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Marginalized Urban Indigenous Youth and the Virtual World of Second Life: Understanding the Past and Building a Hopeful Future

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Abstract

A small independent high school in the Canadian West is using the affordances of the virtual world of Second Life to explore and reconstruct the colonial past of their students: marginalized urban Indigenous youth. The affordances of the virtual world make it possible to reconstruct the past, deconstruct the present and create a possible hope-filled future. This process is underpinned by pedagogies of engagement and emancipation on three virtual islands (sims) in the virtual world. The past was reconstructed and can be deconstructed on the Negan Tapeh sim. Negan Tapeh is a Cree phrase meaning “look to the future.” When the activities and quests associated with exploring and understanding the events of the past and their impact on the present are complete, participants are transported to the virtual present on the Boyle Street sim.

Boyle Street is an inner-city area in Edmonton, Alberta, where most of the youth live or gravitate to. In Canada and the United States, inner city areas have historically been synonymous with depressed and run-down parts of the city where petty crime, violence and substance abuse are woven into the fabric of daily life. On Boyle Street, the youth are tasked with completing assignments (quests or hunts) distributed by teachers (scripted agents) in the sim’s Boyle Street High School. When the three quests are completed, participants receive their key to the future. The future unfolds on the third sim Urban Hope.

This paper underlines the importance of the virtual world in educational projects with marginalized youth.

1. Introduction

Four buildings were constructed on Urban Hope. The first is a representation of the youth's high school. This building engenders a sense of familiarity in the youth and a connection to their physical world. The next buildings represent three of the city's post-secondary institutions. Posters illustrating careers appropriate to programs offered at each post-secondary institution are placed on the walls, complete with career description, starting salary, and required education. Career planning on Urban Hope hinges on the youth's sense of identity, and on the realization that identity is not limited to how they define themselves at this moment. The route to a previously unimaginable future is laid out with a mouse click.

The development of the three sims did not happen as neatly as described. It involved struggles with students and their familiarity with Second Life (SL) technology, pilot projects, pedagogical struggles, design iterations, and a research project with seven of the youth's teachers to determine their understanding of the latent impact of colonialism on their students' habits, behaviors, and learning. The author, through the various stages and iterations of this project, discovered the importance of developing a thorough and engaging orientation to Second Life operational skills, and a contextually relevant learning design, enhanced by avatar like pedagogical agents and underpinned by experiential and constructivist pedagogies. This paper underlines the importance of the virtual world in educational projects with marginalized youth.

The inspiration for this project grew out of a few early 2010 exploratory trips in the virtual world of Second Life (SL). With each exploratory journey, initial frustration transitioned into a sense of being present in the world. The sense of presence, of actually being in the virtual world while being physically in another location developed through exploratory journeys to various locations and communities in Second Life (Kim, 2009) and deepened into co-presence through interaction with other avatars (Dalgarno & Lee, 2010; Gualeni, Vella & Harrington, 2017; Kim, 2009; Loke, 2015; Mennecke et al. 2011). The feeling of being present in the virtual world, the fluidity of identity (Ratts, 2017) and the ability to transport one's self to the past, present or future created enthusiasm to construct a 3D educational site designed to meet the educational needs of marginalized urban Indigenous youth. However, the author's naive enthusiasm was paired with a low skill set in 3D creation.

Help was sought through a posting on an education site in SL. The avatar Arteer Olivia (now deceased) responded to the post and for a small financial benefit agreed to build the first building. In the process, it was agreed that she would teach the author as much as possible. The motivating factor for Arteer was her sense of social justice and her understanding of the project's intended purpose: to provide educational opportunities and career planning for marginalized urban Indigenous youth (hereinafter referred to as youth).

With Arteer's help the first building was constructed. The building is a virtual representation of the youth's school in the Physical World (PW). The school is intended to provide familiarity in an unfamiliar landscape. As Arteer was completing the school the author, confident in a smattering of basic skills from her tutoring and from attending building classes at Second Life's Builders Brewery, began to construct three of the city's post-secondary institutions on the new sim (Urban Hope). On the interior walls of each building are posters of careers appropriate to the particular institute. With a mouse click, each poster reveals, on a notecard, the entry-level education, wages and other pertinent career information. With construction almost complete, it was time to test the build by bringing on youth. However, before we review these first faltering steps, the term marginalized urban Indigenous youth, as it refers to this program, requires some explanation.

2. Marginalized Urban Indigenous Youth

The youth in the school and this project¹ are between 15 and 24 years of age. Most are without parental support, live in unsafe, unstable accommodation and are officially referred to as the “hidden homeless.” On average, five to ten of the youth, at any one time, are homeless and stay in shelters, coffee shops or wherever they can. Most have previously dropped out of or been expelled from other schools before coming to this program. Some are involved in the negative aspects of street life. Over 90 percent have contact with the justice system. Last year, the agency’s court worker helped youth clear 47 warrants for their arrest and supervised 268 community service hours; thereby, preventing youth’s incarceration. The agency’s social workers helped distraught youth draft 23 suicide safety plans (ICYDA 2016/2017). Overall enrolment in September averages between 130 to 150 youths amid much mobility and dwindles to 60 to 80 by June. After being “on the street” and wary of formal institutions many youths have difficulty staying in a building for six hours a day.

Desperate poverty casts a dark shadow over the lives of most youth in this program and creates a bleak view of the future. The purpose of the Urban Hope sim is to engender a sense of hope for the future in the minds of the youth. Most of the participants are survivors of hostile and sometimes violent environments. The skills one learns in order to survive in such an environment can be dysfunctional in mainstream culture. The youth become defined by their environment, as Eichas, Meca, Montgomery and Kurtines (2017) explain; youth construct their identity through the challenges they face in their daily lives. On Urban Hope, the educational intent is that youth will realize access to careers previously thought unattainable and the accompanying identity shift is possible. A hopeful future is within their reach, “constructing who they are through the solutions they create for their life challenges” (Eichas, et al., 2017 p. 1115; see also Turkle, 1995, Ch. 7 p.1/27).

3. Project Overview

This project began by putting the author’s initial enthusiasm for education in the virtual world of Second Life into practice. The ensuing development, which eventually included three sims, began with the creation of a sim for career planning called Urban Hope. Following the creation of the Urban Hope sim, the author realized that a sim illustrating the past would help build the confidence that the intended participants, marginalized urban Indigenous youth, needed to realize that the career options presented on the Urban Hope sim were within their reach. Negan Tapeh, the second sim was created to meet that need.

After bringing small groups of youth to both sims, their initial enthusiasm turned to boredom. It was at this point that the author’s lack of experience in virtual world learning design and pedagogy brought the project’s development to a standstill. This period coincided with the discovery of the University of the West of England’s Education and the Virtual World program and the wealth of literature on education in the virtual world.

Inspired by the literature the author developed a research project with seven of the youths’ teachers with the two-fold intent of discovering the teachers’ understanding of their students’

¹ The acronym ICYDA represents the Inner City Youth Development Association, the Umbrella agency for the school. Inner City High School (ICHS) and the Inner City Youth Engagement Program, an arts-based program that provides youth with counselling, basic resources, food, and enables the transition to ICHS. www.innercity.ca
[More information on the above statistics is available at https://www150.statcan.gc.ca/n1/daily-quotidien/180619/dq180619a-eng.htm](https://www150.statcan.gc.ca/n1/daily-quotidien/180619/dq180619a-eng.htm)

background and as a pilot project to test the learning design. The need for a sim to represent the youth's present grew out of this project. The Boyle Street sim represents the youths present.

The past was created on The Negan Tapeh Sim. The present is explored on The Boyle Street Sim, and the future realized in the Urban Hope Sim. Each step in the process was a learning experience that merged trial and error with theory and practice.

Each development in this project from the various iterations of the orientation to Second Life operational skills, the development of the three sims, the learning design and pedagogical theory followed a process similar to a series of action research cycles where a problem is realized, and a possible solution put into practice. The results of the action evaluated and further cycles implemented as necessary (Cohen, Manion, Morrison, 2011; Dickens and Watkins, 2001).

4. Project Participants

Over the period of development, seven groups of from two to five youths totalling 26 marginalized urban Indigenous youths volunteered to participate in various iterations of the project. Marginalized Indigenous youths are the focus of this project; however, part way through development seven teachers from the school volunteered to participate in a study to determine their understanding of colonialism and its impact on their students. This project led to the development of the Boyle Street Sim which illustrates the youth's present.

5. Development and Implementation Experiences

What began as a project informed by the author's educational background, enthusiasm for education in the virtual world and a healthy dose of trial and error was later informed by the breadth and quality of virtual world scholarly literature.

In the process, through several iterations, the importance of developing an orientation to Second Life operational skills that keeps participants engaged while developing the skills, they need to take part in the project became painfully obvious.

The first few orientations were text heavy, frustrating and dampened the youths' enthusiasm.

The quality of the Sims' context-based representational fidelity deepened engagement.

The eventual addition of Pedagogical Agents enhanced the experiential and constructivist pedagogy.

The development of the past, present, and future sims did not happen in that order. The Urban Hope Sim (the future) was created first. The Negan Tapeh Sim (the past) was second, and the Boyle Street Sim (the present) was last. This nonlinear development reflects the author's growing realization of the educational possibilities that the virtual world holds for educators.

5.1. The Urban Hope Sim

With the Urban Hope buildings finished and two of the three post-secondary institutes complete, the first five youths were given access to the sim. An orientation plan was developed that included the introductory section of SL and the orientation area of two other sims. These proved to be inadequate for the youths. Most instructions were text heavy and the youths quickly grew frustrated. They disengaged before they even began the career planning section.

The author, searching for ways to engage the youth, decided that redesigning the sim might be the answer. After several landscaping attempts failed to produce satisfactory results, it became obvious that help was needed. An experienced SL resident with extensive landscaping experience

offered her services. Despite her lack of background in education, she was contracted to redesign the sim, but leave the buildings intact. The result was an attractive redesigned sim with eye-catching features such as a magnificent waterfall, waterway, a road that ran the perimeter of the sim, motorcycles, and a monorail that stopped at each building. With the redesign complete, it was back to the struggle to engage youth.

To make SL more accessible for the youth, the orientation was redesigned. A section of Urban Hope was set aside for orientation using simple posters, eye-catching images and basic instructions for movement and communication. The section on Urban Hope followed the basic SL orientation.

Five youth created accounts and completed the orientation. Next, the youth enthusiastically explored the site. Flying was enabled, and exploration was quick. To the author's dismay, the tour of the buildings and career posters did not engage the youth. Within a few hours and a few wild motorcycle rides, the youth disengaged and wondered what to do next.

Reflecting on the process with a naive unawareness of the large body of scholarly literature on pedagogy and the virtual world and with recommendations from youth, all agreed that they needed more activities on the sim. A search on Second Life's Marketplace, SL's equivalent to online shopping where purchases are in Linden Dollars, Second Life's currency, Linden Dollars, resulted in the acquisition of a car and two helicopters. Again, after some wild antics, a few crashes and laughter the youth wondered what was next. Engagement dwindled to none.

On reflection, the author's enthusiasm for the potential of education programs in the virtual world lacked a solid understanding of the necessary pedagogical theory and its impact on the design of educational projects in the virtual world. As noted by Loke (2015), this approach to learning in the virtual world is not uncommon. Fowler (2015), adds that learning design in the virtual world must include pedagogical considerations.

With the benefit of hindsight, the redesign of the Urban Hope sim was completed by a well-meaning person who genuinely wanted to help but did not have a background in education and curriculum design. The pitfalls of this situation were pointed out in a 2009 article on curricular interventions in the virtual world (Lim, 2009). The road surrounding the sim, and the motorcycles proved to be a distraction from the intended learning objectives. The author's purchase of a car and helicopters added to the distraction and took the focus away from education and career planning. With this lack of success in mind, it was time to dig deeper into Indigenous pedagogy and ways of knowing.

5.2. The Negan Tapeh Sim

The Negan Tapeh sim was redesigned to enhance the representational fidelity (Fowler 2015). The Indigenous tradition of experiential learning (Battiste, 2002; Couture, 2013) and a constructive approach to knowledge creation were at the core of learning design. Knowledge creation was enhanced by the incorporation of three pedagogical agents (Soliman & Guetl, 2010; Saleeb & Dafoulas, 2013).

Joe Couture, Indigenous Elder, academic, and tireless activist for the education of Indigenous people maintained that by becoming fully aware of their historical conditions, present circumstances, and political forces at play, Indigenous people are able to realize that they have the power to change their situation (Couture & McGowan, 2013). In addition, Elder Couture maintained, curriculum delivery must reflect "the primary traditional learning mode, which is one of experiential learning" (Couture & McGowan, 2013). Marie Battiste, explaining Indigenous learning and pedagogy also writes, "the first principal of Aboriginal learning is a preference for experiential knowledge" (2002, p. 15).

With Elder Couture's words in mind and an awareness of the need for the youth to feel proud of their culture and background, the author managed to learn enough terraforming and landscaping techniques to build another sim adjoining Urban Hope named Negan Tapeh, a Cree phrase that translates as "look to the future." The sim was landscaped to resemble north central Alberta in the mid to late eighteenth century, before significant European contact with the Plains Cree, Indigenous to the area.

The landscape and vegetation included static representations of cultural artifacts and wildlife reminiscent of the historical period. Cultural information was placed on notecards inside posters illustrating particular cultural practices. The educational intent was for youth to engage with the landscape, cultural information, and artifacts. In the process, it was postulated that the youth would feel proud of their culture and of themselves. Then, with a renewed confidence in their cultural identity, they would be prepared to move to the future and career planning on urban hope.

As required by Cree protocol and tradition, when Elder approval for the sim, its design, and intended use was sought, tobacco is offered to the Elder. Sitting beside the author in the Physical World (PW) on two separate occasions, two different Cree Elders took a virtual tour of the sim and gave their approval of its design and purpose.

A new group of five youth created SL accounts, completed an orientation, and with varying degrees of success, accessed and explored the Negan Tapeh sim on foot and on horseback (flying was disabled). Interest was high and the youth were engaged. However, again engagement soon began to wane, and youth were looking for what to do next. It was at this point that further development of the sim was temporarily suspended. The suspension was not a slide into the trough of disillusionment where new technologies are abandoned as illustrated in the Gartner Hype Cycle (George, 2015), but a search for the slope of enlightenment (Senay, 2012).

The author, with more of a practical than theoretical focus, in search for pedagogical strategies to create deeper long-lasting youth engagement, encountered and participated in the 2013 Education and the Virtual World program at the University of the West of England's (UWE) SL campus. This contact opened the door to the wealth of literature on education in the virtual world, resulting in an SL-based project with seven ICHS teachers to determine their level of understanding regarding the latent impact of colonialism and residential schools on their students. The youths' background and living circumstances described in the previous section of this paper detail the significance of that impact and the urgency of addressing it. If we accept, as Dewey (1938) observed over eighty years ago, that it is important for educators to understand their students' background this project was a valuable experience for all concerned and is particularly significant in the education of marginalized youth.

Recently, the damage wrought by colonialism on Canada's Indigenous people was investigated by the government of Canada's Truth and Reconciliation Commission (TRC, 2009-2013). The TRC created a clear recognition that the damage continues to this day. For the TRC, reconciliation is about more than past events—it is also about the future (Sinclair, 2015).

The virtual world sim of Negan Tapeh is not only about the past—it is about the future. Understanding the past and its impact on the future requires deconstructing the past to help understand its impact on the present (Evans, 2012; Couture & McGowan, 2013). The affordances of the 3D virtual world make it possible to recreate the virtual past in a way that would be financially prohibitive and extremely difficult to create in the PW (Saleeb & Dafoulas 2013; George, 2015). Participants are able to interact with the environment through their avatar (Grinberg, Careaga, & Matthias; et al., 2014). The users' connection to their avatar and to the virtual environment creates a sense of presence, of being present in the virtual world (Dalgarno & Lee, 2010; Evans, 2012;

Gualeni, Vella, & Harrington, 2017). However, before participants could engage with the past, creating an engaging orientation process that developed SL operational skills was necessary.

The previous orientation process with youth was repeated and enhanced with visits to SL university campuses, and educational sites. The Negan Tapeh sim was redesigned. The representational fidelity of the trees and other vegetation was improved to enhance immersion and a sense of presence (Dalgarno & Lee, 2010). The learning design incorporated three simple scripted pedagogical agents (PAs) with basic animations, dressed to fit the context.



Figure 1: Pedagogical agents in the Negan Tapeh Sim.

The PAs were placed in different locations and included a buffalo hunter, a woman standing by a tipi and, a buffalo hunter who changed every eight seconds from the traditional dress into modern dress and holding a briefcase. Behind him, a poster reads “Education is our Buffalo.” The agents fit the context, added depth to the environment, and facilitated learning (Soliman & Guetl, 2010; Saleeb & Dafoulas, 2013). The session on Negan Tapeh was in the form of a quest, introduced around a virtual fire in the Cree campsite. The session began with a simple clue that led to the first agent. Each agent held a clue and an image for each participant. The agent greeted the participant with a Cree greeting and when asked “do you have a gift for me?”—gift being the trigger word—gave each participant the next clue and the appropriate image. The images illustrated examples of colonialism and its impact on the indigenous people. The task was to collect the required images and return to the fire. To encourage fireside discussion, a large storyboard was created for a collage of images. Each participant directed the author to place their images on the storyboard according to how they understood colonialism. Each image generated reflection and discussion.

In the next session, participants were tasked with locating a cultural artifact that glowed as the avatar associated with the particular artifact approached. As each participant located their artifact, they were teleported through an imaginary wormhole to a landscaped enclosure on a platform in the sky. Once inside the otherworldly enclosure, participants were presented with a slide show. The audio is narrated by an Elder who tells a story of life before European contact, of residential schools and colonial rule, and of Indigenous people in the present day, educated and standing up for the rights of their people. The wormhole presentation was followed by more discussion around the fire and underpinned with hope for the future. Future sessions with youth were discussed with the

participating teachers. There was general agreement on the value and potential of the virtual world for the education of marginalized urban Indigenous youth. There was also agreement that another sim illustrating the present was needed.

6. Reflections on the Project with Teachers

The pedagogy underpinning this project was experiential, constructivist, and collaborative (Kolb, 1984; Loke, 2015). Learners worked together to explore the sim, locate the pedagogical agents, complete their quest, and return to the fire to reflect and discuss the information they gathered.

As a group in the physical world and virtual world, the teachers and author are part of a community of practice, exploring ways to improve educational outcomes for students (Wenger, 2000; Smith, 2003/2009; Loke, 2015). The pedagogy and knowledge creation in this project are based on a way of knowing that Couture and McGowan (2013) and Battiste (2002) explained, is the traditional Indigenous way of knowing. Experiential learning theory holds that the learner, acting on the environment (concrete experience) followed by reflection, creates meaning and knowledge from the experience (Dewey 1938; Kolb, 1984; Loke, 2015).

How was knowledge created on the Negan Tapeh sim?

1. On the Negan Tapeh sim participants explored the sim and interacted with cultural artifacts (Lim, 2009).
2. Reflection took place in fireside debriefing sessions sitting on logs around a virtual fire (Loke, 2015).
3. Knowledge was constructed in the context of a virtual world with representational fidelity that participants could easily relate to their PW world (Fowler, 2014).
4. Participants worked collaboratively to locate and gather the images they needed from the pedagogical agents. Through their collaboration, problem-solving, reflection, and guidance from peers, learners deepened their understanding of colonialism and its latent impact on their students (Wink & Putney 2002; Loke, 2015).
5. The Pedagogical agents in the form of avatar-like representations of Indigenous people from the time-period and fitted with basic animations greeted participants, gave clues and images to the appropriate avatars, enhanced the learning objectives, were integral to the simulation, and enabled context-dependent knowledge construction and reflection on the processes of colonialism (Saleeb & Dafoulas, 2013).

Without exception, teachers gained a deeper insight into students' background and discovered how events of the past helped shape their present. The teachers' sessions served as a pilot project for improving the pedagogy and learning design for upcoming sessions with the youth.

What did we learn from the project with the teachers?

1. Four of the seven teachers did not have a solid understanding of the colonial policies and processes responsible for the generational impact on their students.
 - 1.1. Reflecting on the project, all seven teachers stated that they had a deeper understanding of their students' culture and the impact of colonialism on their lives.
2. The following elements in the orientation and learning design were improved:

- 2.1. A platform for orientation was built above the Negan Tapeh sim with simple landscaping, a few buildings, and a road around the perimeter.
- 2.2. On the platform, cars, motorcycles, and other vehicles were made available for youth to drive. In the process, they refined their movement skills, had fun, and were engaged.
- 2.3. A building platform was created for students to create shapes, walls, and attempt building structures, in the process, they refined SL operational skills.
- 2.4. An archery field was built and participants shot arrows or threw lances at a target to refine camera and movement skills.
- 2.5. An interactive bowling alley was built on the platform. Youth were attracted to the bowling alley, became engaged in the game of bowling and in the process refined camera and other operational SL skills.
3. To ease the transition from orientation activities to immersion in the past:
 - 3.1. A movie theatre was built on the platform. In the theatre, a slide show gave an overview of the project on Negan Tapeh and instructions for making the journey to the past. Once in the period of the late 1700s, the challenge was to discover what happened to the culture and people of the period. Time travel was possible in a Tardis that was placed inconspicuously outside the theatre and another Tardis among the bushes on Negan Tapeh.
4. Communication methods required improvement.
 - 4.1. Participants were provided with headphones and communication was based on voice.
5. As a community of practice, it was agreed that creating another sim that the youth could identify as the present was necessary to complete the project.
 - 5.1. Construction began on the Boyle Street sim (the present). Boyle Street is an area in the youth's present that they identify with as their "hood" or neighborhood. The sim is near completion with builds in place. Youth have visited, made suggestions and approved of the environment.
6. *Pedagogical Agents* were included as part of the Boyle Street learning design:
 - 6.1. One of the buildings on the Boyle Street sim is the Boyle Street High School. Inside each of the three classrooms is an avatar-like pedagogical agent dressed to represent a teacher. The three classrooms are representative of the three grades necessary to graduate from high school. The teacher greets the approaching avatar and when given the trigger word the teacher presents the avatar with a quest. When each of the three quests is complete, the avatar is ready for transport to the future on the Urban Hope sim.

7. Discussion

The author's experience as a youth living in a similar environment to the young participants and the long-term experience of working with the population of marginalized urban Indigenous youth brings a sense of solidarity to the project that flattens the role of teacher expert giving what is taken for knowledge to the students. The way the youth think and how they see themselves is intimately related to their historical circumstances and social context (Evans, 2012; Lave, 1991). The skills youth learn to adapt to such environments are the same skills that trap them in the environment. They are adapted, but not fully aware of their oppression (Galloway, 2012). In the virtual world, marginalized Indigenous youth are able to deconstruct the past to learn how events of the past created their present. They construct their own understanding of these historical events and build on knowledge embedded in their culture. As Elder, academic, and activist for Native (Indigenous) Education, Joe Couture, maintained, "only by becoming fully aware of their historical conditions, present circumstances, and the political forces at play, are Indigenous people able to realize that they have the power to change their situation" (Couture & McGowan, 2013, p. 136).

In this project, a pedagogy of emancipation involves more than revealing the tentacles of power and structures of oppression (Galloway, 2012). Participants are able to construct their own knowledge through exploration, action, reflection, and discussion in the virtual world – knowledge that is directly related to situations in the participants' physical world (Loke, 2015). In this virtual world project, a pedagogy of emancipation is a pedagogy of self-emancipation (Biesta, 2015). "Immersed in the reality of their small world, they were unable to see it. By taking some distance, they *emerged* and were thus able to see it as they never had before" (Freire, p. 2/4, 2005).

8. Looking Forward

As I have described in parts of this paper, youth have completed projects to varying degrees of success on each of the three sims. For the most part, comments from the youth have been positive and encouraging. The Boyle Street sim (the present) is ninety-five percent complete. Several youths have completed the latest iteration of the orientation process and successfully completed the Quest on *Negan Tapeh*. They were then transported to the present on Boyle Street. The youth explored the build, commented and made suggestions. Enthusiasm was high and the comments positive. The next step on Boyle Street is to complete a few finishing touches and devise a method to transport the youth to Urban Hope once they have completed the quests and received their key to a possible future.

As mentioned previously in this paper Urban Hope was initially built in 2010 as the first development in this project. The core of the learning design on Urban Hope is solid but will be revised to reflect the Indigenous tradition of experiential learning and a center for reflection. A constructivist approach to knowledge creation will be enhanced with scripted Pedagogical Agents. Toys will be removed, flying disabled, and representational fidelity improved. Pedagogical agents will be integral to the updated career planning information. The upcoming project with youth will employ the totality of the revised learning design and its many iterations, taking students from understanding and deconstructing the past "by discovering who they are through activities that actualize their potentials" (Evans, 2012; Eichas, et al., 2017) enabling them to create a more hopeful future.

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