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# IMHOTEP'S



# TEP'S

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## LEGACY ACADEMY

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## Imhotep's Legacy Academy Interim Report

### Abstract

Imhotep's Legacy Academy's 2019/20 program year has been filled with growth, challenges, opportunities, and some pivots & changes

2020-05-27

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Imhotep's Legacy Academy's 2019/20 program year has been filled with growth, challenges, opportunities, and some pivots & changes.

## Growth

This program year started with great optimism and momentum from ILA's board members, staff, mentors, students, and community members. The efforts from ILA's team were matched with students' enthusiasm for learning and advancement in their Science, Technology, Engineering and Mathematics (STEM) education and community encouragement.

## Events

Hosting and participating in events are a fundamental part of ILA's growth strategy. This year, we participated in NSERC PromoScience's science literacy event, in which various organizations across Canada hosted events to promote science reading and literacy. To participate, ILA hosted its second annual quiz tournament with teams from various junior high and high schools coming together to study STEM and culturally relevant material to compete. This was a great opportunity to support the hard work of students through a friendly competition and reward the winners with iPads to aid in their academic success.

ILA hosted a visit from international guest Dr. TeLisa Daughtry, with the support of the US Consulate, to speak with students at our learning center focused on an important role that Arts contribute to STEM education and the necessity of responding to the needs of the community. Dr. Daughtry is an Award-Winning Diversity & Tech Advocate, ten times Serial Social Entrepreneur, Investor, Keynote Speaker, Author, Multi-Disciplined Creative & Technologist, and Disruptor.

This year, we held a Black Excellence in STEM and Health event hosted in collaboration with Promoting Leadership in health for African Nova Scotians (PLANS) and the Delmore "Buddy" Daye Learning Institute (DBDLI). This event was a way to inform and remind our community about the wonderful work that people of African Heritage do in contribution to knowledge in the STEM and Health fields. We invited faculty staff and professionals from across Canada to speak and inspire the attendees at this event.

## Partnerships

A highlight has been our growing partnership with Business is Jammin' (BIJ) and Creative Destruction Labs (CDL). BIJ and CDL collaborated with ILA to host an innovation tour of the Centre for Ocean Ventures & Entrepreneurship (COVE). Through this field trip, we exposed 24 grade 10 students from Auburn high school to ocean science careers and entrepreneurship in the tech industry as they witnessed impactful speeches from guest presenters. This field trip concluded with a hands-on group activity to build a water turbine led by Dr. Sherry Scully, Director of Learning & Organizational Development at the Institute for Ocean Research Enterprise (IORE).

## Programs

Each year we strive for growth and impact through our core programs. Our FIRST Lego League (FLL) Team, the Reveles, competed at the qualifiers hosted at the NSCC Irvy Campus and advanced to the provincial competition at Acadia University. The FLL competition theme this year was “city shapers”.

The Reveles had the opportunity to consult with industry professionals, most notable of these was the director of HRM Transit and won first place in the project presentation competition. Together the team worked on a project to develop a “tap payment” solution that can improve the public transit efficiency in any city, starting with HRM.

Six Summer Student Research Scholars gave a poster presentation of their research to an audience of community members and university faculty.

This year, the student-led Imhotep’s Learning Community (ILC) continued to engage university students of African Heritage with culturally relevant events and academic development activities. Some activities included Black History Month Trivia and a Melanin Monologues event that was in collaboration with other university societies that promoted matters relating to people of African Heritage. As represented in appendix A, the ILC program has encountered over 200 students with 25 participating in a typical event.

Our After-School Program (ASP) continues to gain the attention of learners and teachers across the province, with an increased interest to expand this program to new schools. This motivated our outreach efforts to 11 schools as seen in appendix B.

So far this year, ILA has reached over 1,584 students in 2019/2020 through all of ILA’s programs. There was an increased enrolment in the virtual school tutoring program this year and our core weekly programs had 223 students attending regularly as referenced in appendix A.

The ILA-TD Opportunity Renewal Scholarship continues to enable ANS learners in their pursuit for post-secondary STEM education. As represented in appendix A, 8 students have received the scholarship as a promise (still in Junior-high or High School) and 15 scholarship students are currently in STEM studies at Dalhousie University.

The ILA Centre has functioned well as a co-working space and information hub for African Nova Scotian youth.

# Challenges

Our growth this year has come along with some challenges, including those that were not foreseen. As a responsive, agile organization we had to make some compromises, pivots, and changes. Among these challenges to note were:

- COVID-19 Pandemic.
- Outreach, engagement and hiring in rural communities and regions outside of HRM.

As COVID-19 was a threat that we did not anticipate, we now expect both temporary and long-term effects on our programs. As a result of social distancing orders by Public Health officials, our Learning Centre closed temporarily in March 2020 and several of our staff and program mentors faced the challenge of transitioning to working from home with new online platforms. Overall, we met this challenge with an open mindset and have been successful.

- ILA quickly implemented contingency plans before social distancing became part of our daily lives.
- ILA purchased more tablets, cameras and computers to enable a smooth transition for all our mentors and participants to virtual programs that run online.
- By being early adapters to online learning, our Virtual School tutoring Program (VSP) served the needs of students who were distance learning for the first time.

A key lesson learned in this challenging process has been to be *responsive* rather than *reactive*, as responsiveness prioritizes timing, observation, and asset mapping before making adjustments.

Program accessibility for students in rural areas is an additional challenge that ILA faces. This links back to our mission to increase the number of African Nova Scotians in STEM fields province-wide that can give back to learners in ANS communities. A complex issue related to multiple factors such as out-migration of African Nova Scotian youth from rural communities to city-centers, we see opportunities for outreach; i.e. by identifying community organizations and champions in those regions that can partner with ILA to recruit and retain students, as well as using our online platforms to service remote communities.

# Opportunities

## Embracing the Digital Experience

Students and educators in Nova Scotia have been steadily adapting to the use of new technologies both in and out of the classroom. When the unforeseen COVID-19 Pandemic catapulted Nova Scotians into distance education, ILA was poised to respond to this challenge having already charted this landscape with our Virtual School Program. The VSP was able to continue when in-person programming ceased. The online mentorship program has been able to

expertly balance face-to-face instruction with a digital platform, using live video-chat for academic coaching.

As parents, students and educators alike are pressured to adapt to the use of ed-tech (educational technologies), we recognize there will likely be challenges unique to African Nova Scotian learners. As a STEM-focused organization, our interest is to:

- Facilitate transition to online learning by leading with an “Embracing the Digital Experience” ideology.
- Demonstrate best practices in digital academic programming.
- Provide support to parents, learners and organizations aiming for student success.

Similarly, ILA is exploring new ways to integrate digital experience in our programming:

- Creating digital STEM-education packages.
- Presenting webinars and online-workshops.
- Providing distance academic research opportunities through the Summer Scholar Research Scholarship.
- Developing an ILA iOS/Android enabled app that has the potential to increase outreach province-wide, nationally, and internationally.

## Collaboration with French Language Programs

This year presented ILA with another notable opportunity to collaborate with French Language Programs and Services at the Nova Scotia Department of Education and Early Childhood Development to make our programs accessible in French. This collaboration is currently in development with promotional and learning materials being translated. This will enable African Nova Scotians and other students in French or French immersion schools to gain access to ILA’s programs.

## Building Relationships through Hospitality

ILA’s move to our own Learning Centre on Sexton campus, equipped with an impressive makerspace, has opened opportunities to host events, programs and site visits over the year. These events and activities, which are made possible through the support of our funders, have allowed us to build stronger relationships with parents, students and community. Along with a core focus on academic excellence, these relationships enhance our impact, provide opportunities for exposure to STEM culture and professions and are an integral part of the foundation of an Africentric programming model.

# Pivots & Changes

## Shift to Online Learning

Our sharpest and most successful pivot this year was the transition from face-to-face student engagement, (in-person events and programs in group settings) to virtual engagement through online platforms in response to the challenges posed by the COVID-19 Pandemic. Through this experiment in distance education, ILA was able to retain participant engagement for all of our programs (i.e. the After School Program (ASP), RBC iCode+, Virtual School Program (VSP), Summer Student Research Scholarships (SSRS), and First Lego League (FLL)).

This is testament to the agility of our staff, and foresight of our board. The addition of the Outreach and Communications Officer position this year has allowed ILA to be responsive to the needs of the African Nova Scotian community, particularly the needs of individuals from socio-economically challenged backgrounds that face barriers to accessing digital technology (i.e. hardware such as laptops and tablets, in need of extra support with online platforms). ILA is monitoring the outcomes of this pivot in order to inform future program changes.

## Achievement Gap to Opportunity Gap

With the unique growth, challenges, and opportunities we have experienced this year, our organization at an opportune time will review the efficacy of current operations and reflect on our core values. We are approaching the future with a renewed philosophy on equity, diversity, and inclusion in STEM by focusing on bridging the *opportunity gap* as well as the *achievement gap*.

ILA recognizes that academic achievement is invaluable but not the only contributing factor to the success of African Nova Scotian Learners in STEM, therefore we wish to be a primary partner with community, businesses and organizations that can provide the next step into STEM careers and professions:

- Working with the Black Business Initiative of NS (BBI) and Business is Jammin' (BIJ), Creative Destruction Lab (CDL), Centre for Ocean Ventures and Entrepreneurship (COVE), Volta Labs and participating as a stakeholder in the African Nova Scotian Youth Employment Lab to provide links to career opportunities and increase exposure to STEM entrepreneurship.

## STEM to STEAM

The challenges and opportunities this year have led to closer partnership with the African Nova Scotian community and has set in motion a “revamp” of the cultural aspects of ILA’s programs. In addition to providing an Africentric historical context to STEM, exposure to Black STEM educators

and professionals and a culturally competent peer mentorship model, ILA is looking to enhance cultural curriculum with the addition of arts to select programs.

Anecdotal and expert evidence has shown that integrating arts into the STEM curriculum, forming “STEAM”, can teach complex concepts in new ways. ILA is in the exploration stage of piloting STEAM in new programs. African and African Nova Scotian arts and culture (i.e. music, dance, visual art, design etc.) can be experienced through a STEM lens; this integration offers new avenues for African NS learners to become interested in sciences and math.

## Conclusion

ILA has come a long way since its inception in 2003 and this organization continues to overcome challenges and adapt to new trends. ILA is committed to its outreach opportunities, especially to rural areas, and has hired a full-time outreach and communications officer and created a strategic marketing specialist co-op position to aid in marketing our programs. This contributes to our mission to increase our reach and impact on African NS learners and provide value in their pursuit of STEM education and careers.



## Appendix A: Participation (to March 15, 2020)

<b>Program</b>	<b>Number of students encountered</b>	<b>Number of students who attended regularly</b>
ASP - Halifax	106	16
ASP - Dartmouth		16
ASP - Antigonish		15
ASP - Wolfville		20
ASP - Truro		4
ASP - Ellenvale	19	19
ASP - Dartmouth South Academy	22	22
VSP	92	57
FLL	60	15
RBC iCode+	35	9
ILC	200	25
SSRS	5	5
<b>Totals</b>	<b>539</b>	<b>223</b>

	<b>Number holding a scholarship promise</b>	<b>Number being paid a scholarship at Dalhousie</b>
ILA-TD Scholarship	8	15

*Note: these results are preliminary, subject to final adjustment.*

## Appendix B: Attendance at Outreach Events

(to March 15, 2020)

<b>School Name</b>	<b>Number of students</b>	<b>Number of students of African descent</b>
Gorsebrook Junior High	120	27
King's County Academy	37	37
Graham Creighton junior high	130	97
Oxford Junior high	80	35
Truro Junior High	45	45
St. Andrew's Junior High	420	18
North King's Education Centre	45	15
Bell Park Academic Center (CAEP)	24	24
Ridgecliff Junior high	78	50
Bell Park Academic Center	22	4
Hammonds Plains Consolidated Elementary	360	22
<b>Totals</b>	<b>1361</b>	<b>374</b>

*Note: these results are preliminary, subject to final adjustment.*