



2019/20 ANNUAL REPORT

CELEBRATING BLACK EXCELLENCE IN STEM



PROGRAM OVERVIEW

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.

Building a miniature boat during the 2019 Science Literacy Event.



Caption?



STEM quiz tournament participants and winners.

EVENTS — SCIENCE LITERACY, BESH, TOURNAMENTS, AND MORE!

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. In participation, ILA hosted its **second annual STEM quiz tournament and activity** with teams from various junior high and high schools coming together to study STEM and culturally relevant material and 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**, an Award-Winning Diversity & Tech Advocate, ten-time Serial Social Entrepreneur, Investor, Keynote Speaker, Author, Multi-Disciplined Creative & Technologist, and Disruptor. With the support of the US Consulate, she spoke with

students at our learning center focused on the important role that Arts has in contributing to STEM education, and the necessity of responding to the needs of the community.

A **Black Excellence in STEM and Health (BESH)** event was 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. Faculty and professionals from across Canada spoke and inspired the attendees at this event.

Due to the COVID-19 pandemic, our **annual closing ceremony** was delayed and changed. This year, the ceremony was held virtually to award the ILA-TD opportunity scholarships and recognize exceptional staff.



Summer Student Research Scholarship (SSRS) Poster Presentation.

PROGRAMS – WHAT WE HAVE DONE THROUGHOUT THE YEAR!

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 Ivany Campus and advanced to the provincial competition at Acadia University. The FLL competition theme this year was “city shapers”. The Reveles consulted with industry professionals, most notable of these was the director of HRM Transit. They won first place in the project presentation competition. Together, the Reveles worked on a project to develop a “tap payment” solution to improve the public transit efficiency in any city, especially HRM.

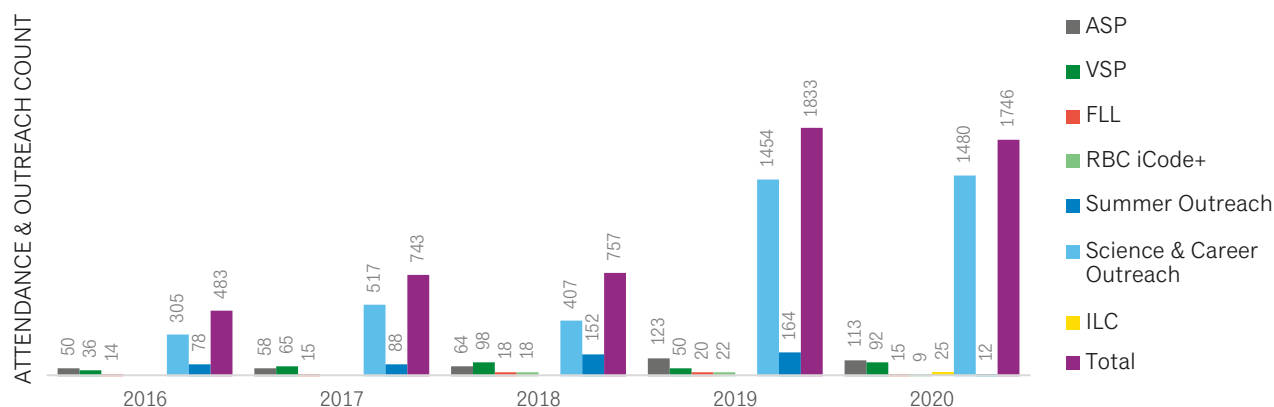


Team Reveles at the FIRST Lego League (FLL) competition.

In September 2019, six **Summer Student Research Scholarship (SSRS) recipients** presented their research to an audience of community members and university faculty. Due to the pandemic, the 2020 SSRS for the faculties of Computer Science and Medicine were completed and all others were postponed to the next year because labs were closed. The selected candidate for **Computer Science was Victor Popoola** and for **Medicine was Deng Mabil Khot**; they conducted their research in the summer of 2020.

This year, the student-led **Imhotep's Learning Community (ILC)** continues 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. The ILC program has engaged over **200 students** with 25 participating in a typical event, as seen in figure 1.

Figure 1: Distribution of ILA program participation from 2016 to 2020.



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.**

ILA reached over **1,746 students** this year through all programs. An increase of enrolment in the **Virtual School Tutoring Program** and our core programs had **254 students** attending regularly. ILA's trivia night continues to be a fun link between programs, with students from various grades participating in weekly quiz tournaments to win prizes.

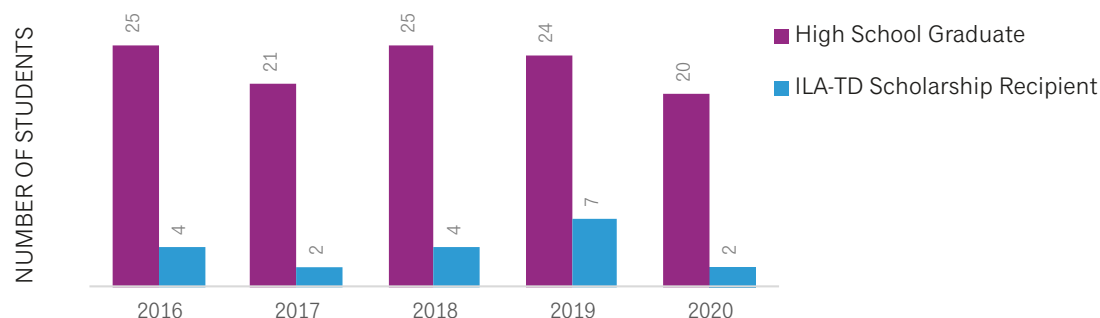
The **RBC iCode+ program** ran coding sessions at the **North Preston** recreation center and the ILA makerspace on the Dalhousie University campus. Students completed activities to learn the skills necessary to make a project by the end of the program. This year, one of our students, Kyle, made the best innovative solution focused on a smart car application.

The **ILA-TD Opportunity Scholarship** continues to enable ANS learners in their pursuit of post-secondary STEM education. **8 students** 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. As in figure 2, there were 20 students graduating high school and 3 new scholarship recipients.

The **ILA Centre** has functioned well as a co-working space and information hub for African Nova Scotian youth. It serves as a hub to bring all our program participants together, in a culturally immersive environment to thrive in Academia.

In the summer, ILA hired university students and a high school student to work remotely in creating **new STEM activities** to be used in 2020/21. During this period, they created study materials for the 2020 STEM Quiz tournament, mathematics lessons and reading materials for the summer scholar programs hosted by the **African Canadian Service Branch (ACSB).**

Figure 2: Number of ILA participants graduating high school and number of participants graduating with an ILA-TD Scholarship





[LEFT] Team Visionaries at the 2019 STEM quiz tournament (Science Literacy); [RIGHT] Students building a miniature turbine at the innovation tour at COVE

PARTNERSHIPS – ACSB, COVE, IORE, BIJ & ENS

In partnership with ACSB, we delivered a portion of their **Summer Scholar program** at some locations. This year, our mentors taught math virtually to grade 4, 5 and 6 students using lesson materials created by ILA with the assistance of a secondary school math teacher. Additionally, our mentors read books with **primary students from the ACSB summer scholar camps** in a reading program that we called the “**Roots-to-STEM Reading series**”.

ILA contributed to ACSB's Summer stay-at-home educational activities promo. We shared a poster promoting ILA's Virtual School Program & a DIY After School Program activity. This was distributed province-wide in **English and French** for African Nova Scotian Learners to learn about ILA's VSP program and do a DIY activity at home.

Our collaboration with Business is Jammin' (BIJ) and Creative Destruction Labs (CDL) is a highlight for this year. 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 speakers. 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)**.

ILA connected with parents of elementary students this summer during the **parent engagement sessions** hosted by the Africentric Learning Institute at the **Henry G. Bauld Center (Dartmouth)**. With Delmore Buddy Daye Learning Institute (DBDLI), we trained secondary & post-secondary students to become **Academic Coaches** for secondary school students across Nova Scotia. Trained Academic Coaches work with community organizations to coach ANS learners on their academic studies.

Lastly, ILA created a short **promotional video featuring ILA-involved engineering students and Black engineers in Nova Scotia** talking about their engineering experience. This video was submitted to Engineers Nova Scotia for their 100th anniversary and it can be found on [ILA's YouTube Channel](#).

CHALLENGES DEALING WITH COVID-19

Our growth has come along with some challenges, including those that were not foreseen. As we seek to be an agile organization, we made some compromises, pivots, and changes.

Among these challenges to note were:

- COVID-19 Pandemic
- Outreach & Engagement
- Hiring in rural communities and regions outside of HRM

COVID-19 was an unanticipated threat, and 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 as a result we have been successful in our adaptations.

- ILA quickly implemented **contingency plans** before we started social distancing;
- ILA purchased more **tablets, cameras, and computers** to enable a smooth transition for all our mentors and participants to virtual programs that run online;
- Being early adopters of 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 is to be responsive **rather than** reactive, as responsiveness prioritizes timing, observation, and asset mapping before implementing adjustments in our program.

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.



A VSP session at the ILA learning center

OPPORTUNITIES

EMBRACING THE DIGITAL EXPERIENCE

Students and educators in Nova Scotia have been adapting to the use of new technologies both in and out of the classroom. When the COVID-19 Pandemic catapulted Nova Scotians into distance education, ILA was poised to respond to this challenge having already explored 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;
- Creating interactive activity flyers accessible in **English and French**;
- Presenting webinars and online-workshops;
- Providing **distance academic research**;
- Developing an **ILA iOS/Android** enabled app that has the potential to increase outreach province-wide, nationally, and internationally.

Building a model boat during the 2019 Science Literacy Event.



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**. Currently, this collaboration is in

the developmental stage 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.



Students building a miniature boat during the 2019 Science Literacy Event.

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 the 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 **Afrocentric programming model**.

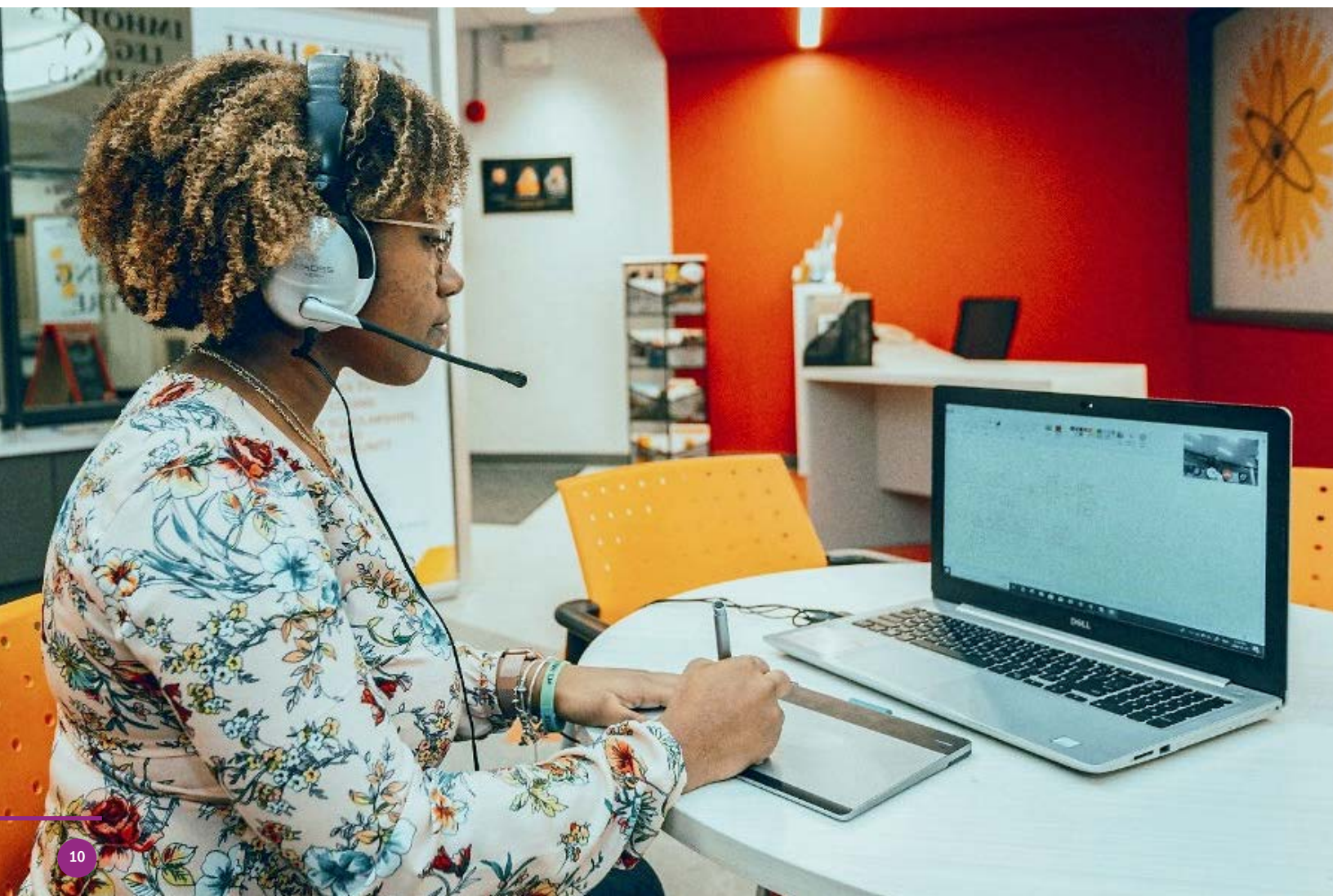
PIVOTS & CHANGES

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 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. This makes us 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, or those in need of extra support with online platforms). ILA is monitoring the outcomes of this pivot to inform future program changes.

VSP tutor, Cyerra Gibson, tutoring a student virtually from the ILA learning centre.





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 it is 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 increased exposure to STEM entrepreneurship.

STEM TO STEAM

The challenges and opportunities ILA has experienced this year, 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 Afrocentric historical context to STEM, exposure to Black STEM educators and professionals and a culturally competent peer mentorship model, ILA is looking to enhance cultural curricula 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 arts, design) can be experienced through a **STEM lens**; this integration offers new avenues for African NS learners to become interested in sciences and math. Altogether, students will be able to envision pursuing a career in STEM by bridging the gap between STEM and the arts.

CONCLUSION

ILA has come a long way since its inception in 2003. Our organization continues to overcome challenges and adapt to new trends. We are committed to outreach opportunities, especially to rural areas, and we have hired an outreach and communications officer and strategic marketing specialist to aid in marketing our programs. This contributes to our mission to increase our engagement of, and impact on, African NS learners and provide value in their pursuit of STEM education and careers.

BOARD OF DIRECTORS

ILA is governed by a Board of Directors who volunteer their time for the greater good of the organization's mandate.

Dr. J. Pemberton Cyrus (President/Chair)

Head, Department of Industrial Engineering,
Dalhousie University

Dr. Claver Diallo

Associate Professor, Department of Industrial
Engineering, Dalhousie University

Mr. Darren Googoo

Director of Education, Membertou Band

Dr. Barb Hamilton-Hinch

Assistant Professor, Leisure Studies, School of
Health and Human Performance, Dalhousie
University

Ms. Brenda Riley

Parent Representative

Ms. Oluronke Taiwo

Black Student Advisor, Dalhousie University

Dr. Keith Taylor

Professor, Mathematics & Statistics, Dalhousie
University

Ms. Adrienne Glasgow-Slawter

Guidance Counsellor, Prince Andrew High School,
Halifax Regional Centre for Education

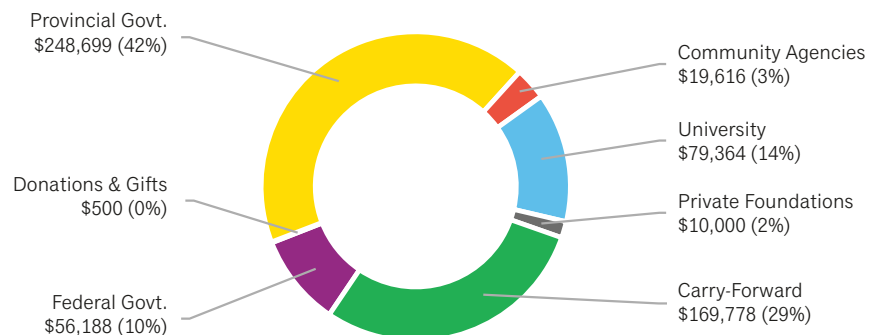
Dr. Wilber Menéndez Sánchez

Faculty, Nova Scotia Community College,
Academics & Career Connections

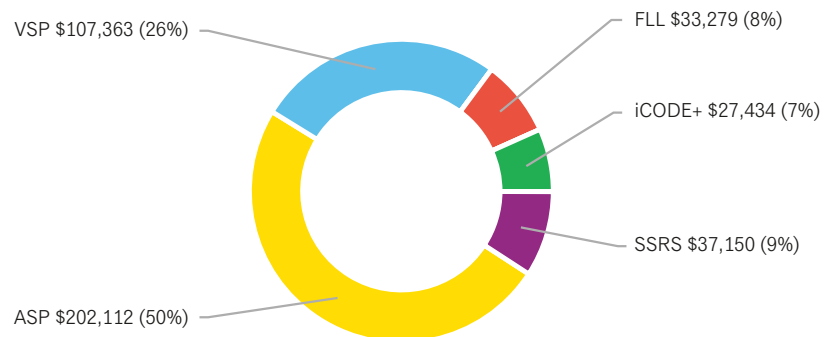
FINANCIAL SUMMARY

ILA's financial transactions are processed on a cash basis through the Dalhousie University financial system (BANNER) and are tracked through Special Purpose Funds. The financial statements of Dalhousie University are subject to an annual audit by an external accounting firm, reporting to the audit committee of the Board of Governors. Dalhousie does not undertake to provide external audits of specific research and special purpose projects unless it is expressly required by the contract and specific funds are provided for this purpose. The federal Tri-Council Agencies and other funding agencies periodically review Dalhousie University research accounts. Dalhousie University maintains extensive financial policies which in conjunction with the Internal Audit Department leads to a strong control environment.

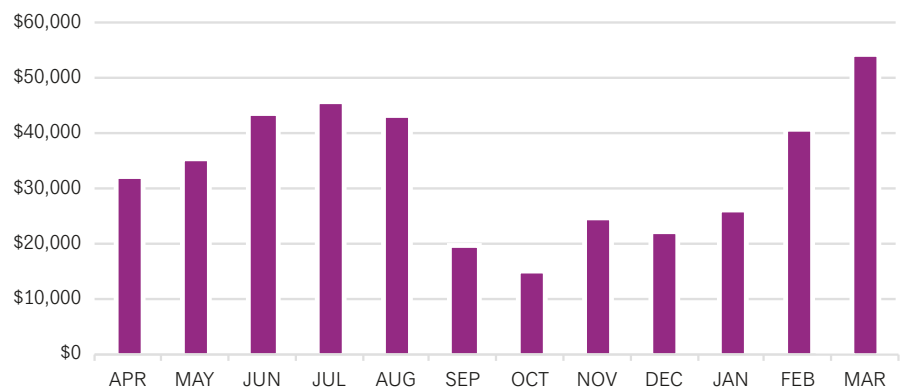
ILA 2019/20 REVENUE SOURCES



ILA 2019/20 EXPENSES BY PROGRAM



ILA 2019/20 EXPENSES BY MONTH



APPENDIX A: PROGRAM ATTENDANCE

TABLE 1. 2019/20 PROGRAM AND OUTREACH PARTICIPATION

Program/School	Weekly Attendance
ASP – Halifax	17
ASP – Dartmouth	16
ASP – Antigonish	15
ASP – Wolfville	20
ASP – Truro	4
ASP – Ellenvale	19
ASP – Dartmouth South Academy	22
VSP	92
FLL	15
RBC iCode+	9
ILC	25
Total	254

Summer Outreach	
Summer Scholar Program	10
SSRS	2
Total	12

Science & Career Outreach	
Gorsebrook Junior High	120
King's County Academy	37
Graham Creighton junior high	130
Oxford Junior high	80
Truro Junior High	45
St. Andrew's Junior High	420
North King's Education Centre	45
Bell Park Academic Center (CAEP)	24
Ridgecliff Junior high	78
Bell Park Academic Center	22
Hammonds Plains Consolidated Elementary	360
FLL – Ihsan Academy	60
RBC iCode+ Cole Harbor High and Auburn Drive	27
ILA STEM Quiz tournament	32
Total	1480

Total Overall Reach	1746
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TABLE 2. NUMBER OF STUDENTS WITH ILA-TD OPPORTUNITY SCHOLARSHIPS (PROMISED AND AWARDED)

	Promise Scholarship	Awarded Scholarships and attending Dalhousie
Recipients	8	15



SPONSORS



PRESIDENT'S OFFICE
VICE-PROVOST STUDENT AFFAIRS
FACULTY OF ENGINEERING
FACULTY OF SCIENCE
FACULTY OF HEALTH
FACULTY OF COMPUTER SCIENCE
FACULTY OF MEDICINE



HALIFAX YOUTH
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PARTNERS



PLANS
Promoting Leadership in
health for African Nova Scotians



Delmore "Buddy" Daye
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DONORS AND SUPPORTERS

Acadia Robotics

Anonymous Donors

Dalhousie University, Black Student Advising Centre (BSAC)

Dalhousie University, Office of Advancement

Jamaican Canadian Cultural Association of NS (JCANS)

Saint Mary's University, Student Employment Initiative (SEI)

FOR MORE INFORMATION CONTACT

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