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# IMPACT EVALUATION 2018-2019

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*IN MEMORIAM OF L. JACQUES MÉNARD, C.C., G.O.Q.,*

*CHAIRMAN EMERITUS AND CO-FOUNDER OF YOUTH FUSION,*

*A GREAT MAN, AN OUTSTANDING MENTOR,*

*WHOSE FOCUS HAS ALWAYS BEEN ON EDUCATION.*







**This impact evaluation was carried out under the supervision of Fanny Gérin-Lajoie, Director – Programming, Evaluation and Development, with the invaluable support of Laura Fortin, Director – Partnership, Strategy & Public Affairs, and that of the entire Youth Fusion Operations team.**

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A special thank you to all 491 young participants, 57 coordinators and 101 teachers for answering a total of 1 157 questionnaires. Thank you also to all Youth Fusion supervisors who helped implement this large-scale evaluation.

Thank you also to Véronique Dupéré, Associate Professor at the Université de Montréal's École de psychoéducation and Anne-Sophie Denault, Full Professor, Département des fondements et pratiques en éducation at Université Laval, for their generosity and their invaluable advice when developing this evaluation.

**EXCLUSIVE NATIONAL PARTNER**



# PREFACE - THÉRÈSE LAFERRIÈRE



Having had the privilege of being the main researcher of the first evaluation, carried out in 2013 by The Centre de recherche et d'intervention sur la réussite scolaire (CRIRES) (Centre for Research and Intervention on School Success), and having carefully read this evaluation report, I wish to highlight the uniqueness of Youth Fusion in the educational landscape, particularly in Quebec. This uniqueness stems from Youth Fusion's ability to involve students in collaborative projects. Through their involvement, participants get to be surprised at their own power of action and to surprise other educational agents around them through their commitment and other manifestations of their participation in class, as well as after school.

Gabriel Bran Lopez had the idea, and he was able to convince others to embark on this adventure and invest the necessary resources. This impact study, carried out with 491 students, 57 coordinators and 101 teachers who answered 1 157 questionnaires, is of public interest and affects all citizens who are concerned about the academic success of students while machines are gaining intelligence in the world of work and in other spheres of civic life and, as a result, learning for life becomes the norm. Diversifying the educational experience of students in order to keep them in school is extremely important, and the model put forward by Youth Fusion is clearly contributing to this. In addition, carrying out creative and collaborative projects puts students in a position to develop skills and competences that will be decisive in their orientation and employability as well as in their civic engagement.

Youth Fusion is therefore not just a pedagogical innovation, but a social innovation whose positive results have spread over time. Validated by different perspectives and research methodologies on academic success, this innovation must continue, and must be deployed! As principal researcher of the PÉRISCOPE network (Plateforme d'Échange Recherche et Intervention sur la SColarité : Persévérance et réussite), of which CRIRES and Youth Fusion are part of, I am therefore delighted to be able to wish good continuation of this magnificent work to Gabriel Bran Lopez and Fanny Gérin-Lajoie, two committed, dynamic and influential people who I had the pleasure of meeting, as well as the entire Youth Fusion operations team, which annually supports around 13 000 students in more than 200 schools in rural, urban and indigenous environment in Quebec, Ontario and France.

A handwritten signature in blue ink that reads "Thérèse Laferrrière". The signature is fluid and cursive.

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# EXECUTIVE SUMMARY

During the 2018-2019 school year, with the support of Université de Montréal and Université Laval's researchers, and in compliance with Québec's Longitudinal Study of Child Development (QLSCD) standards, Youth Fusion (YF) carried out an evaluation so as to scientifically measure the impact of its approach — i.e. the implementation of experiential projects in the classroom throughout the school year — on school perseverance determinants which relate to the organization's mission, namely: "to contribute to school

perseverance, employability, orientation, and civic engagement of youth." A representative sample of participants, teachers and coordinators (students or recent graduates hired by YF to implement its projects) answered the pre- and post-project questionnaires. The data was then subjected to statistical analyses, namely mean difference and mean comparison. Here are a few of the key findings:

## SCHOOL PERSEVERANCE

- Collaborative and creative projects that resulted in a major achievement allowed participating youth to work as a team, hence reducing social withdrawal behaviours. They were also conducive, for many among them, to an awakening of their creative spirit.

- The relationship to authority was most significantly improved among teenagers aged 16 to 18. There was also an improvement in the relationship with teachers, fewer oppositional behaviours as well as an increase in behaviours that were compliant with the rules.

81.08%

- Over 80% of teachers believe that students have considerably increased their ability to interact collaboratively by taking part in a YF project.

75.67%

- More than 75% of teachers believe that students have considerably improved their creativity through the YF project.

- Implementing projects in the classroom (in comparison to our initial after-school approach) helped integrate school subject matters and made learning real and tangible, which led to a positive impact on the students' school performance.

75%

- The programs where we saw the most significant improvement in learning attitudes and school investment were Cinema and Video Game Design. The teachers consider that Youth Fusion had a significant impact on social skills and group behavior of 75% and 83% of the participating youth, respectively.

83.34%

43.63%

- Teachers believe that YF has had a significant impact on the school performance of over 43% of all boys and 56% of all girls.

56%

## ORIENTATION AND EMPLOYABILITY

- Projects which focus on the interests and aspirations of young people, while giving them the necessary leeway to discover lesser known or inaccessible fields, have had a significant impact on their self-confidence, their comfort level with respect to their career choice and their choice of professional fields.

57.34%

- More than 57% of students say that YF helped them feel confident about themselves and their own talents.

- Findings show that all participating youth across Québec are significantly more at ease with respect to their career choice. This variable refers to a young person's comfort level as to one's career choice, which is to say whether he is happy and confident in his choice as opposed to just accepting what is offered. An examination of the evolution of the students' career choices throughout the school year shows that the fields of justice, science and engineering, and arts and culture have seen the most significant growth in popularity.

- The integration of an entrepreneurial approach and the use of technological tools across all our programs helped students develop these skills and have even had an impact on their teachers.

62.42%

- More than 62% of all respondents stated that the project had inspired them to develop their own project in the future.

68.18%

- Over 68% of teachers believe that their experience with YF could have an influence on their professional practice in regard to the use of technological tools.

- Visiting businesses and post-secondary education institutions as well as the participation of professional mentors during the project helped students further clarify their career choice and expand their career opportunities.

- Post-secondary students and recent graduates, hired by YF as project coordinators, were able to develop certain transferable professional skills, notably communication and interpersonal skills as well as punctuality.

90.63%

- More than 90% of all teachers believe that project coordinators communicate efficiently and professionally, whether verbally or in writing, and communicate easily with the students.

### CIVIC ENGAGEMENT

- Reflecting on the ethical, social and environmental issues related to the project's theme proved to be a very effective gateway to engage and steer the – very receptive – students toward civic engagement.

63.17%

- In Indigenous communities, more than 63% of students consider that YF inspired them to get involved in their community and make a difference, compared to 50% of all students polled.

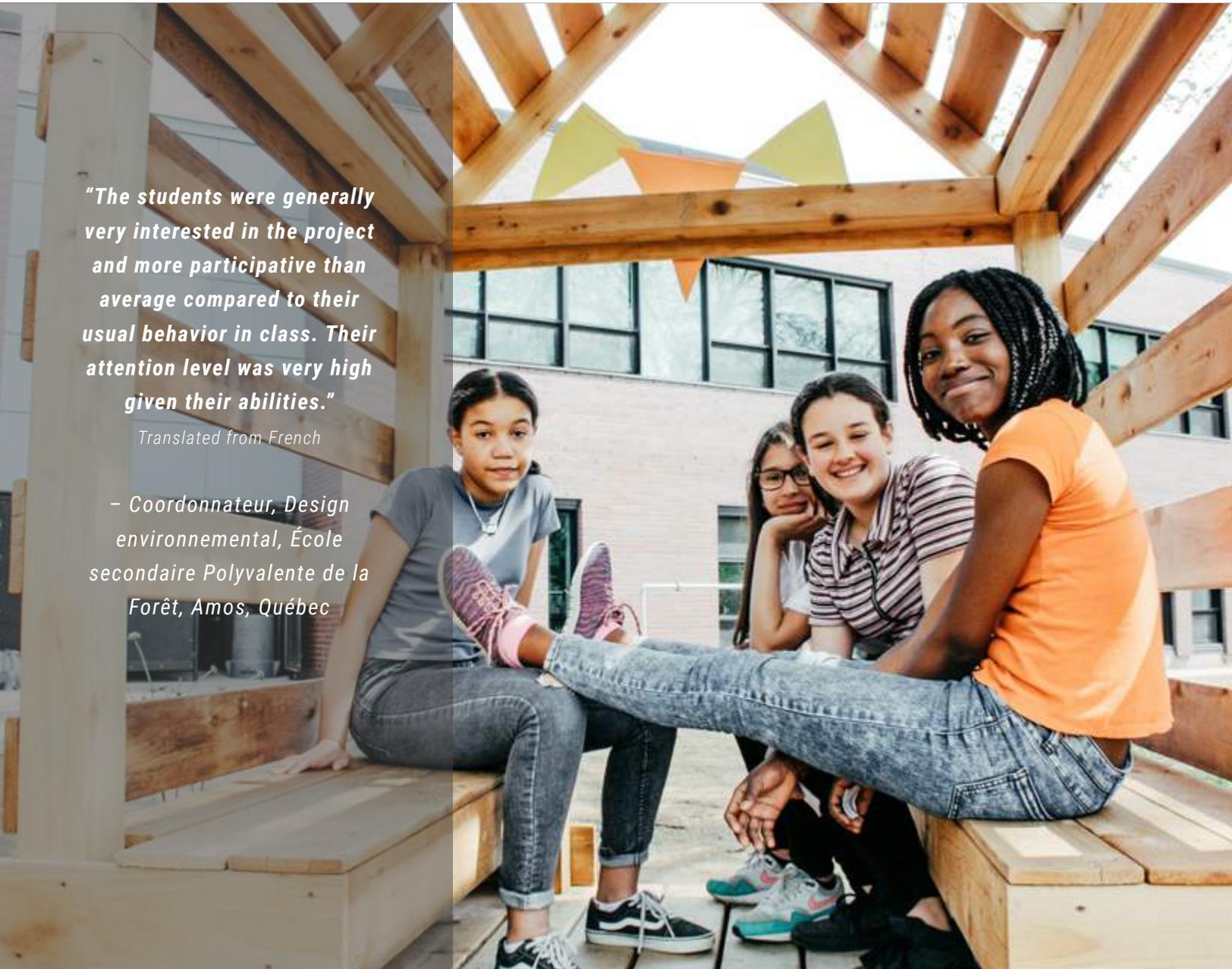
51.05%

- Essentially, this evaluation demonstrated the significant impact YF's approach has on school perseverance, which has been at the very heart of its mission for over a decade. Findings related to civic engagement were also positive and have inspired us to devise new strategies to further develop this component of our mission. Lastly, in regard to orientation and employability, our findings show a clear impact on students' and project coordinators' transferable skill acquisition, as well as on students' development of an entrepreneurial spirit and a sense of ease when programming and using technology.

*"The students were generally very interested in the project and more participative than average compared to their usual behavior in class. Their attention level was very high given their abilities."*

*Translated from French*

*- Coordonnateur, Design environnemental, École secondaire Polyvalente de la Forêt, Amos, Québec*



# PREVIOUSLY CONDUCTED EVALUATIONS OF YOUTH FUSION'S WORK

## " Youth Fusion's contribution to Quebec schools "

- *Thérèse Laferrière, CRIRES Director*

"The study shows that Youth Fusion's programs, which thoroughly differ from other dropout prevention programs because of the cooperative work between teachers and university students, are highly effective. According to the parties involved, these programs achieve a 95% success rate in terms of engaging young students in learning. As for the students, 70% admit the programs have helped them move forward, with some reporting they are either thinking about their future more than they used to, are looking forward to obtaining their high school diploma, are enjoying and attending school more, are thriving in being part of a team, and are talking to other people or feeling more self-confident. Also, a 40% drop in deviant behaviour has been observed by those involved in the programs." (translated from French)

## « Canadian Charity Impact Fund »

- *Charity Intelligence Canada and Success Markets*

Social return on investment: "Youth Fusion produces \$16 of social return on investment for every dollar invested". This study allowed Youth Fusion to be among the TOP 10 highest impact charities across Canada in 2015 and 2016 (Highest Impact Charity).

2013

2015

2016

## " Evaluation report on the implementation and impacts in 2014-2015 of Youth Fusion "Science FFL" and "Media and Cinema " programs "

- *Évalécole*

- *Janosz, M., Pascal, S., Priouzeau, M-P.*

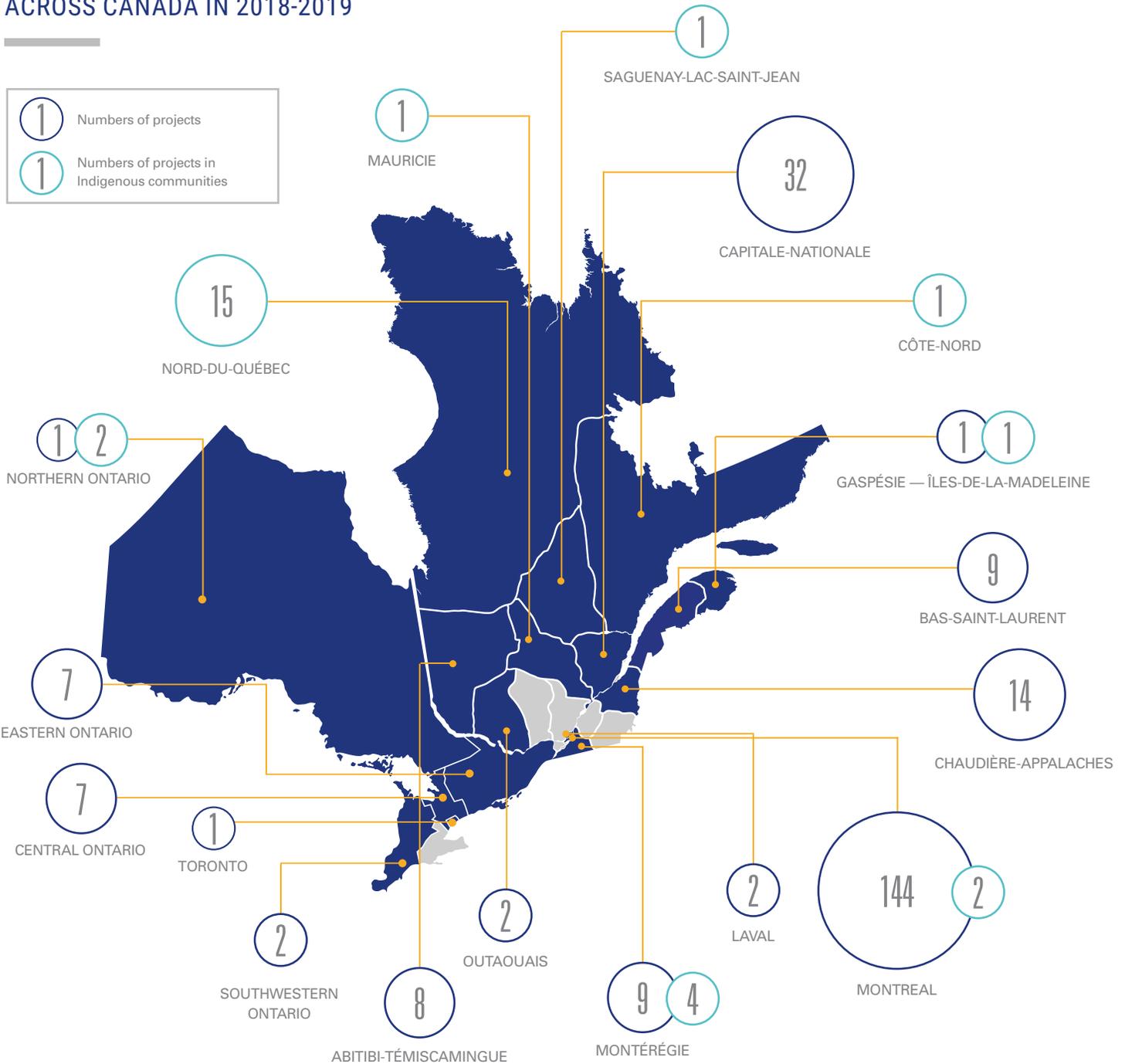
" Findings at the elementary level suggest that students experiencing greater difficulty in the classroom in terms of learning are those that benefit the most from the intervention. This is undeniably good news given that they are the students most at risk of becoming disengaged from school and dropping out. Furthermore, results show that Youth Fusion programs have a significant impact on motivation, sense of belonging to one's school, relationship with one's schoolmates, higher grades in French, and a behavioural commitment in mathematics, especially with at-risk students." (translated from French)

# YOUTH FUSION'S MISSION

Youth Fusion is an award-winning charity that contributes to the perseverance, orientation, employability and civic engagement of youth by implementing innovative experiential learning projects that

create ongoing links between school systems and the community. Every week, we work with 13,000 youth in over 200 schools in rural, urban, and Indigenous communities.

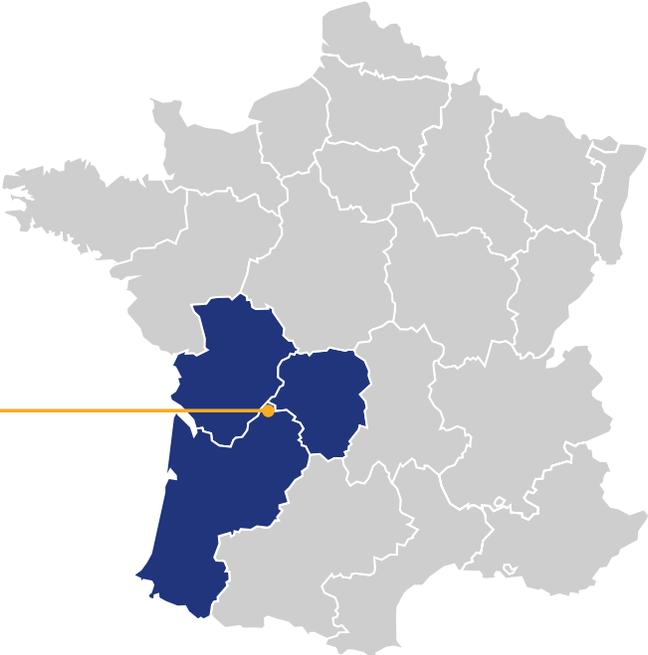
## DISTRIBUTION OF OUR PROJECTS ACROSS CANADA IN 2018-2019



PILOT PROJECTS IN FRANCE IN 2018-2019 \*

9

NOUVELLE-AQUITAINE



\* The results of the evaluation of our projects in France in 2018-2019 are not included in this report.



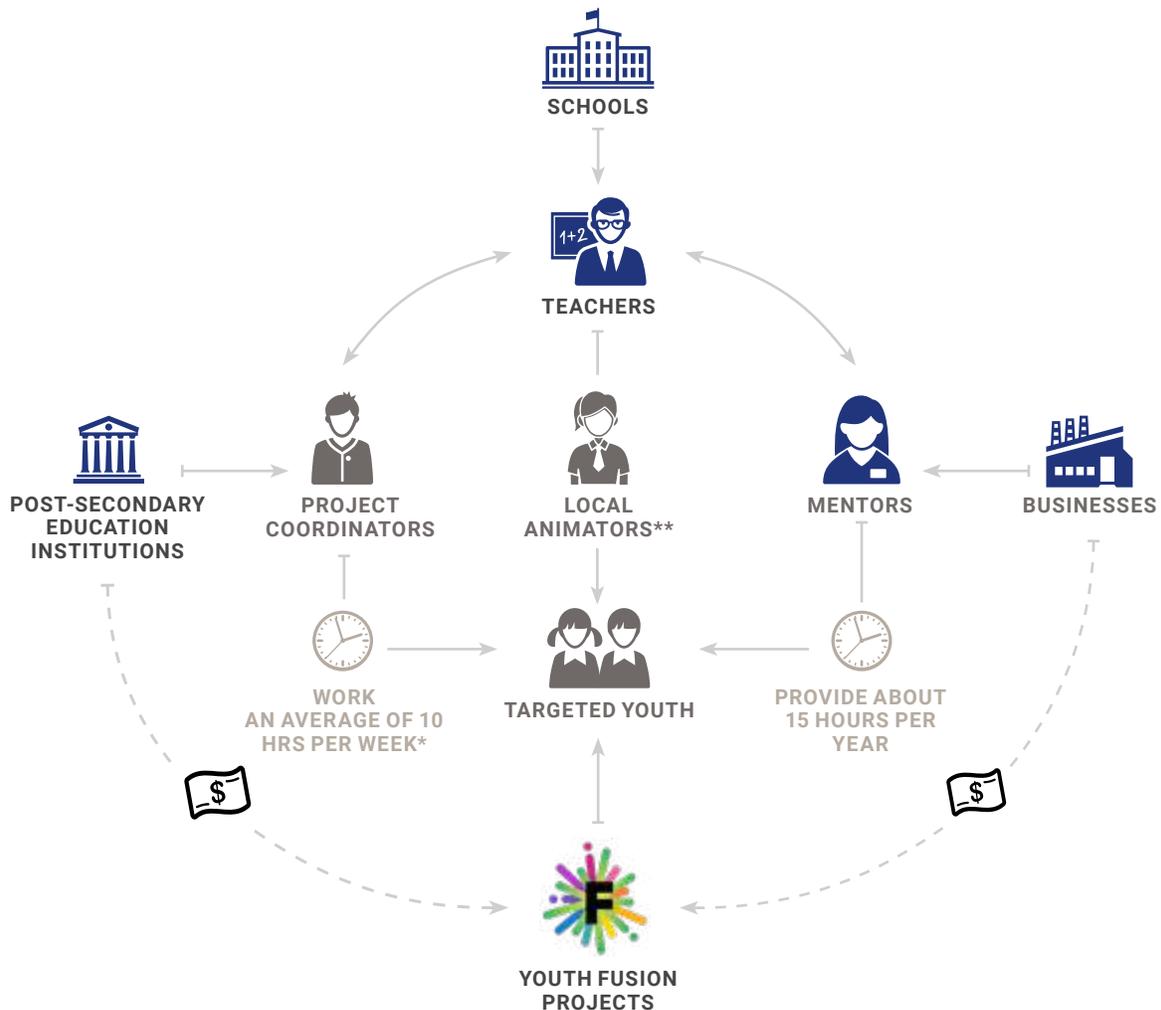
# OUR MODEL

Youth Fusion has developed an effective and innovative model that transcends pure mentoring: we hire post-secondary students to work 10 to 30 hours a week with targeted students, in class or in an extracurricular capacity, for 32–37 weeks, i.e. the entire school year, on educational projects spanning 4 different domains (Arts, Science & Engineering, Design and Leadership & Entrepreneurship)

In addition to working alongside grade or high schoolers on projects related to their academic field, these post-secondary students develop a close bond with their students, which helps nurture continuity and perseverance.

Employees from businesses and community organizations operating in sectors tied to the projects are also brought in as mentors and assigned to schools to introduce students to career options and to shepherd them through the process of completing their projects. These organizations consequently promote not only “expertise volunteering” among their employees but also the thriving opportunities and the needed skills in their sector.

Youth Fusion therefore offers a continuum of interventions ranging from elementary schools to the industry, and contributes to creating closer links between training and employment while working to lower dropout rates.



\* Most project coordinators working in Indigenous communities work 30 hours per week.

\*\* Only in Indigenous communities

# OUR PROGRAMS

## ARTS



CINEMA



MEDIA PRODUCTION



DIGITAL ARTS



OPERA



DRAMATIC ARTS



PERFORMING ARTS \*

## SCIENCE & ENGINEERING



ARTIFICIAL INTELLIGENCE



VIDEO GAME DESIGN



ROBOTICS FLL **FIRST**



ROBOTICS FLL Jr **FIRST**



SCIENCE & TECHNOLOGY



SCIENCE OF THE LAND \*

## DESIGN



FASHION DESIGN



EXHIBITION DESIGN



ENVIRONMENTAL DESIGN

## LEADERSHIP & ENTREPRENEURSHIP



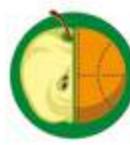
ENTREPRENEURSHIP



ELEMENTARY ENGAGEMENT \*



MEDIA \*



HEALTHY LIVING \*



COMMUNITY BUILDING \*  
FOR CEGEP

\* Exclusively in Indigenous communities

# SCHOOL PERSEVERANCE

*“A variety of factors and situations can have a positive or negative impact on students’ success at school and school perseverance. The combined effect of several risk factors increases the likelihood that a student will drop out of school.”*

- Montreal Hooked on School

## OUR APPROACH TO SCHOOL PERSEVERANCE

Determinants of school perseverance are present at all levels of student life, namely in their personal, school, social and family life. Youth Fusion has selected determinants it could impact and modulated its approach and actions accordingly. These determinants are as follows:

1. Self-control and social and behavioural conduct
2. Association with peers
3. Self-esteem
4. Motivation and engagement
5. Educational and career aspirations
6. Student-teacher relationship

The organization also believes it has a direct and/or indirect impact on the following determinants:

7. School performance in reading, writing and mathematics
8. Pedagogical and educational practices
9. School climate

## OUR ACTIONS TO ENCOURAGE SCHOOL PERSEVERANCE

So as to have the desired impact, Youth Fusion incorporated the following key components in its approach:

### COLLABORATIVE AND CREATIVE PROJECTS WHICH RESULT IN LARGE-SCALE ACHIEVEMENTS

This allows for:

- Teamwork and learning to know and respect oneself
- A sense of pride in one’s achievement and contribution
- A long-term commitment, and being able to embrace a vision and to project oneself into the future

#### School perseverance determinants:

- Student-teacher relationship
- School performance in reading, writing and mathematics
- Pedagogical and educational practices
- School climate

### CLASSROOM INTEGRATED PROJECT, IN COLLABORATION WITH THE TEACHER <sup>1</sup>

This allows for:

- A number of school subjects to be integrated in the project
- What is learned in school to be put into action
- The teacher to be actively involved in an experiential context
- A diversified clientele (capabilities, motivation, interests, etc.) being reached
- A project not being associated to specific students (deliberately or voluntarily)
- A shift in student’s feeling toward the classroom and teacher

#### School perseverance determinants:

- Association with peers
- Self-control and social and behavioural conduct
- Self-esteem
- Motivation and engagement

<sup>1</sup> Following the recommendations of a 2013 CRIRES external study of Youth Fusion’s impact, it was decided to prioritize the integration of projects in the classroom, given that they were mainly extracurricular activities at the time.

# ORIENTATION AND EMPLOYABILITY

## OUR APPROACH TO FACILITATE ORIENTATION AND EMPLOYABILITY

It is important, both for our students and our project coordinators (aged 18 to 35), to foster reflection so as to better understand potential professional choices and develop skills which may lead to achieving professional and educational goals. Consequently, Youth Fusion decided to focus on the development of professional skills and abilities, both for students and project coordinators, given that the latter are often working in their chosen field for the very first time. This experience and the projects also help uncover new interests which can shed some light on career aspirations.

Professional abilities developed by students:

- Entrepreneurial spirit
- Technological skills

Professional abilities developed by the coordinators:

- Communication
- Interpersonal skills
- Organization
- Punctuality

Students' career aspirations:

- More accurate decision-making process toward career choice
- Discovery of professional fields

School perseverance determinants:

- Self-esteem
- Motivation and engagement
- Educational and career aspirations

## OUR ACTIONS FOR ORIENTATION AND EMPLOYABILITY

To achieve the desired impact, Youth Fusion incorporated the following key components in its approach:

### **FOCUS THE PROJECT ON STUDENT INTERESTS AND ASPIRATIONS, WHILE GIVING THEM THE OPPORTUNITY TO DISCOVER LESSER KNOWN OR INACCESSIBLE FIELDS**

This allows for:

- Students to discover their own identity, values and aspirations
- Students to believe in their own potential and to project themselves into the future
- Mental barriers to be broken down, discovering the possibility of success and giving rise to new perspectives

### **INCORPORATING AN ENTREPRENEURIAL APPROACH AND THE USE OF TECHNOLOGICAL TOOLS ACROSS ALL PROGRAMS**

This allows for:

- Students to understand their own ability to spearhead successful projects
- Financial literacy development
- Aspects of commercialization, sales and targeted communication to be incorporated
- Digital literacy development

### **VISITING BUSINESSES AND HIGHER EDUCATION INSTITUTIONS, PARTICIPATION OF PROFESSIONALS (MENTORS), ROLE DISTRIBUTION IN RELATION TO EXISTING OCCUPATIONS**

This allows for:

- Meeting inspiring people
- Debunking imagined hurdles related to professional success
- An understanding and exploration of work environments
- The discovery of postsecondary journeys
- A desire to reach professional objectives through a commitment to one's studies and learning to be instilled in the students

# CIVIC ENGAGEMENT

*“Civic engagement has been defined as the process of believing that one can and should make a difference in enhancing his or her community.”*

– Doolittle, A., & Faul, A. 2013

## OUR APPROACH TO CIVIC ENGAGEMENT

The journey to civic engagement can take many forms, but always begins with a greater understanding of social issues through various experiences and encounters. This realization can lead to getting involved in a number of ways, based on each person’s decisions along the way. Youth Fusion’s impact on this journey of involvement takes place mainly in its initial phase, namely:

- A greater understanding of social issues

Subject to students’ acceptance of responsibility with regard to the projects they’re involved in and their ability to associate their power to act and social consciousness, Youth Fusion can also have an impact on:

- Raising student interest in getting involved in causes deemed important (civic engagement)
- A desire in getting involved in one’s community (citizen engagement)

## OUR ACTIONS FOR CIVIC ENGAGEMENT

To achieve the desired impact, Youth Fusion incorporated the following key components in its approach :

### REFLECTION ON THE ETHICAL, SOCIAL AND ENVIRONMENTAL ISSUES RELATED TO THE PROJECT’S THEME

This allows for:

- Frank and open discussions on current and real issues
- Students to develop critical judgment and a scale of personal values
- The demonstration of the direct or indirect impact choices and actions may have
- A broader reflection as to other contexts and issues that affect students
- Drawing connections between issues and existing or possible solutions

Our approach in Indigenous communities—diversified as well as integrated in the community—involves a series of approach-specific determinants which entails a more complex evaluation capacity, namely:

- Nutrition and physical activity
- Tobacco, alcohol and drugs
- Feelings of depression
- Community resources

Integrated actions:

- Physical activity, sports leagues, the outdoors, promoting healthy lifestyles habits
- Discussion groups through social clubs
- Significant involvement of different community members and stakeholders

# THE IMPACT EVALUATION

## OBJECTIVES AND METHODOLOGY

Youth Fusion conducted an impact evaluation during the 2018-2019 school year in order to:

1. Measure the quality of our various programs and better understand the true impact of our work on young people
2. Identify our best practices and our challenges
3. Set practice improvement targets and implement action plans to meet those targets

### QUESTIONNAIRES

The impact evaluation was carried out by means of a “before-and-after” sample survey. As such, variables needed to be collected before and after a Youth Fusion project and then compared so as to assess the project’s impact on its participants.

Questionnaires were sent to the students, coordinators and teachers/ adults involved.

### VARIABLES

Variables used in the “before-and-after” analysis are based, for the most part, on the Québec Longitudinal Study of Child Development (QLSCD, or Étude longitudinale du développement des enfants du Québec). These variables were developed, tested and approved by different researchers from the child development field. The study’s methodological tools were made public and accessible. This allowed Youth Fusion to gain access to valid tools. Only slight changes were made to existing scales (some terminology was changed to ensure student comprehension). A few variables stemming from alternative studies were added for Indigenous communities (only one was preserved due to its methodological validity). Lastly, questions related to the project’s effects, as perceived both by students and adults, were added to the final questionnaire.

### DATA COLLECTION



**3 714 STUDENTS**

- Target population: All students aged 12 to 18 involved in our projects



**249 STUDENTS**

- Representative sample (95% confidence level, 6% margin of error)

- Methodology: random stratified probability sampling
- Strata: Programs and territories
- Sample: class selection (simple random), 4 students per classroom (simple random)

### RESPONDENTS :



In total, **649 participants** answered **1 157 questionnaires.**



**491 STUDENTS**



**158 COORDINATORS AND TEACHERS**

- Initial questionnaires completed:



By students  
**393**



By coordinators and teachers  
**341**

- Final questionnaires completed:



By students  
**238**



By coordinators and teachers  
**112**

# RESULTS

This first iteration of our internal impact evaluation exercise allowed us to shed some light on key findings regarding our mission's primary goals: school perseverance, orientation and employability, and civic engagement.

## RESULTS - ANALYSIS AND PRESENTATION

Variables are measured on a scale of 0 to 10.

All collected data was subjected to bivariate analyses, more specifically to mean difference tests (on independent samples) and difference of proportion tests. All analyses were conducted using the SPSS (Statistical Package for the Social Sciences) statistical analysis software.

**Mean difference:**

Mean difference tests involve comparing two means of a given variable and measuring if the difference between these two means is different or if this difference is a random occurrence. In this instance, the relevant means are those measured prior to the project (before) and once the project is completed (after).

**Difference of proportions:**

Difference of proportions tests consist in cross-tabulating the means of various groups of characteristics within the sampling to measure if means are different from one group to the next (i.e. gender, Youth Fusion program, territory, etc.)

**Interpreting the results:**

Measured using the ANOVA test, the difference in means and proportions is either significant (threshold at or below 0.05), a trend (threshold between 0.05 and 0.1), or non-

significant (threshold higher than 0.1). The results presented herein are either significant (s) or indicate a trend (t). Non-significant (n.s.) results are not taken into consideration as the difference may be a random occurrence.

As such, a difference deemed significant or trending means that there is a real difference between results garnered before and after a project, or that groups of characteristics do impact the results (ex.: if there is a significant difference in results based on gender, it could then be said that the difference in results between boys and girls is real. If not, it is a random occurrence.)

It is important to avoid drawing any definitive conclusions based on the results' analysis. Though it can be said that all these students have had a complete experience with Youth Fusion, many other factors may have played a role in the differences observed. Furthermore, given that the data was collected 6 months apart, it would be ambitious to think that marked generalized differences would be observed, seeing that it is more often than not exceptional occurrences. Lastly, given that the final data was collected during the months of May and June, it would be hardly surprising if the stress involved in year-end demands and the lower motivation due to fatigue may have an impact on the results.

<sup>2</sup> Certains résultats non significatifs sont présentés seulement à titre de comparaison avec un résultat significatif d'une même variable appliqué à un sous-échantillon.

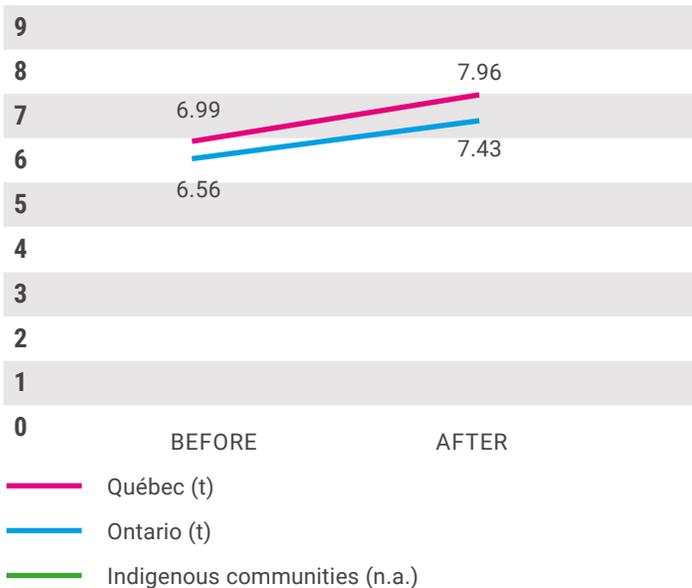
Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

# SCHOOL PERSEVERANCE

School perseverance was analyzed in terms of relationship to authority, relationship with others and with one's environment, as well as the relationship one has with oneself and perseverance. In this area, a number of positive findings emerge from the analysis of the results.

## RELATIONSHIP TO AUTHORITY

### Positive relationship with the teacher

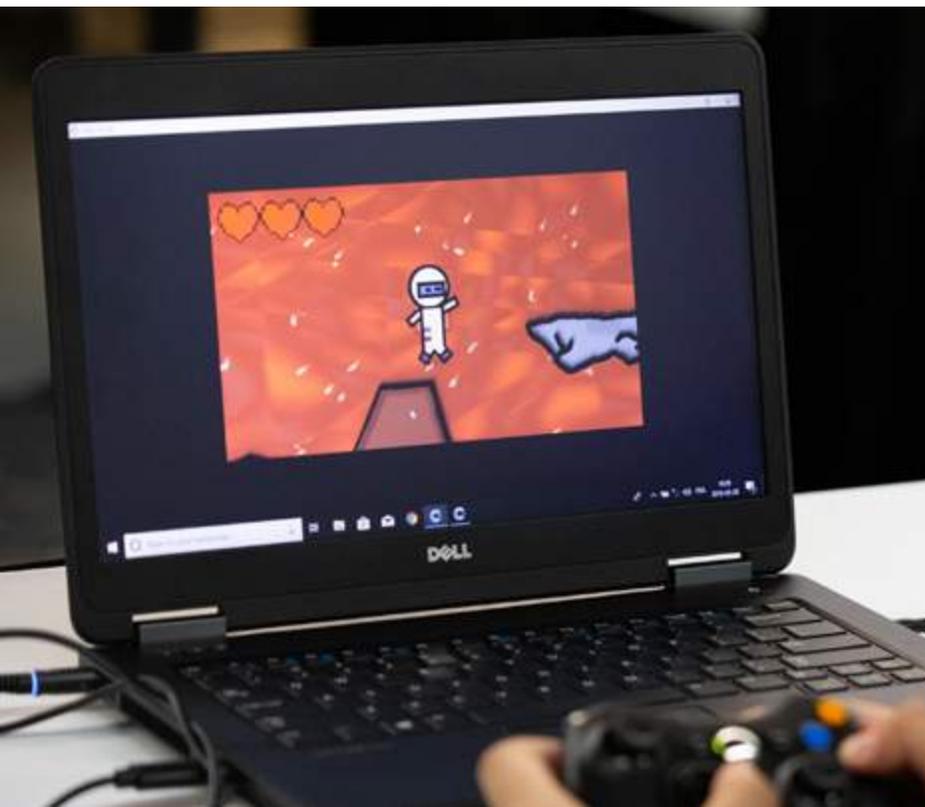


Data analysis reveals that Youth Fusion's impact on the relationship to authority translates into a more positive relationship with the teacher, a decrease in oppositional behaviour and an improvement in rule-abiding and responsibility-related behaviours.

### Opposition



Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)



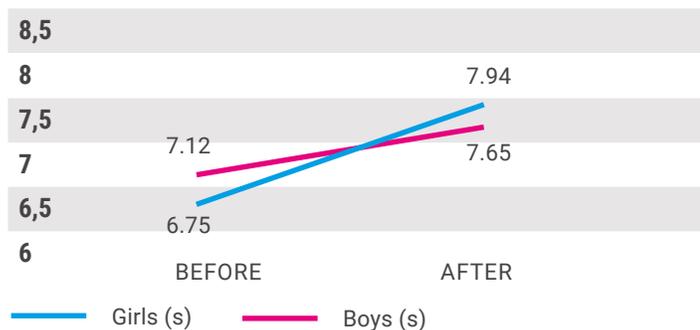
*"I think the most enjoyable experience with Youth Fusion is the sense of responsibility and trust that not only the kids have with you but the teachers as well. Knowing that you are looked up to as a leader and a mentor to a lot of the kids is a great feeling."*

*– Project coordinator, Video Game Design, Hammarskjold High School, Thunder Bay, Ontario*

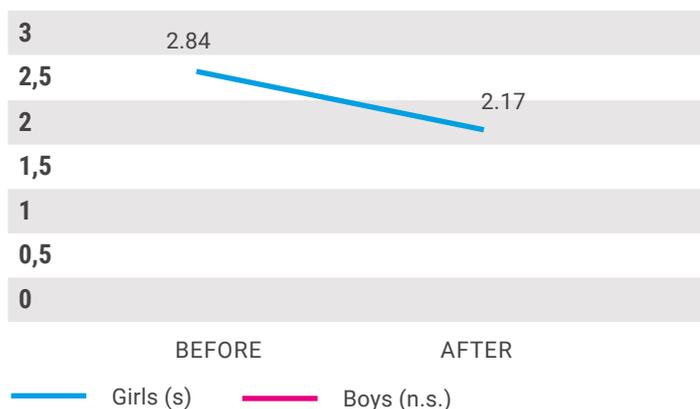
## KEY HIGHLIGHTS

There seems to be a greater impact, with respect to the relationship to authority, with girls than boys.

### Positive relationship with the teacher



### Opposition



Though the impact is generally positive for everyone involved, the impact on the girls seems to be more significant, which is surprising given that they did not start the year at a disadvantage. The improvement of their relationship with authority increases significantly throughout the year. The decrease of girls' oppositional behaviours is impressive, especially given that they end the year below the QLSCD mean<sup>3</sup>.

<sup>3</sup> The control comparison with the QLSCD, relating to this specific variable, shows a 2.27 value for Secondary 1 (children aged 12 to 13).

Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

There seems to be a greater impact on older students.

	Positive relationship with the teacher	Opposition	Responsibility and rule compliance
Under age 14	0.6 <sup>t</sup>		
Aged 14-15			
Aged 15-16		- 2.09 <sup>s</sup>	
Aged 16-18	1.12 <sup>t</sup>	- 1.81 <sup>s</sup>	0.7 <sup>t</sup>
Over age 18			

The most significant improvement with respect to the relationship to authority is among 16 to 18 year-olds. And yet, we see no differences in this variable's initial results, which could indicate that behaviours were in fact evolving throughout the year. The positive relationship with the teacher is of particular interest given that we know that student-teacher relationships do impact school perseverance and, in this particular instance, the students themselves are getting the higher scores at the end of the year, not the adults assessing that same variable. This reflects a greater sense of trust toward the teacher, as well as a change in behaviour related to this trust.

**Technological programs have had a particularly marked effect on the relationship to authority.**

	Opposition	Responsibility and rule compliance
Video Game Design		1.15 <sup>s</sup>
Artificial Intelligence	- 3.13 <sup>s</sup>	

For technological programs, Artificial Intelligence for instance, this impact can be explained by the fact that everyone, students and teachers, all learn a new subject together, because teachers don't necessarily have previous knowledge of the topic. As such, given that students and teachers develop a common point of interest alongside one another, their relationship is improved which could explain the lower level of opposition observed.

Though there is less oppositional behaviour in many programs, an improvement in behaviours related to responsibility and rule compliance is only seen among students participating in the Video Game Design program. Though many hypotheses could be put forward to explain this result, it would be particularly interesting to further investigate the impact of mentor involvement in this program. Moreover, breaking down the creative process in specific stages and deliverables as well as the responsibilities shouldered by students with respect to these deliverables could also explain the students' change of behaviour toward responsibilities and rule compliance.

## RELATIONSHIP WITH OTHERS AND WITH ONE'S ENVIRONMENT

Data analysis shows that Youth Fusion has a significant impact on students' ability to work within a team and to interact collaboratively, as well as on overall social behaviours, particularly among Indigenous students.

When asked what they liked most about their experience with Youth Fusion, several students gave answers related to teamwork and group discussions, such as "discussions with others", "working as a team", etc.

***"In terms of collaboration, which I think is one of the most important skills that you can develop, each of these students has been a pivotal member of their teams and has displayed great collaboration and teamwork throughout the semester."***

*– Project coordinator, Video Game Design, Hammarskjold High School, Thunder Bay, Ontario*



***"[What I liked the most was] when we started planning on what we were gonna do for our youth fusion project, also when we all started working together and helping each other out through this experience."***

*– Student, Environmental Design, Village Union Public School, Oshawa, Ontario*

***"I work in a special education class. This entails that, regularly, students have a hard time expressing themselves and working within a team. They had to learn to compromise and articulate when something wasn't okay so the project could move forward. Even if it was really difficult for them, they did it. I am very proud of them."***

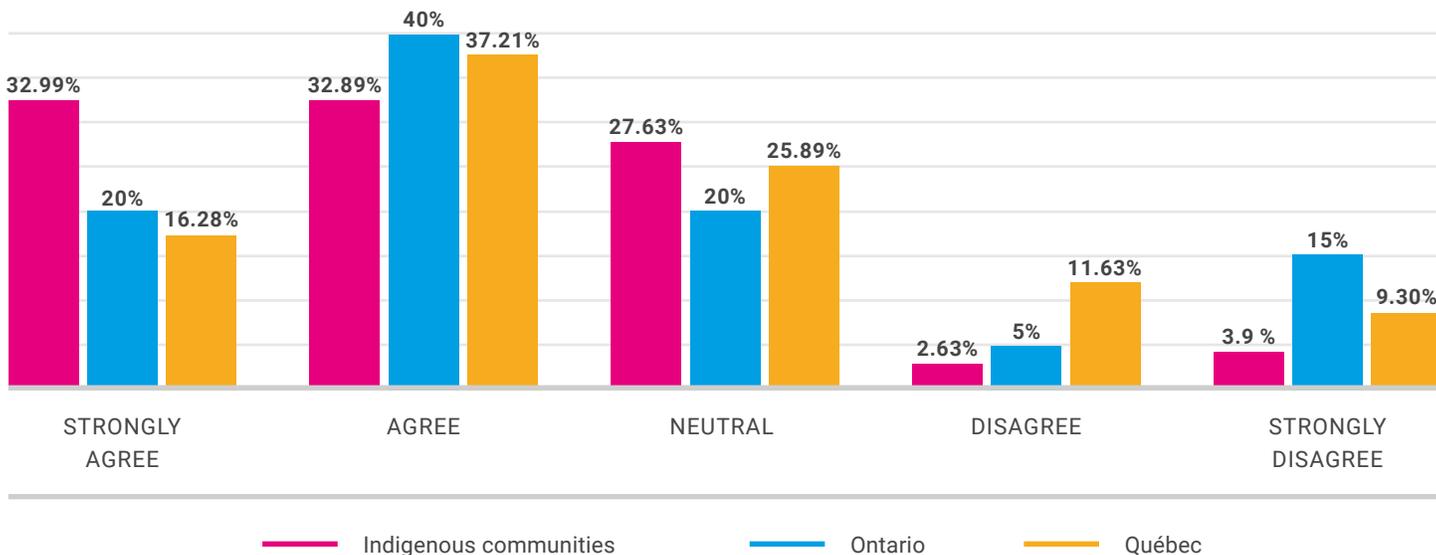
*Translated from French*

*– Teacher, FIRST LEGO League, École de Neufchâtel, Québec, Québec*

61.48%

Over 60% of all students said that Youth Fusion helped them develop their ability to work within a team.

The Youth Fusion project allowed me to develop my ability to work within a team



58.18%

Teachers say that Youth Fusion had a significant impact on social skills and behaviour within a group for more than 58% of all young participants.

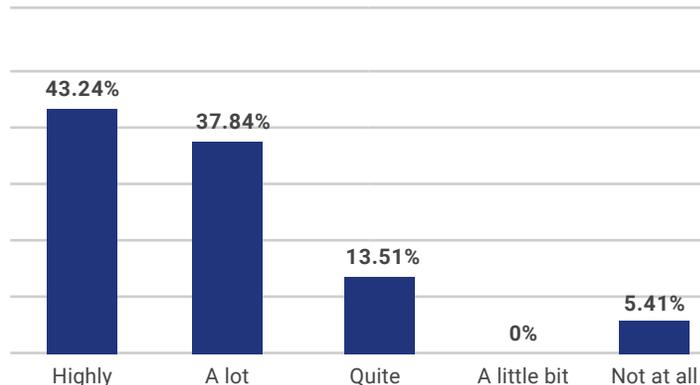
The Youth Fusion project had a significant impact on the social skills and behaviour within a group of the student being evaluated.

Strongly agree	16.36%
Agree	41.82%
Neither agree nor disagree	21.82%
Disagree	5.45%
Strongly disagree	

81.08%

More than 80% of teachers consider that students have significantly developed their ability to interact collaboratively by taking part in a Youth Fusion project.

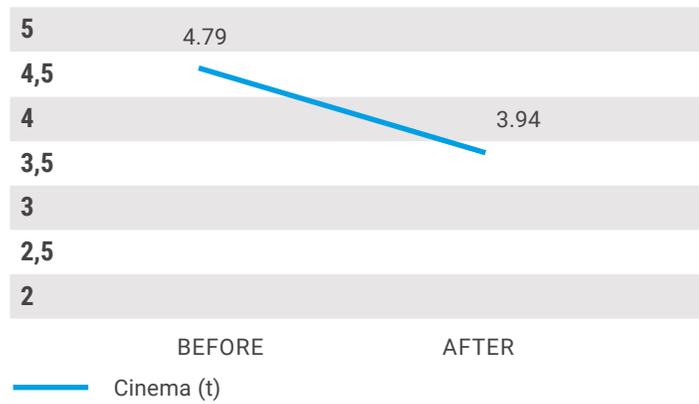
To what extent was the competency "Collaboration" developed by students throughout the Youth Fusion project?



## KEY HIGHLIGHTS

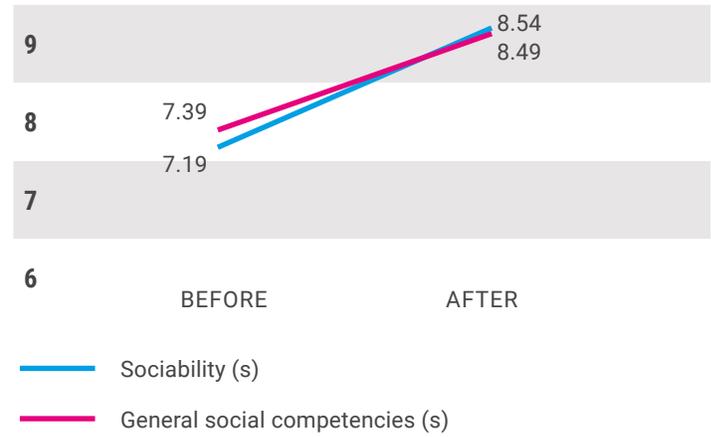
The Video Game Design and Cinema programs had a significant impact on the students' behaviours and social skills.

### Social withdrawal



### Social skills -

#### Video Game Design program



Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)



75%

In the Cinema and Video Game Design programs, teachers consider that Youth Fusion had a significant impact on the social skills and behaviour within a group of, respectively, 75% and 83% of their young participants.

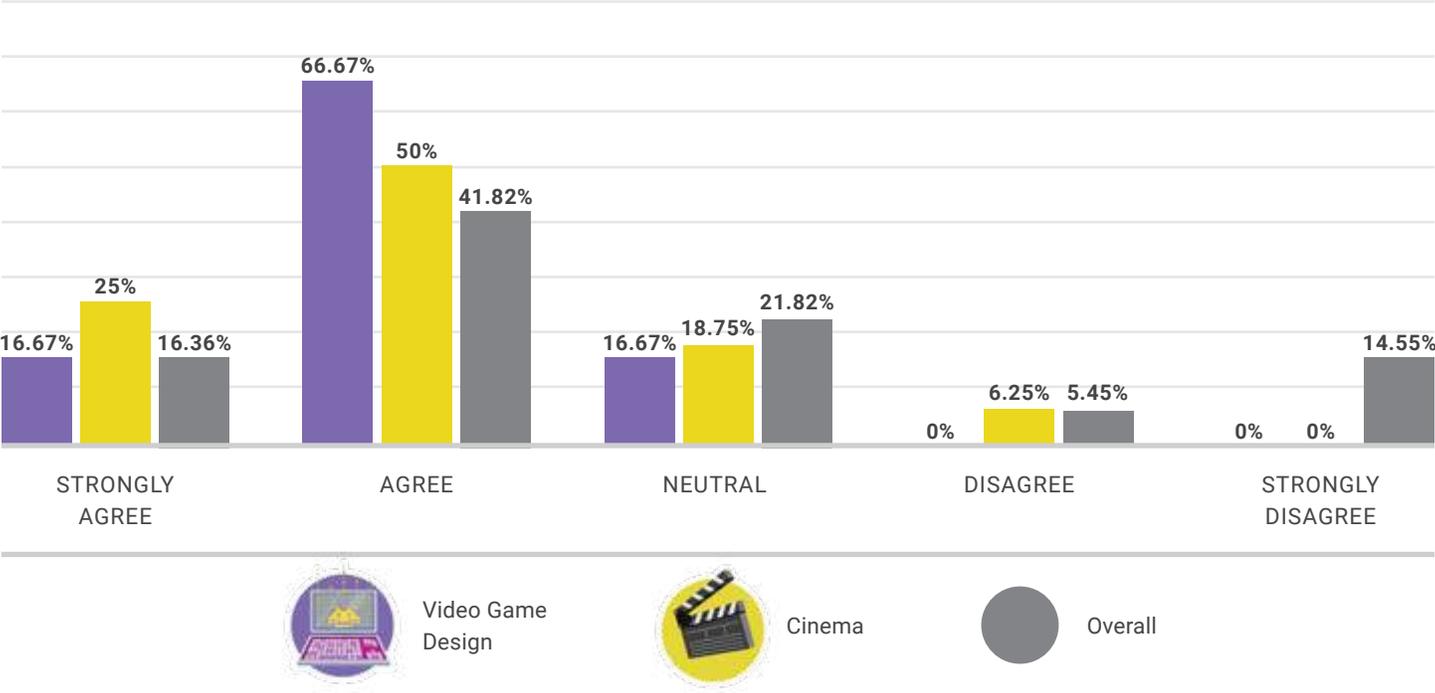
83.34%

This result may be explained, among other things, by the fact that the Cinema program calls for the movie creation process to be done as a team. As such, students work on a single project and come to collective decisions. By working toward a consensus, they learn to hear others out but also to express their own ideas in a calm and respectful manner. Furthermore, the entire movie creating process (acting, directing, etc.) leads them to interact with others and to develop their capacity for introspection and constructive criticism with respect to their work and the work of others. Interactions with

others occur throughout the entire project. By working together towards a common goal, students develop friendships, increase their ease in a group setting through mutual encouragement and support, and develop their social skills and a sense of belonging to their team.

With regards to the Video Game Design program, the positive impact on the students' social skills can also be explained by the program's prevailing collective work climate. Given that students experience Video Game Design in smaller teams, dialogue and the search for collective solutions and decisions are encouraged. Moreover, given that everyone has a role to play within the team and project, and that everyone's expertise is valued, students can build confidence in their ability to communicate and collaborate and thus, improve their social behaviours.

The Youth Fusion project had a significant impact on the social skills and behaviour within a group of the student being evaluated



## **INNOVATIVE PRACTICES IN NEW BRUNSWICK IN 2019-2020: INTEGRATED LEADERSHIP**

New Brunswick public schools participating in Youth Fusion projects since fall 2019 have adopted a practice implemented in the programs of the First Nations and Inuit communities, namely the integration of local animators. This is the first time that students have played this role in a non-Indigenous context. The experience is positive to say the least. This has allowed them to gain valuable skills in project management, leadership and community engagement while working alongside their project coordinator. In addition to encouraging students to become active community leaders while broadening their

skills in terms of work preparation, creativity and civic engagement, the role of local animator also promotes linguistic and cultural diversity in Indigenous and non-Indigenous communities.

In light of the success of this innovation in New Brunswick, Youth Fusion plans to employ more young people as local animators to better integrate our programs in the communities they serve and to further promote the civic engagement of participants.



**There has been an increase in school commitment among young Youth Fusion participants in Indigenous communities, as opposed to a declining non-significant general trend.**

**School commitment level**



Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

As shown in the chart, students in Indigenous communities begin the school year with a below-average school commitment level when compared to students in general. Which is why Youth Fusion has always recognized the importance of developing strong bonds between a school and its community. A great number of community members are as such integral components of Youth Fusion's projects and are often on hand at the school itself for that purpose. Many student activities also take place outside school walls so as to create bridges and give the school an opportunity to be considered as a stakeholder in the community. Some of the more recreational activities taking place in the school are designed to help make initial contacts easier and to engage with students in the community so as to give them the opportunity to enjoy positive relational and cultural experiences. This helps build trusting relationships with students, and brings them to get more involved and to no longer see school as a place synonymous with failure and insecurity.

All through the year, students take ownership of their projects and are able to redefine the use of their environment so it becomes a place that they love and that represents them. School then becomes a vector for change. Lastly, the coordinators' contribution is undeniable. Associated with the school without being authority figures, their steadfast presence and stimulating projects make coordinators key players in the transformation of the relationship students have with their school.



## RELATIONSHIP WITH ONESELF AND SCHOOL PERSEVERANCE

By and large, results show that Youth Fusion has had a cross-cutting impact on the relationship students have with themselves through self-confidence and creativity, particularly where Indigenous students are concerned. With regard to school perseverance, Youth Fusion has a cross-cutting impact on students thanks to increased motivation and interest toward school.

57.34%

More than 57% of all students consider that Youth Fusion helped them have confidence in themselves and in their talents.

**The Youth Fusion project helped me have confidence in myself and in my talents.**

Strongly agree	27.27%
Agree	30.07%
Neither agree nor disagree	27.27%
Disagree	5.59%
Strongly disagree	9.79%

***"I mostly liked that our class got to work together to make something fun."***

*– Student, Cinema, École Gron Morgan Public School,  
Thunder Bay, Ontario*

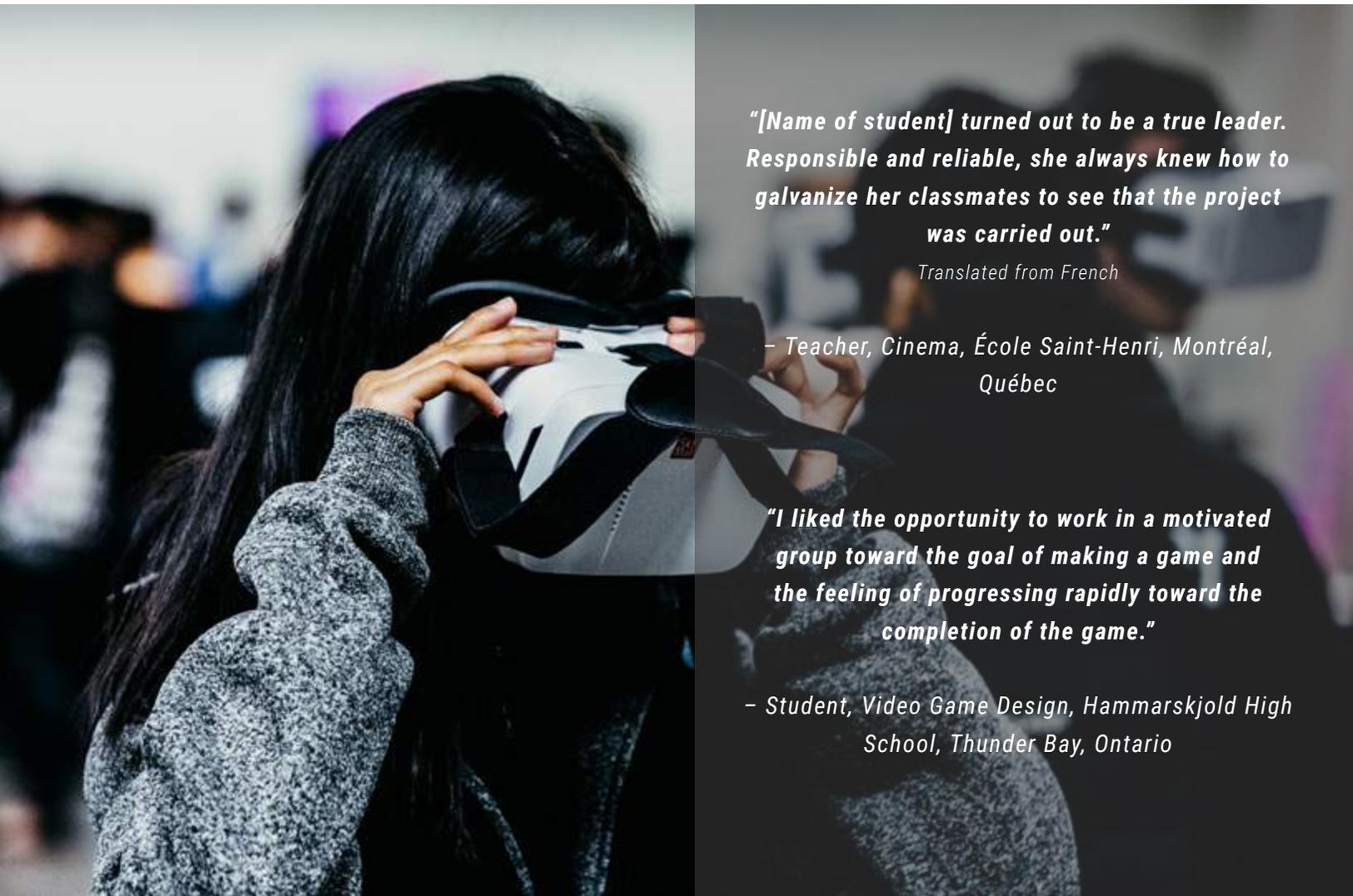
***"[Name of student] turned out to be a true leader. Responsible and reliable, she always knew how to galvanize her classmates to see that the project was carried out."***

*Translated from French*

*– Teacher, Cinema, École Saint-Henri, Montréal,  
Québec*

***"I liked the opportunity to work in a motivated group toward the goal of making a game and the feeling of progressing rapidly toward the completion of the game."***

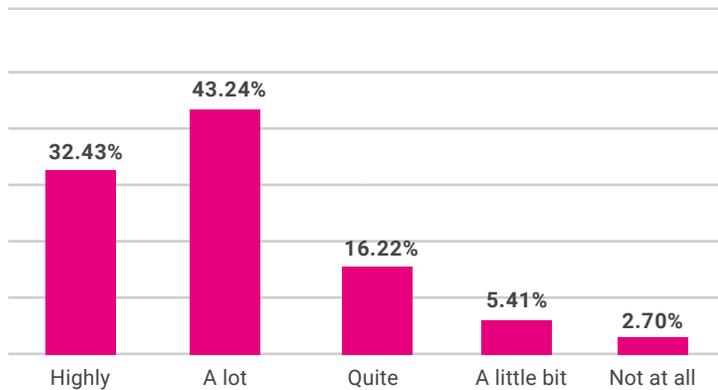
*– Student, Video Game Design, Hammarskjold High School, Thunder Bay, Ontario*



75.67%

Over 75% of surveyed teachers consider that students have significantly developed their creativity through the Youth Fusion project.

To what extent was the competency "creativity" developed by students throughout the Youth Fusion project?



59.44%

Close to 60% of students consider that Youth Fusion has increased their motivation to succeed in school.

In general, the Youth Fusion project has increased my motivation to succeed in school.

Strongly agree	30.07%
Agree	29.37%
Neither agree nor disagree	23.78%
Disagree	7.69%
Strongly disagree	9.09%

62.94%

More than 62% of students consider that Youth Fusion helped them enjoy going to school.

The Youth Fusion project helped me enjoy going to school.

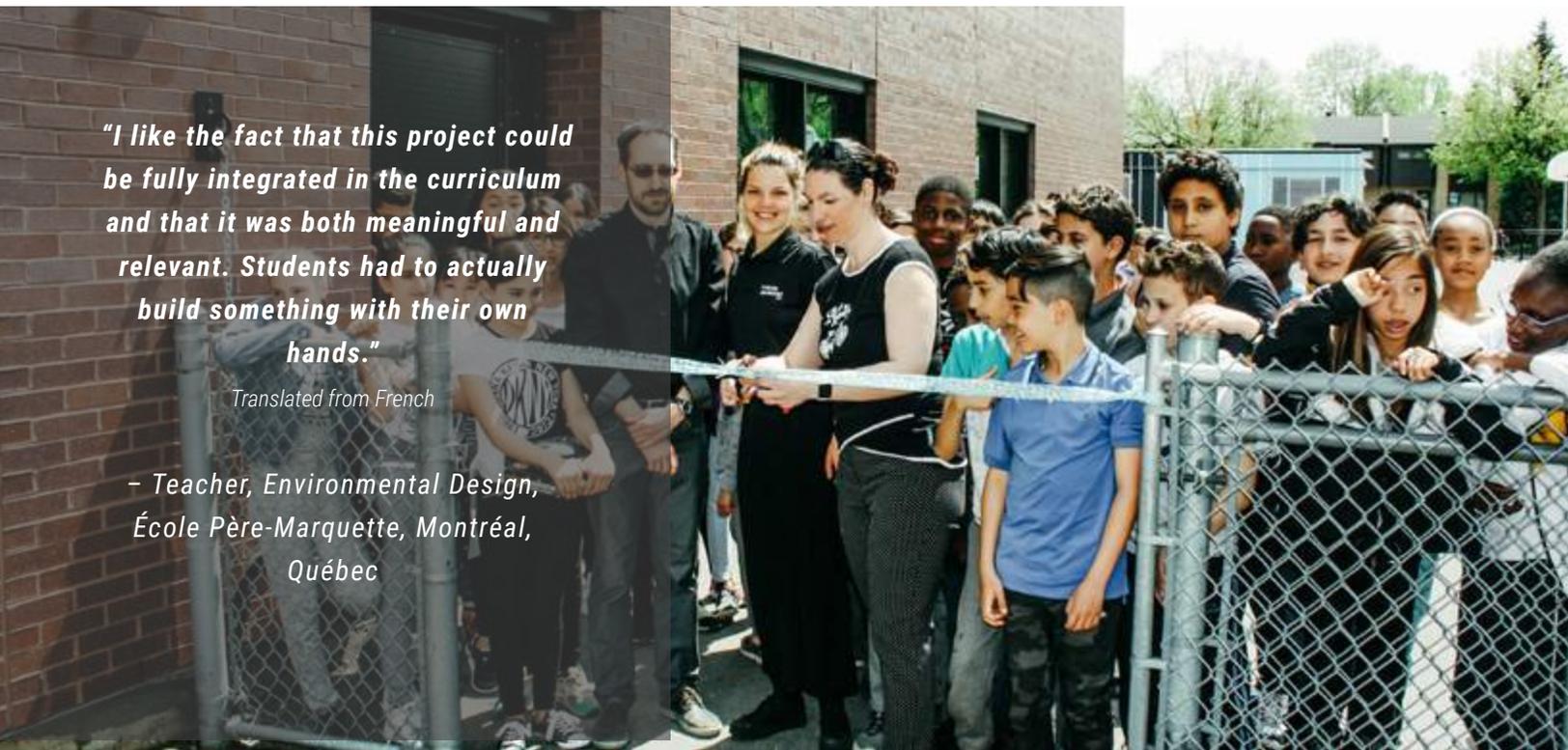
Strongly agree	30.07%
Agree	32.87%
Neither agree nor disagree	23.08%
Disagree	7.69%
Strongly disagree	6.29%

These results can be explained by the fact that projects are tangible and student-focused, and take place in the school itself. Not only do these two aspects help shape the project based on student interests and, consequently, increase their interest for the project, but given that it takes place within school grounds and even in the classroom, project-related skill development brings students to associate these achievements with others that could be accomplished at school. Furthermore, students are led to view school as a place where they can achieve even greater success, or simply outdo themselves during the Youth Fusion project. Considering projects are tailored to suit their participants, students are given the opportunity to provide new ideas in a context with enormous possibilities, which allows them to opt for a very creative and innovative approach. It also helps them build greater confidence in themselves and their capabilities.

*"I like the fact that this project could be fully integrated in the curriculum and that it was both meaningful and relevant. Students had to actually build something with their own hands."*

*Translated from French*

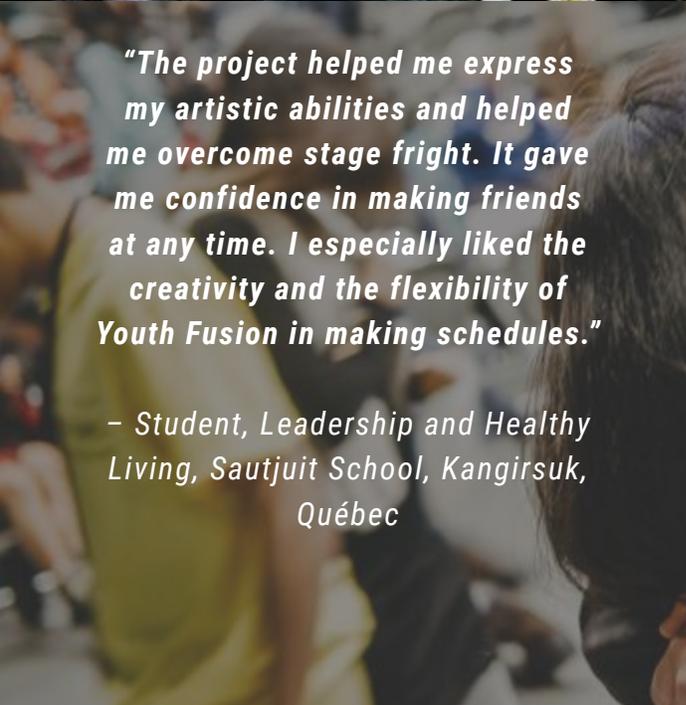
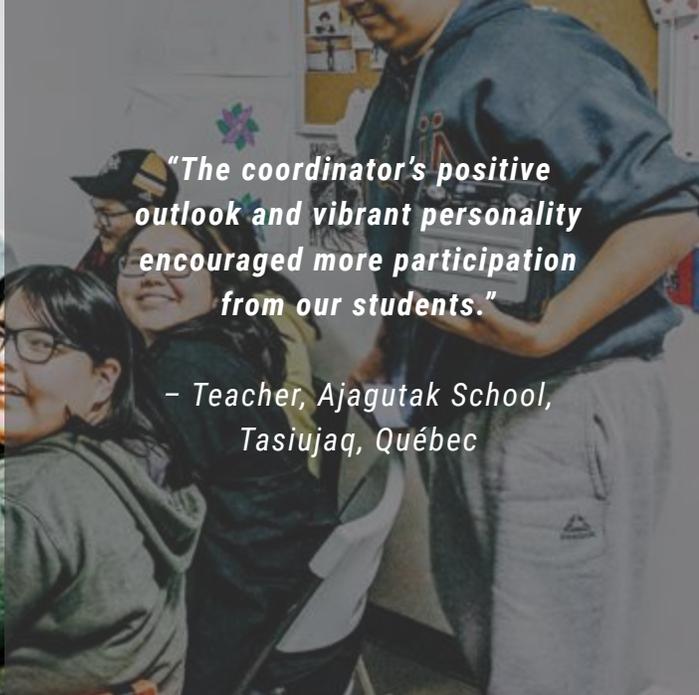
*- Teacher, Environmental Design,  
École Père-Marquette, Montréal,  
Québec*





*"The coordinator's positive outlook and vibrant personality encouraged more participation from our students."*

*- Teacher, Ajagutak School, Tasiujaq, Québec*



*"The project helped me express my artistic abilities and helped me overcome stage fright. It gave me confidence in making friends at any time. I especially liked the creativity and the flexibility of Youth Fusion in making schedules."*

*- Student, Leadership and Healthy Living, Sautjuit School, Kangirsuk, Québec*



*"I like that Youth Fusion gave me something to look forward to when coming to school."*

*- Student, Leadership and Media, Willie J. Happyjack Memorial School, Waswanipi, Québec*

## IN ONTARIO, SCHOOL AND SUCCESS GO HAND IN HAND

In Ontario, students strongly associated their participation in a Youth Fusion project and their desire to succeed in school. These very encouraging results are consistent with our efforts to foster school perseverance, as it means that motivation through identified regulations is demonstrably positively affected, which is a significant component of school perseverance. These results can be explained by the type of supervision received by our coordinators. Given that direct supervision is region specific rather than program specific, heavy emphasis is placed on Youth Fusion's

overall objectives, while program specific goals are monitored by program experts, that are at the organization's headquarters. Consequently, important objectives are given priority across the province, such as connections between the activities and the rest of the school journey as well as the importance of succeeding in school to reach one's goals. In fact, project coordinators have developed greater expertise with respect to retrospection that other territories could draw from.

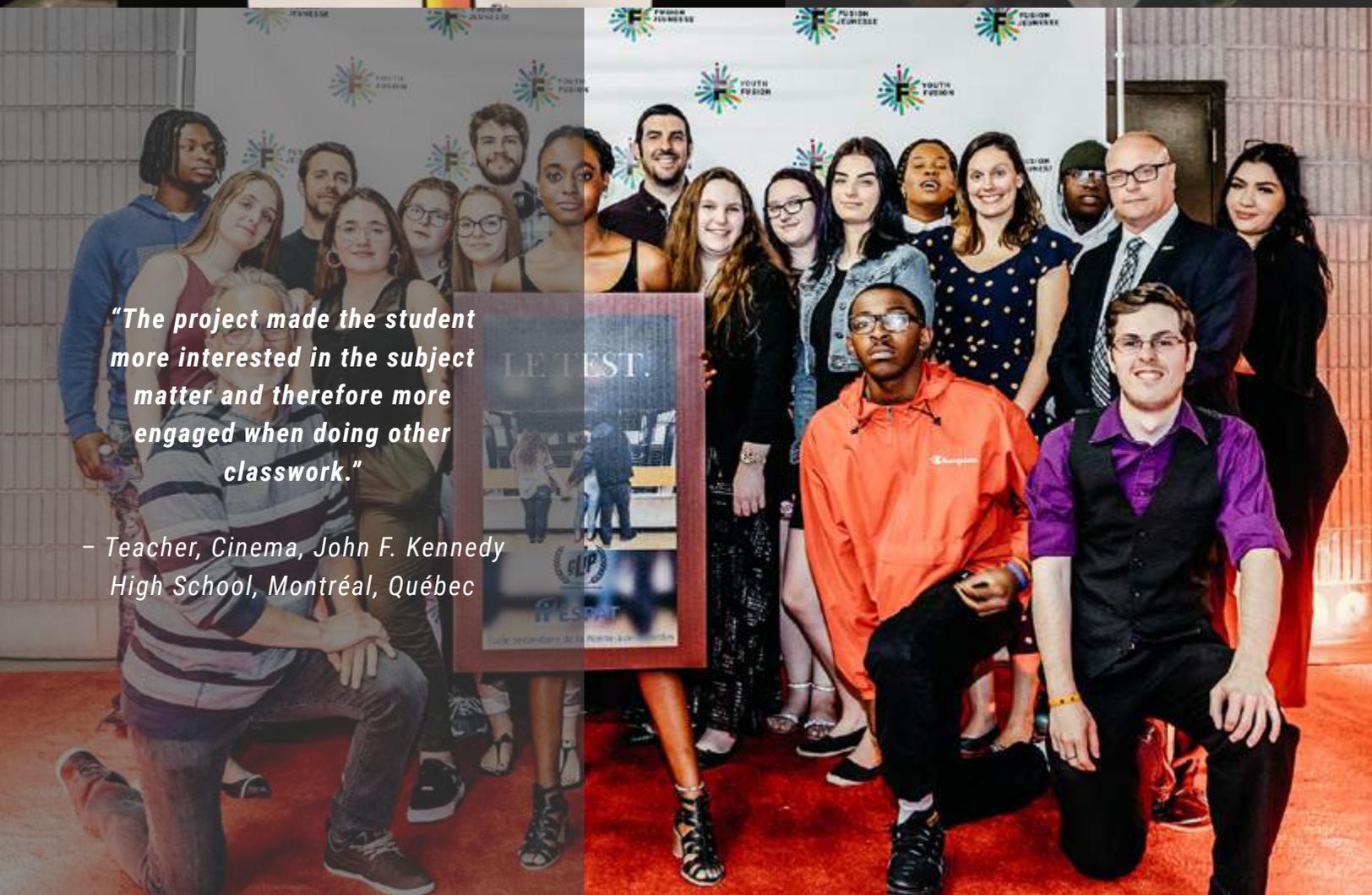




***"The hands-on and production components of each of our projects were really appreciated. These students need something tangible, they need to move."***

*Translated from French*

*– Teacher, Entrepreneurship, École le Tremplin, Malartic, Québec*



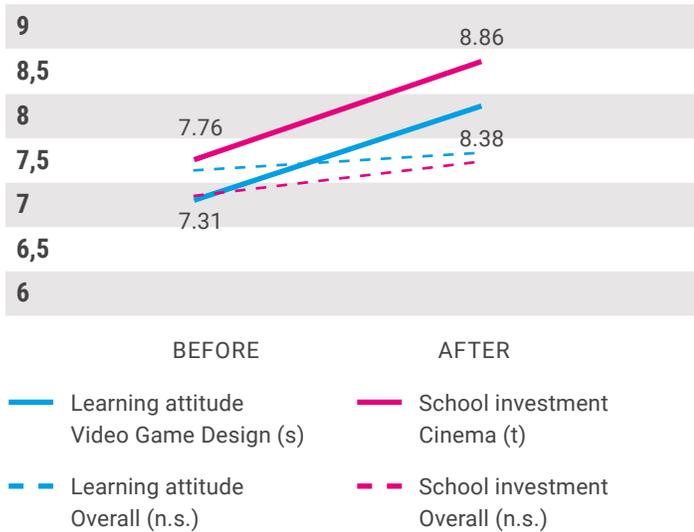
***"The project made the student more interested in the subject matter and therefore more engaged when doing other classwork."***

*– Teacher, Cinema, John F. Kennedy High School, Montréal, Québec*

## KEY HIGHLIGHTS

*The Cinema and Video Game Design programs are where the greatest improvement in learning attitudes and school commitment were observed.*

### School behaviour - by program



Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

These observations can be explained by a playful, tangible and significant integration of certain school subjects—French, for instance—in Cinema projects. This successful integration helps students understand the importance of learning school-related subjects (ex.: reading, oral communication), and their usefulness in carrying out projects dear to their hearts, which undoubtedly has an impact on school investment.

As for the Video Game Design program, we could hypothesize that its innovative, technological and multidisciplinary nature piques the students' intellectual curiosity and bestows on school subjects an importance brought on by their use in carrying out the project. It could also be said that the students' interest and commitment in creating video games affect their learning attitude, given that as the project involves a number of school subjects, students involved in this project are more likely to commit to their learning.

*The impact of Youth Fusion on the students' school performance is noticeable for all students, and particularly for girls.*

43.63%

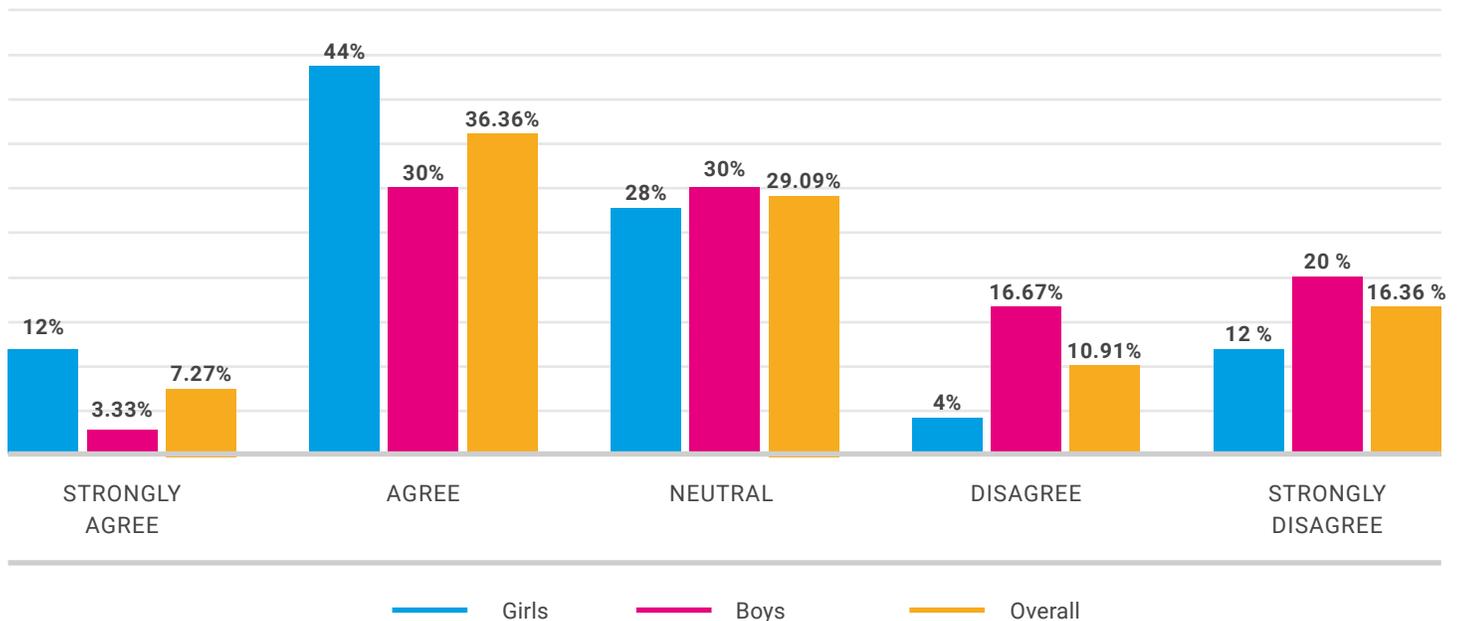
Teachers consider that Youth Fusion has had a significant impact on the school performance of more than 43% of young participants.

56%

Teachers consider that Youth Fusion has had a significant impact on the school performance of 56% of all girls participating in the project.

As detailed in our approach to school perseverance, our main objective is not to improve school performance but rather to act on a number of components which impact performance. Our decision in 2014 to adjust our approach so as to prioritize classroom integration of our projects as well as the creation in 2017 of educational resources designed to help coordinators draw connections between a project and school subjects certainly explain the very promising results we are now seeing and encourage us to forge ahead with this integrative approach.

### The Youth Fusion project had a significant impact on the school performance of this student.



## GOAL ATTAINMENT AND IMPROVEMENT CHALLENGES: SCHOOL PERSEVERANCE

### RELATIONSHIP TO AUTHORITY

- Student-teacher relationship: Achieved
- Self-control and social and behavioural conduct: Achieved

Improvement challenges:

- Increase teacher involvement in the activities to strengthen the positive relationship
- Investigate Video Game Design results in relation to positive rule-abiding behaviour so as to draw conclusions which may be applied to other programs
- Implement good practices across all programs

### RELATIONSHIP WITH OTHERS AND ONE'S ENVIRONMENT

- Association with peers: Achieved
- Self-control and social and behavioural conduct: Partially achieved
- School climate: Partially achieved

Improvement challenges:

- Provide more opportunities to interact outside of comfortable established relationships so as to improve social behaviours
- Increase the school community's involvement in various aspects of the project so students can develop a greater sense of belonging to their school

### RELATIONSHIP WITH ONESELF AND SCHOOL PERSEVERANCE

- Motivation and engagement: Partially achieved
- School performance in reading, writing and mathematics: Partially achieved
- Self-esteem: Partially achieved

Improvement challenges:

- Provide for more opportunities for introspection and retrospection throughout the year and highlight the students' achievements so as to heighten impact on self-esteem
- Increase and use a variety of school subject integration strategies to increase motivation across all subjects by identified regulation (motivation generated by the action's relevance) as well as the impact on school performance.

# ORIENTATION AND EMPLOYABILITY

## CAREER ASPIRATIONS

Findings show that all young participants across Québec are significantly more at ease with respect to their career choice. This variable refers to students' comfort level with regard to their career choice, which is to say if they are happy and feel strongly about their choice. Results show that the fields of sciences and engineering, arts and culture as well as justice are among those whose popularity has seen the greatest increase during the year.

	Comfort level of career choice
Québec	1.23 (s)
Ontario	.
Indigenous communities	-2.13 (s)

Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

The positive results in Québec show that our work toward bringing students and professional mentors stemming from project-related industries together, visiting businesses and post-secondary institutions, as well as the variety of roles and responsibilities that

students experience through the programs have had the desired impact. In fact, not only do our actions help students discover various occupations, they also provide them with the opportunity to meet people very much like themselves, whose journey is inspiring and has brought them to a stimulating career, thus helping students to project themselves in a successful journey both at school and in their future career. As students carry out their projects based on their own interests, their career-related musings turn to their true interests, which explains why students become "comfortable" with their choice of career.

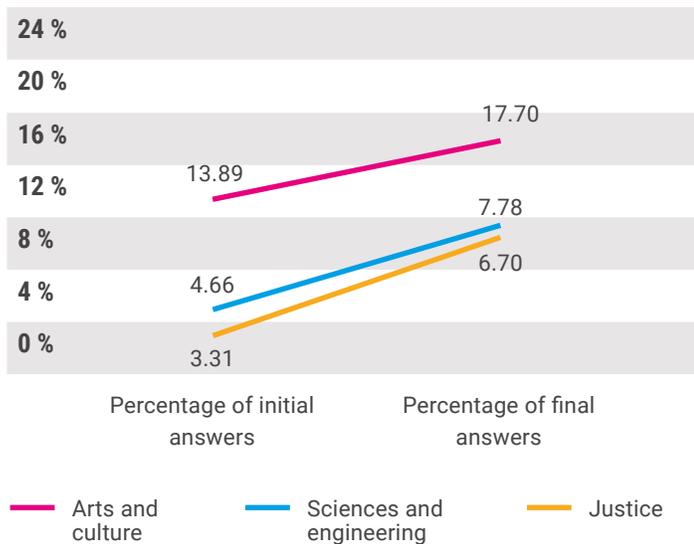
In Indigenous communities, issues are quite different. Building relationships with students and professionals working in a project-related field is much more challenging given that many of these industries are not present in their community. Students' ability to project themselves in an occupation they know nothing about and for which a meeting with professionals very much like themselves is nearly impossible is therefore greatly impacted. The idea of leaving one's community to pursue a career significantly impedes the ambitions students may have, which results in their projecting themselves in local careers instead. Lastly, the manner in which the concept of "occupation" is perceived differs in Indigenous communities; this also impacts how students view their journey. In fact, the journey doesn't necessarily hinge on one's profession but more on the contribution or activity, which makes the need to choose an occupation less of a priority and not as essential to their vision of the future.



*"I enjoyed that Youth Fusion encouraged both expression and competition among schools Canada-wide. I also enjoyed how it allowed me to experience and obtain many great opportunities, namely working in the industry I wish to work in and learn how to be a more cooperative person not only with friends but with new members of the team. I loved how, overall, Youth Fusion allowed me to create something I was proud of and allowed many others to see it with me."*

*- Student, Cinema, John F. Kennedy High School, Montréal, Québec*

## What professional field are you interested in?



**At year-end, arts and culture accounted for 17.70% of the students' choices of interesting professional fields, whereas they accounted for 13.89% when the school year began. This 3.81 point jump actually represents an increase of over 27% of the students' interest in the field of arts and culture.**

**The field of sciences and engineering saw a 66% increase in student interest from the outset of the Youth Fusion project to its conclusion.**

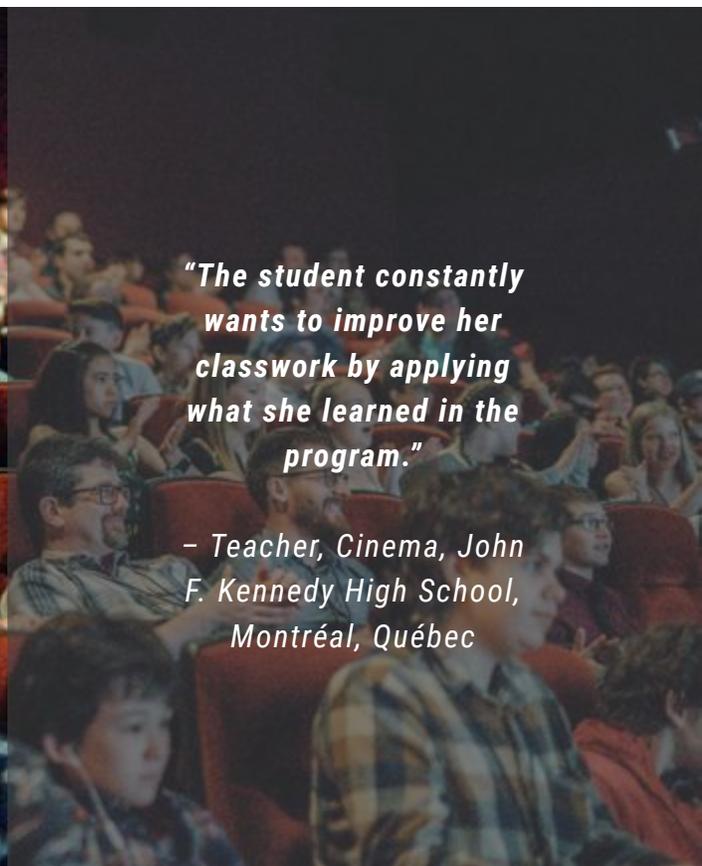
The professional field for which student interest increased the most is the field of justice. More specifically, student interest for this field doubled from the start of the Youth Fusion project to its conclusion, going from 3.31% to 6.70% of all choices related to students' professional field of interest.

In sciences and engineering, students mentioned occupations such as "programmer analyst" (student in Artificial Intelligence), "game programmer or game designer" (student in Video Game Design), "engineer" (student in Video Game Design) or even "computer expert" (student in Cinema).

In arts and culture, students mentioned occupations such as "writer" (student in Cinema), "designer" (student in Exhibition design), or even "cinematographer" (student in Video Game Design).

In the field of justice, students mentioned occupations such as "police officer" (student in Robotics) or even "lawyer" (student in Video Game Design).

Based on student and teacher comments, it can be said that students in arts and culture greatly appreciated uncovering their artistic personality throughout the project. It appears that this discovery led them to know themselves better and to better appreciate that side of themselves. With respect to sciences and engineering, it appears that many students have a new-found passion for programming, robotics as well as the software used in several programs. In addition to getting to meet professionals and visiting businesses and universities, students discovered that their new passion could lead them to a multitude of inspiring occupations. Lastly, with regard to the field of justice, many students who had chosen this sector later wrote that they wanted more justice, but fewer spoke of a justice-related occupation. We may then speculate that the main impact related to this field was primarily the recognition of a fair and just system, due in all likelihood to the many meetings held throughout the year and to the projects' emphasis on the development of a social conscience as well as civic and citizen engagement.



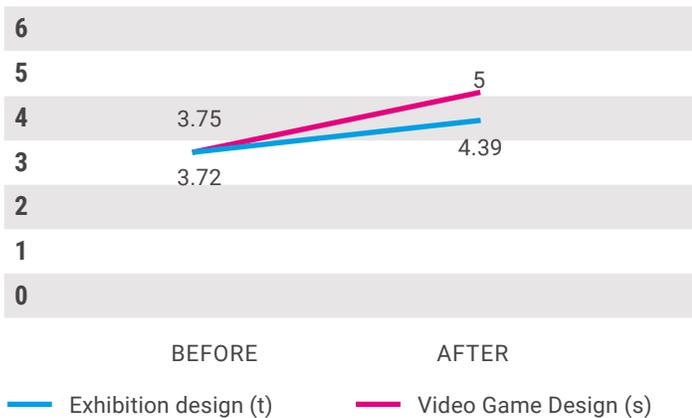
***"The student constantly wants to improve her classwork by applying what she learned in the program."***

***- Teacher, Cinema, John F. Kennedy High School, Montréal, Québec***

## KEY HIGHLIGHTS

**An increased career choice comfort level is observed particularly among students involved in the Exhibition design and Video Game Design programs.**

### Comfort level toward career choice



Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

With regard to the Exhibition design program, this increase can be explained by the students experiencing a comprehensive artistic process, from ideation to exhibition, by working in collaboration with a recognized institution: the Montreal Museum of Fine Arts. This project also gave students the opportunity to meet several professionals from the arts community and to experience a career related to this field: a museum's exhibition curator. As such, students get to understand what being an artist really involves and the possibilities of a career in this field. They are therefore more comfortable when choosing to pursue artistic projects or to embark on this career path.

Thanks to its mentors and studio visits, the Video Game Design program exposes students to a broad range of learning journeys and professions related to Video Game Design. Given that this field is constantly evolving, students can see for themselves its opportunities and what may lie ahead, which may increase their comfort level with their career choice.

**Career orientation has had a particular impact on students aged 16 to 18.**

Comfort level of career choice	
Aged 16-18	0.997 <sup>s</sup>
Other age categories	-

Legend: (s)=significant (t)=trend (n.s.)=non-significant (n.a.)=not available (uncollected data)

The greatest increase in the career choice comfort level throughout the year was seen among older students. It goes without saying that the guidance-oriented approach integrated in YF programs resonates most with students who need to address this question in the short-term, which provides a space to discuss, explore and discover the journeys and careers related to the students' skills and interests. Results show that students are more self-assured when taking on the next step of their journey than when the year began.

50.75%

Among boys, not only is the perception of having chosen a career path thanks to Youth Fusion greater (over 50% agree), but there is an increased interest in arts and culture as well as with sciences and engineering.

### The Youth Fusion project helped me discover an interesting future occupation.

	Boys	Girls
Strongly agree	26.87%	15.63%
Agree	23.88%	17.19%
Neither agree nor disagree	25.37%	43.75%
Disagree	10.45%	9.38%
Strongly disagree	13.43%	14.06%

### Fields of interest with greatest increases, by gender

Fields of interest	Percentage of initial answers	Percentage of final answers
Arts and culture (boys)	8.86%	16.52%
Sciences and engineering (boys)	5.06%	10.43%
Health (girls)	17.78%	21.79%
Justice (girls)	2.96%	6.41%
Arts and culture (girls)	14.81%	17.95%
Agriculture, wildlife and environment (girls)	5.19%	8.97%

## PROFESSIONAL ABILITIES DEVELOPED BY STUDENTS

62.42%

With regard to job market related skill development, it is interesting to observe that according to students, entrepreneurial spirit is where participants showed the greatest improvement. More than 62% of respondents said that the project had inspired them to develop their own project in the future.

48.22%

The second skill assessed was technological and programming skills. Nearly half of all respondents consider that Youth Fusion helped them develop these skills.

### Youth Fusion helped inspire me to contemplate developing my own projects in the future

Strongly agree	31.21%
Agree	31.21%
Neither agree nor disagree	24.11%
Disagree	4.96%
Strongly disagree	8.51%

### Youth Fusion gave me the opportunity to develop technological and programming skills

Strongly agree	14.89%
Agree	33.33%
Neither agree nor disagree	29.08%
Disagree	7.80%
Strongly disagree	14.89%

These results can be explained by the fact that all our programs incorporate entrepreneurship concepts and that most use digital tools to carry out projects. Entrepreneurship concepts entail much more than making a budget or drafting a marketing strategy. Throughout the project, the coordinator brings the students to realize that any innovative idea can be carried out in the community or in a professional environment. This transforms the students' perception as to their ability to bring a project to fruition and to innovate, whether for a business or a any ideas with strong innovative potential.

## PROBLEM SOLVING AND ORGANIZATIONAL SKILLS ARE BOTH KEY COMPONENTS OF PROJECT MANAGEMENT.

*"From the start my 6/7 class were experts at identifying problems. Over the course of the project I began to notice many of the students taking this skill to the next level and beginning to provide solutions for potential problems. As we approached project realization, students thought of several solutions to problems we may face.[...]. Developing this fundamental competency empowered the students to ensure they had all the materials and equipment they needed to carry out the project. "*

*- Project coordinator, Environmental Design, St-Matthew Catholic School, Sarnia, Ontario*

*"Students had to manage material that was far more complex than what they were used to ...]. It was quite a challenge for them, but they learned a lot about organizational skills and the importance of communicating to make sure everything is well coordinated. "*

*- Project coordinator, Cinema, École La Calypso, Amos, Québec*



***"[What I liked the most about the project was] building robots and the programming."***

*Translated from French*

*– Student, FLL Robotics, École Monseigneur-Belzile, Saint-Ulric, Québec*

***"I really liked creating the video game because I was able to understand how to make one."***

*Translated from French*

*– Student, Video Game Design, École Roger-Comtois, Québec, Québec*

***"[What I liked the most during this project was] [name of the coordinator]! And working on Artificial Intelligence."***

*Translated from French*

*– Student, Artificial Intelligence, École Vanier, Québec, Québec*

***"[What I liked the most was] the fact that a lot of software I never heard before was opened up. And now I can use the skills outside of class in my own projects."***

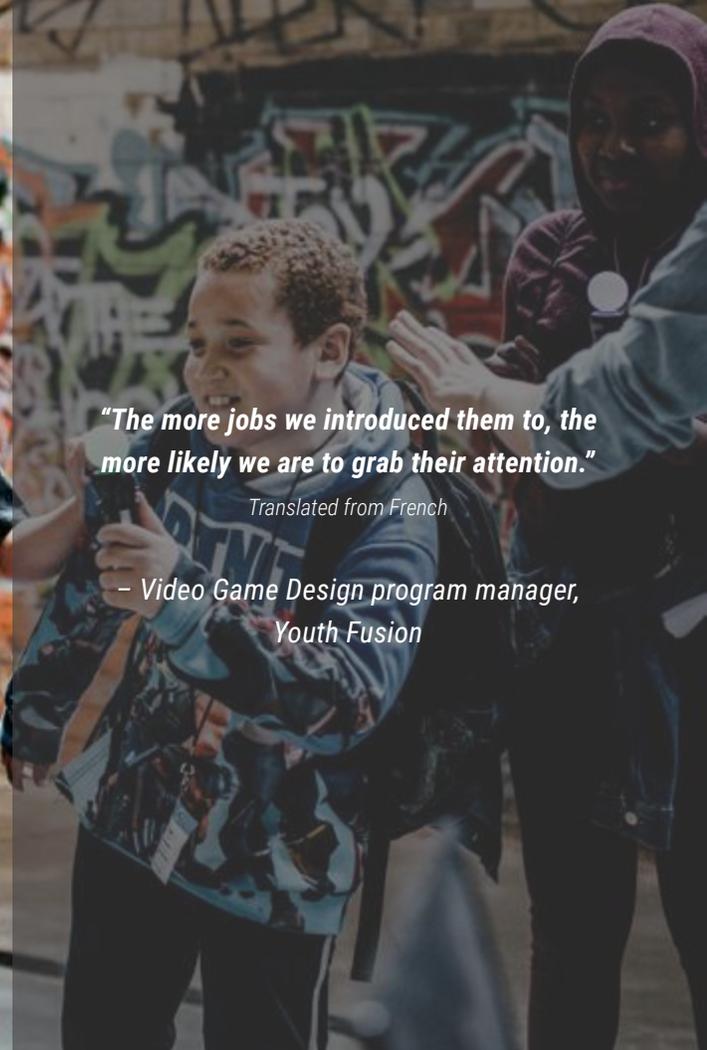
*– Student, Video Game Design, Superior Collegiate and Vocational Institute, Thunder Bay, Ontario*

## QUÉBEC, A POOL OF FUTURE ENTREPRENEURS!

In Québec, the overall increase of entrepreneurial spirit across all genders was one of our evaluation's most significant impacts. This result can be explained by our recently incorporated cross-cutting entrepreneurship approach across all our programs. Also, a great number of entrepreneurial aspects call for specific training for project coordinators, who are out of their comfort zone, and follow-ups. The team at our headquarters are very thorough when conducting these follow-ups,

so as to develop best practices. Study results show that the implemented components have allowed us to reach our goals, and that this course of action should be extended to all Youth Fusion programs and territories, in order for cross-cutting entrepreneurial skills and values to be implemented in all our programs.





***“The more jobs we introduced them to, the more likely we are to grab their attention.”***

*Translated from French*

*– Video Game Design program manager,  
Youth Fusion*

## KEY HIGHLIGHTS

*The section on occupational outlooks is where study results were the most gendered.*

**90.90%**

- In Ontario, 90% of boys say they have developed their entrepreneurial spirit, compared with 22.22% among girls.

**22.22%**

- The perception of having developed technological and programming skills is more present among boys (58% of all boys) than among girls (35% of all girls). While general results clearly show the pervasiveness of technology across all our programs, the fact that boys have made more progress with respect to their skills in this sector, or at least perceive that they have, arguably demonstrates that inequities still exist as to gender-related preferences or behaviours. However, let us not forget that the fact that 35% of all girls involved with Youth Fusion confirm having increased their technological and programming skills is still quite a positive outcome.

**58.21%**

**35.49%**

## PROFESSIONAL ABILITIES DEVELOPED BY COORDINATORS

There's no question that interpersonal communication skills were those most developed by coordinators. An improvement in organizational skills and punctuality has also been noted by the coordinators and the teachers.

### COMMUNICATION AND INTERPERSONAL SKILLS

80%

80% of coordinators consider that their experience with Youth Fusion has significantly helped them develop their ability to communicate effectively.

90.91%

More than 90% of teachers believe that "the project coordinator communicates in an effective and professional manner both in their written and oral communications" and "communicates easily with the students".

### ORGANIZATION AND PUNCTUALITY

72.73%

Over 72% of surveyed teachers consider that "the project coordinator is organized and arrives to his/her workshops well prepared."

95.45%

More than 95% of all teachers consider that "the project coordinator is on time and keep to the agreed schedule."

A coordinator's work is accomplished thanks to their passion and the relationships they build with the students. This leads them to want to outdo themselves, to create bonds and to develop the best practices possible to help students succeed. As a result, they become great communicators, a key aspect of their mandate, and work on creating quality activities, make the most of their collaboration with the teacher, and are committed to being a role model for their students by being, for instance, always on time. They will benefit from these skills throughout their entire professional journey.

### THE PROJECT COORDINATORS: COMMITTED AND GREAT EDUCATORS!

*"My experience at Fusion made me re-examine pedagogy as a whole and how we're teaching our students to increase their awareness of our environment. I've also given a lot of thought to how we showcase our students' commitment and motivation in our day-to-day lives. [...] Ultimately, I learned as much as they did!"*

*Translated from French*

*- Project coordinator, Environmental Design, École Père-Marquette, Montréal, Québec*

*"The collaboration with my teachers this year was one of the great highlights of my year. Their collaboration, with a group where motivation was a bit of a challenge, was just wonderful. [...]. The development of skills related to my field of study was also an interesting aspect this year: the communication, the organization, the project management have had a great positive impact on my journey this year."*

*Translated from French*

*- Coordinator, Environmental Design, École Jeanne-Mance, Montréal, Québec*





***"Working with these kids helped me learn how to express myself differently and pushed me to find innovative ideas to grab their attention and spark their interest in subjects they knew nothing about."***

*Translated from French*

*- Project coordinator, Environmental Design, École Père-Marquette, Montréal, Québec*

***"I really loved learning how to communicate with teenagers. I learned to become a leader, a facilitator as well as a person they can confide in."***

*Translated from French*

*- Coordinator, Cinema, École le Tremplin, Malartic, Québec*

***"I loved collaborating with the coordinator. Sharing ideas, mulling things over with the students, solving problems, everything was quite fluid and pleasant, and was also very rewarding. Thanks to this shared experience, the quality of my course has greatly improved. [...]. Frankly, this is a memorable experience!"***

*Translated from French*

*- Teacher, Exhibition design, École le Vitrail, Montréal, Québec*

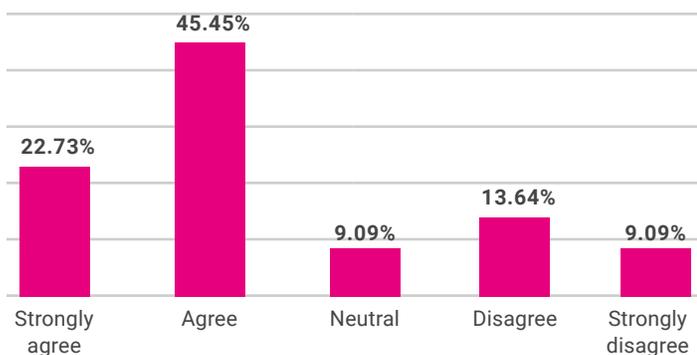
## PROFESSIONAL ABILITIES DEVELOPED BY TEACHERS

The impact that the teachers' participation in Youth Fusion programs has had on their own practice is very positive and quite impressive, across all analyzed variables, seeing that the basic premise did not suggest that teachers' Youth Fusion experience would be as great an influence. In fact, we can see that, after a one-year project, many teachers have been considering incorporating an experiential approach in their pedagogical practice as well as the use of technological tools in their classroom.

68.18%

Over 68% of teachers believe that their experience with Youth Fusion could have an influence on their professional practice with regard to the use of technological tools.

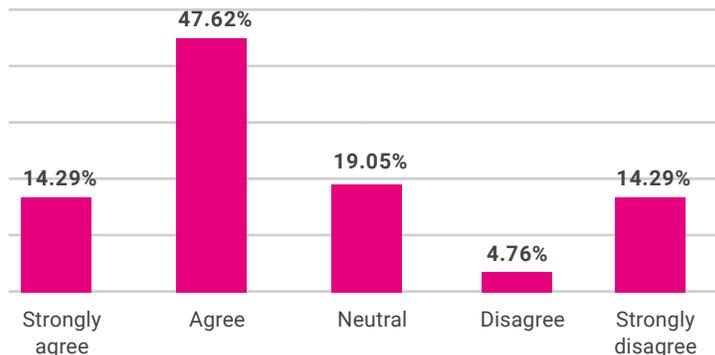
Would you say that your experience with Youth Fusion could have an influence on your professional practice with regard to the use of technological tools



61.91%

More than 61% of teachers believe that their experience with Youth Fusion could have an influence on their professional practice with regard to a project-specific or experiential educational approach.

Would you say that your experience with Youth Fusion could have an influence on your professional practice with regard to a project-specific or experiential educational approach.



These results can be explained by the teacher-coordinator collaboration which makes a project's integration in a classroom possible, ultimately helping to improve class dynamics as well as the learning process. Teachers are therefore at the very heart of the project, in direct contact with different teaching methods that work and technological tools with which they are increasingly comfortable and whose educational potential they acknowledge.



*"[I loved] being able to work differently with the students. To see students solve problems, work collaboratively. Seeing students proud of themselves after the competition."*

*Translated from French*

*- Teacher, FLL Robotics, École de Neufchâtel, Québec, Québec*

## **PILOT PROJECT IN FRANCE: WHEN TEACHERS ARE AT THE HEART OF THE PROJECT**

In January 2019, Youth Fusion launched Video Game Design pilot projects, with an approach centred on teacher integration, in 9 institutions in France, more specifically in Nouvelle-Aquitaine. All projects take place exclusively in the classroom with a team of teachers that follow one specific group of students, and each teacher allots a portion of their class time. This helps interdisciplinary collaboration as well as the learning process for a variety of disciplinary competencies such as mathematics, languages, digital and

technological sciences, history and geography, visual arts, music education, technology, etc. Moreover, Youth Fusion collaborates with academies (school boards) so as to organize training days for the teachers where they can learn more about our digital tools and experiential approach.



## GOAL ATTAINMENT AND IMPROVEMENT CHALLENGES: ORIENTATION AND EMPLOYABILITY

- Career aspirations: Achieved
- Professional abilities - students: Achieved
- Professional abilities - coordinator: Achieved
- Professional abilities - teachers: Achieved

### Improvement challenges:

- Expand on professional aspiration issues in an Indigenous context and develop contextualized tools to help achieve this impact.
- Pay more attention to behaviours which could encourage gender differences with regard to entrepreneurial and technological skills. Avoid replicating inequalities, and reduce them instead.
- Develop better tools to monitor and assess the coordinators' professional abilities to optimize our impact.



# CIVIC ENGAGEMENT

Civic engagement is an important pillar of the Youth Fusion mission. Though this component's development occurs more indirectly (as described in the "Our approach to civic engagement" section) and builds above all on the connections students make throughout the project, results in this field bode well and encourage us to design new strategies to further develop student civic engagement.

The Youth Fusion approach sets time aside to explore ethical, social and environmental issues related to the project's theme, which allows students to have frank and open discussions on current and real issues, to develop critical judgment and a scale of personal values, to demonstrate the direct or indirect impact choices and actions may have, to broaden their reflection as to other contexts and issues that affect them, and to draw connections between issues and existing or possible solutions.

46.81%

We determined our impact on civic engagement thanks to social issue awareness and the interest in getting involved in one's community. In both cases, results have exceeded expectations: **more than 46% of all students have developed an awareness of social and environmental issues, and more than 50% of students have developed an interest in getting involved in their community and making a difference.**

51.05%

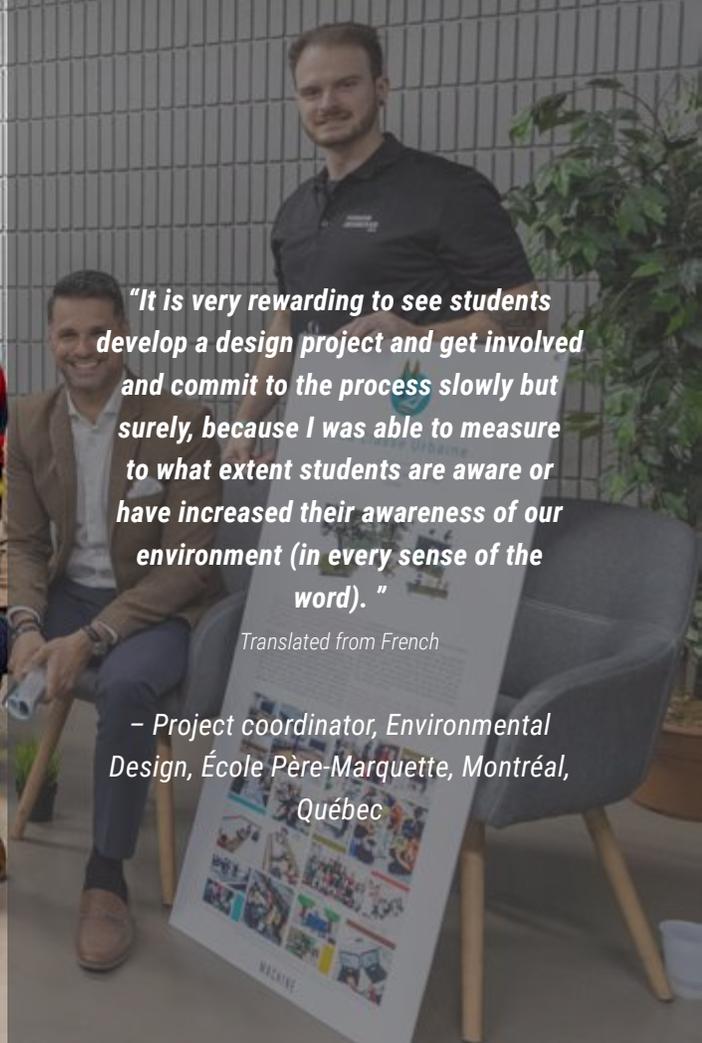
## Youth Fusion helped me develop an understanding of environmental and/or social issues in my community

Strongly agree	19.15 %
Agree	27.66 %
Neither agree nor disagree	36.17 %
Disagree	4.96 %
Strongly disagree	12.06 %

## The Youth Fusion project inspired me to get involved in my community and to make a difference in the world around me.

Strongly agree	18.18 %
Agree	32.87 %
Neither agree nor disagree	29.37 %
Disagree	8.39 %
Strongly disagree	11.19 %

As the coordinators' testimonies illustrate, students are really "enthusiastic" and want to build the world of tomorrow. One aspect which stands out throughout our projects is that students start to better understand issues they are already familiar with by making connections thanks to the concepts they pick up and by contextualizing them alongside the issues that strike a chord. This sparks a renewed interest in social phenomena, but from a more thought-out and critical point of view, which they can then delve into throughout the year.



*"It is very rewarding to see students develop a design project and get involved and commit to the process slowly but surely, because I was able to measure to what extent students are aware or have increased their awareness of our environment (in every sense of the word)."*

*Translated from French*

*– Project coordinator, Environmental Design, École Père-Marquette, Montréal, Québec*



*"[Students] also made several great connections between our project and the current environmental crisis, we can see that in this regard, they are really enthusiastic about taking action, they've developed a beautiful awareness."*

*Translated from French*

*– Project coordinator, Environmental Design, École secondaire d'Amos, pavillon La Forêt, Québec*



## IN THE EYE OF YOUNG INUIT FILMMAKERS

Each year, Inuit students participating in the program “leadership and media” stand out for the quality of the documentaries they produce. In 2019, *The Little Hunter*, a documentary directed by students from the Kiluutaq school in Umiujaq, won the Clip d’Or, the highest distinction of the Future Education Festival. The film, narrated by a young boy, in Inuktitut and English, talks about the cultural importance of hunting in his community. The short film *Networking*, produced by a group of students from the Tukisiniarvik school

in Akulivik, was screened at the *Présence autochtone* festival in Montreal. Through this documentary, the students became interested in the traditional practice of fishing net making in their community. The short films of young Inuit demonstrate a great sensitivity and a real interest for the members of their community, their cultural practices and the issues that affect them. The cinema project allows them to share their conception of the world around them with youth from across Quebec, to open their horizons and to deconstruct several preconceived ideas.



## KEY HIGHLIGHTS

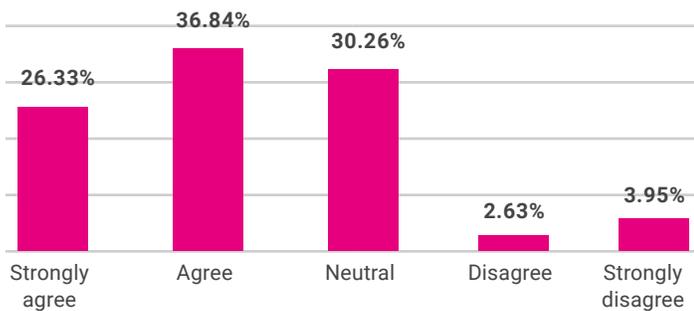
There seems to have been a significant impact with regard to civic engagement on students in Indigenous communities.

63.17%

In Indigenous communities, over 63% of students consider that Youth Fusion inspired them to get involved in their community and make a difference in the world around them, compared to 50% among all surveyed students.

51.05%

The Youth Fusion project inspired me to get involved in my community and to make a difference in the world around me.

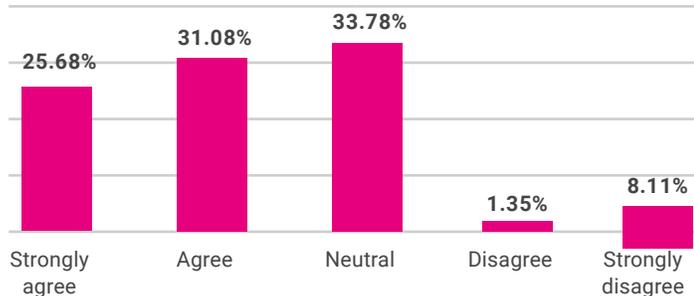


56.76%

Among Indigenous communities, more than 56% of students believe that Youth Fusion has helped them develop an understanding of environmental and/or social issues, compared to 46% of all surveyed students.

46.81%

Youth Fusion helped me develop an understanding of current environmental and/or social issues in my community.



In Indigenous communities, projects take place both in the school and in the community, and involve a wide-range of community players throughout the project. Given that projects are highly flexible, their direction is more often than not shaped by the students' encounters and their reflections throughout their journey. Results show that these aspects are important contributors to the integration of citizen engagement concepts across all programs and for all students.

Connections with civic engagement were most successfully integrated in the Entrepreneurship and Artificial Intelligence programs.

66.66%

In Entrepreneurship and Artificial Intelligence, over 66% and 75%, respectively, of all students consider that Youth Fusion helped them develop an understanding of environmental and/or social issues.

75%

The Entrepreneurship program encourages students to solve a problem in their community thanks to an entrepreneurial project, which significantly increases opportunities to discuss environmental issues. We were able to see that social entrepreneurship is growing in popularity among young people and that their desire to make a difference is increasingly apparent. The fact that students are more aware of various issues such as local agriculture and waste reduction leads them to get involved so as to make a difference. This results in students' increased social consciousness.

The same can be said of the Artificial Intelligence program. Given that the project is based on the impact and use of an AI solution participants develop based on the issues they deem important, student prototypes often have a bearing on environmental issues such as house energy efficiency, optimizing sorting systems for recyclable materials or even a habitable planet analysis system.

## GOAL ATTAINMENT AND IMPROVEMENT CHALLENGES: CIVIC ENGAGEMENT

- Greater understanding of social issues: Partially achieved
- Desire to become involved in important causes: Achieved
- Interest in getting involved in one's community: Partially achieved

Improvement challenges:

- Incorporate civic engagement evaluation tools suitable to Youth Fusion's needs
- Prioritize strategies which incorporate ethical and social issues in all programs

# CONCLUSION

Ever since Youth Fusion was created, the organization's team and Board of directors have relied on various evaluations to improve its approach and measure its impact. We have reached out to established leaders such as Thérèse Laferrière and Michel Janosz, and we have always been able to find the necessary resources to implement recommendations, with one ultimate goal: to provide our young participants with the very best programs.

This evaluation's objectives were to measure the quality of our various programs, to understand the real impact of our work with the students, to identify our best practices as well as our challenges, and to develop improvement targets for our practices while implementing action plans to reach said targets.

Results show that practices put in place in the last few years, based on the recommendations of our 2013 and 2015 evaluations, have served the three pillars of the Youth Fusion mission well, and provide relevant information toward the improvement of our model and our way of doing things.

## **SCHOOL PERSEVERANCE:**

As we are well aware, a teacher's role is crucial. Based on our results and for improvement purposes, Youth Fusion wants to increase teacher involvement in the activities to strengthen positive relationships with a larger proportion of students.

## **ORIENTATION AND EMPLOYABILITY:**

Focusing the project on student interests and aspirations while providing them with opportunities to discover lesser known or unattainable fields has had a significant impact on the students. The integration of an entrepreneurial approach, the use of technological tools, visiting businesses and educational institutions as well as the participation of professionals (mentors) during our projects are key to truly successful endeavours.

For improvement purposes, Youth Fusion wants to further explore professional aspiration issues in Indigenous environments and develop contextualized tools to help achieve this impact.

## **CIVIC ENGAGEMENT:**

Reflecting on the ethical, social and environmental issues related to the project's theme proved to be a very effective gateway to engage and steer the—very receptive—students toward civic engagement.

For improvement purposes, Youth Fusion wants to prioritize strategies which incorporate ethical and social issues in all its programs.

In view of this evaluation, Youth Fusion notes the importance of strengthening its approach, to build on its best practices and to implement them on a larger scale to increase their impact. Youth Fusion has always prided itself on its ability to adapt to the realities

in the field and to innovate from the bottom up; that is why it is always looking to develop new tools and discover new ways of doing things. It is essential that we continue to build our approach, bringing into play the innovations that stem from all regions, communities and programs, so as to constantly improve our model while meeting conditions of replicability and being always open to the realities in the field.

This desire for ongoing improvement will help implement an action plan that will determine development strategies for the coming years. In the same vein, these evaluation results provide a road map and pinpoint the challenges we need to address to make a more cross-cutting and inclusive impact. All of it is definitely spurred on by innovation and creativity, which will lead us to considerate different development avenues. Whether by refining our distance learning courses through e-learning so as to ensure the quality of our expansion, by developing stronger ties with the teachers by incorporating them in a training process, or even by building an ongoing relationship with our former participants through a new online platform, Youth Fusion has set its sights on facing the coming years in a proactive manner, for a greater impact for everyone.

We end this report by thanking all the partners in our ecosystem without whom our projects would not take place: teachers, principals and school staff; post-secondary education institutions; school boards; academies; businesses; Crown corporations; governments (municipal, provincial, regional, departmental, federal) and ministries; individuals and public figures; and NPOs and foundations, primarily our exclusive national partner, the Azrieli Foundation.

## **THANK YOU FOR YOUR SUPPORT !**

**Finally, we would like to congratulate the thousands of Youth Fusion students who persevere and who amaze us every year!**

See you soon,

**The Youth Fusion team**

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# APPENDIX I: ANALYZED VARIABLES

VARIABLE	DESCRIPTION	SOURCE	RESPONDENT	TERRITORY
<b>Positive relationship with the teacher</b>	The closeness [or positive relationship] constitutes a close, positive and helping relationship with the teacher. A close and personalized relationship with the teacher, marked by frequent communication and characterized as supportive rather than critical, would help the children develop a trusting relationship, to demonstrate more commitment toward their studies and to adopt positive behaviours in class and, consequently, to get better grades at school.	DESROSIERS, H�el�ene, Christa JAPEL, Pooja R. P. SINGH and Karine T�ETREAUULT (2012)	Students (QC and France only) Coordinators (QC and ON only) Teachers	Qu�ebec Ontario France
<b>Opposition</b>	Oppositional behaviours are externalized behaviours with respect to psychosocial adjustment. They represent a type of behavioural problem. For instance, rebellion, refusal to obey and temper tantrums are a few manifestations of opposition.	DESROSIERS, H�el�ene, Virginie NANHOU and Luc BELLEAU (2016)	Students (QC and France only) Coordinators (QC and ON only) Teachers	Qu�ebec Ontario France
<b>Responsibility and rule compliance</b>	Responsibility and rule compliance are among the social skills associated with educational success. Responsibility and rule compliance are defined as accepting responsibility for one's actions, being respectful of others and of property, demonstrating self-control, abiding by the rules and taking care of the material.	DESROSIERS, H�el�ene, Virginie NANHOU and Luc BELLEAU (2016)	Coordinators Teachers	Qu�ebec Ontario
<b>Unruly behaviour at school</b>	"Unruly behaviour at school covers the dysfunctions and transgressions that disrupts a school's normal operations" (Nouvian, P., 2006, p.1). "Unruly" acts can occur for various reasons: avoidance, designed to free oneself of the school's grasp, to avoid school work because deemed painful, fastidious, insignificant, uninteresting or simply too difficult; obstruction, by hindering or preventing a class or activity to unfold. This type of indiscipline can impact a teacher in his function, his role, his status and sometimes in his person; challenging rules and work arrangements.	PRAIRAT, E. (2008), p.3.	Students	Qu�ebec Ontario

# APPENDIX I: ANALYZED VARIABLES

VARIABLE	DESCRIPTION	SOURCE	RESPONDENT	TERRITORY
<b>Social withdrawal</b>	“Social withdrawal [...] includes many forms of solitary behaviours (Rubin, Coplan & Bowker, 2009)”. Social withdrawal is characterized, among other things, by a propensity to do things alone or by oneself and have little interest for the company of others.	Rubin, Coplan & Bowker. (2009), in Pinchaud. (2019)	Students Coordinators (QC only) Teachers (QC only)	Québec France
<b>Sociability</b>	“Sociability is seen in the [young person’s] propensity to search for interactions with his peers, by his awareness and responsiveness within interactions as well as the manner with which peers respond to him.” This variable calls upon a student’s social and personal skills and is a dimension associated with interactions.	Bouchard, M.C. (2015)	Coordinators Teachers	Québec Ontario
<b>Inappropriate school behaviour</b>	Inappropriate school behaviour entails manifestations of unruly behaviour. It can take many forms such as, for instance, a lack of respect toward a peer, wasting time, inappropriate use of the equipment	Gouvernement du Québec - Ministère de l’Éducation, de l’Enseignement supérieur et de la Recherche. (2015)	Coordinators Teachers	Québec Ontario
<b>General social competence</b>	General social competence refers to: social skills; self-confidence; sense of responsibility; respect for peers, adults, rules and routines; work habits; autonomy; and curiosity	Desrosiers, H. and Tétreault, K. (Institut de la statistique du Québec). (2009)	Coordinators Teachers	Québec Ontario
<b>Self-esteem</b>	Self-esteem refers to how a student values and respects himself.	Schraml et al., 2011, in Institut de la statistique du Québec. (2012)	Students	Québec PNI France
<b>Intrinsic motivation (in mathematics)</b>	Intrinsic motivation occurs when the source of motivation does not originate from external sources, but from the pleasure and satisfaction a student experiences when doing an activity.	Gouvernement du Québec, Institut de la statistique du Québec. (2014) Guay, F. and Talbot, D. (2010).	Students	Québec Ontario
<b>Motivation by identified regulation (in mathematics)</b>	Identified regulation refers to the motivation associated with practising a given activity, not because it is pleasurable but rather because the individual sees it as important and places a value on carrying it out.	Ryan and Deci, 2000, in Rodrigue, I. (2013)	Students	Québec Ontario

# APPENDIX I: ANALYZED VARIABLES

VARIABLE	DESCRIPTION	SOURCE	RESPONDENT	TERRITORY
<b>Motivation by controlled regulation (in mathematics)</b>	Motivation by controlled regulation is characterized by adopting a behaviour simply to satisfy an external request, such as receiving a reward or avoiding a punishment.	Forgues, C. (2018)	Students Coordinators (QC only) Teachers (QC only)	Québec Ontario
<b>Self-concept (in mathematics)</b>	Self-concept is the subjective evaluation a student does of his own skills in a given subject (Marsh and Craven, 1997). It would be said of a student who believes he is a quick-learner in mathematics that he has a high self-concept with regard to this subject.	Guay, F. and Talbot, D. (2010)	Students	Québec Ontario
<b>School investment</b>	School investment is an indicator related to the dimension of motivation, to the quality of participation in the classroom and the students' self-concept, which is related to the dropout risk in high school.	Janosz, Michel, Sophie Pascal, Luc Belleau, Isabelle Archambault, Sophie Parent and Linda Pagani (2013)	Coordinators Teachers	Québec Ontario
<b>Learning attitude</b>	A learning attitude manifests itself through the following indicators: the student pays close attention, follows directions, finishes his work on time, works independently.	DESROSIERS, Hélène, Virginie NANHOU and Luc BELLEAU (2016)	Coordinators Teachers	Québec Ontario
<b>School attachment level</b>	The school commitment level is one of the facets of school engagement which includes three components: behavioural, emotional and cognitive. School commitment can be considered as part of the emotional dimension of school engagement.	DESROSIERS, Hélène, Virginie NANHOU and Luc BELLEAU (2016)	Students	Québec Ontario PNI France
<b>School engagement</b>	School engagement includes three components: behavioural, emotional and cognitive (Fredricks, Blumenfeld and Paris, 2004). As such, as mentioned by the MELS (2013: 14): "The behavioural dimension manifests itself in the student's behaviour (compliance or non-compliance to the rules) among others, and in his participation in social and extracurricular activities. The emotional dimension relates to his interest in school, his perception of the usefulness of subject matters and his sense of belonging to the school. The cognitive dimension covers his commitment to his learning and the strategies used to learn."	DESROSIERS, Hélène, Virginie NANHOU and Luc BELLEAU (2016)	Students	Québec Ontario PNI France

# APPENDIX I: ANALYZED VARIABLES

VARIABLE	DESCRIPTION	SOURCE	RESPONDENT	TERRITORY
<b>Risk of dropping out</b>	The risk of dropping out refers to three key factors, namely school performance, falling behind at school (repeating a year) and school engagement.	DESROSIERS, Hélène, Virginie NANHOU and Luc BELLEAU (2016)	Students	Québec Ontario France
<b>Type of dropout</b>	Four types of dropout have been identified through a cluster analysis (Janosz et al., 2000): discrete, disengaged, underachiever and maladjusted.	DESROSIERS, Hélène, Virginie NANHOU and Luc BELLEAU (2016)	Students	Québec Ontario
<b>Career choice decisional level</b>	This variable indicates to what extent a student has committed to his career choice.	Gouvernement du Québec, Institut de la statistique du Québec (2018)	Students	Québec Ontario PNI France
<b>Comfort level of career choice</b>	The comfort level indicates to what extent the student is comfortable with his career choice.	Gouvernement du Québec, Institut de la statistique du Québec (2018)	Students	Québec Ontario PNI France



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