



## PROJECT SNAPSHOT

### Pathway development through the Indigenous early college model

**Type:** Innovative Transfer

**Project Number:** 2019-28 or I1928

**Project Lead:** Six Nations Polytechnic

**Collaborators:** Six Nations Polytechnic, Mohawk College

**Deliverables for website (if applicable):** Program of Study

#### Project Summary

The STEAM Academy represents a uniquely effective approach to building pathways to post secondary education for Indigenous and non-Indigenous high school students, where students can begin to braid diploma level courses into their studies. This allows students to build toward their Ontario Secondary School Diploma (OSSD), while simultaneously receiving credits toward a Software Engineering Technician Diploma. This project has supported Six Nations Polytechnic (SNP) and Mohawk College to develop curriculum and transfer pathways that link STEAM Academy outcomes with further post secondary opportunities at SNP and Mohawk College. Throughout this project, both SNP and Mohawk College have gained a great deal of knowledge relating to potential post secondary pathways for our SNP STEAM Academy Students, and as a peripheral benefit, our partnerships and departmental connections have also been strengthened.

#### Project Rationale

This project, and indeed the entirety of the SNP STEAM Academy were created to meet the needs of our learners and community members. Through a great deal of planning and community review, it was determined that the current programming available to our Six Nations learners was insufficient to meet their learning and graduation needs. We therefore established the Six Nations Polytechnic STEAM Academy to address these needs, specifically creating this alternative pathway to ensure that students had additional options to benefit themselves and their community through new and unique post-secondary and career pathways.

## Collaborator Contributions

Six Nations Polytechnic staff undertook most of the consultation pieces with staff and students. These conversations were extremely insightful and helpful to the project overall.

Following these conversations the collaborative approach taken towards research and pathway development in this project became a shared responsibility between both institutions. Many meetings were held both in person and using online methods to allow for robust consultation and collaboration with many different stakeholders at each Institution. Mohawk College kindly provided personnel support to help build the pathway options, and Six Nations Polytechnic provided personnel support to verify that these courses could be offered Six Nations Polytechnic from both a financial and a regulatory perspective.

Six Nations Polytechnic staff undertook a lead role in the preliminary financial research that has gone into determining if these pathways are financially viable for SNP.

Additionally, IBM as an industry partner in this project provided considerable support regarding the consideration of the benefits and challenges that could be associated with the technology focused pathways and transfer options considered, as well as providing comments and learning around what some of the career-oriented outlooks could be with each of these potential options.

## Key Steps

**Consultation** - We began this project with consultation from our current students, families, and internally with our staff to see what insight each of these groups could provide. These were mostly conversations and often done within other events, such as parent teacher conferences. We asked the question “What other pathways or opportunities would you like to see at SNP STEAM Academy?” This question was perhaps too broad. Because of this, some of the initial input provided was less focused than we would have liked, but once we narrowed the question by instead asking “What other post-secondary opportunities would you like to see at SNP steam Academy?” our acquired information became more focused and useful.

**Collaboration** - We then took this information and began to collaborate with our partners at Mohawk College. Much of the feedback that we received revolved around students having additional options should they decide that the current pathway was not to their liking in the latter years of the program, and about providing additional options for students whose interest lied more with other programs such as construction engineering or the arts. This led naturally into discussions about other pathways and transfer opportunities as illustrated elsewhere within this report.

**Research** - We then began to research a range of other options with Mohawk College as well as looking into the financial viability of these options with other partners and governing bodies. As our work in the early college model is entirely new to Canada as a whole, it was often challenging to gather useful information regarding funding for the delivery of this kind of programming.

**Preliminary Pathway Establishment** - SNP and Mohawk College then took the time to plan out the two attached preliminary pathways. These pathways remain theoretical, but we have now established their viability and that there is indeed interest from the community and student level in pursuing these as options in the future.

## Outcomes

### 1. Increase Transfer Options for Students

Although the specific pathways of transfer between our two organizations, specifically regarding the SNP STEAM Academy Software Engineering Technician program, have yet to be fully established, many new and exciting potential pathways for our students to take have now been explored, reviewed and have been determined to be viable for our students. As our program remains relatively new it is important for us to ensure that our students have a range of options to pursue if/when they choose to pursue additional postsecondary education. Furthermore, as the students are very young (starting the SNP STEAM Academy Software Engineering Technician program when they are in grade ten) we want to assure that transfer options are available to them should they see themselves as prioritizing something other than software engineering. Some of the explored options included: Augmented and Virtual Reality Innovation, Computer Systems Technician, Cyber Security Analytics and Virtual Reality Multimedia Production. Again, although these specific pathways and transfer opportunities have not been fully established (mostly as a consequence of our programs relative infancy) these options are now known to exist for our students. As we progress, we hope to make these readily-available transfer options to students at Six Nations Polytechnic.

### 2. Establishment of Preliminary Work On New Student Pathways

A great deal of preliminary work was undertaken to review and consider additional student pathway options here at the SNP STEAM Academy. As has been previously stated, with our program being new we want to ensure that we are both meeting the needs of our community and School population but also ensuring that we are poised to meet future needs as they arise. To this point Six Nations Polytechnic and Mohawk College together have throughout this project explored two potential pathways besides the currently established software engineering technician program. These two programs are, like our current offering, built under the Early College model allowing students to take a variety of courses taught by both Six Nations Polytechnic staff as well as Mohawk College staff leading to dual credit courses and a dual credentialed result. These two programs are a Construction Techniques program as well as an Art and Design Foundations program. Both of these programs have been identified as areas of interest for our current students and as we prioritize meeting community needs both of these programs have been identified as potential pathways for future offering at SNP STEAM Academy. The preliminary program of studies for these two pathways as well as sample scope and sequence has for both of them will be attached to this final report.

### Clearer and Shared Understanding Institutional Alignments and Priorities

3. Oftentimes work with various partners amongst post-secondary institutions can become distant and purely business like. We are happy to report however that throughout the duration of this project a great deal of relationship (and indeed team-building) took place, significantly better aligning all staff involved with this project as well as all involved in the SNP STEAM Academy early college program as a whole. Mohawk College staff were supportive throughout and very receptive to conversations about the reasoning behind initially beginning the school, and for our exploration of additional pathways and transfer options for our students. As Six Nations Polytechnic is an Indigenous Institute that carefully considers the needs of our community in all of our decisions, it is important to us that our partners share our vision for our students future. Throughout this work it was evident that the staff of Mohawk College involved in this program have an understanding of the necessity for a program such as ours.

Close institutional alignment around the Early College model and the SNP STEAM Academy has also helped us to establish further peripheral programming between our two organizations such as an internship program in partnership with both Mohawk College and our partners at IBM that would partially take place at the Mohawk College campus this summer and then throughout subsequent summers afterwards. Without the time spent on this project building our shared understanding, this extremely positive and student-focused result would have been unlikely.

## Challenges

Although we were very satisfied with the engagement received it would have likely been beneficial to have engaged additional post secondary partners in this project. Outreach was done to other partners on numerous occasions to engage them in these conversations, however due to scheduling and personnel time at all involved institutions, these further conversations did not come to fruition. This is in no way to minimize the exceptional work that was done, simply to state that with projects of this nature often additional input can/could have been beneficial.

## Student Outcomes

Some of the primary benefits of the Early College model, both established and discovered throughout this program are:

**Financial Savings** - There is no cost to being an early college model student at the SNP STEAM Academy. This allows students to graduate with both an Ontario Secondary School Diploma and a post secondary credential without incurring any student debt.

**Ability to Acquire Credential / Rate of Credential** - Students are given the opportunity to acquire credentials at a faster rate than they could acquire elsewhere. By utilizing the Early College model, and starting students on this pathway at the grade 10 level, students are able to earn these two credentials a full academic year of study faster than previously possible.

**Expanded Support Structures** - By being enrolled both at Six Nations Polytechnic and at Mohawk College student support structures are greatly expanded. Students have access to both institutions' expertise and support services and are provided with multiple perspectives from professionals at a variety of academic levels.

**Transfer Opportunities / Flexible Learning Outcomes** - We recognize that when students start on this pathway they are indeed quite young and still very much establishing themselves as both young people and as students. We therefore are happy to have begun excellent conversation and research with Mohawk College surrounding innovative transfer opportunities for students to move from the software engineering technician program into other programs such as Cyber Security Analytics and Virtual Reality multimedia production.

This will allow our students to both utilize the dual-credit programming we currently offer and to further customize their learning by transferring to alternative but still adjacent programming as they mature and learn more about what they would like their own individual pathway to look like.

## **Student Credential**

Students can acquire an Ontario Secondary School Diploma as well as a Software Engineering Technician Diploma.

## **Student Time Savings**

It is possible for students to save time by using this pathway option as the secondary school component and the post-secondary component can both be earned within five years as opposed to the typical six years that it would take via other means. It should be noted that these other means, prior to the establishment of the SNP STEAM Academy, were largely unavailable to our students.

## **Student Financial Savings**

This pathway comes at no cost to students as the entirety of the of the SNP STEAM Academy program is tuition free.

## **Student Flexibility**

This program has given access to a new field of study that our students would never have been able to access prior to the establishment of the SNP STEAM Academy. There are many internal portions of the program that also increase student flexibility and ease of access, such as all SNP STEAM Academy courses having blended delivering inbuilt, and the shared support from both Six Nations Polytechnic and Mohawk College staff as well as other supporters and mentors from IBM.

## **Student Work Alignment**

Currently, software engineering technicians are one of the top ten top in demand jobs in Canada. This level of demand is anticipated to continue to increase over the next five to seven years. By providing our students access to this programming now, we create a well-placed and well prepared student for the future. Also, by creating educational programming that partners directly with industry and post-secondary institutions, students are given a much broader scope of learning then they would be under typical circumstances.

## **Institutional Outcomes**

As noted above, the institutional cultures of both SNP and of Mohawk College came into further alignment throughout the duration of this project. Through our many discussions we further established both the need for and the impetus behind establishing the Early College model here at SNP. Mohawk College was supportive of these many discussions and also came to further understand why the Early College model at SNP is truly an effort of reconciliation. Previously unconnected staff at multiple levels in departments such as teaching, guidance and administration have also been connected (often for the first time) which has further contributed to the strengthening of our overall partnership, thereby enhancing current and future opportunities to develop programming and smoother transfer opportunities for students.

## Sector or System Implications

The SNP STEAM Academy has already shown significant promise as a student focused Early College model. Our students are engaged with many skills at both the secondary and post-secondary levels that allow them to explore education and future career options in ways that they (and truly, we as well) have not before been able to do. Through interactions with our partners at IBM as well as other institutions and businesses, students have been able to blend secondary, post-secondary, and experiential based learning into an innovative and student focused pathway. Also, the shared willingness between SNP and Mohawk college to consider additional transfer opportunities for students into alternative programs should they eventually determine that the software engineering technician pathway is not the pathway that they would like to follow, allows for a significant amount of student customization to their learning.

Throughout our time working in the Early College model, and while exploring these alternative pathways and transfer opportunities for our students, there are aspects of this kind of program that we do urge caution with. We have been fortunate to have good partners in IBM; the significance of a supportive and flexible corporate partner cannot be understated; their involvement in this program is critical to its success. IBM has assisted us in preparing our students for this type of programming while the students are still early in their educational careers. Without adequate preparation for these courses the students could easily find themselves lost in content and unable to progress. By utilizing IBM's expertise in both software and business skills, our students have been given an advantage and are much more likely to achieve success within this program.

This is certainly not an exhaustive report on the initial successes and outcomes of our Early College model; we would be happy to share more of this learning with ONCAT through further projects and conversations.

## Tips/Advice

As noted previously: "There are many other learnings that we have acquired throughout our time with the Early College model, and while exploring these alternative pathways and transfer opportunities for our students, that we would indeed urge caution with. We have been exceptionally fortunate to have very good partners and associates in IBM, and the significance of a supportive and flexible corporate partner in this kind of early college program cannot be understated. Although the corporate sector is often not as involved in these kind of programs, their involvement in this program is critical to its success. IBM has assisted us in preparing our students for this programming while the students are still early in their educational career in grade 10. Without adequate preparation for these courses at such an early stage in their educational journey, the students could easily find themselves lost in content and unable to progress along this pathway. By utilizing their expertise in both software and business/soft skills, our students have been given a great advantage and are much more likely to achieve success within this program."

Additionally, and foundationally to our program and institution, the value placed on cultural knowledge and Indigenous ways of knowing and being have been critical to our continued development and early success with this model. Our adherence to the values of Ga'nigoq̄hí:yo:/Ka'nikonhrí:io (Respect and the Good Mind) in all of our operations, ranging

from our institutional relationships to our interactions with students, have been critical to ensuring that our priorities remain the student experience by creating a respectful environment build on cooperation and togetherness.

## Tools and Resource

Yes. We established two new pathway templates as a result of this project. These templates are attached to this report. Please find our currently established SNP STEAM Academy scope and sequence document attached as well.

