure that collectively, a system is sufficiently providing multiple and varied opportunities to support Native Hawaiian learners and communities. The framework therefore serves as a driver for curriculum development, ‘ohana and community engagement, reforming education policy, educator practice and professional growth, and cultural revitalization.

With specific regard to the use of the framework when engaging contracted support through a request for proposal (RFP) to fulfil the statutory obligations of the Council, the consultancy group strongly recommends the following. The Council should seek contractors who possess a strong ‘ōiwi Hawai‘i epistemological perspective; those who have demonstrated that they possess a clear, Hawaiian cultural lens, and understand ‘ōiwi ways of knowing and socializing. These contractors should also ideally be able to speak to previous successes they’ve had in providing servicing Native Hawaiian educational programs. Successful experience with program evaluation should be a foundation skill for anyone contracted to engage with the framework. Once initial system evaluations that illuminate presence of the Niho have been conducted, contractors should be prepared to facilitate next steps for system actors to advance collective innovations in light of the framework through the application of developmental evaluation (DE) and therefore should ideally be able to provide examples of their experience with using DE to drive collective innovations.

Contractors who have also shown an ability to develop meaningful and deep pilina with individuals and groups should also be sought. In reflecting on the consultancy group’s work in generating the framework, the group recognized that an inherent strength that helped to advance the work in substantive ways was the group’s collective proficiency with ‘ōlelo Hawai‘i. With proficiency, one is more likely to possess ‘ōiwi epistemological perspectives and very likely has strong pilina with those who work in service to Native Hawaiian education across the pae‘āina. The Niho Framework is best applied through material involvement by the evaluand as an equal contributor to the evaluation. Much like the features within the framework like the transmission of ‘ike, HCBE is participatory in nature. The insider perspective is a highly valued input to illuminating the detailed nuances that are easily missed by those external to the program. An overarching recommendation for the Council therefore is to reflect on the features of the framework when engaging consultants and to consider the degree to which responders to the RFP understand, value and have demonstrated application of the features within the Niho.
the consultants demonstrated valuing of ʻōiwi sources of and the appropriate use of ʻike, experience with genealogy, protocols and spirituality, and proficiency in facilitating innovation in education in service to indigenous populations? While finding a contractor that possesses all of these traits might not be entirely realistic, the Council will need to define a minimum threshold of acceptability when reviewing the capacity of RFP responders to complete this meaningful work. Lastly, the consultancy group recommends that this work be piloted with a small community of Native Hawaiian education servicing programs that comprise a micro-system to learn more about the scalability of the Niho Framework and the application considerations.

**Conclusions**

The creation of this Niho Framework was an arduous process. Defining a culture that all group members identify with as well as articulating the aspects of education that reflect the practices of a time when a written language made research difficult. This is an area of future research in the further development of the Niho Framework. As more resources are provided electronically and greater access is provided to physical copies of original resources revisions will need to be done. Time constraints on this project also did not allow for the review of all literature the four areas of research discussed previously. As the understanding of these four areas increases, additions can be made to refine the framework.

Great care, respect, humility, and reverence should accompany those who set out to continue this work. Kuleana, drove the development of this work and although it is presented as a completed product we know that there will always be room for revision. Defining a culture and the way it transmits its knowledge across generations is a daunting task. We have done both as individuals who belong to and who are currently working in different capacities to revitalize and perpetuate this culture.
Abstract

Prior to 1778, Native Hawaiian Education pedagogy and processes were inherently based in traditions, practices, and purposes that sustained Hawai‘i’s indigenous population for over two thousand years. With the introduction of foreign influences and as Hawai‘i’s political landscape began to change because of colonization, so too did the education of its people. Replaced with Western culture based education, the indigenous population experienced a suppression of its language, customs, beliefs, and practices. Following the Hawaiian Renaissance of the late 1970’s, Hawaiian Culture Based Education began to resurface in different facets and organizations throughout its communities. After approximately thirty years of HCBE efforts among various stakeholder groups, the Native Hawaiian Education Council desired a definition of HCBE along with an evaluation framework. The Niho Framework is offered to aid in understanding the prevalence of its eleven hi’ohi’ona in these various educational settings whose primary focus is on HCBE. As Native Hawaiian Education begins to proliferate and move to mainstream audiences, it is our intent to offer the Niho framework to solidify a respectful and responsible foundation for all involved in HCBE settings.

Keywords: Native Hawaiian Education, Hawaiian Culture-Based Education, Evaluation
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Introduction

Beginning in the Fall 2017 semester, the Native Hawaiian Education Council (NHEC) consulted with Hui Ulana, a team of doctoral students to study the collective impact of Native Hawaiian Education in Hawai‘i. As a federally established organization under the Native Hawaiian Education Act (NHEA), the council’s statutory responsibilities are “to coordinate, assess, and report and make recommendations on the effectiveness of existing education programs for Native Hawaiians, the state of present Native Hawaiian education efforts, and improvements that may be made to existing programs, policies and procedures to improve the educational attainment of Native Hawaiians” (“Strategic Plan 2020”, n.d.).

Problem of Practice

Education in Hawai‘i has gone through many changes, which have impacted Native Hawaiians. In the public education system, established in 1841 by Kauikeaouli, Kamehameha III, instruction was conducted through the medium of Hawaiian language. It did not take long for foreign influences to change the system and English became the medium of instruction. As these influences became stronger, teaching and learning began to look more and more foreign as well. By 1896, the Hawaiian language was banned from instruction in schools (“History of Hawaiian Education”, n.d.).

It was not until the 1960s and 1970s, that there began to be a resurgence of interest in Hawaiian culture. Many kūpuna were getting older and it was evident that efforts were needed to save the Hawaiian language, which is essential to the saving of the culture. People began to take a stand and push for a better education for Native Hawaiians. With the establishment of the
Hawaiian Studies Program in 1980 and the Hawaiian Language Immersion Program in 1986, there were efforts made to increase Hawaiian culture, history, and language in the classroom.

Today, the push continues with growing enrollment in the Hawaiian language immersion programs, private schools implementing culture-based curriculum, and a growing number of charter schools that provide families a choice of focus in education. During the 2017-2018 school year, there were 36 charter schools in operation in the state of Hawai‘i (“Charter Schools,” n.d.). Some of these programs are funded by the NH Education Act.

With thirty plus years of federal funding under the NH Education Act, the council as well as the U.S. Department of Education were interested in studying the effectiveness and collective impact of Native Hawaiian education in the State of Hawai‘i, utilizing developmental evaluation and collective impact frameworks. The council discussed the magnitude of such a study and decided to adjust the focus of our work. Although the goal of integrating a developmental evaluation approach into a collective impact framework was initially intended for this study, the final work of the team, with guidance from the council was 1) a definition of Hawaiian Culture-Based Education (HCBE), and 2) a Native Hawaiian Education Evaluation framework.

**Research Questions**

The original question was based on the initial request by the council:

1. What is the collective impact of Native Hawaiian Education in the State of Hawai‘i?

We were asked to design an evaluation that could be used to answer this question. In researching the literature, we focused on questions such as, but not limited to:

1. What is Hawaiian culture-based education?
2. What is developmental evaluation?

3. What makes an evaluation culturally responsive?

4. What is systems thinking?

In July of 2018, the council revised their request to Hui Ulana, which was to define Hawaiian culture-based education and to develop a Native Hawaiian education framework. This allowed us to focus in on the following two questions:

1. How do we define Hawaiian culture-based education?

2. What are the components of Hawaiian culture-based education?

**Hui Ulana**

We chose the name of Hui Ulana to represent the weaving of our four literature reviews to inform our work. As our Theoretical Framework, this weaving of the literature reviews became our foundation. The name of Hui Ulana also grew to represent the coming together of our team members. Each member comes with a different moʻokūʻauhau. Not only familial genealogy, but genealogy of place, education, and ‘ike. Just as our kūpuna were skilled in ulana, our intent was to weave the research together to provide the council with information, understanding, and products that will benefit all stakeholders regarding improvements that can be made to existing programs, policies, and procedures to improve the education of Native Hawaiians.

Committing to work on this consultancy project was motivated by the idea that the magnitude of this work, if accomplished, would have meaningful, direct application across the field of education, namely education that impacts our ‘Ōiwi Hawai‘i learners. The possibility that we would be able to provide an additional vehicle to drive conversation, collaboration and
innovation within and across Hawaiian-serving education programs rooted in features of ‘Ōiwi Hawai‘i teaching and learning presented as highly enticing. Furthermore, contributing to the conversation around appropriate evaluation philosophy or methodology for Native Hawaiian education programs and the potential to reclaim our educational era through defining elements that should comprise these evaluations served as another major motivator to engage with this work.

ʻŌlelo Hawai‘i

We recognize ‘ōlelo Hawai‘i as an official language of Hawai‘i and its people. We have chosen to not italicize Hawaiian terms and have freely woven ‘ōlelo Hawai‘i throughout our work. As Native Hawaiians, we have also chosen to capitalize the word Native and ‘Ōiwi, as we refer to our vibrant people and culture.

Review of Literature

The following literature reviews were expressly commissioned due to their inherent relatedness, which is further illuminated when considering the statutory responsibilities of the Council, when attempting to understand the collective impact of Native Hawaiian education. Foundational to understanding impact, is developing a common understanding of HCBE. The definition of HCBE derived from a review of the literature has served as a primary impetus for the creation of the Niho Framework. The remaining reviews helped to inform considerations and recommendations for the application of the framework in understanding and driving innovations related to Native Hawaiian education. Culturally responsive evaluation (CRE), for example, values ‘Ōiwi epistemology in helping to paint the picture of the evaluand and considers holistic,
contextualized experiences of the evaluand that are rooted in place and epoch, and informed by history. In a similar manner, developmental evaluation (DE) seeks to understand the evaluand from an insider’s perspective, to engage those immersed in the day to day doing of the work, those that understand the intricate nuances of a program in helping to provide the clearest possible picture to convey what is truly occurring. The review of the literature on systems thinking (ST) highlights the importance of discrete synergistic and analytic skills that allow for a deeper understanding of actors within a system and their behaviors, and support the introduction of innovations to induce desired changes. A core feature of CRE, DE and ST is that the evaluator possesses strong connections to the evaluand and that philosophically, the evaluation is highly participatory in nature, prioritizing a for-us, by-us mindset. The researcher as practitioner, in addition to practicality in developing the most accurate snapshot of an evaluand, aligns with and is affirmed by ‘Ōiwi mindset, which values sources and appropriate use of ʻike. As it would seem quite odd and principally inappropriate from an ‘Ōiwi research perspective to evaluate a system with no prior pilina with or kuleana to the evaluand, tenets of CRE, DE, and ST that prioritize inclusivity and agency of the evaluand are further validated by indigenous, namely ‘Ōiwi Hawai‘i epistemological approaches. Each review is included in its entirety with respective references due to the desire of our client to publish each review or combination therefore at their discretion, and to maintain clear distinctions between the topics reviewed given their inherent nature for conceptual overlap.
Hawaiian Culture-Based Education

Culture-based education (CBE) as well as Hawaiian culture-based education (HCBE) was covered in this literature review in part, to develop a collective impact evaluation of Native Hawaiian education in the State of Hawai‘i. The literature was analyzed for the synthesis of CBE and HCBE definitions to aid in the articulation of the impact evaluation’s evaluand. Core elements of CBE and HCBE were discussed. Contemporary literature was covered in this review, but primary source material, historical documents, as well as indigenous Hawaiian stories were highlighted to gain a better understanding of indigenous ways of teaching, learning, and knowing and to also reveal the many defining facets of the Hawaiian culture that are pertinent to HCBE. The limitations of the literature were discussed, and possible future research avenues were covered.

Key Takeaways: Hawaiian culture-based education definition, Hawaiian culture-based education foundations

Literature Review

All education is developed and delivered through a certain culture (Kana‘iaupuni, Ledward, & Malone, 2017) whether it be standard formal American education as provided or influenced by the United States Department of Education (USDOE), or an indigenous education provided at home. This would mean every type of education is founded upon a specific culture, and all education is culture-based education (Kana‘iaupuni et al., 2017). Working from this premise, the literature covered here concerning CBE, is focused primarily on works that seek to
define aspects of CBE to promote its use as an avenue to increase the academic achievement of students who were raised in the indigenous culture of specific places that are facing the fallout of education systems founded through colonization. The history and strategy of colonization in Hawai‘i is similar to that of many indigenous peoples across the globe, including those of the Americas (Dawson, 2012; Kaomea, 2003, 2009, 2014; Kawai‘ae‘a mā, 2018; Trask, 1999). Although colonization is not the central focus of this review, it is important to mention here to provide context to the efforts of CBE and HCBE. Kawai‘ae‘a mā (2018), give a, “Chronology of Hawaiian Education” (p. xxi-xxviii). The atrocities and changes revealed in the literature (Dawson, 2012; Handy & Pukui, 1998; Kaomea, 2003, 2009, 2014; Kawai‘ae‘a mā, 2018; Trask, 1999), outlines the dramatic shift in education and culture of indigenous peoples, and the effects are the basis of the movement toward CBE and HCBE.

Numerous works sought to define CBE (An Nee-Benham & Cooper, (2000);(W.G. Demmert Jr. & Towner, 2003; William G Demmert Jr., 2011; William G Demmert Jr., Grissmer, & Towner, 2006; Kanaʻiaupuni et al., 2017; S. Kanaʻiaupuni, Ledward, & Jensen, 2010; S. M. Kanaʻiaupuni & Kawaiʻaeʻa, 2008; Kawakami & Anton, 2001; B. Ledward & Takayama, 2009; B. Ledward, Takayama, & Kahumoku III, 2008; Reyhner, 2011; Singh, 2011) providing focal points in the implementation of CBE in varying contexts. These focal points are indicative of those provided in Kanaʻiaupuni et al. (2010), which include the use of the indigenous language, inclusion of family and community in the education process, use of culturally appropriate locations of instruction as place based education gives context to learning, the native perspectives and spirituality should be considered to provide cultural context, and the assessment of learning should be appropriate for the cultural context in which it is being used (p. 21-24).
Others provide additions to these focal points such as, Ledward et al. (2008), who includes the importance of genealogy and knowing one’s family history and stories. Kawakami & Anton (2001), also include the importance of traditional culture, cultural content being taught by cultural practitioners, hands on learning, and the connection of content to relevant life application (p. 59-60). These definitions, as discussed prior, provide broad application and leave room for the varying contexts of implementation across many differing cultural groups.

Other literature provided a narrower focus and included detailed characteristics of CBE particular to the Hawaiian people and culture, these works are discussed here as sources representing HCBE. The following sources have developed their arguments through examining specific areas of the Hawaiian culture and provide clear detailed pedagogical recommendation that connect to these specified areas.

Krug (2016), develops his insights through the examination of traditional Hawaiian moʻolelo in efforts to support the development of Hawaiian language immersion curriculum. He highlights the importance of a Hawaiian foundation for lessons aimed to teach through the Hawaiian language. Wilson and Kamanā (2006), also speak to the importance of language in the revitalization of indigenous language and culture. Krug (2016) and Perreira (2013), also reveal the importance of not just using indigenous language, but the importance of language and word choice for specific contexts in which they are being used to maintain the worldview embedded in the indigenous language. Krug (2016) also reveals the importance of looking at traditional moʻolelo as templates for the creation of language and other lessons, as these moʻolelo describe the learning of Hawaiian children in their language and through their culture. These moʻolelo are
also considered primary resources in a culture that passed its knowledge generationally in part through moʻolelo (Kuykendall, 1938).

The importance of kuleana and genealogy are also covered in Krug (2016), in respect to knowledge and its transmission and retention. Lopez (2015) also points to the importance of genealogical knowledge and the perpetuation of a core knowledge that is passed down in families and from teacher to student. Lopez (2015) outlines a framework of learning that was derived from a hula practitioner perspective and details Hawaiian cultural protocols that ensure the proper teaching, learning, and holding of traditional Hawaiian knowledges. *Nā honua Mauli Ola: Hawaiian Cultural Pathways for Healthy and Responsive Learning Environments* (Kawaiʻaeʻa mā, 2018), also speaks to kuleana, and genealogical connections in their work which provided an in-depth description of elements that constitute an educational foundation aimed at the elevation of HCBE in Hawaiʻi’s school systems. These elements which Kawaiʻaeʻa mā (2018), discuss as, “Nā Ala ‘Ike — The Cultural Pathways” (p. 13), are provided through a contextual framework including concepts that are unique to the Hawaiian culture, language, and worldview. Kawaiʻaeʻa mā (2018) explain their philosophy:

Describes nine Hawaiian cultural pathways, each of which carry the cultural strands of ʻike, mauli, aloha and kuleana. Together, the nine pathways represent a cultural framework that was created, inspired and expressed through reciprocal relationships with akua, ʻāina and kanaka—the spiritual, physical and human world. (p. 5)

Kawaiʻaeʻa mā (2018), expand on each aspect of their philosophy and provide great detail about the importance of weaving these aspects together to form a cohesive educational framework representative of and conducive toward the elevation of HCBE. The work of

In considering genealogy and the importance of this concept to research as a methodology of organizing the evolution of a phenomenon such as CBE and HCBE, primary resources needed to be considered. These resources revealed the traditional Hawaiian ways of life that existed prior to the arrival of foreign influence in Hawaiʻi in the year 1778 (Kamakau, 1867; Kuykendall, 1938). These works also represented the traditional Hawaiian ways of life that survived the colonizing effects of acculturation, a process described in Berry (2005). The effects of colonization and acculturation were outlined in the works of Emerson (1996), Kamakau (1961); Kamakau (1996), Kawaiʻaeʻa mā (2018), Kuykendall (1938), Trask (1999) and many others. To establish this connection to a time where foreign influence is minimal traditional Hawaiian moʻolelo were reviewed.

The connection to genealogy in learning continues in the review of three specific moʻolelo Hawaiʻi, Moʻolelo Hawaiʻi o Kalapana (Nākuʻina & Wilson, 1994), He Moolelo no Aukelenuiaiku (Fornander & Thrum, 1916), and He Moʻolelo Kaʻao No Kekūhaupiʻo Ke Koa Kaulana O Ke Au O Kamehameha Ka Nui (Desha, 1996), The work of Nākuʻina and Wilson (1994) as well as that of Desha (1996), speak to the education of children in the profession of their parents. This practice showed, in Hawaiʻi, the familial relationship to knowledge and in this
way the genealogy of knowledge and the genealogy of people are intertwined. In the
generational transmission of these genealogical knowledges, many Hawaiian pedagogical
approaches are embedded in mo’olelo as is explained in Krug (2016), and a select few were
covered as these were present in each of the three previously mentioned mo’olelo. Place based
learning was covered in all three of these mo’olelo. Place provided the knowledge to be taught as
well as the context for the learning of the people in the mo’olelo. Apprenticeship practices were
outlined in, He Mo’olelo Ka‘ao No Kekūhaupi‘o Ke Koa Kaulana O Ke Au O Kamehameha Ka
Nui (Desha, 1996), and Mo’olelo Hawai‘i o Kalapana (Nāku‘ina & Wilson, 1994). The people in
these two mo’olelo, were taught first by their parent then sent to masters of specific knowledges.
Assessment through practical application was covered in each of the three mo’olelo. In each
mo’olelo, the people were put in situations where their knowledge was assessed in situations of
practical application. Each of the three mo’olelo also speak to the importance of language, but
the importance of language is highlighted in Mo’olelo Hawai‘i o Kalapana (Nāku‘ina & Wilson,
1994) where carefully selected, contextually based language is used throughout. This type of
language use reflected the thoughts of Krug (2016) and Perreira (2013) mentioned previously.
Traditional protocols, and norms were covered in the three mo’olelo as well, this practice
stemming from a belief system governed through a deep rooted spiritual foundation. This
spiritual foundation is mentioned in many Hawaiian works (Beckwith, 1951; Emerson, 1996;
Campbell, 1997; Kuykendall, 1938; Ledward, 2011; Malo, Emerson, & Chun, 1951; Pukui &
into the process of observing a child to gauge aptitude for learning certain skills. Desha (1996),
revealed age in years of a child was not as important as the child’s readiness physically and mentally to learn and perform certain tasks. This process of gauging readiness by observation of a child’s mental and physical maturity is also covered in Nānā i ke Kumu (Look to the Source) Vol. II (Pukui et al., 1979b). Pukui et al. (1979b), also conveyed the Hawaiian pedagogical approach, “I ka nānā no a ‘ike, by observing, one learns. I ka ho‘olohe no a ho‘omaopopo, by listening, one commits to memory. I ka hana no a ‘ike, by practice one masters the skill” (p. 48). This approach is echoed in other works as well (Pukui et al., 1979a, p. 170; Pukui, 1983, p. 248, #2268; Handy & Pukui, 1998, p. 91; Woodside et al., 2011, p. 16). According to Pukui et al. (1979b), these were what the elders believed and taught through. The belief of elders holding knowledge, and the practice of them being the first lead teachers of children, to the extent of adopting their grandchildren so the child’s education would be conducted in an immersion setting, is outlined in many works (Handy & Pukui, 1998; Kamakau et al., 1964; Pukui et al., 1979a, 1979b). When grandparents raised their grandchildren, the genealogical link between generations of knowledge grew tighter. Genealogy, considered again here, was a recurring theme in the literature reviewed previously and a wealth of literature provides great detail on the importance of genealogy, in its many forms, to the Hawaiian people (Barrere, 1969; Beckwith, 1951; Kamakau et al., 1964, 1976; Pualani K. Kanahele, 2011; Krug, 2016; Malo et al., 1951; McKinzie & Stagner, 1983; Nāku‘ina & Wilson, 1994; Pukui, 1983; Pukui et al., 1979b, 1979a).

**Limitations of Literature Reviewed**

The literature reviewed covering CBE (Ah Nee-Benham & Cooper, 2000; W.G. Demmert Jr. & Towner, 2003; William G Demmert Jr., 2011; William G Demmert Jr. et al., 2006; Kana‘iaupuni et al., 2017; S. Kana‘iaupuni et al., 2010; S. M. Kana‘iaupuni & Kawai‘ae‘a,
2008; Kawakami & Anton, 2001; B. Ledward & Takayama, 2009; B. Ledward et al., 2008; Reyhner, 2011; Singh, 2011), provided great insight into indigenous ways of learning in different cultures and offer definitions of CBE that may be helpful in the initial phases of CBE implementation. The broad definitions allow for broad application, but also lack detail when considering a specific culture in CBE efforts. The literature reviewed concerning HCBE, provided invaluable insight to the Hawaiian ways of learning, knowing and teaching, but they are works of literature trying to reveal aspects of a culture that was not handicapped by a written system of knowledge communication. These written documents of an oral tradition, though valuable, must also be placed in a sub-category of translations. The literature cannot replace the generational oral knowledge lost to the effects of foreign influence.

**Conclusion and Future Research**

The definitions provided below are distilled from the review of the literature on CBE and HCBE. These definitions are cautiously and humbly provided below knowing the importance of this type of work and the permanency of the written word. The literature reviewed is a part of the foundation upon which these definitions are drafted, and this is an area where future research is needed. As research on this topic demands insight in to the essence of a culture, its mole must be examined and in doing so here the literature reviewed was but a glimpse of a culture where, “Ua lehulehu a manomano ka ‘ikena a ka Hawai‘i” (Pukui, 1983, p. 309, #2814). The definitions are presented as a part of a larger work, as discussed previously, and were put forth to begin this work, though daunting and every effort brought forth to, “Kuhukuhi pono i na au iki a me na au nui o ka ‘ike” (Pukui, 1983, p. 40, #325), it must always be remembered, “A‘ohe pau ka ‘ike i ka hālau ho‘okāhi” (Pukui, 1983, p. 24, #204).
Definitions

Culture-based education.
Culture-based education is education whose foundation is built of the values, norms, knowledge, beliefs, spirituality, practices, experiences, places, and language of a culture. Further, it is education created with and taught through the worldview of a culture with the support and continual interaction of its community members. It is also education, assessed through culturally appropriate methods.

Hawaiian culture-based education.
Hawaiian Culture-Based Education, is education whose foundation is the indigenous Hawaiian education systems (ways of learning, knowing and teaching) that were genealogically Hawai‘i prior to the year 1778. Further, it is education created, taught, learned, and assessed through the indigenous Hawaiian cultural worldview, in environments conducive to the effective transmission of indigenous Hawaiian knowledge at a pace that is appropriate for its learner.

Table 1
Hawaiian Culture-Based Educational Foundations

<table>
<thead>
<tr>
<th>Welo</th>
<th>Teaching and learning require, and values kupuna and ʻohana involvement and knowledge.</th>
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<tbody>
<tr>
<td>Wahi</td>
<td>Place provides context as well as content. Being physically present allows the learner and the teacher to actively engage with content. Place is also a teacher that provides knowledge to those who reside in an area, making them the experts of knowledges unique to that area.</td>
</tr>
<tr>
<td>Loca</td>
<td>Masters of a knowledge or those who are intimately familiar should be the lead resources and teachers for their content area.</td>
</tr>
<tr>
<td>Moʻokūʻauhau</td>
<td>Kuleana, validity, accountability, relationships and history are embedded in</td>
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</tbody>
</table>
Genealogy. Genealogy includes not only biological genealogy, but also genealogy of knowledge. Through genealogies, teachers and students are able to build and analyze connections to content. Genealogy also highlights the importance of knowing the sources of knowledges and conveying these to students.

Loina
Protocols set the context for learning. These convey the sacredness and importance of knowledge, the process of its transmission and its internalization. Protocol also helps to establish a governing value system in education.

Hoʻomana
Hawaiian spirituality in HCBE drives accountability and connectedness to all aspects. Hawaiian spirituality also helps to maintain the Hawaiian mindset towards knowledge. Spirituality is the recognition that there is an existence of mana in everything. This informs how teachers and students interact with everything around them, including place. Awareness of how mana flows determines and maintains the Hawaiian mindset and behavior.

ʻIke Laʻa
Knowledge is connected to all things through genealogy and spirituality, and it bestows and allows for the maintenance of Kuleana. To hold, teach, or learn knowledge puts one in a place where they are burdened with great responsibility to that knowledge.

Nānā i ka hana
Teachers provide opportunities for students to learn observation skills and to observe practical application of content.

Hana i ka hana
Teachers provide hands on learning opportunities to students. Assessment should also incorporate practical components.

Haʻawina Ponoʻī
The aptitude of a student is not determined by age or a grade level. It is instead determined by an observant teacher. Content, its delivery or denial and assessment, are designed to be appropriate for the learner.

ʻŌlelo Hawaiʻi
The Hawaiian language is a foundational piece of HCBE, from research and lesson planning to teaching and assessment. Content
<p>| | |</p>
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<tr>
<td>specific language, including ʻōlelo noʻeau and language nuances, maintains Hawaiian worldview and language accuracy. Oral traditions including speeches, moʻolelo, oli, mele, debate and nane, are used as curricular tools.</td>
<td></td>
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</tbody>
</table>
References


Kuamoʻo, University of Hawaiʻi at Hilo.


Culturally Responsive Evaluation

The purpose of this literature review is to understand how Culturally Responsive Evaluation (CRE) could be applied to an evaluation framework looking at the collective impact of Native Hawaiian education in the state of Hawai‘i. The intention here is to define CRE, provide cultural connections to Indigenous peoples, provide the value in using its principles, and to address some challenges faced by evaluators of CRE.

A Cultural Lens

We can no longer use the evaluations and theories based on western models to evaluate programs of today. People deserve to be seen for who they are and have evaluations of their programs through the lens of their own culture. Culturally responsive evaluation requires the evaluator to step into the group being evaluated. The responsibility now includes learning about the evaluand, their life situations, experiences and their relationship with their environment. What methods do these people use to measure their truths? Dominant western ways of thinking try to group all people into one. An evaluation serves its purpose when it is helpful to the people of that community. To ensure the validity of the evaluator’s work, culture is key (Bledsoe & Donaldson, 2015).

Definition

CRE is an evaluation that includes the culture of the program/community as an important factor. “Culturally responsive evaluators honor the cultural context in which an evaluation takes place by bringing needed, shared life experience and understandings to the evaluation task at hand (Frierson, Hood, & Hughes, 2002, p.63).” Understanding that his or her own positionality may not align with the program, the evaluator acknowledges and values the input of the community being evaluated.
Bledsoe & Donaldson (2015) list the steps to conducting a Culturally Responsive Evaluation (CRE). They are (a) prepare for the evaluation by understanding the context and seeking out members of the community; (b) engage stakeholders of multiple perspectives gaining an understanding of the struggles and issues; (c) identify the purpose of the evaluation with an understanding of how the resources work; (d) frame the right questions alongside stakeholders; (e) design the evaluation that considers the questions and the context; (f) select and adapt instrumentation that works for the context; (g) collect the data using both qualitative and quantitative data sensitive to the context; (h) analyze the data with consideration of the cultural context in the interpretation; (i) disseminate and use the results. The CRE model in Figure 1 models how cultural responsiveness is central throughout the evaluation process.

Figure 1. A CRE requires the evaluator to be culturally aware and responsive through each step of the evaluation.
Kawakami, Aton, Cram, Lai, & Porima (2007) state that “evaluation should be based on indigenous epistemology” using holistic approaches and contextualized experiences with regard to a specific place, time, community, and history. Evaluations should promote and practice an indigenous worldview, including indigenous identity, epistemology, values, and spirituality. Meyer (2001) explains that as Hawaiians, “We simply see, hear, feel, taste, and smell the world differently (p. 125).” Through her interviews with kūpuna (elders) from the Hawaiian community, Meyer further defines seven themes of Hawaiian epistemology or ways of knowing. Table 2 provides some examples.

Table 2

Themes of Hawaiian Epistemology

<p>| Spirituality and Knowing: the cultural context of knowledge | Pua Kanahele shared, “[Knowledge] doesn’t only have to do with intelligence, it has to do with spirituality, it has to do with everything that has lined up before you, and all of the things that are lined up ahead of you. All sorts of coming together to make all of this happen. You, yourself, cannot make any of this happen (p. 128).” |
| That Which Feeds: physical place and knowing | Hannah Kihalani Springer shared, “Our cultural as well as physical geography is the foundation of our creativity, of our problem solving, of our knowledge building (p. 129).” |</p>
<table>
<thead>
<tr>
<th>The Cultural Nature of the Senses: expanding the idea of empiricism</th>
<th>Abbie Napeahi shared, “You know what they used to say to me, and I’ll never forget, that’s what I taught my children: nana pono ka maka, ho’olohe pono ka pepeiao, pa’a kou waha, hana ka lima. That’s a famous saying from my po’e kupuna [elders]. Be very observant and when you are to listen, listen very carefully, but whenever you listen, that’s not for you to open your mouth and create problems, that’s why they say, shut your mouth and work, do the work (p. 133).”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship and Knowledge: self through other</td>
<td>Irmgard Aluli, “You don’t overstep someone you think is older than you in authority. You don’t try to correct. You pay homage to the old all the time, bow to them. They are smarter than you; they’ve live longer; take their word rather than mine. I may disagree, but you listen to that (p. 135).”</td>
</tr>
<tr>
<td>Utility and Knowledge: ideas of wealthy and usefulness</td>
<td>Pua Kanahele shared, “Function is tied to lifestyle, and so you have to be able to use it in your lifestyle, it has to be tied to family, it has to be tied to land and it has to be tied to establishing the foundation (p. 138).”</td>
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</tbody>
</table>
### Words and Knowledge: causality in language and thought

Irmgard Aluli shared, “Knowledgeable [is] knowing when to share and with whom to share - I think so. You don’t just give to anybody. Teaching carefully for ones that you choose (p. 139).”

### The Body-Mind Question: illusions of separation

Lynette Paglinawan shared, “Feeling, the definition of feeling for me has to do with whether or not I feel okay, whether or not I feel comfortable, whether or not I am not out of sorts. It has to do with not feeling anxious, it has to do with not feeling scared; it has to do with not being uncertain like I have to look over and check myself time and time again. It’s a coming together of knowledge and emotion in my gut when it merges, and I’m altogether comfortable (p. 142).”

Meyer acknowledges that there are much more than just seven themes, but this could serve as a starting point for an evaluator preparing to do a CRE.

Askew, Beverly, & Jay (2011) couple collaborative evaluation techniques with being culturally responsive as it “intentionally incorporates program stakeholders into the evaluation process and views their participation as essential for generating evaluation findings that are meaningful, useful and effective (p. 552).” The idea here is that both the evaluator and the stakeholder “share” in the responsibility for the evaluation. This refers to both the process and
the product. Inclusion of the program community benefits both the staff and the evaluator. Staff learn the process and steps to improving their own program, while the evaluator builds relationships with the staff and receives a richer collection of data due to the increase of understanding by the program community through lived experiences (p. 553-554).

Once the evaluator has an evaluation team that includes key stakeholders and has taken the time to learn about and experience the culture of the program, the next step would be to begin developing the questions. The team will want to identify the questions that have the “most value to the stakeholders and community members, and acknowledge issues that might affect the way the program may or may not meet the needs of the participants (Bledsoe, 2015, p. 17).” In other words, how has the program impacted the community?

Designing the evaluation methodology would be the next step. The recommendation is to use multiple methods and to include mixed methodology (p. 17, Kawakami et al., 2007 p. 335). As mentioned earlier, stakeholders should be involved in each step of the evaluation, including the selection, development and adaptation of reliable and valid instruments. Consideration should be given to alternative ways of collecting data to enhance and increase accuracy of data collection (Bledsoe, p. 18). “Spiritual, cultural, historical, social, emotional, cognitive, theoretical, and situated information all contribute to that understanding (Kawakami et al., p. 335).”

In analyzing and interpreting the data collected, a team approach with stakeholders should be used. Reports could include “graphic representations, moʻolelo (narratives), culturally created manifestations (e.g., oli and hula)” to share out the results. The findings should first be shared with the program community. In the end, the conclusions should be useful for the
community and any funding agency (p. 335). Being involved in the process from the beginning, the program community should gain an understanding of where they were, where they are, and where they want to go.

Up until this point, we have based the evaluation on the CRE principles and inserted recommendations by other indigenous practitioners. Let us review one other set of principles shared from the Kaupapa Māori Evaluation Principles and Practices in Table 3 (Green, 2015). While it was created to assist in Aotearoa, evaluators could also apply it to other indigenous peoples as well. It includes seven points that evaluators should consider in conducting a culturally responsive evaluation.

Table 3

<table>
<thead>
<tr>
<th>Kaupapa Māori Evaluation Principles and Practices</th>
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<tbody>
<tr>
<td><strong>Aroha ki te tangata:</strong></td>
</tr>
<tr>
<td>A respect for people</td>
</tr>
<tr>
<td>Allow people to define their own space and to meet on their own terms, using appropriate engagement processes and correct observance of protocols. Stay informed about previous activities in whānau/communities, and leave preconceived ideas at home.</td>
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<tr>
<td><strong>He kanohi kitea:</strong></td>
</tr>
<tr>
<td>The seen face</td>
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<tr>
<td>“A voice may be heard but a face needs to be seen.” This is about building personal relationships and becoming known to the whānau/community, using face-to-face approaches and investing the time it takes to become known.</td>
</tr>
<tr>
<td>Titiro, whakarongo...korero:</td>
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<tr>
<td>Manaaki ki te tangata:</td>
</tr>
<tr>
<td>Kia tupato:</td>
</tr>
<tr>
<td>Kauae takahia te mana o te tangata:</td>
</tr>
<tr>
<td>Kia māhaki:</td>
</tr>
</tbody>
</table>

Green acknowledges Cram for the statement that one should not assume that a culturally responsive evaluation is weak or lacks rigor because of its emphasis on relationships. Instead,
one should see that established trust as the accountability to the people in the context of the evaluation (p. 101-102).

Lopes, R. K. (2016) shares the mele, *Ua Noho Au A Kupa* written by King David Kalākaua, and how its lyrics offer us an insight into how we might conduct research amongst our Hawaiian people, especially our mentors and kūpuna. Table 4 below looks at some key words from the mele and how Lopes explains its deeper meaning.

Table 4

*Ua Noho Au A Kupa*

| “Ua noho au a kupa i ke alo” | Noho:  
While it is defined as “to live, reside, inhabit, occupy, dwell, stay, tarry, marry, sit,” it is reflective of someone who has made a commitment to establish a relationship, an expression of humbleness and respect. |
|-----------------------------|---------------------------------------------------------------|
| Kupa:  
Defined as native or well acquainted, to identify oneself as a kupa one must be a longtime resident, possessing relationships with the people and the mo’olelo of that place, both ancient and modern. Reflective of patience and investment. |
Alo:
This is the front, face or presence of someone. By giving the attention to the speaker, you communicate that you are truly interested in gaining the knowledge and in developing that relationship. Building trust.

<table>
<thead>
<tr>
<th>“A kama‘āina lā i ka leo”</th>
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<tbody>
<tr>
<td>Kama‘āina:</td>
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<tr>
<td>Looking at the two parts of the word, kama as descendent, and ‘āina as land, it connects to the genealogical connections to that place. It gives reference to the humility, respect, and reciprocal relationship to that place and the people of that place.</td>
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</tbody>
</table>

Leo:
To become accustomed to that voice takes time. Coming from an oral people, it is the voice that keeps us connected and informed.

Written over a hundred years ago, the lesson of this mele is still very much relevant for us today. One can see connections between the Māori and Hawaiian practices. An evaluator conducting an evaluation in an indigenous community would benefit from learning these entry points.

One might ask, why use culturally responsive evaluation? Society is so diverse that to not recognize the culture of the people served by the programs being evaluated, would result in an evaluation that was flawed. If the purpose of the evaluation is based on helping not just the
funding agency, but the people it serves, then the lived experiences, beliefs, and practices of those people are essential to understanding the findings. Education in Hawai‘i has been evaluated for many generations through the Western lenses. With the shift and push for Hawaiian Culture-Based Education (HCBE) throughout the state, we need to change the lenses we use to evaluate these programs. CRE provides the solution. It is an effort to undo the negative effects of colonization of indigenous people. Indigenous people are wary of others coming in to evaluate them because of what has happened in the past, when our indigenous worldviews and ways of knowing were disregarded or thought of as not valid. With CRE, the evaluation includes the people in the community, and requires the evaluator to listen, observe, participate, then speak, acknowledging the value of the people and place.

**Conclusion**

While CRE has become more recognized, some evaluators still feel that culture should not be a factor in evaluation, claiming that an evaluation should be “culture free (Frierson et al., 2002, p. 64).” This is a challenge in itself. Is an evaluation ever “culture free?” Culturally responsive evaluators have the responsibility to understand their own culture and work at not allowing those beliefs to influence their work with other cultural programs. Instead, we need these evaluators to become culturally competent to better serve the community being evaluated. It is important for indigenous and non-indigenous evaluators to work together, once again working towards the goal of helping the community program evaluate their own progress.
References


Developmental Evaluation

This resource was produced at the request of the Native Hawaiian Education Council to, in part, understand how Developmental Evaluation (DE) might be applied in the design of an evaluation framework to inform the collective impact of Native Hawaiian education in the state of Hawai‘i. The literature was analyzed to understand the theory and practice of DE and the possible conditions under which DE is best suited in the field of practice. Further, this review seeks to understand the connections between DE and other related collective impact domains identified by the council, including Hawaiian culture-based education, culturally relevant evaluation, and systems thinking. An exploration of the competencies required of evaluators using DE, and potential challenges are also included in prologue for future work related to the use of DE in evaluation design in the context of Native Hawaiian education.

Key takeaways

DE is appropriately suited as an evaluation methodology in new and emerging contexts, ongoing systems evaluation, as may be the case in trying to understand the collective impact of system innovations in collectively advancing Native Hawaiian education, or in evaluating systems change.

DE methodology is highly correlative to ‘ōiwi epistemology as both value collaborative engagement of and pilina amongst participants in the advancement of innovations for the express benefit to the collective.

Definition

Ma ka hana, ka ‘ike,

In working one learns (Pukui, 1993, #2088)
Developmental Evaluation reflects an ‘ōiwi concept that emphasizes the importance of the participants of a system as active agents in examining, learning from, and further improving a collection of complex and possibly ever changing elements comprising a system (Patton, 2011).

“The purpose of DE is developmental. Some kind of innovation is being developed. The evaluation tracks what is being developed and how it is being developed – the nature and implications of the innovative and adaptive processes” (Patton, 2016, The Developmental and Evaluation Principles section, para. 3). Engaging as research practitioners, those involved in DE learn and improve by simply doing; engaging skills essential to life on an island, for example like kilo, observing intensely one’s environment, practices that work well and practices that do not, facilitating continuous inquiry instead of rendering final judgement, and innovating and adapting nimbly as data emerge.

Calling upon historical ‘ōiwi context to briefly illustrate DE in a more culturally relevant setting, we look to Kohapiolani and his decision to begin training his son, Kekūhaupiʻo to become a warrior. Through constant observation of Kekūhaupiʻo in practice and in regular consult with both his son and the instructors responsible for his training, Kohapiolani modified tools, resources, and instructors based on developments in his son’s skills as they presented over time. Recognizing, for example, that while Kekūhaupiʻo was excelling at throwing spears, he was not as strong in defending against them, and adapting the focus of training accordingly (Frazier, 2000). Kohapiolani did not wait to evaluate his son’s performance on the field of battle, nor did he begin with an intent to work toward and evaluate specific skills in an agreed upon order. Rather, he relied on emerging data to inform what should be monitored and appropriate next steps, including when a change in instructor would be needed. Such is the inherent adaptive
nature of DE – the ability to understand as well as adapt innovations as events unfold, the direct results of the material involvement of the practitioner in the evaluation itself. The practitioner therefore brings an insider perspective, which coupled with evaluative thinking and disciplined practice, allows for, as Patton (2016) writes, “the marriage of empirical inquiry focused on the innovation to direct engagement with the innovator” (The Developmental Evaluation Value Proposition section, para. 2). Including practitioners in evaluative inquiry promotes a shared commitment to the evaluation and to the larger group that maintains a vested interest in the innovations that result from the group’s work (Wenger, Trayner, & De Laat, 2011).

I ka nānā nō a ‘ike,

By observing one learns (Pukui, 1993, #1186)

Originating as a tool to accommodate the formative characteristics of emergent programs, DE also serves to as a tool for generating feedback and stimulating learning around the progress of scaled changes to a system that may have matured beyond the emergent stages of existence (Patton, 1994). For Hawaiians, from a communal perspective for example, while the collective yield of an ahupua’a’s lo’i was certainly a long-term concern affecting society’s ability to continue to survive into perpetuity, intense attention to the day-to-day environmental elements and the immediate evidence of plant development based on these conditions, water level, rate of flow, ‘ohā growth, leaf appearance, or presence of disease was needed to nimbly adapt interventions to ensure long-term yield and sustain life across the community system. DE therefore prioritizes the journey over the destination, valuing and engaging with the developing, emergent changes and context-specific nuances within a system as the focus of deep learning and driver of innovation.
Connecting to the core philosophy of DE, Saari and Kallio (2011) in their work concerning developmental impact evaluation further expand the concept of “research impact as a qualitative learning challenge, rather than an accountable target to be judged”, as a perpetual way of managing, learning from, and renewing the work of a system’s actors, and ensuring that what and how elements are observed align with the practical needs of the community at that time (p. 227). From an ‘Ōiwi viewpoint, there is an immediate purpose to the learning as it relates to the emerging needs of the collective. John Charlot (2005) explains that from a classical Hawaiian perspective, learning was born out of necessity and served a practical purpose, and that our activities should have a ‘waiwai, a virtue, value, or benefit’ (p. 94). He further contends that the life or death nature of knowledge and the connection of data to the going concern for a population requires active participation by actors within a system to observe, learn, and adapt.

**Eight Essential Principles of DE**

No mākou ka mana,
The power is within each of us to determine our future (Beamer, 2014)

Patton (2016) emphasizes that DE is not a compilation of tools, techniques, or methods, nor are there specific steps, procedures, recipes, or formulas to follow. Rather, guiding principles help to illustrate the philosophy of the methodology, and the mindset that should be assumed in applying DE. Patton furthers that in a well conducted DE, evidence of having addressed these principles in some substantive manner, either in the evaluation process or the result, should be evident, as all eight principles are important. Dweck (2006) maintains that the perspectives we adopt for ourselves have profound effects on our actions. Proper application of DE therefore necessitates a perspective or rather a mindset of integrity of application through interpretation
and adaptation to context and situation, through what Patton (2016) refers to as “sensitizing elements” (What Are the Essential Elements of Developmental Evaluation section, para. 4). This is in immediate contrast to other forms of evaluation that prioritize fidelity, whereby an evaluation must mimic discrete or prescribed steps, processes, and behaviors.

Table 5

*Design Principles and Descriptions*

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
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<tbody>
<tr>
<td>Developmental purpose</td>
<td>Five specific types of DE contributions:</td>
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<tr>
<td></td>
<td>1. Evaluating a new, original approach to a problem as it is being created</td>
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<tr>
<td></td>
<td>2. Informing ongoing innovative development of a program or intervention in response to changing conditions and new understandings (adaptive innovation)</td>
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<td></td>
<td>3. Adapting effective principles validated in one context to a different context</td>
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<td></td>
<td>4. Supporting major systems change, including cross-system/cross-scale innovation</td>
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<td>5. Developing rapid responses in crisis situations</td>
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“Developmental evaluation is distinguished from other forms of evaluation by its purpose: to illuminate, inform, and support what is being developed, by identifying the nature and patterns of development, and the implications and consequences of those patterns” (The Developmental Evaluation Principles section, para. 1).
| Evaluation rigor | • DE is driven by empirical data that are collected and interpreted to build understanding around what is being developed.  
• A rigorously designed DE will result in a clear and convincing compilation of evidence in support of stated conclusions that can withstand scrutiny when judged by the professional evaluation standards set forth by the Joint Committee Standards for Evaluation.  
• Evaluation design in and of itself does not ensure rigor, it manifests in the commitment to rigorous evaluative thinking throughout the DE process coupled with context appropriate evaluation methods, all aligned to the mindset espoused by the DE principles. |
| Utilization focus | • The DE focus is on the intended use by intended users from start to finish, ensuring that facilitation of the process results in actual use by the intended users  
• DE data are used by the intended audience to adapt innovative strategies that affect the actors within the immediate system being studied |
| Innovation niche | • DE supports the creation of a novel response to an authentic, emerging problem  
• Whether or not something is considered an innovation is based on co-constructed agreement among stakeholders  
• Qualifying a change as an innovation is often measured by the extent to which the change compares to the existing situation  
• DE helps to solve for *wicked problems*, problems that are difficult to deal with or resolve, adaptive challenges rather than technical problems (Rittel & Webber as cited in Patton, 2016), (Heifetz, Grashow, & Linsky, 2009) |
| Complexity perspective | • No one model can comprehensively address problems inherent in social system over the course of a DE  
• A concerted focus on the emergence of data that informs iterations of innovations over time is required in a complex system |
Systems thinking

- Allows the evaluator to understand the multitude of variables that affect how a system operates and responds to innovations
- Systems thinking works in concert with complexity perspectives and are both important considerations in trying to make sense of system dynamics and formulating needs

Co-creation

- DE must assume a fundamental role in the change process and must include participation from multiple stakeholders impacted by the system in all phases of the evaluation

Timely feedback

- Feedback emerges organically rather than simply at predetermined touchpoints, the timing of which is driven by the needs of the evaluation process as data comes to light

(Patton, 2016)

Differences Between Evaluation Types

In clarifying the differences between other, traditional types of evaluation such as formative or summative, Patton (2009) communicates that DE differs from traditional summative and formative evaluations in that the former focuses on evaluation as an ongoing process throughout an emerging initiative. The latter two are generally positioned as evaluations for programs that have already been established and are less emergent in nature; summative evaluation measuring outcomes against predetermined goals and frameworks for the purpose of rendering overall judgement of merit, worth and significance (Patton, 2016). Formative evaluation, while also used in some situations to assist in continuous improvement, aligns in a similar manner to summative evaluation in that ongoing evaluation continues to occur in light of
predetermined outcomes, and seeks to improve on a model in preparation for summative evaluation.

Table 6

*A Comparison of Traditional and Developmental Evaluation Approaches*

<table>
<thead>
<tr>
<th>Evaluation Component</th>
<th>Traditional Evaluation</th>
<th>Developmental Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Model validation, accountability</td>
<td>Development, adaptation</td>
</tr>
<tr>
<td>Situation</td>
<td>Stable, goal oriented, predictable</td>
<td>Complex, dynamic, changing</td>
</tr>
<tr>
<td>Mind-set</td>
<td>Effectiveness, impact, compliance</td>
<td>Innovation, learning</td>
</tr>
<tr>
<td>Target</td>
<td>Program participants</td>
<td>Participants’ environment</td>
</tr>
<tr>
<td>Measurement</td>
<td>Based on predetermined indicators</td>
<td>Based on emergent indicators</td>
</tr>
<tr>
<td>Unexpected Consequences</td>
<td>Paid token attention</td>
<td>Paid serious attention</td>
</tr>
<tr>
<td>Evaluation Design</td>
<td>By evaluator</td>
<td>Collaborative with program staff</td>
</tr>
<tr>
<td>Evaluation Methods</td>
<td>Based on social science criteria</td>
<td>Based on evaluation use criteria</td>
</tr>
<tr>
<td>Evaluation results (ideal)</td>
<td>Best practices</td>
<td>Best principles</td>
</tr>
<tr>
<td>Evaluator role</td>
<td>Independent from program</td>
<td>Integrated with program</td>
</tr>
<tr>
<td>Evaluator qualities</td>
<td>Strong methodological skills, credibility with external authorities and funders</td>
<td>Strong methodological skills, credibility with organizational and program staff</td>
</tr>
</tbody>
</table>

(Fagen et al., 2011, adapted from Patton 2011)

**Connections to HCBE, Systems Thinking, Culturally Relevant Evaluation**

*Ua ao Hawai‘i ke ‘ōlino nei mālamalama*

Hawai‘i is enlightened, for the brightness of day is here (Pukui, 1993, #2773)

A common element across organizations that maintain a strong focus on Hawaiian culture-based education, is the desire to engage ‘Ōiwi through learning that is grounded in
cultural knowledge, language, and values with a focus on responsibility to family, community and environment in preparation for long-term college, career, and community readiness (Duarte, Hoe, Kelling, & Espania, 2016; Espania, Hoe, Kelling, Tamura, & Trinidad, 2017).

Goodyear-Kaʻōpua (2013) writes, “The efforts to build Indigenous Hawaiian culture–based charter schools have been about not only educational reform but also the restoration of the holistic health of Hawaiian communities and nationhood. They are projects of survivance” (p. 5). Understanding the historical underpinnings of organizations at the center of Native Hawaiian culture-based education helps to illustrate the fundamental uniqueness of these types of programs in comparison to traditional, western forms of education that compulsorily, the majority of school-aged children of Hawaiʻi participate in (Hawaiʻi department of education data book, 2017). In attempting therefore to evaluate collective impact of organizations that endeavor to support and advance Native Hawaiian culture-based education, the unique nature of many of these programs requires a special consideration, and ultimately, a specialized, contextually relevant evaluation method. Patton (2016) maintains that the inherent responsiveness of DE to situationally relevant circumstances, well positions DE as an evaluation method when conducting evaluations within cultural contexts. He further implicates the expertise needed, including cultural, facilitation, evaluation, and community knowledge to conduct a DE in a cultural setting.

Arnold & Wade (2015) define systems thinking as “a set of synergistic analytic skills used to improve the capability of identifying and understanding systems, predicting their behaviors, and devising modifications to them in order to produce desired effects” (p. 675). From an ʻōiwi worldview, systems perspectives form the foundation of who we are as a people, it is a
concept that is embedded in our naʻau from birth. Kameʻelehiwa (1992) speaks of ʻŌiwi standing firmly in the present with our backs to the future and our gaze upon the past as a metaphor to describe ʻŌiwi ideology in how to address issues of the present by understanding deeply, events of the past. Andrade (2013) adds that ʻōiwi operate in a living history wherein actions are guided by multiple factors, historical context, moʻokūʻauhau, kūpuna, and Akua. ʻŌiwi Hawaiʻi, therefore, naturally operate in a world that takes into account multiple variables and inputs to inform and guide in decision making.

Finally, there exists a substantive parallelism between DE and culturally relevant evaluation (CRE) methodology. CRE values the initiation by and inclusion of the community upon which the evaluation is focused (Kawakami, Aton, & Cram, 2007). Multiple sources of data must also be considered, including data that may not be initially valued in Western contexts such as “spiritual, cultural, historical, social, emotional, cognitive, theoretical, and situated information”, while also incorporating, as appropriate, academic perspectives and methodology (Kawakami et al., 2007, p. 335). The purposes of both CRE and DE serve as further evidence of alignment in that both maintain, as a central focus, a goal toward betterment, improvement, innovations that positively impact the evaluand.

Table 7

<table>
<thead>
<tr>
<th>Competency Areas*</th>
<th>General evaluator competencies</th>
<th>Specialized developmental evaluator competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional practice</td>
<td>Knowing and observing professional norms and values, including evaluation standards and principles.</td>
<td>The importance of the ongoing relationship between social innovators and developmental evaluators increases the need for professional boundary management as an essential competency.</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Systematic inquiry</td>
<td>Expertise in the technical aspects of evaluations, such as design, measurement, data analysis, interpretation, and sharing results.</td>
<td>Developmental evaluator Mark Cabaj has observed, “The competencies demanded are greater because you need a larger methods toolbox and capability to come up with creative approaches.”</td>
</tr>
<tr>
<td>3. Situational analysis</td>
<td>Understanding and attending to the contextual and political issues of an evaluation, including determining evaluability, addressing conflicts, and attending to issues of evaluation use.</td>
<td>Being able to distinguish the simple, complicated, and complex is essential. So is understanding how to use complexity concepts as part of situation analysis: emergence, nonlinearity, dynamical, uncertainty, adaptability.</td>
</tr>
<tr>
<td>4. Project management</td>
<td>The nuts and bolts of managing an evaluation from beginning to end, including negotiating contracts, budgeting, identifying and coordinating needed resources, and conducting the evaluation in a timely manner.</td>
<td>Special project management challenges in developmental evaluation include managing and adapting the emergent design, timely data collection and feedback, handling the sheer volume of data that emerges as the project unfolds, and flexible budgeting.</td>
</tr>
</tbody>
</table>
5. Reflective practice | An awareness of one’s program evaluation expertise, as well as the needs for professional growth. | Reflective practice is a data collection approach in developmental evaluation, as is a commitment to assess and further develop one’s developmental evaluation competencies. This practice includes reflexivity—reflecting on one’s contribution and role in relation to particular contexts and processes.  

6. Interpersonal competence | The “people skills” needed to work with diverse groups of stakeholders to conduct program evaluations, including written and oral communication, negotiation, and cross-cultural skills. | A developmental evaluation is co-created with primary intended users (social innovators, funders, and implementation staff). The approach is heavily relationship-focused, so interpersonal relationships are parallel to methods in determining the evaluation’s relevance and credibility.  

(Ghere, King, Stevahn, & Minnema (2006), as cited in Patton, 2016)

**Challenges**

ʻAʻohe hana nui ke ʻalu ʻia,

No task is too big when done together by all (Pukui, 1993, #142)

Gamble (2008) and (Patton, 2016) speak to challenges often inherent in DE. Evaluator credibility, how the evaluator structures the evaluation and the manner in which participants are included and communicated with throughout the process being one such challenge. Pilina thereto represents a substantive mitigating factor in supporting positive judgements by participants and
external stakeholders regarding the credibility of the evaluator and the evaluation. Those leading DE also maintain credibility through accountability; maintaining professionalism and managing resources including human capital and time well. Accurately assessing outcomes and impacts throughout the evaluation process, as second level of accountability, is often related to expectations of traditional program evaluation. Lastly, remaining accountable for learning, development, and adaptation that results in actual systems change, ideally positive, further supports evaluation credibility via a tangible representation of the results of the work. Ambiguity and uncertainty are often common concerns of participants and stakeholders in a DE, requiring leaders within the evaluation to be highly skilled at monitoring and addressing these feelings of others and within themselves to be able to provide reassurance and help the group remain committed to and ultimately advance the collective work. The speed at which data is collected and analyzed, and iterations implemented collectively problematize the rapid data collection and innovation cycle that is often part of DE. Coupled with the human capital necessary to adequately and respectfully engage participants as evaluators, Gamble (2008) writes, “developmental evaluators tend to rely heavily on visuals, diagrams and stories in recounting and making sense of the unfolding innovations that they are tracking” (p. 55). Effective developmental evaluators must remain vigilant in maintaining focus on the work and its purpose, while continuing to build the group’s capacity for evaluative thinking.

Conclusion

The literature related to DE consistently support inclusion of evaluation participants as researcher practitioners, essentially, those who are deeply connected to and are best positioned to understand and speak to the nuances of the work as it unfolds. Maintaining rigor and flexibility
while ever mindful and observant of how the parts of a system work together or against each other to produce the results that emerge are also foundational. These core principles of DE inextricably align this methodology with ‘ōiwi epistemologies; acts of survivance and reclamation of ea through a focus on Native Hawaiian education rooted in a Hawaiian worldview, a focus on the system and the collective – kākou, and steadfast commitment to the belief that by engaging the right kānaka, in the right activities, at a pono time, our deep learning will drive innovation for the benefit of all.
References


[https://drive.google.com/file/d/0B1yqzwjzu1LLSW9mRTFVQjViQzQ/view?usp=sharing](https://drive.google.com/file/d/0B1yqzwjzu1LLSW9mRTFVQjViQzQ/view?usp=sharing)


**Systems Thinking Theory**

The objective of evaluating the collective impact of Native Hawaiian Education in Hawai‘i is an extensive undertaking given the complex historical, political, and social landscape that make up Native Hawaiian Education. There are many variables that can serve as criteria for determining collective impact. The word collective connotes that there are many elements and factors that make up the whole system of Native Hawaiian Education. Systems Thinking Theory puts forward a perspective or mindset for identifying the elements and factors of the system in which Native Hawaiian Education takes place in Hawai‘i. Given the complex history of Hawai‘i, understanding the timeline of education is one significant element of the system that must be addressed in order to evaluate collective impact. This element of the system was examined in the literature review of Hawaiian Culture-Based Education.

The word impact implies that the parts of a system are interrelated and interdependent where each component is vital to understanding how a system works; how a system behaves; and how the parts of the system aid or hinder the system’s ability to adapt, evolve, create, and recreate. Terms like stock, flow, input, output, delays, feedback loops, and boundaries are commonly used in Systems Thinking Theory. Non-linear relationships are core to understanding the complex nature of evaluating a large system. They are unpredictable, complex, and cannot necessarily be restrained by any one part of the system. As each part impacts another, the dynamics of the system are always in motion. Hence, capturing data about a system especially in this context of evaluating collective impact requires a methodical approach of which Systems Thinking Theory offers.

**Key Takeaways**
Systems Thinking Theory supports collective collaboration in studying problems at macro and micro levels.

Systems Thinking Theory recognizes the complexity in the nature of a problem and the non-linear relationships that impact a system.

Systems Thinking Theory supports an inherently Hawaiian mindset and perspective giving premise to its application and alignment in Hawaiian inquiry approaches.

Systems Thinking Tools can be applied in localized contexts to support highly contextual settings to meet the needs of its community.

**Parallels to Hawaiian Perspectives**

Being disciplined, systematic, and observant are characteristics that describe a System Thinking perspective. These qualities are necessary as they provide a starting point for all those involved in describing and analyzing a system together. When I reflect on these qualities and the context of Native Hawaiian Education, it is obvious that Systems Thinking Theory can be paralleled to Hawaiian cultural ways of thinking, doing, and engaging. While there are many examples to draw upon, the kū’āuhau framework and the ahupua’a lo‘i land system are ones that I will elaborate upon for consistency as they have also been used in the Hawaiian Culture-Based Education and the Developmental Evaluation Literature Reviews.

The kū’āuhau framework acknowledges the genealogical and historical importance of understanding our present day state of affairs. Taking a Systems Thinking perspective shows us that the lineage of the Native Hawaiian Education system is one element that underpins the research into collective impact. A Hawaiian perspective recognizes the collective contributions of many who have impacted Native Hawaiian Education in the past, who currently impact Native
Hawaiian Education in the present, and those who will impact Native Hawaiian Education in the future. Investigating this genealogical inquiry employs a Systems Thinking perspective because it explores the who, what, where, when, why, and how of researching Native Hawaiian Education. Therefore, the historical knowledge of Native Hawaiian Education is an impetus for this research.

The ahupua’a lo‘i land system is described in the Developmental Evaluation Literature Review as a system that operates well when a methodical approach is implemented with thoughtfulness, care, and consistency when given feedback. Developmental Evaluation is a process oriented evaluation that involves the participants as “active agents” in the process towards innovation (Gapero, 2018, p.3). Systems Thinking Theory and Developmental Evaluation similarly share the concepts of engaging stakeholders of the system and methodically approaching the evaluation at hand.

The micro systems of an ahupua’a lo‘i that ensure its vitality and productivity include the intake flow of water, the viability of the stock of huli (seed stalk), the water temperature, the size of the lo‘i (terrace), and other ecological factors like soil health, predators, and growth over time. I would liken the parts of the ahupua’a lo‘i system to the Systems Thinking terms in this way: The stock of the system is the type of huli (seed stalk) use for planting and producing the kalo (corm). To ensure that the huli (seed stalk) grow well, the flow of water into the lo‘i is important. Water acts as an input and an output because ideally water flows in and out of the lo‘i.

Traditionally the po‘owai flows into the kahawai and then the water is diverted into ‘auwai and returned back into the kahawai to maintain flow throughout the system. The size and boundaries of each lo‘i will need its own specific amount of water. Debris or invasive species
like apple snails may cause delays in the growth and fluidity of the system impacting its success or not. A keen mahi‘ai kalo (taro farmer) will be intimately tuned to his or her lo‘i in a way to receive feedback in order to make necessary adjustments along the way. When all factors are accounted for and the system is running properly, a mahi‘ai kalo can expect a fruitful harvest in nine to twelve months.

Hawaiians used Systems Thinking perspective and paradigm in their everyday lives in order to ensure their survival and sustainability. Approaching their environment with an inherent understanding in the connectivity of everything is an example of how Systems Thinking Theory correlates to an innately Hawaiian worldview and perspective. Therefore, using Systems Thinking Theory as one theoretical framework to evaluating collective impact is indeed valid.

**Defining Systems Thinking**

In contrast, Systems Thinking Theory as a body of knowledge in the Western academic setting has undergone its own evolution throughout history. In the period of scientific development, as scientist and researchers worked to describe the world around them and define systems, interdependent relationships emerged as the core of their initial understanding. Understanding concepts like cause and effect eventually led to deeper explorations that then lead into a period of scientific experimentation.

Researchers in the social science fields also followed suite with exploring the use of Systems Thinking Theory in their own areas of study like education. When working to establish the history of this theory in research, I essentially applied a Systems Thinking perspective to my work thereby personally experiencing the legitimacy of Systems Thinking as a natural cognitive
thinking process. Consolidating and categorizing the literature so that I could conceptually capture its definition also required using a Systems Thinking perspective.

In 1987, the term “Systems Thinking” was coined by Barry Richmond, a leader in the field of Systems Thinking (Arnold & Wade, 2015, p. 669). As the theory itself gained attention and momentum, many scholars have explored its meaning, definitions, and implications for use in understanding, evaluating, and goal setting at macro and micro levels. Its pragmatic application in institutions and organizations make it appealing for understanding how a system acts, interacts, and evolves over time especially for reaching a common goal or objective.

Recent analysis of the Systems Thinking theory by Arnold and Wade (2015), offer up this definition:

Systems thinking is a set of synergistic analytic skills used to improve the capability of identifying and understanding systems, predicting their behaviors, and devising modifications to them in order to produce desired effects. These skills together work as a system, (Arnold & Wade, 2015, p. 675).

To arrive at this definition, Arnold and Wade (2015), analyzed eight definitions of Systems Thinking previously proffered by other notable Systems Thinking leaders using their own system test. In conducting this systems test, their intent was to propose a coherent definition of Systems Thinking that could encapsulate the main components after analyzing each definition. To begin, they established that each of the eight definition needed to meet all three criteria of the system test. The three criteria were elements, interconnections, and purpose. They elaborate on each element in the following way:
Elements describes the characteristics of systems thinking such as the ability to do x. Interconnections describes the ways the systems thinking elements feed into and relate to each other. Purpose describes the purpose of systems thinking in a way that can be clearly understood” (Arnold & Wade, 2015, p. 671).

While these elements describe Systems Thinking Theory at a macro level, analyzing and comparing each definition against the systems test described Systems Thinking at a micro level. The approach of using both macro and micro level analysis, provided a thorough overview of these eight definitions supporting their intent to arriving at a relevant and complete definition of Systems Thinking Theory.

Simply stated, Systems Thinking is the ability to think about a system as a whole and the ability to analyze how the parts of the system interact. It is also necessary to appreciate the cyclical nature of a system and respect its unpredictability given its complex nature. Taking a Systems Thinking approach in measuring collective impact leads to a deeper understanding for the system so that all those involved in the system can work collectively to improve their actions upon the system in order to reach the shared objectives.

**Everyday Systems**

Humans have always organized themselves in systems. However, as the complexity of human interactions have evolved over time, so too has the growth of complex systems that govern our everyday lives. Just about everything in our lives can be analyzed from a Systems Thinking perspective. Our governmental systems, our educational systems and our immediate family systems are examples of the systems that we use to organize ourselves as a cohesive unit in these various contexts. In this way, Systems Thinking supports our innate desires to establish
order, set boundaries, and form agreements so that we can create greater opportunities for ourselves as well as for the collective greater good. Systems Thinking is one such mechanism that when applied to a common goal or objective, has the potential to improve our lives and the capacity of the communities that we co-exist in and co-create together. Systems Thinking is concerned then with the synergy that can be generated through the interconnections of the parts and variables of the system.

Peter Senge, a leading systems scientist since the early 1990’s, uses family as an example to introduce Systems Thinking in a simple way that everyone can relate to. As we all belong to a family system, it is easily understood that a family is a unit made up of various individuals who share commonalities while also maintaining their own unique identities, personalities, skills, interests, strengths, etc. A family unit is also generational with varied levels of interactions among its members. For example, a parent-child interaction is different from a grandparent-grandchild relationship. Both types of relationships grow, evolve, and change over time as both people in the relationship grow, evolve, and change over time. The size of the family system is an important factor in the dynamics of its unique unit as a whole. Depending on all the other variables at play, a system can be analyzed by extracting specific variables for a specific purpose. The system can also be examined to understand the interconnections in action and the impact of these connections to each other. In Systems Thinking Theory, this is referred to as feedback.

Having a common language among the members of a family is important for the system to function as well. Systems Thinking Theory brings people together through its own language. Barry Richmond believes that when viewed collectively Systems Thinking can help us to “have a
common language and framework for sharing our specialized knowledge, expertise, and experiences with ‘local experts’ from other parts of the web” (Arnold & Wade, 2015, p. 670). Systems Thinking will facilitate the important conversations between all stakeholders who have an interest in evaluating collective impact.

**Systems Thinking and Native Hawaiian Education**

Hawai‘i’s education system is diverse and multifaceted. The public school system acts as one large district across all islands and is accountable for the majority of student learners. All those involved in this system have an impact on Native Hawaiian Education in two ways; first, the Native Hawaiian student population and secondly, the type of Native Hawaiian Education programming. Native Hawaiian Education can be viewed as education delivered to the Native Hawaiian student population and as educational programming delivered to all students regardless of ethnic make-up. The diverse population makes discerning Native Hawaiian Education in these two ways an important step in evaluating collective impact.

Therefore, analyzing the system of Native Hawaiian Education using a System Thinking perspective incorporates a shared process. There are many entities in Hawai‘i that administer Native Hawaiian Education and that make up our educational systems statewide. Identifying these entities was one part of the process in describing the evaluand for this research project. Specifically, our team chose to chart these organizations in these categories: island, address, name, service, population, type, age, vision and mission. This information allowed us to populate the data into a program called Google Fusion Tables. The Fusion Tables were then used to create a Fusion Map. The maps use a coded system to show the system of Native Hawaiian Education
across the state. This visual tool allows further analysis to be completed in order to understand the system in a deeper way.

One such analysis included the span of services across geographic locations and communities. The maps showed areas with greater amounts of programs and organizations along with participant’s perception of impact. Generally, most programs were located on O‘ahu, which is to be expected given that O‘ahu is home to the majority of our state’s residents. Accounting for the system of Native Hawaiian Education through this visual tool is an important part of the process for evaluating collective impact. It allows for stakeholders to gain perspective on the concentration of programs and services. This kind of information can potentially help to articulate needs in rural communities who may have less access because of their location.

**Perspective and Paradigm**

Systems thinking is a perspective to understanding large complex problems that exist in organizations, institutions, communities, countries, and the world. When we think about the systems that govern and shape our lives and our goals, they exist at macro and micro levels. Everything from seemingly simple decisions to larger more complex decisions requires a level of systematic thinking. As thinking is itself a complex cognitive process, systems thinking lends itself to the idea that it is an approach to gaining greater clarity in our thinking. It is an approach that shapes our thinking about systems. “Systems thinking is, literally, a *system of thinking about systems*” (Arnold & Wade, 2015, pg. 670).

Systems Thinking is a “cognitive framework containing basic assumptions, ways of thinking, and methodology that are commonly accepted by members of a community” (http://www.dictionary.com). This aforementioned definition is the definition of a paradigm and
clearly demonstrates that Systems Thinking is indeed a framework. Many proponents of Systems Thinking believe that affecting change in our ever changing and complex world requires a greater use of a Systems Thinking perspective. Bringing together like minded people who share a common goal or objective for improving systems is imperative to effectuating growth and change for future generations. “With the exponential growth of systems in our world comes the need for systems thinkers to tackle these complex problems.” Described again by Arnold and Wade (2015) as a “goal oriented system,” systems thinking can bring together all stakeholders who have an interest in solving complex problems. Evaluating collective impact of Native Hawaiian Education is the primary complex problem we are working to answer in this project. Again, taking a Systems Thinking approach is indeed valuable in this evaluation design.

**Divergent Definitions**

As previously mentioned, numerous attempts to define Systems Thinking have been undertaken by researchers and theorists alike. In order to offer a conceptual view of systems thinking, Cabrera et al. (2008), describe Systems Thinking in “four component rules or patterns: Distinctions, Systems, Relationships, and Perspectives (DSRP)” (p. 304). When applying Systems Thinking from the DSRP conceptualized framework, they assert that “each concept is recognized as “dynamic, patterned, evolving, adaptive, and complex” (Cabrera et al., 2008, p. 303). This approach to Systems Thinking can provide structure for a new or novice user. The ability to position each of the five characteristics in the four larger concepts demonstrates the complexity of Systems Thinking for solving messy problems and also allow for an abstract point of view to be appreciated as well. Abstract thinking gives way to conceptualizing the world around us as a means to think in a different way. This is one reason that “systems thinking has
become increasingly popular...people believe it provides a new way to think about...whether our issues rest within a local or global context” (Cabrera et al., 2015, p. 301).

**Systems Thinking Tools**

Williams’ book, “Systems Concepts in Action: A Practitioner’s Toolkit” offers up a host of methods and approaches to aide in Systems Thinking work. The three categories of systems work as described in his book, are 1) Describing and Analyzing Situations, 2) Changing and Managing Situations, and 3) Learning About Situations. For the purposes of this Literature review, I will briefly describe and summarize the systems tools offered for 1) Describing and Analyzing situations because they are the most relevant in this stage of the evaluation design.

The tools are: Causal Loop Diagrams (CLDs), System Dynamics (SD), Social Network Analysis (SNA), Outcome Mapping (OM), Process Monitoring of Impacts (PMI), and Strategic Assumption Surfacing and Testing (SAST). These examples of methods of analysis guide Systems Thinking from the macro point of view when beginning evaluation work incorporating a Systems Thinking approach. The strength of these tools connect the various stakeholder groups involved in the situation of interest and offer analysis of the lay of the land with everyone’s input, impressions, and interpretations. These tools help to capture the essential aspects of the situation in relation to a specific purpose or problem. In this instance, the system of Native Hawaiian Education is the evaluand to be described and analyzed. The following chart names the various tools and the guiding questions that they serve to answer.

Table 8

**Systems Thinking Tools and Guiding Questions**

<table>
<thead>
<tr>
<th>Name of System Tool</th>
<th>Guiding Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causal Loop Diagrams (CLDs)</td>
<td>___</td>
</tr>
<tr>
<td>System Dynamics (SD)</td>
<td>___</td>
</tr>
<tr>
<td>Social Network Analysis (SNA)</td>
<td>___</td>
</tr>
<tr>
<td>Outcome Mapping (OM)</td>
<td>___</td>
</tr>
<tr>
<td>Process Monitoring of Impacts (PMI)</td>
<td>___</td>
</tr>
<tr>
<td>Strategic Assumption Surfacing and Testing (SAST)</td>
<td>___</td>
</tr>
<tr>
<td>Method</td>
<td>Questions</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Causal Loop Diagrams (CLDs)</td>
<td>What are the key variables in the situation that interests us?</td>
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<tr>
<td></td>
<td>How do they link to each other?</td>
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<tr>
<td></td>
<td>How do they affect each other? Does each variable have a reinforcing or</td>
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<tr>
<td></td>
<td>dampening effect on the variables to which it is linked?</td>
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<tr>
<td>System Dynamics (SD)</td>
<td>How does the structure of feedback affect the behavior of the situation?</td>
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<td></td>
<td>How does the “delay” in that feedback impact on the performance of the</td>
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<tr>
<td></td>
<td>situation that is rich in interconnections?</td>
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<td></td>
<td>What controls the way in which resources flow through the situation?</td>
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<tr>
<td></td>
<td>How does this affect performance?</td>
</tr>
<tr>
<td>Social Network Analysis (SNA)</td>
<td>What are the structural characteristics of a network?</td>
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<td></td>
<td>Who are the key actors in a network, why, and for what purpose?</td>
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<td></td>
<td>How can the network structure or information flows be changed?</td>
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<tr>
<td></td>
<td>How do these changes affect the network’s performance?</td>
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<tr>
<td>Outcome Mapping</td>
<td>How does our intervention contribute to an ultimate goal?</td>
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<td></td>
<td>Whose behavior can we influence in terms of that contribution?</td>
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<td></td>
<td>What is a realistic strategy to achieve that behavior change?</td>
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<td></td>
<td>How does these behavior changes affect our role, and which changes do we</td>
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<tr>
<td></td>
<td>have to make to be an effective partner?</td>
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<tr>
<td>Process Monitoring of Impacts (PMI)</td>
<td>How can the behavior of diverse actors be steered in a desired direction?</td>
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<tr>
<td></td>
<td>What are the key processes for achieving the intended results of an</td>
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<td></td>
<td>intervention?</td>
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<td></td>
<td>What are the consequences for achieving effects if those processes do not</td>
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<td></td>
<td>take place as foreseen?</td>
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<tr>
<td></td>
<td>What should be done if such gaps between plan and reality occur?</td>
</tr>
<tr>
<td>Strategic Assumption Surfacing and Testing</td>
<td>Who are the stakeholders who can affect the adoption or implementation of a strategy? What assumptions is each stakeholder making about other stakeholders in believing that the preferred strategy will succeed? Which assumptions of the other stakeholders does each stakeholder find the most troubling? How can these differences be resolved in the service of the strategy?</td>
</tr>
</tbody>
</table>

**Causal Loop Diagrams**

Causal Loop Diagrams (CLDs) provide a visualization of the variables in a system and their relationships over time. The analysis of the current state of the system of interest and the relational patterns using feedback loops articulate assumptions about the dynamic behavior of the system. Feedback loops are the building blocks of CLDs. One type of feedback loop is a reinforcing or positive feedback loop where all variables respond to each other in the same direction. Another type of feedback loops is a balancing or negative feedback loop where one variable in the system responds to change in another variable in the opposite direction. CLDs define only what is crucial for the situation of interest; diagramming the problem and not the whole system. CLDs observe patterns of behavior and identify systems structures that are known to cause the patterns. Defining variables using an iterative approach successively eliminates variables that have no impact on the whole systems. CLDS take on a “both-and pattern” instead of an “either-or pattern.” This tool is not necessarily best used for explaining or predicting behaviors of the system.

**System Dynamics**
System Dynamics (SD) does not tell the real story of a problem or issue, but rather acts as an aide in the development of deeper understanding in order to communicate with stakeholder groups. “SD is an approach for understanding the dynamic behavior of systems, in particular social systems,” (Williams & Hummelbrunner, 2011, p. 45). In the context of evaluating Native Hawaiian Education then, employing a Systems Dynamics approach provides insight into the system by following these steps. First, identify the evaluation question. Then, develop a dynamic hypothesis to explain the problem. Next, build a model of the system at the root of the problem. The model of the system should include variables that flow in and out of the system, the system defined by boundaries, and consideration of auxiliary variables.

**Social Network Analysis**

Social Network Analysis (SNA) is a set of techniques for analyzing social systems and emphasizes the importance of the structure of relationships between people. As social phenomena is made up of interactions of individuals, Social Network Analysis analyzes the behavior of larger groups. A social network is made up of a number of actors connected by some kind of relationship. This type of analysis focuses on both the relationships of actors and their attributes. An egocentric network is described as one actor and that actor’s relationship with other kinds of entities. An actor map is one such technique that can analyze a social network using three types of interrelated tools; a matrix; a map; and measures. While a matrix collects data on relationships, a map visualizes the relationships to convey complex information to recognize patterns and measures assess the network structure. Social Network Analysis as an alternative to logic models move analysis from logical to social frameworks thereby examining the complex causal relationships to provide emergent outcomes.
Actor Mapping Activity

On March 26, 2018, my consultancy team members and I conducted an Actor Mapping workshop at the Native Hawaiian Education Association Conference held at UH West O'ahu. The primary purpose of this activity was to have participant’s identify actors in the system of Native Hawaiian Education and to also gain participant’s perceptions on the impact of these identified actors on the larger community in which they serve. “Network maps must include actors perspectives and their theories of social action, and their concerns on the existence and content of relationships” (Williams & Hummelbrunner, 2011, p. 66). Using pre-made maps of each island, participants were asked to write the names of actors in Native Hawaiian Education that they knew and to place them in the districts on each island. The next step was to use colored dots to share their perceptions on the impact of those organizations to Native Hawaiian Education. Perceptions were categorized as positive or negative. Upon completing the activity, participants analyzed the maps and information. One theme that participant’s shared was that smaller organizations tended to have a positive impact on the community while larger institutions seemed to have a negative impact on the community. Proximity of the recipient to the provider emerged as an important factor in the participant’s perceived level of impact. People generally felt that small organizations, such as grassroots type programs had a closer relationship to their communities and therefore were perceived in a more positive way. Another important idea that was brought forward was the benefit of Native Hawaiian Education programs and services to non-Hawaiians. In my opinion, these two ideas are worthy of further discussion as we continue to understand how best to measure and evaluate the collective impact of Native Hawaiian Education in Hawai’i given Hawai’i’s diverse community and complex history.
Outcome Mapping

Williams and Hummelbrunner (2011) define outcome mapping as, “an approach to planning, monitoring, and evaluating social change initiatives.” What is most important about the process outcome mapping is that guides teams through an “iterative process to identify their desired change and to work collaboratively to bring it about.” Outcome mapping is not concerned with “assessing the impact of a program..., but moving toward changes in the behaviors, relationships, actions, or activities of the people, groups and organizations with whom a program is working directly and seeking to influence--and of the program being influenced by these interactions” (2011, p. 75).

Process Monitoring of Impacts

Process Monitoring of Impacts (PMI) are used to help steer actors towards a goal. This tool transforms logic models into “circular” ones and deals with them in a systematic manner. It is essentially about identifying processes that are considered relevant for the achievement of the goal or impacts and then monitoring whether these processes are valid and actually taking place (2011, p. 92).

Strategic Assumption Surfacing and Testing

Strategic Assumption Surfacing and Testing (SAST) uses a dialectic approach when problems are highly interrelated and often conceal deep divisions between those addressing the problem (2011, p. 108). It is best used to identify and explore issues that may normally remain ignored or hidden. Inviting groups to identify their assumptions about an issue aids in bringing forth the underlying assumptions people hold about stakeholders in a way that allows for the

**Conclusion**

Systems Thinking Theory is an all encompassing collective effort encouraging people to come together to solve complex problems using practical tools, methods, and approaches of analysis. Systems Thinking recognizes that people are diverse in their knowledge, expertise, and contributions to a system. Therefore, Systems Thinking can “act as a bridge between the academic, professional, and lay communities providing feedback between what we know about systems and the conceptual patterns of how we think systemically” (Cabrera, 2008, p. 301).

Systems Thinking takes into consideration and offers accountability to all members involved in a system. System Thinking encourages synergy and collective outcomes for the system itself and all those who seek to benefit from the programs, projects, and goals that make up the system services. Systems Thinking reminds us that impacts on a system no matter how large or small can be significant to the success of a desired goal. It is important then to be cognizant of the micro and macro components of the system.

Given that we are each unique and experience the world through our own subjectivity, it is important to note that individual subjective experiences substantiate the dynamics of the system. Our experiences then are valuable in analyzing systems because they are foundational to creating the collective conceptualization of a system and its purpose. “It is necessary to focus on the individual and subjective within a conflict, and to include the connection between multiple perspectives that form the collective subjective” (Ollove & Lteif, 2017, p. 3). Therefore, the collective consciousness of our systems are highly informed by our individual consciousness.
Conducting this literature review on Systems Thinking revealed that Systems Thinking Theory is inherently Hawaiian. When comparing and contrasting the concepts of systems thinking to Hawaiian epistemological ways of knowing, being, and doing, it is clear that Systems Thinking is indeed a valid theory for the purpose of evaluating the collective impact of Native Hawaiian Education in Hawai‘i. This body of knowledge is appropriate and holds merit for designing a developmental evaluation collect framework.
References


Methodology

Client Scoping Conversations

To begin answering the research question, “What is the collective impact of Native Hawaiian Education?,” our team spent time with our client to understand what elements make up collective impact. We discussed ideas like health, education, economic, housing, workforce, family, community, as well as the political status of Hawai‘i. Below is an example of the scoping technique captured from our initial discussion.

Figure 2. Scoping with client.

Figure 3. Scoping with client.
As explained earlier, the scope of our work throughout the year changed along with the final work products.

**Systems Thinking Tool: Systems Mapping (Preliminary Synthesis-Fusion Map)**

To begin our understanding the system of Native Hawaiian education, our team began with a preliminary synthesis of programs who are providers of Native Hawaiian education throughout all of the islands. We followed the four county distinctions; Hawai‘i, Maui, O‘ahu, and Kaua‘i, since there were four members on the team. We created a spreadsheet to begin our data collection. This included the island location, the physical location, the name of the organization, the type of program (private, public, other), the target population by grade and age, and finally the vision and mission statements of each organization. (See Appendix A)

We uploaded our data into the Fusion map program on Google which then generated a visual map across all of the islands that showed clusters of the programs geographically. (See Appendix B) This visual aid provided insight into our understanding of where Native Hawaiian education programs and or services exist and the prevalence of these programs in the different communities. Along with displaying specific points on each island map, we were able to create a heat map to also denote the geographic areas where Native Hawaiian education programs and or services are prevalent to non-existent. The map also confirmed our initial belief that most of the programs are located on O‘ahu.

**Systems Thinking Tool: Actor Mapping**

Our team then coded this list with perceived impact data that we collected at the actor mapping workshop that we hosted at the Native Hawaiian Education Association’s 19th annual conference held at UH West O‘ahu on March 26, 2018. The actor mapping activity allowed our
team to gain insight from various stakeholder groups who are involved with Native Hawaiian education. Actor Mapping is a systems thinking tool that solicits input from participants on who they believe are the actors of a system. In this study, we asked our participants to identify key actors in the system of Native Hawaiian education.

To prepare for this activity, we used large poster sized maps of each island which were then divided geographically. (See Appendix C) Participants used post-its to write down the names of agencies, schools, programs, and other organizations that they had knowledge or experience with, in the field of Native Hawaiian education. Following this part of the activity, participants were then asked to use colored dot stickers; orange and green to denote their perceived impact of these organizations within the communities they exist. Green denoted a positive impact while orange denoted a negative impact. Upon completing this activity, our team lead a whole group discussion with the participants to further understand their perceived impact and the reasons for their categorization.

Two main ideas emerged from the whole group discussion. The first was that the smaller an organization, the greater it is perceived having a positive impact on the community by the participants. For example, community level organizations seemed to be favored over larger institutions like universities. The closer a participant felt to the organization, the stronger they felt about its positive impact whereas as the further away a participant felt to the organization, the stronger they felt about is negative impact.

The second important idea that emerged was the benefit of Native Hawaiian education programs to non-Hawaiian participants who may be employed by these organizations. In discussing with the participants the desire of the council to understand collective impact of
Native Hawaiian education in Hawai‘i, the non-Hawaiian participants highlighted that they were also recipients of Native Hawaiian education, although perhaps not directly impacted by the service(s), but indirectly as an employee of a program.

**Council Presentations and Consultations**

Throughout the year of this research study, our team presented to the Native Hawaiian Education Council (NHEC) members as a means to share our work and also receive feedback, input, guidance, and direction directly from council members. Our first presentation was held on January 31, 2018. (See Appendix D) At this presentation, we introduced the overall research study to help council members understand that our work on this evaluation project was the first stage of describing the evaluand. We also shared our backgrounds and experiences in our current professions of which all of our team members have primarily been positioned in for many years.

On May 16, 2018, our second presentation to the council included a completion of the four Literature Reviews, the Systems maps, and a definition of Hawaiian Culture-Based education. (See Appendix E) This council meeting yielded a rich discussion with council members around collective impact and developmental evaluation. Some notable feedback included that measuring collective impact is a large scale inquiry that may need to be scaled into smaller phases over time. Developmental evaluation, while promising for the overall intent and goal of this research study, was prematurely embedded into the work because generally DE measures process and provides summative assessments.

The rich point in this council meeting and the discussion that occurred was that perhaps the research question itself needed to be revised. And that instead of asking, “What is the
collective impact of Native Hawaiian Education in Hawai‘i?,” that perhaps the collective impact piece could be removed from the question altogether.

The final team presentation was held on Wednesday, November 7, 2018. (See Appendix F) At this final presentation, our team presented the final two deliverables: 1) a definition of Hawaiian Culture-Based Education (HCBE), and 2) a Native Hawaiian Education Evaluation framework.

**Evaluation Methodology Course**

During the summer 2018 semester, members from our team completed the EDUC 769 course on Evaluation Methodology and Developmental Evaluation with instructor, Dr. Sanjeev Sridharan. This course introduce the basic concepts of evaluation methodology and then further elaborated into Developmental Evaluation. Our team and client discussed our research study with Dr. Sridharan to gain his expert insight into further developing our collective impact framework.

This discussion lead our team to understand that DE could possibly be incorporated into this research study as a means to understand the power of synergy when various actors of the system work together. This conversation helped our group to understand that measuring collective impact through a developmental evaluation approach would be much larger than what our team had time to complete given the timeline of the research study. Following this discussion, our team was redirected in our charge and final work products to produce a definition of Hawaiian culture-based education and a Native Hawaiian Education Evaluation Framework.

**Team Time Discussions**
Throughout the year, our team held bi-weekly online meetings to discuss our work, our progress, and our understandings. We increased our meeting times at the final phase of our work to engage in meaningful dialogue around the Native Hawaiian Education Evaluation Framework. Team member, Kona Keala-Quinabo, who was charged with the Hawaiian culture-based education literature review presented his findings on a definition of Hawaiian culture-based education. He then identified eleven characteristics based on this definition to help lead the team into creating the Niho Framework.

**Final Work Products and Discussion**

**Definitions**

**Definition of culture-based education.**

Culture-based education is education whose foundation is built of the values, norms, knowledge, beliefs, spirituality, practices, experiences, places, and language of a culture. Further, it is education created with and taught through the worldview of a culture with the support and continual interaction of its community members. It is also education, assessed through culturally appropriate methods.

**Definition of Hawaiian culture-based education.**

Hawaiian Culture-Based Education, is education whose foundation is the indigenous Hawaiian education systems (ways of learning, knowing and teaching) that were genealogically Hawai`i prior to the year 1778. Further, it is education created, taught, learned, and assessed through the indigenous Hawaiian cultural worldview, in environments conducive to the effective transmission of indigenous Hawaiian knowledge at a pace that is appropriate for its learner.
The development of the definitions.

Our consultancy group was tasked with developing a collective impact evaluation of Native Hawaiian education in the State of Hawai‘i. To fulfill this task a primary step was to increase our understanding of culture-based education (CBE) and more importantly Hawaiian culture-based education (HCBE). Through our in-depth review of the literature on these two subjects, primarily utilizing Native Hawaiian authors, Hawai‘i based authors, and literature based on Hawaiian culture and education, we drafted our own definition of CBE and HCBE. Focusing on these types of resources increased the viewpoint of Hawaiian scholars, Hawaiian content, and relevant ideas, present in the definitions. Heavy focus was also placed upon Hawaiian language resources. These resources included academic literature and traditional Hawaiian stories. These resources provide a unique perspective of pre-foreign contact Hawai‘i in the language of the Native Hawaiian people. By increasing these Hawaiian perspectives, the non-Hawaiian perspectives were lessened. This was done intentionally to reflect, as accurately as possible, the traditional Hawaiian educational practices that existed without the foreign influence that currently permeated all aspects of modern life in Hawai‘i.

Capturing the voice of the Native Hawaiian people was important for accuracy and validity. Accessing this repository of Hawaiian language resources increased the breadth and depth of research possible during this project. Seeking to understand the culture of pre-foreign contact Hawaiian people through their language was a high priority and done intentionally to communicate the salience of this practice. Understanding a people and the essence of their
culture through their language, their stories, and their history, told through their words, is essential when seeking to define the culture of a people. Focusing primarily on Hawai‘i-centric and Hawaiian language resources produced a fundamentally different definition of HCBE.

**Analysis of our Hawaiian culture-based education definition.**

Our definition of HCBE incorporates the history of the Hawaiian people and focuses heavily on the process of education instead of the content. The year 1778 is captured in the definition. This was done to ensure that the definition only represents education in Hawai‘i that occurred pre-foreign contact, that is, education up to 1778, the date that demarcates pre and post foreign contact Hawai‘i (Kamakau, 1867). Within this time period all aspects of education, though possibly differing across the islands, were innately Hawaiian because no other foreign education system had been introduced through foreign discovery of Hawai‘i. Focusing on this time period was also done to remove language that served motivations towards reconciliation or cultural revitalization. As discussed previously in the literature review, Hawai‘i faced many difficulties during the influx of foreign influence. Our definition intentionally focuses on a time where this was not present in Hawai‘i to reflect only traditional practices without any motivations stemming from circumstances that may have arisen post 1778 Hawai‘i.

The year 1778 also specifies a time period in the genealogy of Hawaiian knowledge and Hawaiian practices. This genealogy of knowledge was an important consideration. The definition was drafted to represent traditional forms of Hawaiian education and the current practices that are genealogically connected. Inclusion was important, and we wanted the definition to include
as many current educational practices as possible while still being rigid enough to represent the
traditional pre-foreign contact Hawaiian educational practices with a high level of integrity. This
class concept of genealogy of knowledge communicates the importance of knowing the history of the
transmission of the knowledge that led to the development of current traditional Hawaiian
practices. The concept also delivers an underlying importance of the maintenance of this
genealogy and the history that is ingrained within. Without this genealogy of knowledge, a
practice may not be included under our definition of HCBE.

The educational processes highlighted explicitly in the definition include curriculum
development, pedagogy, learning, environment, and assessment. These processes are included to
reflect the importance of the development and implementation of Hawaiian educational
processes in HCBE. We believe it is the process that makes the educational practice Hawaiian
not necessarily its content. By focusing on process instead of content we are able to
communicate that Hawaiian learning processes can transcend content areas, and their
implementations are not limited to Hawaiian content alone. This viewpoint values and shows the
relevance of Hawaiian learning that needs to exist if we are to incorporate current traditional
Hawaiian practices under our definition. It also served to widen the spectrum of Native Hawaiian
education evaluation, to non-Hawaiian content based HCBE practices.

Native Hawaiian Education Evaluation Framework

Structure of the Niho Framework.
Through the development of our definition of HCBE and the analysis of tradition pre-foreign contact Hawaiian education practices, in combination with our consultancy group’s goal of developing a collective impact evaluation of the current Native Hawaiian educational practices across the State of Hawai‘i, we developed our Niho Framework. This framework was designed as a continuum that could be used to evaluate the prevalence of HCBE, as defined by our definition, in an education program. From its inception the intent of the Niho Framework was not to render judgement as to program or system quality or Hawaiian-ness, rather, its aim is to supports the self-assessment of prevalence of elements under the umbrella of HCBE. It is also intended to inform shared focus around future collaborative innovations and drive further analysis and conversation around the services and impact that organizations collectively have on Native Hawaiian education across the State of Hawai‘i. The Niho framework is included in its entirety in Appendix G.

Eleven Native Hawaiian education elements were distilled from the literature review of Hawaiian culture-based education.

Table 9

Hawaiian Culture-Based Educational Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Translation/Interpretation of Element terms</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welo</td>
<td>Kupuna and families as teachers</td>
<td>Teaching and learning require, and values kupuna and ʻohana involvement and knowledge.</td>
</tr>
<tr>
<td>Loina</td>
<td>Maintaining protocols during learning</td>
<td>Protocols set the context for learning. These convey the sacredness and importance of knowledge, the process of its transmission and its internalization. Protocol also helps to establish a governing value system in education.</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Moʻokūʻauhau</td>
<td>Genealogy</td>
<td>Kuleana, validity, accountability, relationships and history are embedded in genealogy. Genealogy includes not only biological genealogy, but also genealogy of knowledge. Through genealogies, teachers and students are able to build and analyze connections to content. Genealogy also highlights the importance of knowing the sources of knowledges and conveying these to students.</td>
</tr>
<tr>
<td>Loea</td>
<td>Learning from masters of a specific knowledge</td>
<td>Masters of a knowledge or those who are intimately familiar should be the lead resources and teachers for their content area.</td>
</tr>
<tr>
<td>Wahi</td>
<td>Placed-based learning</td>
<td>Place provides context as well as content. Being physically present allows the learner and the teacher to actively engage with content. Place is also a teacher that provides knowledge to those who reside in an area, making them the experts of knowledges unique to that area.</td>
</tr>
<tr>
<td>Hoʻoman</td>
<td>Spirituality in learning</td>
<td>Hawaiian spirituality in HCBE drives accountability and connectedness to all aspects. Hawaiian spirituality also helps to maintain the Hawaiian mindset towards knowledge. Spirituality is the recognition that there is an existence of mana in everything. This informs how teachers and students interact with everything around them, including place. Awareness of how mana flows determines and maintains the Hawaiian mindset and behavior.</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>ʻIke Laʻa</td>
<td>Knowledge is sacred</td>
<td>Knowledge is connected to all things through genealogy and spirituality, and it bestows and allows for the maintenance of Kuleana. To hold, teach, or learn knowledge puts one in a place where they are burdened with great responsibility to that knowledge.</td>
</tr>
<tr>
<td>Nānā i ka hana</td>
<td>Learning through observation</td>
<td>Teachers provide opportunities for students to learn observation skills and to observe practical application of content.</td>
</tr>
<tr>
<td>Hana i ka hana</td>
<td>Learning through doing</td>
<td>Teachers provide hands on learning opportunities to students. Assessment should also incorporate practical components.</td>
</tr>
</tbody>
</table>
Haʻawina Ponoʻī | Appropriate learning level for each individual student | The aptitude of a student is not determined by age or a grade level. It is instead determined by an observant teacher. Content, its delivery or denial and assessment, are designed to be appropriate for the learner.

ʻŌlelo Hawaiʻi | Hawaiian language | The Hawaiian language is a foundational piece of HCBE, from research and lesson planning to teaching and assessment. Content specific language, including ʻōlelo noʻeau and language nuances, maintains Hawaiian worldview and language accuracy. Oral traditions including speeches, moʻolelo, oli, mele, debate and nane, are used as curricular tools.

These elements were discussed previously in the Hawaiian Culture-Based Education literature review as Hawaiian Culture-Based Educational Foundations, they are represented here as they are reflected in the Niho Framework, and with translations and interpretations of the Hawaiian terminology used for each element. These elements are termed hiʻohiʻona in our framework.

These hiʻohiʻona were then condensed to form three clusters, that we have termed niho. These three niho represent the major sections of our framework. The table below shows each niho and the corresponding hiʻohiʻona that combine to form each niho as well as a translation or interpretation of the Niho terms used in the Niho Framework.
Table 10

*Niho and Hiʻohiʻona*

<table>
<thead>
<tr>
<th>Niho</th>
<th>Translation/Interpretation</th>
<th>Hiʻohiʻona</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Ke Kumu</td>
<td>Sources of knowledge</td>
<td>Welo, Wahi, Loea</td>
</tr>
<tr>
<td>No ka Piko</td>
<td>Kuleana or Responsibility and Privilege to knowledge</td>
<td>Moʻokūʻauhau, Loina, Hoʻomana, ʻIke Laʻa</td>
</tr>
<tr>
<td>No Ke Aʻo</td>
<td>Transmission of knowledge, its acquisition and communication</td>
<td>Nānā i ka hana, Hana i ka hana, Haʻawina Ponoʻī, ʻŌlelo Hawaiʻi</td>
</tr>
</tbody>
</table>

The hiʻohiʻona were grouped by function and we recognized that some may be able to reside under another Niho and we embrace this overlap in the creation of the Niho Framework as a sign that HCBE processes are integrated and function together.

These Niho and hiʻohiʻona along with their descriptors were then used to draft the levels of HCBE use in a program or system. Each Niho in the Niho Framework makes up a section of the framework. Each section includes the corresponding hiʻohiʻona and a description of the different levels of use for each hiʻohiʻona. In the Niho Framework the highest level is positioned at the left of the page while the lowest level is positioned at the right. This was done intentionally to communicate a strength-based approach. We determined it best to position the levels this way to show the value of the HCBE practices that we worked hard to extract from our research and to emphasize the higher levels first as motivation towards this level of HCBE use in a program.
The levels of the Niho Framework are presented in the table below in descending order, highest to lowest use, with translations, interpretations, and explanations.

Table 11

*Niho Framework Levels*

<table>
<thead>
<tr>
<th>Level</th>
<th>Translation/Interpretation</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kahua</td>
<td>Foundation</td>
<td>This is representative of a program whose use of Hawaiian culture-based educational elements is its foundation. Hawaiian culture-based education is its mode of education. Like the building of a house the foundation is the most important.</td>
</tr>
<tr>
<td>Paepae</td>
<td>To build as a foundation</td>
<td>This is representative of a program whose use of Hawaiian culture-based educational elements has become common practice but is still in the stages of being solidified as the foundation of the program. Like the building of the foundation of the house this is the actual setting of the foundation’s stones.</td>
</tr>
<tr>
<td>Halihali</td>
<td>To pass or transport</td>
<td>This is representative of a program whose use of native Hawaiian education elements is at an emergent stage. Like the building of the foundation of a house one of the beginning steps is to transport the stones that will become its foundation.</td>
</tr>
<tr>
<td>‘A‘ohe</td>
<td>None</td>
<td>Not present in the program.</td>
</tr>
</tbody>
</table>

The terms used for the levels reflect the metaphor of niho that is present throughout the Niho Framework. In this case each level correlates to stages in the building of a stone foundation. We
also chose the highest level on the continuum to be represented by the term meaning foundation. This shows a Hawaiian perspective that even though low in position, the foundation is of utmost importance to the integrity of the entire structure. The levels are also reflective of the process, the building and development of the foundation. This was done to reflect the journey and growth of programs in their development and implementation of HCBE practices and to incorporate the Developmental Evaluation perspective to this framework.

**Preamble.**

Following the drafting of the Niho Framework we thought it prudent to draft a preamble explaining certain aspects of the framework that will assist those who seek to better understand our motivations behind the choices made during our work. Many of the topics covered here in the structure of the framework are presented in the preamble. The metaphor of niho is also articulated.

The preamble also seeks to explain the framework, its intentionality and our motivations as the developing group so as to leave less room for ambiguity during the discussions among evaluators and programs. We realize that we may not be part of the evaluation team and this is an avenue to ensure that the framework is used as intended.

**Metaphor of niho.**

A rough diagram of the three clusters that would later become termed niho, inspired the niho metaphor we used to help convey our thoughts behind the Native Hawaiian education evaluation framework. This diagram consisted of the three clusters positioned at the vertices of
an equilateral triangle as in Figure 4. This triangle represented a niho for us and because each member of the consultancy group is a Hawaiian language speaker, we were able to discuss the many meanings of niho that may apply to our project. We discussed the meanings of niho and hoʻoniho, and we also discussed the properties of triangles. Through this rich discussion we were able to develop fully the metaphor for our Native Hawaiian education evaluation framework.

We start first with the thoughts behind the triangle and the underlying meanings this symbol holds for our Niho Framework. We spoke to the inherent structural characteristics of a triangle, such as their strength and their ability to interlock with other triangles. The triangle also represents balance that we incorporated in the framework. Each of the clusters No ke Kumu, No ka Piko, and No ke Aʻo are equivalent in importance. As we look to understand and construct our education systems to support the advancement and betterment of learners across the state of Hawaiʻi, we envision the necessity for all individual contributors within these systems to know intimately, each other’s work, priorities and contributions. Interlocking triangles represent this type of systemic work. The Niho Framework provides common elements around which everyone contributing to Native Hawaiian education might join in discussion, calibration and collective effort, each piece, each triangle fitting tightly together supporting each other.

Niho also represents large stones that are used in the construction of building foundations. To set these stones in place is termed hoʻoniho. This concept of foundation and the importance of placing each niho in the correct position so as to support the structure to come applies well to the framework. The foundations of programs need to be set well as we move
forward to advance the education systems Hawai‘i. The framework will allow programs and systems to self-assess the prevalence of HCBE practices that make up their foundations. We also spoke to niho as being teeth and protection. This framework is designed to be strict in the sense that it only represents educational practices when foreign influence did not exist. In doing this, we are able to protect and differentiate the genealogies of people and knowledges that are connected, from those that are not. Our definition of HCBE and our Niho Framework, are designed to be broad and inclusive of many educational practices, but it is also clearly representing a certain genealogy of practice and if a current practice is unable to articulate its relationship to this genealogy it will not fall within the parameters of this work.

Figure 4. This triangle, with HCBE at the center and the named niho at its vertices, is the rough diagram that sparked the development of the niho metaphor for the Native Hawaiian education evaluation framework.

**Refinement of the framework through application.**

As part of the development process of the framework we realized the need to apply the earlier drafts of the framework to actual programs in mock evaluations with the intent of refining the framework. All group members work in different capacities in different HCBE
programs across the State Hawai‘i. Some members of the group have also worked previously in other HCBE programs. During this process we did not actually visit these programs and run an official on-site evaluation with these programs, instead we used our intimate working knowledge of these programs to apply the Niho Framework. We acted as both evaluator and evaluand as we applied the framework to each our programs.

This process led to the development of the preamble, the current labeling of the levels, refinement of descriptors and better articulation of our intentions. Having experience in the HCBE field made this a necessary step in the refinement of the framework and allowed us to see the possible impact this framework can have for a program.

The connection of developmental evaluation, culturally responsive evaluation, and systems thinking to the Niho Framework.

In the development of the Niho Framework our group members brought to this work the research that had been previously conducted in the areas of developmental evaluation, culturally responsive evaluation, systems thinking, and Hawaiian culture-based education. Four separate literature reviews were completed prior to the drafting of the Niho Framework. The integration of these four topics will be discussed here. Hawaiian culture-based education, as previously discussed, is the focus of the evaluation and due to its overt presence in the Niho Framework it will not be covered in the following discussion.

Developmental evaluation.
Developmental evaluation influenced the labeling of the levels of in the framework as we see each program that uses this framework as a program that is seeking to develop their practice. We envision this framework being used in a developmental evaluation process. The process of developmental evaluation allows for the individual group to work together with the evaluator(s) to develop an evaluation that will work with their program. This type of inclusive work creates a favorable environment for the use of our Niho Framework. Discussion and calibration need to be done before the evaluation and in a HCBE program these discussions need to occur with the people of the programs that are being evaluated.

* Culturally responsive evaluation.*

Working together to be culturally appropriate to the HCBE programs is where culturally responsive evaluation is present in our work. Developmental evaluation allows for the space to include the voices of the evaluand and culturally responsive evaluation is the mindset that drives the interaction between the evaluators and the evaluands. The Niho Framework was designed to work best in evaluations where the culture of a program is valued and the needs of the program are discussed so the results of the evaluation will be meaningful for the evaluand.

* Systems thinking.*

Using the framework across many programs to evoke conversation and present data that allow programs with like intentions to collaborate, is where systems thinking was used to frame the goal of creating the precursors of a collective impact evaluation. As programs are evaluated using our Niho Framework, the data generated show the prevalence of certain HCBE practices in
specific programs. This data combined with physical locations of programs will allow for the mapping of HCBE practices in communities across the State. This will drive collaboration as programs move towards providing HCBE to students.

Conclusion

Limitations and Future Research

The creation of this Niho Framework was an arduous process. Defining a culture that all group members identify with as well as articulating the aspects of education that reflect the practices of a time when a written language made research difficult. This is an area of future research in the further development of the Niho Framework. As more resources are provided electronically and greater access is provided to physical copies of original resources revisions will need to be done. Time constraints on this project also did not allow for the review of all literature the four areas of research discussed previously. As the understanding of these four areas increases, additions can be made to refine the framework.

Great care, respect, humility, and reverence should accompany those who set out to continue this work. Kuleana, drove the development of this work and although it is presented as a completed product we know that there will always be room for revision. Defining a culture and the way it transmits its knowledge across generations is a daunting task. We have done both as individuals who belong to and who are currently working in different capacities to revitalize and perpetuate this culture.
Application Considerations / Recommendations

We have identified the following considerations for application of the Niho Framework in program or systems evaluation and in driving innovation. These considerations collectively highlight the importance of ‘ʻumia ka hanu, hoʻokāhi ka umauma ke kīpoʻohiwi i ke kīpoʻohiwi, and alu like, being of one accord, standing abreast shoulder to shoulder, in exerting great effort toward a task, and working together.

First, the Niho Framework provides a means by which to understand the prevalence of valued features of HCBE. It is not intended to place judgement on a program or system’s quality. Rather, by examining systems in light of the level of prevalence of features across the Niho, members begin to develop inquiry foci around which to structure discussions and planning related to innovations intended to ensure an appropriate distribution of these features across educational programs. This leads to the greater benefit of ensuring that as a collective, the larger system is attending to these Niho in multiple ways, and contributing to the nourishment of the mauli of our learners.

Second, the framework supports the calibration of HCBE practices within and across systems. The Niho, No Ke Kumu, for example stresses the value of knowledge from a variety of sources, including ancestral and ‘ōhana wisdom, ‘āina and content experts. At the Kahua level of the continuum, we recognize that learning is inextricably connected to these sources, and that these kumu are regularly engaged as a valued feature of Native Hawaiian education. The framework therefore provides a means for dialogue around the capacity of our system to promote and incorporate these kumu, not just as sources of knowledge, but in helping to build the identity of learners as members of a moʻokūʻauhau of ‘ike, from which they gain agency for
independently accessing and then assume kuleana for shepherding as they develop expertise and begin to develop new innovations, insights and understanding.

A third consideration for the framework is in its potential to reposition traditional, Native Hawaiian education elements and the degree to which we nourish, celebrate, and proliferate our mauli Hawai‘i as determinants of collective impact. The framework provides a structure that paves the path toward the reclamation of educational ea and defining for ourselves from a strengths-based perspective, impact that we value most. While emphasis on standardized assessments has been a pillar within the current structure of education evaluation, which attempts to illuminate learners’ growth or proficiency pertaining to specific content areas like math and English language arts, we recognize that there is a greater need, particularly as it relates to Native Hawaiian communities, to understand the extent to which learners are proficient at accessing and applying various types of knowledge, whether content-specific or more universal in nature such as persevering in solving problems locally and globally. Academic competence therefore becomes one of several determinants of college, career and life readiness as opposed to the sole or primary determinant.

Finally, by identifying valued features of HCBE, the framework may also be applied when considering the distribution of resources and supports across a system. Understanding the presence of these features within and across systems and areas in which these features are thriving or perhaps not fully present, helps in the deployment of appropriate resources, including funding and the establishment and support for learning and innovation partnerships to specific areas, to ensure that collectively, a system is sufficiently providing multiple and varied opportunities to support Native Hawaiian learners and communities. The framework therefore
serves as a driver for curriculum development, ʻohana and community engagement, reforming education policy, educator practice and professional growth, and cultural revitalization.

With specific regard to the use of the framework when engaging contracted support through a request for proposal (RFP) to fulfil the statutory obligations of the Council, the consultancy group strongly recommends the following. The Council should seek contractors who possess a strong ʻŌiwi Hawai‘i epistemological perspective; those who have demonstrated that they possess a clear, Hawaiian cultural lens, and understand ʻŌiwi ways of knowing and socializing. These contractors should also ideally be able to speak to previous successes they’ve had in providing servicing Native Hawaiian educational programs. Successful experience with program evaluation should be a foundation skill for anyone contracted to engage with the framework. Once initial system evaluations that illuminate presence of the Niho have been conducted, contractors should be prepared to facilitate next steps for system actors to advance collective innovations in light of the framework through the application of developmental evaluation (DE) and therefore should ideally be able to provide examples of their experience with using DE to drive collective innovations.

Contractors who have also shown an ability to develop meaningful and deep pilina with individuals and groups should also be sought. In reflecting on the consultancy group’s work in generating the framework, the group recognized that an inherent strength that helped to advance the work in substantive ways was the group’s collective proficiency with ʻōlelo Hawai‘i. With proficiency, one is more likely to possess ʻŌiwi epistemological perspectives and very likely has strong pilina with those who work in service to Native Hawaiian education across the paeʻāina. The Niho Framework is best applied through material involvement by the evaluand as an equal
contributor to the evaluation. Much like the features within the framework like the transmission of ‘iʻi, HCBE is participatory in nature. The insider perspective is a highly valued input to illuminating the detailed nuances that are easily missed by those external to the program. An overarching recommendation for the Council therefore is to reflect on the features of the framework when engaging consultants and to consider the degree to which responders to the RFP understand, value and have demonstrated application of the features within the Niho. Have the consultants demonstrated valuing of ʻŌiwi sources of and the appropriate use of ‘iʻi, experience with genealogy, protocols and spirituality, and proficiency in facilitating innovation in education in service to indigenous populations? While finding a contractor that possesses all of these traits might not be entirely realistic, the Council will need to define a minimum threshold of acceptability when reviewing the capacity of RFP responders to complete this meaningful work. Lastly, the consultancy group recommends that this work be piloted with a small community of Native Hawaiian education servicing programs that comprise a micro-system to learn more about the scalability of the Niho Framework and the application considerations.
References

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History of Hawaiian education. (n.d.). Retrieved from
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http://nupepa.org/gsdl2.5/cgi-bin/nupepa?e=d-0nupepa--00-0-0--010----4-----text---0-1l--1ha
w-Zz-1---20-about---0003-1-0000utfZz-8-00&cl=CL1.24.7&d=HASH016f37a96fcb5d5b24eb365a.1&l=en

## Fusion Map: Master List Spreadsheet

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**Notes:**
- TDS: Total Daily Schedule
- SC: School Code
- Grades: Grade Levels Offered
- Focus: Focus Areas
- Program: Program Offered
- Graduated Students: Students who graduated within the last 5 years.
## Appendix A

### Fusion Map: Master List Spreadsheet

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## Appendix A

### Fusion Map: Master List Spreadsheet

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*Note: This list includes a wide range of institutions and organizations that have been involved in the education of Native Hawaiian students in various ways, including through direct support, funding, and partnership. The list is not exhaustive and may not include all institutions and organizations that have contributed to the education of Native Hawaiian students.*
## Appendix A

### Fusion Map: Master List Spreadsheet

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Note: These are the institutions that have been identified as providing education in the Hawaiian language for Native Hawaiian students. Each entry includes the institution's name, type of program, and level of education.
## Appendix A

### Fusion Map: Master List Spreadsheet

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*Notes:*
- This list is for informational purposes only and may not be comprehensive.
- Contact information may have changed since the list was compiled.
- For more detailed information, please visit the respective websites.
## Appendix A

### Fusion Map: Master List Spreadsheet

<table>
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<tr>
<th>School</th>
<th>Address</th>
<th>Principal</th>
<th>Grade</th>
<th>Type</th>
<th>Instructional Focus</th>
<th>Themes</th>
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<td>Naalehu Elementary</td>
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<td>Native Hawaiian culture, community values, social justice, and environmental stewardship.</td>
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Appendix A

Fusion Map: Master List Spreadsheet
Appendix A

Fusion Map: Master List Spreadsheet
## Fusion Map: Master List Spreadsheet

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<tr>
<td>Kamehameha School, Waiʻanae, Oʻahu</td>
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"Native Hawaiian Education Evaluation"
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<td>97-1504 Kamehameha Hwy, Waipahu</td>
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<td>3960 W worries, Honolulu</td>
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<td>Ali`i Kula High School</td>
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## Appendix A

### Fusion Map: Master List Spreadsheet

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<th>Site</th>
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<td>Liholiho Elementary School</td>
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<td>Students work together to improve and progress students toward a cleaner and more changing world.</td>
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<td>115</td>
<td>Students work hard to improve their learning capabilities.</td>
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<td>Paepae Elementary School</td>
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*SC* signifies the school is a Specialized School.
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Mast</td>
<td>7700 Waipahu St</td>
<td>Punahou School</td>
<td>SC</td>
<td>FS</td>
<td>PS</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>Mast</td>
<td>655 Kaahumanu St</td>
<td>Punahou School</td>
<td>SC</td>
<td>FS</td>
<td>PS</td>
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<td>2</td>
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<td>4</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>Mast</td>
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<td>Punahou School</td>
<td>SC</td>
<td>FS</td>
<td>PS</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Mast</td>
<td>500 Kapiolani Blvd</td>
<td>Punahou School</td>
<td>SC</td>
<td>FS</td>
<td>PS</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
### Fusion Map: Master List Spreadsheet

<table>
<thead>
<tr>
<th>Module 1</th>
<th>1050 Alaka St</th>
<th>Kamehameha H/C</th>
<th>SC</th>
<th>3</th>
<th>2</th>
<th>D</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 2</td>
<td>2175 Lehilani Ave</td>
<td>Kamehameha H/C</td>
<td>SC</td>
<td>3</td>
<td>2</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>Module 3</td>
<td>133 Manawai Rd</td>
<td>Kamehameha H/C</td>
<td>SC</td>
<td>3</td>
<td>2</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>Module 4</td>
<td>2360 Kamehameha V Hwy</td>
<td>Kamehameha H/C</td>
<td>SC</td>
<td>3</td>
<td>2</td>
<td>D</td>
<td>1</td>
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<tr>
<td>Module 5</td>
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<td>Kamehameha H/C</td>
<td>SC</td>
<td>3</td>
<td>2</td>
<td>D</td>
<td>1</td>
</tr>
</tbody>
</table>

*Notes:*
- Module 1: Fusion Map
- Module 2: Fusion Map
- Module 3: Fusion Map
- Module 4: Fusion Map
- Module 5: Fusion Map

**Table notes:**
- SC: School Code
- D: Date
- 1: Status (Active)

**Description:**
- Fusion Map: Master List Spreadsheet
- This document contains a list of schools and their locations, along with relevant dates and statuses.
Appendix B

Maps in Fusion Map Google App
Appendix C

Actor Mapping Pictures
Appendix D

Native Hawaiian Education Council Presentation 1: January 2018
Appendix E

Native Hawaiian Education Council  Presentation 2: May 2018

Developmental Evaluation

Key Takeaways continued:
- OE multidisciplinary is highly collaborative to 3 tier.
- Epistemology and values collaborative engagement of practitioners among participants in the advancement of innovations for the benefit of the collective.

Developmental Evaluation

- Mo i ka‘i o le ʻike
- Ika i ka‘i o le ʻike
- No malu ia mano
- Ua ora Hawai‘i, ua ora ia malu i mano

Synthesis of Evaluation

- Who The Evaluation
- Where: Hawai‘i

- What: OE, Culturally Embedded

- How: Systems Thinking, Organizational

- When: DC High School, UC Masterclass

Definition of Evaluation

The evaluation is the proposed collective impact evaluation is the system of educational programs whose stated mission, vision, program goals, direction and its efforts in part or in its entirety are representative of HOBIE as defined previously.

Systems Mapping

Data Collection Categories:
- Island
- Address, Name, Service
- Population, Age, Vision & Mission
- Actor Mapping
- Receiving impact

Transition Map View

Map can be viewed in these ways:
- Transition Map
- Map is maintained through the maintenance of the administrator attached to the map.

Native Hawaiian Education Systems and Education Programs on System Scanning Native Hawaiian

K-12 Public Education Context

Questions to consider:
1. Does our definition of the evaluated measure with the council’s definition?
2. Does the council’s mission statement play a defining role in this evaluation?
3. What does the council believe is key in the design of a collective impact framework?
4. What does the council believe is key in the design of a collective impact framework?
5. What does the council believe is key in the design of a collective impact framework?

Suggestions...

Start with a broad list of macro-level indicators such as:
- Community
- Economic
- Education
- Health

Draft Sketch Proposal

Kūhaku Lineage

Next Steps for Hawai‘i

- 2016 Hawai‘i Pacific Sustainable Association (HSPA)
- Conference, December 4-5, 2016 in Honolulu
- Participate in Social Network Analysis & Data Visualization Workshop
- Serve as student facilitators
- Possibly present Collective Impact Frameworks
Appendix E

Native Hawaiian Education Council  Presentation 2: May 2018
Appendix F

Native Hawaiian Education Council Presentation 3: November 2018
Appendix G

Niho Framework

Niho Framework

The Niho framework represents education in Hawai‘i that occurred pre-foreign contact, that is, education up to 1778. Within this time period all aspects of education, though possibly differing across the islands, were intrinsically Hawaiian. Some of these aspects include: language, worldview, identity, and political philosophy. The aspects explored below are included intentionally without the mindset aimed towards correcting the injustices done to Hawai‘i and its people through interaction with foreign entities nor is it intended to rectify the current state of Hawaiians in education. This framework reflects the characteristics of Hawaiian education prevalent during the time period previously discussed so it can be utilized in the analysis of Native Hawaiian education and Hawaiian culture-based educational programs.

Hawaiian Culture-based education is hereby defined as:

Education whose foundation is the indigenous Hawaiian education systems (ways of learning, knowing and teaching) that were genealogically Hawai‘i prior to the year 1778. Further, it is education created, taught, learned, and assessed through the indigenous Hawaiian cultural worldview, in environments conducive to the effective transmission of indigenous Hawaiian knowledge at a pace that is appropriate for its learner.

The intent of this framework is not to render judgement as to a program’s or system’s quality or ‘Hawaiian-ness’. Rather, this framework serves to drive further analysis and conversation for state- and community-wide education systems and individual program contributors to those systems around the services and impact that they collectively have on Native Hawaiian education. While current academic measures are commonly viewed as determinants for individual and/or collective impact, this framework may be used to reposition traditional, Native Hawaiian education elements and the degree to which we nourish, celebrate, and proliferate our maoli Hawai‘i as determinants of collective impact; reclaiming educational en and defining for ourselves from a strengths-based perspective, impact that we value most. Considerations, therefore, for framework application may include:

- Understanding the prevalence of elements of Hawaiian culture-based education within a program and across a system, which may inform future collaborations around innovations, to which principles of developmental evaluation might be applied.
- Redefining determinants of impact that are more Native-Hawai‘i- / maoli Hawai‘i-centric
- Calibrating educational practices within and across communities and systems
- Informing education policy, training, curriculum development, funding models, and possibly compensation models from Pre-K through postsecondary levels of education

Framework Structure

The framework is divided into three clusters or Niho; No ke Kumu, No ka Piko, No ke A‘o. Each Niho is further divided into several H‘oku‘ona, which collectively seek to define aspects of each respective Niho. Together, the Niho form the vertices of a triangle with our definition of Native
Appendix G

Niho Framework

Hawaiian Culture-based education (NHCBE) positioned at its center; each Niho with its Hiʻoiʻona plays an important role in supporting the definition of NHCBE. The inherent strength that triangles possess as well as their ability to interlock tightly with other like triangles inspired the metaphor of ‘Hoʻoniho’, to set stones in an interlocking manner. As we look to understanding how our education systems support the advancement and betterment of our haumāna, we envision the necessity for all individual contributors within these systems to know intimately, each other’s work, priorities and contributions. The Niho Framework therefore provides common elements around which everyone contributing to Native Hawaiian education might join in discussion, calibration and collective effort, each piece fitting tightly with the next to ensure a system that is paʻa in advancing the māoli Hawaiʻi-centric drivers for our kānaka.

Framework Levels explained
Kahua - Meaning foundation. This is representative of a program whose use of Hawaiian culture-based educational elements is its foundation. Hawaiian culture-based education is its mode of education. Like the building of a house the foundation is the most important.

Paepae - Meaning to build as a foundation. This is representative of a program whose use of Hawaiian culture-based educational elements has become common practice, but is still in the stages of being solidified as the foundation of the program. Like the building of the foundation of the house this is the actual setting of the foundation’s stones.

Halihali - Meaning to pass or transport. This is representative of a program whose use of native Hawaiian education elements is at an emergent stage. Like the building of the foundation of a house one of the beginning steps is to transport the stones that will become its foundation.

ʻAʻohe - Not present in the program.

![Niho Framework Diagram]
Appendix G

Niho Framework

<table>
<thead>
<tr>
<th>No ke Kumu (Sources of 'ike: Welo, Wahi, Loea)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welo:</strong> Teaching and learning requires and values kupuna and 'ohana involvement and knowledge.</td>
</tr>
<tr>
<td><strong>Wahi:</strong> Place provides context as well as content. Being physically present allows the learner and the teacher to actively engage with content. Place is also a teacher that provides knowledge to those who reside in an area, making them the experts of knowledges unique to that area.</td>
</tr>
<tr>
<td><strong>Loea:</strong> Masters of a knowledge or those who are intimately familiar should be the lead resources and teachers for their content area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kahua</th>
<th>Paepae</th>
<th>Halihali</th>
<th>'A'ohe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welo:</strong> Current learning is routinely connected to the events of the past and the knowledge brought forth by generations of kupuna. Kupuna, 'ohana, and their ancestral knowledge are consistently included in the school program and are regularly accessed by students in the attainment and construction of new knowledge.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Welo:</strong> Kupuna and 'ohana have somewhat of a presence in the learning program. Ancestral wisdom is occasionally connected to current learning and the construction of new knowledge.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Welo:</strong> Kupuna and 'ohana have limited presence in the learning program. Ancestral wisdom is seldom incorporated or connected to current learning and the construction of new knowledge.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Welo:</strong> Kupuna and 'ohana are not included in the learning program. Connections to ancestral knowledge or historical context are not used in developing student understanding or construction of new knowledge.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Wahi: Opportunities to connect learning to and engage with place are the norm. Concerted effort is made to develop students’ knowledge of and connection to place, its history, resources, challenges, and future. The program seeks to build students’ identities as informed stewards of 'aina, able to contribute to the advancing of opportunities for |
| Wahi: Some efforts are made to connect learning to and engage with place. Occasional effort is made to develop students’ knowledge of and connection to place, its history, resources, challenges and future. Aspects of stewardship and personal kuleana for 'aina and community sustainability are somewhat included in the learning program. |
| Wahi: Little effort is made to engage place in the learning program. Minimal effort is made to develop students’ knowledge of and connection to place, its history, resources, challenges, and future. Stewardship and kuleana for 'aina and community sustainability are infrequently included in the learning program. |
| Wahi: Connections to place are virtually non-existent across the learning program, nor does the program seek to build knowledge of history, resources, challenges or other substantive elements related to place. Issues of natural resource stewardship or community betterment through 'aina engagement are not addressed. |
Appendix G

Niho Framework

| Loea: Engaging experts highly versed in content-specific knowledge within the learning environment, whether from the school community or the community at large, occurs regularly. The school can identify specific individuals or groups that provide content knowledge and instructional support on an ongoing basis. | Loea: Purposeful incorporation of experts from across the community into the learning program occurs on occasion. Certain individuals from with the organization are aware of and access community resources. | Loea: Incorporation of experts from across the community into the learning program occurs infrequently, or, as a result of external entities requesting to participate in the learning program. Knowledge of community resources is not widely held across the program. | Loea: The learning program does not seek to engage experts from across the community as valued learning contributors. |

| No ka Piko (Kuleana: Moʻokūʻauhau, Loina, Hoʻomanana, ‘Ike Laʻa) |

Moʻokūʻauhau: Kuleana, validity, accountability, relationships and history are embedded in genealogy. Genealogy includes not only biological genealogy, but also genealogy of knowledge. Through genealogies, teachers and students are able to build and analyze connections to content. Genealogy also highlights the importance of knowing the sources of knowledge and conveying these to students.

Loina: Protocols set the context for learning. These convey the sacredness and importance of knowledge, the process of its transmission and its internalization. Protocol also helps to establish a governing value system in education.

Hoʻomanana: Hawaiian spirituality in HCBE drives accountability and connectedness to all aspects. Hawaiian spirituality also helps to maintain the Hawaiian mindset towards knowledge. Spirituality is the recognition that there is an existence of mana in everything. This informs how teachers and students interact with everything around them, including place. Awareness of how mana flows determines and maintains the Hawaiian mindset and behavior.

ʻIke Laʻa: Knowledge is connected to all things through genealogy and spirituality, and it bestows and allows for the maintenance of Kuleana. To hold, teach, or learn knowledge puts one in a place where they are burdened with great responsibility to that knowledge.
## Appendix G

### Niho Framework

<table>
<thead>
<tr>
<th>Kahuas</th>
<th>Paupae</th>
<th>Halihali</th>
<th>'A'ole</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mo'okū'auhau</strong>: Teachers utilize genealogies of knowledge and/or people, during research and curriculum development to inform instruction. Instruction is given on the importance of, or shows value for, genealogy and the associated loina. Students value, know their place within and uphold the loina of genealogy.</td>
<td><strong>Mo'okū'auhau</strong>: Teachers sometimes utilize genealogies of knowledge and/or people during research and curriculum development to inform instruction, but may not be able to articulate fully the genealogy of the knowledge they are using to create curriculum or the ties this knowledge may have to people. Instruction is given on the importance of, or shows value for, genealogy and the associated loina. Students know the loina of genealogy.</td>
<td><strong>Mo'okū'auhau</strong>: Genealogy of knowledge and people are not consciously used in research and curriculum development, but the teacher is able to articulate the genealogy of knowledge and/or people that are covered in the curriculum. No formal instruction is given on the importance of genealogy and the associated loina.</td>
<td><strong>Mo'okū'auhau</strong>: Genealogy of knowledge and people are not consciously used in research and curriculum development, and the teacher is not able to articulate the genealogy of knowledge and/or people that are covered in the curriculum. No formal instruction is given on the importance of genealogy and the associated loina.</td>
</tr>
<tr>
<td><strong>Lōina</strong>: Traditional protocols and a Hawaiian value system, or lōina, are foundational pieces of the program's learning environment. Visual reminders of values are present and referred to in the learning environment and they are aligned to the practiced protocols of the program. The lōina are also foundational pieces that are observable throughout the program.</td>
<td><strong>Lōina</strong>: Traditional protocols and a Hawaiian value system or lōina influence the learning environment. Visual reminders of values are present in the learning environment and they are aligned to the practiced protocols of the program. The lōina are also foundational pieces that are observable in most areas of the program.</td>
<td><strong>Lōina</strong>: Traditional protocols and a Hawaiian value system or lōina accompany learning. Visual reminders of values are present in the learning environment but may not aligned to the practiced protocols of the program. The lōina observable in some areas of the program.</td>
<td><strong>Lōina</strong>: No traditional protocols or Hawaiian value system or lōina intentionally accompany learning.</td>
</tr>
<tr>
<td><strong>Ho'omanaha</strong>: Spirituality is imbedded in the development of curriculum and the delivery of instruction. Students develop a relationship with their environment through personal</td>
<td><strong>Ho'omanaha</strong>: Spirituality is found in many areas of the curriculum and delivery of instruction. Students develop a basic understanding of what spirituality looks like in a Hawaiian perspective and base</td>
<td><strong>Ho'omanaha</strong>: Spirituality is evident in limited areas of curriculum and delivery of instruction. Mana is taught as a concept from the past and not relevant in current times.</td>
<td><strong>Ho'omanaha</strong>: There is no evidence of spirituality in the curriculum and delivery of instruction.</td>
</tr>
</tbody>
</table>
Niho Framework

| experiences, which determines their interaction and behavior. | their interaction and behavior on this understanding. | 'Ike La'a: Recognition is given to how and where knowledge is derived. Kuleana to this knowledge is discussed with teachers and students. Some understanding is evident in the way it is passed on. | 'Ike La'a: Knowledge is shared as part of a curriculum and while some connection is made to how and where it came from, teachers and students may not clearly understand their responsibility to that knowledge. | 'Ike La'a: Knowledge is shared without any spiritual or genealogical connections. Teachers and students are unaware of responsibilities to the knowledge being shared. |

| No ke A'o (How 'ike is acquired / conveyed: Nānā i ka hana, Hana i ka hana, Ha'awina Pono'il, 'Ōlelo Hawai'i) |

| Nānā i ka hana: Teachers provide opportunities for students to learn observation skills and to observe practical application of content. |
| Hana i ka hana: Teachers provide hands on learning opportunities to students. Assessment should also incorporate practical components. |
| Ha'awina Pono'il: The aptitude of a student is not determined by age or a grade level. It is instead determined by an observant teacher. Content, its delivery or denial and assessment, are designed to be appropriate for the learner. |
| 'Ōlelo Hawai'i: The Hawaiian language is a foundational piece of HCBE, from research and lesson planning to teaching and assessment. Content specific language, including 'ōlelo no'eau and language nuances, maintains Hawaiian worldview and language accuracy. Oral traditions including speeches, mo'olelo, oli, mele, debate and none, are used as curricular tools. |

<table>
<thead>
<tr>
<th>Kahua</th>
<th>Paepae</th>
<th>Halihali</th>
<th>'A'ohe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nānā i ka hana: Instruction is provided in how to observe. Students are given opportunities to construct understanding through personal observation. Application of content is directly observed.</td>
<td>Nānā i ka hana: Instruction is provided in how to observe, but students may not be given opportunities to practice the skill.</td>
<td>Nānā i ka hana: Students are asked to conduct observations, but may not have received instruction on how to do it.</td>
<td>Nānā i ka hana: Students are not taught observation skills and do not use observation as a means for knowledge construction.</td>
</tr>
</tbody>
</table>
### Appendix G

**Niho Framework**

<table>
<thead>
<tr>
<th>Hana i ka hana: Instruction and assessment are frequently done in practical situations.</th>
<th>Hana i ka hana: Hands on learning is often present but assessment is not or vice versa.</th>
<th>Hana i ka hana: Hands on learning and/or assessment is limited.</th>
<th>Hana i ka hana: Students do not engage in hands on learning or assessment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ha‘awina Ponoʻī: Student learning need and readiness for learning is the primary driver for instructional decisions.</td>
<td>Ha‘awina Ponoʻī: Student learning need and readiness for learning is considered during instructional decisions.</td>
<td>Ha‘awina Ponoʻī: Student learning need and readiness for learning is rarely considered during instructional decisions</td>
<td>Ha‘awina Ponoʻī: Instructional decisions are not based on student learning need and readiness.</td>
</tr>
<tr>
<td>'Ōlelo Hawaiʻi: The medium of instruction is 'ōlelo Hawaiʻi. Curriculum resources are also presented in 'ōlelo Hawaiʻi. Oral traditions and content specific language are used.</td>
<td>'Ōlelo Hawaiʻi: The majority of instruction is in 'ōlelo Hawaiʻi. Curricular resources are not universally available in 'ōlelo Hawaiʻi.</td>
<td>'Ōlelo Hawaiʻi: There is a limited focus on 'ōlelo Hawaiʻi. Curricular resources are primarily not 'ōlelo Hawaiʻi.</td>
<td>'Ōlelo Hawaiʻi: The medium of instruction is not 'ōlelo Hawaiʻi. Curricular resources are not 'ōlelo Hawaiʻi.</td>
</tr>
</tbody>
</table>
## Appendix H

### Infographics (updated)

**Native Hawaiian Education Systems and Education Programs or Systems Serving Native Hawaiians**

<table>
<thead>
<tr>
<th>Private Entity Delivery</th>
<th>Public Entity Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kamehameha Schools (KS)</td>
<td>HiDOE Hawaiian Focused</td>
</tr>
<tr>
<td>'Aha Pūnana Leo</td>
<td>Public Charter Schools</td>
</tr>
<tr>
<td>INPEACE</td>
<td>(19) - KS, Council for</td>
</tr>
<tr>
<td>Other Independent,</td>
<td>Native Hawaiian</td>
</tr>
<tr>
<td>Pre-K to 12 Schools</td>
<td>Advancement (CNA)</td>
</tr>
<tr>
<td>Home Schooling</td>
<td>501(c)(3) entities</td>
</tr>
<tr>
<td>Family/Community</td>
<td>supporting HiDOE</td>
</tr>
<tr>
<td>Based (e.g., Keiki O</td>
<td>Public Charter Schools</td>
</tr>
<tr>
<td>Ka 'Aina)</td>
<td>(36)</td>
</tr>
<tr>
<td>KS Pre-School</td>
<td>KS Post-High Scholarships</td>
</tr>
<tr>
<td>Scholarships</td>
<td></td>
</tr>
<tr>
<td>KS Post-High Scholarships</td>
<td></td>
</tr>
<tr>
<td>Private Universities</td>
<td></td>
</tr>
<tr>
<td>(BYU-H, Chaminade,</td>
<td></td>
</tr>
<tr>
<td>Hawaii Pacific</td>
<td></td>
</tr>
<tr>
<td>University)</td>
<td></td>
</tr>
</tbody>
</table>

**Private Entity Funding**
- Children’s Defense Fund
- EPIC Foundation
- Head Start Federal
- INPEACE
- ʻIsis-Hawai‘i
- Kawaihao Church
- Keiki O Ka ‘Aina
- Kuʻūloa – He‘eia Ecumenical
- Lāna‘i Culture & Heritage Center
- Living Life Source Foundation
- Mālama ʻĀina Foundation
- Partners in Development
- Pacific American Foundation
- Tutor Hawai‘i
- Head Start

**Public (Federal/ State) Entity Funding**
- HiDOE Schools (292) including
  - 17 which are Hawaiian Language Immersion Schools;
  - 36 which are Public Charter Schools, 19 of which are Hawaiian Focused
- Open Doors (State Pre-School Funding, Department of Human Services)
- HiDOE Hawaiian Focused
- Public Charter Schools (19) – Office of Hawaiian Affairs
- College/University for High School or Pre-School bridging
- University of Hawai‘i System
  - 3 Universities, 7 Community Colleges = 10 Campuses

Native Hawaiian Education Council
735 Bishop Street, Suite 224, Honolulu, HI 96813
(808) 523-6432 www.nhec.org
Appendix H

Infographics (updated)
Appendix H

Infographics (updated)
Appendix H

Infographics (updated)
Learning “THROUGH” Hawaiian is key to producing high-level proficiency

Learning “Of” Hawaiian

Public High School Hawaiian classes
5,348
Private High School Hawaiian classes
2,000
English Medium Hawaiian Culture-Based Charter Schools
2,234

22 Ka Papahana Kaiapuni-Kaiaʻōlelo
Hawaiian Language Immersion Schools
6 Public Charter Schools
16 Public Schools

Learning “Through” Hawaiian

Kaiapuni Hawai‘i (public & charter) Hawaiian language schools (2017)
3,114
Former Kaiapuni Hawai‘i students in other schools (estimate by Wilson 2015)
2,000
Pūnana Leo Hawaiian language infant-toddler/preschool enrollment (2017)
324
15,020 Students
26,608 Speakers

Hawaiian spoken at home by school-age children

Statewide 12.7%
Hawai‘i County 29.9%
Maui & Kaua‘i 14.4%
Honolulu 9.1%

1 generation to be endangered
3 generations to revitalize

All successful language revitalization efforts center around an endangered language once again becoming . . . the normal language of informal, spoken interaction between and within all three generations of the family – keiki, makua, kupuna

1983
< 50 children
2,500 native speaking kupuna

2018
> 3,000 children
< 50 native speaking kupuna

We’re halfway there.
Will Hawaiian still be an endangered language in another generation?