

Organ and Tissue Donation Education in the Classroom (Secondary Cycle Two): Chain of Life's Education Program from Québec

EVALUATION REPORT

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Organ and tissue donation education, a sine qua non for a more informed, altruistic and health-conscious society.

RESEARCHERS

Johanne Bédard, Ph.D.

Adjunct professor, Faculty of Education, Université de Sherbrooke (UdeS)

Research Professor Member of the *Centre de recherche interuniversitaire sur la formation et la profession enseignante* (CRIFPE-UdeS) [Interuniversity Research Centre on Teacher Training and the Teaching Profession]



Sherri Bisset, Ph.D.

Program evaluation consultant and assistant clinical professor, Public Health, Université de Montréal (UdeM)



WITH THE COLLABORATION

Lucie Dumont

Founding president of Chain of Life

ESL teacher and education advisor (retired) at the *CSS de Kamouraska–Rivière-du-Loup*.

Judith Rohlf

Administrator, translator, corrector and author for Chain of Life

ESL teacher and education advisor (retired) at the *CSS des Découvreurs*.

CONTACT INFORMATION: CHAIN OF LIFE

Lucie Dumont: luciedumont@chainedevie.org | 418 862-5702 | chainedevie.org

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TO QUOTE THE EVALUATION REPORT

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SUMMARY

In Québec, the Chain of Life organization has developed organ and tissue donation education in the classroom. Since its official launch in 2014, the *Chain of Life Program* has been offered in secondary schools in Cycle Two (in Secondary IV and Secondary V) during English as a Second Language (ESL) classes.

A utilization-focused evaluation enabled the researchers to create a portrait of the role of organ and tissue donation education in the classroom and the innovative contribution of the *Chain of Life Program*. To do this, teachers who had taught the education program to several groups completed an online questionnaire (n=91), after which some of them took part in a one-on-one interview (n=15). The results of the evaluation provide their common and shared representations, revealing the vital role that organ and tissue donation education plays among secondary school students and the efficient contribution of the education program, which is considered to be of excellent quality. Also, a focus-group interview with organ and tissue donation specialists (n=4) corroborates the need to educate not only young people, but also their families, the general public and healthcare professionals. Without a doubt, education is the most promising avenue for informing the public and developing a genuine culture of donation woven into the fabric of Québec society in the hope of saving more lives. Educating young people not only fosters solidarity and altruism, but also works upstream to reduce the incidence of chronic diseases that increase the need for transplants.

More specifically, the education program comprises a pedagogical toolkit, teaching-learning material and other tools geared to a meaningful and dynamic learning and evaluation situation (LES). It motivates students and teachers alike. When young people discuss the issue together, the knowledge and information they acquire is brought back home. Educating students about organ and tissue donation therefore has tangible benefits for them, as well as positive effects on their families and by extension, the general public.

The results of this evaluation clearly expose the scope of school-based education and that of the *Chain of Life Program* and lead to the three findings that follow.

1. Teachers' appreciation of the *Chain of Life Program* and its alignment with ESL in Secondary Cycle Two of the QEP (Gouvernement¹ du Québec, 2007a).
2. The positive effects of the education program on students, their families, teachers and the general population.
3. The power of education as a course of action to foster a culture of organ and tissue donation, a major societal issue.

To put it simply, educating students about organ and tissue donation through the *Chain of Life Program* addresses a major collective concern: how to raise responsible citizens in order to have a society that is more informed, more caring and healthier.

¹ In Québec, certain terms, proper nouns or expressions are generally not translated. This practice has been retained in the Evaluation Report.

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LIST OF ACRONYMS

CCQ	Culture and Citizenship in Québec
CEST	Commission de l'Éthique de la science et de la technologie
ESL	English as a Second Language
ISODP	International Society for Organ Donation and Procurement
ISQ	Québec Institute of Statistics
LES	Learning and evaluation situation
OECD	Organisation for Economic Co-operation and Development
QEP	Québec Education Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

INTRODUCTION

Organ and tissue donation is a societal issue that raises numerous questions with authorities in Québec, Canada and the rest of the world. While promoting organ and tissue donation has always been necessary, educating young people is an “avenue/voice”² that should not be neglected as it holds the promise of a bright future. During a presentation at the 2023 Organ Donation Congress of the International Society for Organ Donation and Procurement (ISODP), Ryan & al. (2023) stated that, “Educating young people is the key to changing culture and increasing support for organ donation” (p. 97).

As an organization at the forefront of organ and tissue donation education, Chain of Life is making an impact in Québec and around the world. Its precursor education program in Québec schools positions the organization as a leader in the field. The *Chain of Life Program* is offered in Québec secondary schools in Cycle Two (in Secondary IV and V), during English as a Second Language (ESL) classes. In order to document the interest and importance of educating young people about organ and tissue donation, an evaluation of the relevance of the education program and its benefits for students and their families was carried out through representations of teachers who have taught the program, as well as specialists in the field.

“Education is the key to a society’s progress and a driving force for change”³

Plan stratégique 2023-2027 – Ministère de l’Éducation
(Gouvernement du Québec, 2023, p. 3)

The report is divided into five parts. The first part places the evaluation in context. The second focuses on organ and tissue donation education for young people. After briefly defining in-school education, it describes the Chain of Life organization and its education program. In the third part, the objectives underlying the evaluation are presented. As for the fourth part, it explains the methodology that was used, that is, the methods of choice, what and whom the sample included, the instrumentation and its tools, analysis of the data collected), ending with the evaluation’s limitations. In the fifth part of the report, the researchers expose and discuss the findings. The evaluation report concludes with a portrait of the role of organ and tissue donation education in the classroom and reveals how the *Chain of Life Program* has made an innovative contribution in this respect.

Enjoy your reading!

² Free translation of: “voie/voix.” (These two words are homonyms in French.)

³ Free translation of: “L’éducation est la clé du progrès d’une société ainsi qu’un puissant facteur de changement” (Gouvernement du Québec, 2023, p. 3).

1. EVALUATION CONTEXT

Considering that “increasingly, charities are being asked to demonstrate the impact of the programs and services they deliver” (Lasby, 2019, p. 1), in January 2022, Chain of Life called upon two university researchers to conduct an external assessment of the evolution of its education program.

Evaluation is defined by the Organisation for Economic Co-operation and Development (OECD, 2002) as a “systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. [...] An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decisionmaking process of both recipients and donors” (pp. 21–22). More specifically, the evaluation of a program (Joint Committee on Standards for Educational Evaluation, 1981) makes it possible, among other things, to recognize the quality and value of the latter by its appreciation, merit, scope, importance and relevance (Scriven, 1991; Yarbrough & al., 2011). Consequently, the evaluation of a program “may address the relevance of the intervention and the means chosen, the implementation of the intervention, its results, the effectiveness with which its objectives are pursued or the efficiency of the action”⁴ (Secrétariat du Conseil du trésor du Québec, 2013, p. 9). In other words, the evaluation will focus initially on building knowledge about the program that will facilitate future decision-making. It will enhance intervention-related actions and foster the reinvestment of exemplary practices, all the while encouraging the mobilization of professionals from the learning community who are interested in the program. Accordingly, the present evaluation conveys the salutary experiential results of the *Chain of Life Program*, which will bolster decision-making, not only by the organization itself, but also in other players in the human development ecosystem (Bronfenbrenner, 1979, 1986) with whom it interacts.

In concrete terms, the education program is a utilization-focused evaluation (Patton & Campbell-Patton, 2021). From this point of view, “evaluation is not only a normative judgment, but above all an enabling judgment [that] is developed in an evolving, iterative and interactive process in which the stakeholders participate”⁵ (Quesnel & al., 2022, p. 31). Thus, having taken part in various stages of the evaluation process, and as the main stakeholder, Chain of Life is considered to be a user of the evaluation. In fact, both the president and certain members of the board of directors played an active role in the following: a) orienting the evaluation process and planning; b) determining the roles and responsibilities; c) formulating the objectives and revising the instruments used to collect data; d) identifying and soliciting the participants; e) examining the results; f) re-reading the evaluation report thoroughly and disseminating it. In addition, the results of this evaluation will be used by the organization to demonstrate the added value of the pedagogical toolkit and other tools that make up the *Chain of Life Program* with regard to their compliance with the Québec Education Program (QEP)⁶ for Secondary Cycle Two (Gouvernement du Québec, 2007a), and the ESL competencies to be developed.

⁴ Free translation of: “pourra aborder la question de la pertinence de l’intervention et des moyens d’intervention choisis, de la mise en œuvre de l’intervention, de ses résultats, de l’efficacité avec laquelle ses objectifs sont poursuivis ou de l’efficience de l’action” (Secrétariat du Conseil du trésor du Québec, 2013).

⁵ Free translation of: “l’évaluation n’est pas uniquement un jugement normatif, mais elle est surtout un jugement habilitant [qui] s’élabore dans un processus évolutif, itératif et interactif auquel participent les parties prenantes” (Quesnel & al., 2022, p. 31).

⁶ The *Québec Education Program* (QEP) is the English version of the *Programme de formation de l’école québécoise* (PFEQ).

The evaluation involves a descriptive study. According to (Fortin & Gagnon, 2016), this latter “aims to obtain precise information about the characteristics, behaviours or conditions of individuals, groups or populations in order to establish an accurate portrait of the situation [...] when existing phenomena are [...] little studied”⁷ (p. 208). Lenoir & al. (2018) speak of “meticulous description, and even classification of facts, of phenomena linked to situations”⁸ (p. 37). In the present evaluation, it’s a question of the “description of the state of affairs as it exists at present” (Kothari, 2004, p. 2), compared with how the *Chain of Life Program* is used. As such, it’s with “a complementary purpose of understanding and explaining”⁹ (Astolfi, 1993, p. 6), that this evaluation documents the relationship between the training that teachers receive from the Chain of Life organization, the implementation of the education program and the changes it generates in students according to teachers’ representations. As a result, it is through this logic of action that the merits of the education program are revealed by highlighting the contextual characteristics that favour its use and contribute to the development of competencies by students, as well as the transfer of information and knowledge to their families.

⁷ Free translation of: “vise à obtenir des informations précises sur les caractéristiques, les comportements ou les conditions des personnes, de groupes ou de populations de manière à dresser un portrait juste de la situation [...] quand les phénomènes existants sont [...] peu étudiés” (Fortin & Gagnon, 2016, p. 208).

⁸ Free translation of: “description minutieuse, voire de classification de faits, de phénomènes liés à des situations” (Lenoir & al., 2018, p. 37).

⁹ Free translation of: “une visée complémentaire de comprendre et d’expliquer” (Astolfi, 1993, p. 6).

2. ORGAN AND TISSUE DONATION EDUCATION FOR YOUNG PEOPLE

Two decades ago, the *Commission de l'Éthique de la science et de la technologie* [Commission on the Ethics of Science and Technology] (CEST, 2004), published a notice, in which one of the recommendations was to raise public awareness about organ and tissue donation, stating that it is “an issue of solidarity for society and for the population”¹⁰ (p. xxx). More specifically, the consultations it held underscored the fact that awareness should be raised through promoting the social value of transplant activities [...]. In addition, numerous participants [...] also brought up the importance of raising young people’s awareness of this issue”¹¹ (CEST, 2004, p. 63). By mutual agreement, if one of the recommendations of the House of Commons (2018) is “that the Government of Canada provide information and education to Canadians” (p. 26), Transplant Québec (2020) reiterates “the importance of continuing—even steadily bolstering—its efforts to educate the general public”¹² (p. 2) through its “participation in awareness activities, namely in schools, [...] or even in the Chain of Life Challenge”¹³ (p. 10) that brings together children, teens and adults. Since awareness and education are intertwined and interrelated, The Kidney Foundation of Canada, Québec Branch (2024), recommends investing in a provincewide public awareness and education campaign because it “believes it’s important to raise organ donation awareness among both the younger and older generations. Specifically, the Foundation suggests including a component of the campaign in the school curriculum”¹⁴ (p. 5).

From this standpoint, educating young people is a solution to prioritize as a favourable context for guaranteeing the success of organ and tissue donation awareness among the general population. Indeed, “according to several studies, education in the classroom helps improve young people’s perception of organ donation”¹⁵ (Altarbouch & al., 2021, p. 79). As Transplant Québec (2024) points out, “In fact, the majority of the world’s highest performing organ donation legislations provide for organ donation education as part of their school curricula”¹⁶ (p. 23). Furthermore, educating students would extend beyond school and reach families. Altarbouch & al. (2021), who conducted a comparative study of effective practices in ten jurisdictions, including Québec,¹⁷ found that “educating close friends and families and raising awareness of organ donation beginning at the school-aged level, are factors that can have a positive impact on families’ willingness to consent, as well as on their willingness to respect their loved one’s consent”¹⁸ (p. 54).

¹⁰ Free translation of: “un enjeu de solidarité pour la population” (CEST, 2004, p. xxx).

¹¹ Free translation of: “devrait passer par la valorisation sociale des activités de greffe [...]. De plus, de nombreux participants [...] ont aussi abordé l’importance de sensibiliser les jeunes à ce sujet” (CEST, 2004, p. 63).

¹² Free translation of: “l’importance de poursuivre, voire renforcer sans cesse les efforts d’éducation auprès de la population” (Transplant Québec, 2020, p. 2).

¹³ Free translation of: “participation à des activités de sensibilisation, notamment dans des écoles [...] ou encore lors du Défi Chaîne de vie” (Transplant Québec, 2020, p. 10).

¹⁴ Free translation of: “juge important de conscientiser tant les jeunes que les moins jeunes afin d’augmenter la sensibilisation au don d’organes. Elle suggère notamment d’inclure un volet de cette campagne dans le cursus scolaire” (Fondation du rein, Division du Québec, 2024, p. 5).

¹⁵ Free translation of: “selon plusieurs études, la formation en milieu scolaire aide à améliorer la perception qu’ont les jeunes sur le don d’organes” (Altarbouch & al., 2021, p. 79).

¹⁶ Free translation of: “la majorité des législations les plus performantes en matière de don d’organes prévoient d’ailleurs une formation sur le don d’organes au sein de leur cursus scolaire” (Transplant Québec, 2024, p. 23).

¹⁷ Ontario, Nova Scotia, British Columbia, Croatia, Australia, Pennsylvania, Spain, France, Great Britain and Québec.

¹⁸ Free translation of: “l’éducation des proches et la sensibilisation au don d’organes dès le niveau scolaire sont des facteurs qui peuvent avoir un impact sur la volonté des familles à consentir, mais aussi sur leur volonté à respecter le consentement de leur proche” (Altarbouch & al., 2021, p. 54).

Education is, therefore, a place for information, dialogue and awareness about this current issue involving the health—even the lives—of everyone of us.

2.1 Defining Education in the Classroom

The notion of education encompasses many facets. Although there is no single definition of the act of educating, more than a hundred years ago, Durkheim (1922) referred to the collective function of education as the action exerted to form the “social being” by putting forward social practices through society’s work on itself. In a similar point of view, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2021) specifies that education is a shared societal project that “has long played a foundational role in the transformation of human societies. [...] It connects us with the world and to others, exposes us to new possibilities, and strengthens our capacities for dialogue and action” (p. 7). UNESCO (2021) also speaks of a heritage of common knowledge bequeathed in the form of a social contract that corresponds to “an implicit agreement among members of a society to cooperate for shared benefit [...] of which] the point is a shared vision of the public purposes of education” (p. 2).

Today’s school “is officially recognized as being the major place for health education”¹⁹ (Grenier & Otis, 2010, p. 1), where young people “learn to learn” (Tardif & Lessard, 2016, p. 193) the importance of “acquiring competencies and developing behaviours that promote educational success, health and well-being” (Gouvernement du Québec, 2005, p. 1). As a result, both school stakeholders and community partners are mobilizing in order to “reinforce or consolidate the presence of school-based health education”²⁰ (Turcotte & al., 2007, p. 64). According to the World Health Organization (WHO, 1998), “Health education comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health” (p. 4). As for the promotion of health, a number of strategies and courses of action are proposed, stipulating that the “Access to education and information is essential to achieving effective participation and the empowerment of people and communities” (WHO, 1998, p. 2). As revealed in the *Québec Health Survey of High School Students 2016–2017*, conducted by the Institut de la statistique du Québec [Québec Institute of Statistics] (ISQ, 2018a, 2018b), a close link must be established between a young person’s social environment, that is, family, friends, school and community, with the school and community playing a major role. From then on, elementary and secondary schools open their doors to organizations that become their partners in providing health education in one form or another.

By way of illustration, here are three reputable organizations that, in partnership with Québec schools, designed and implemented innovative education projects and programs about health and well-being. Their ongoing success has inspired and guided children and teenagers—and even their parents—by a transfer of the knowledge acquired and the competencies developed at school into the home. As is the case with Chain of Life and its organ and tissue donation education program, which is presented in the following subsection, these organizations offer schools, not only an innovative program but also comprehensive turnkey material to guide the education of young people, which is then passed on to their families and loved ones. In addition, each of the programs has been evaluated and a positive degree of satisfaction accorded by the participants, whether they be young people, their parents or teachers. In short, educating our youth can be considered a winning solution for tomorrow’s society.

¹⁹ Free translation of: “est officiellement reconnue comme lieu majeur d’éducation à la santé” (Grenier & Otis, 2010, p. 1).

²⁰ Free translation of: “de renforcer ou de consolider la présence de l’éducation à la santé en milieu scolaire” (Turcotte & al., 2007, p. 64).

- a) Ever since 2003, Les Ateliers cinq épices,²¹ founded in 1989, have been offering the project *Petits cuisiniers-Parents en réseaux* [*Little Cooks—Parental Networks*]. This project offers cooking-discovery workshops in daycare (ages 2–5) and cooking-nutrition workshops, in which teachers participate, in elementary schools (ages 4–12) in various regions of Québec. Through the *Little Cooks (Petits cuisiniers)* component, “Healthy eating is best promoted through action. By experimenting in a fun way, students gain the ability to initiate a positive change in their eating habits”²² (Les Ateliers cinq épices, 2021, p. 11) for their health and well-being. As for the *Parents en réseaux* component, it qualifies as “an experiment in social responsibility [...] based on parent participation in hands-on cooking-nutrition workshops and consolidation activities [...], bringing together parents, the school, and neighbourhood organizations”²³ (Bédard & al., 2011, p. 265).
- b) Founded in 1991, Équilibre²⁴ has been offering the *Bien dans sa tête, bien dans sa peau* [*Good in Your Head, Good in Your Skin*] program since 1996. Through a variety of activities and resources, the organization promotes a positive body image and healthy lifestyle habits among elementary and secondary school students. Physical education and health teachers are encouraged to participate with “activities to raise awareness, mobilize and transfer knowledge”²⁵ (Équilibre, 2022, p. 12). More specifically, in Québec secondary schools, in order to promote health and well-being among teens (ages 12–17), the program targets “the development of healthy attitudes and behaviours (regarding weight and the body; diet and physical activity) as well as fostering self-esteem and respect for others, regardless of their body shape”²⁶ (Blackburn & al., 2019, p. 7).
- c) Founded in 2007, *Fillactive*²⁷ (*FitSpirit*) proposes extracurricular activities, resources and tools, designed for Québec secondary schools enrolling girls (ages 12–17). With the organization, teenage girls “can develop a strong sense of belonging in an inspiring group and have access to positive and diverse female role models, while at the same time having fun doing each activity”²⁸ (Fillactive, 2021, p. 5). The educational activities, described as unifying, attractive, innovative and varied, aim to encourage teenage girls to be active for life by creating unforgettable moments for them, targeting their health and well-being. “Fillactive stands out as one of the few in-school programs to promote a non-competitive multisport option [...] rolled out with a genuine concern for respecting the particularities of its target audience”²⁹ (Leduc & Marois, 2023, p. 26).

²¹ Free translation of: “la promotion d’une saine alimentation s’optimise dans l’action. En faisant l’expérience dans le plaisir, les élèves sont en mesure d’initier un changement positif dans leurs habitudes alimentaires” (Les Ateliers cinq épices, 2021, p. 11).

²² Les Ateliers cinq épices: <https://www.cinqepices.org>

²³ Free translation of: “s’inscrit comme une expérience à la responsabilité sociale [...] basée sur la participation des parents aux ateliers de cuisine-nutrition et à des activités de consolidation [...] mettant en relation les parents, l’école et les organismes de quartier” (Bédard & al., 2011, p. 265).

²⁴ Équilibre: <https://equilibre.ca>

²⁵ Free translation of: “des activités de sensibilisation, de mobilisation et de transfert de connaissances” (Équilibre, 2022, p. 12).

²⁶ Free translation of: “le développement d’attitudes et de comportements sains par rapport au poids et au corps, à l’alimentation et à l’activité physique, en plus de promouvoir l’estime de soi et le respect des autres, quel que soit leur format corporel” (Blackburn & al., 2019, p. 7).

²⁷ Fillactive: <https://fillactive.ca/a-propos/mission>

²⁸ Free translation of: “peuvent développer un lien d’appartenance fort dans un groupe inspirant, avoir accès à des modèles féminins positifs et diversifiés tout en ayant du plaisir à travers chaque activité” (Fillactive, 2021, p. 5).

²⁹ Free translation of: “Fillactive se distingue en étant l’un des rares programmes à promouvoir une offre multisports non compétitive en milieu scolaire [...] déployée dans un réel souci du respect des particularités de son public cible” (Leduc & Marois, 2023, p. 26).

Thus, there is no longer any need to defend the merits of education, since it is a universal human right that acts as a lever for change in individuals and societies. UNESCO (2021) perceives education as the “collective knowledge resources of humanity that have been accumulated over generations” (p. 2). The interest is all that much greater to focus on promising practices with young people that favour lifelong learning (UNESCO, 2020) for social cohesion. According to the Conseil de l’Europe (2005), social cohesion resides in “society’s ability to secure the longterm well-being of all its members, including equitable access to available resources, respect for human dignity with due regard for diversity, personal and collective autonomy and responsible participation” (p. 23). To sum it up, “As a shared societal endeavour, education builds common purposes and enables individuals and communities to flourish together” (UNESCO, 2021, p. 2). Consequently, educating young people about organ and tissue donation will increase their understanding and awareness, eventually generating attitudes at the heart of society through the creation of a dynamic vitality in situ, transferable and reproducible over time.

Educating “active and responsible citizens in society throughout their lives [...] forms the basis of the mission of Québec schools”³⁰

Plan stratégique 2023-2027 – Ministère de l’Éducation
(Gouvernement du Québec, 2023, p. 3)

2.2 Chain of Life and Its Education Program

Since the official launch of the education program in 2014, and the recognition of Chain of Life as a charitable organization in 2017, whether through conferences (university population, professional associations and social groups), television and radio interviews or mainstream and specialized press articles, Chain of Life’s media coverage is on a broad (regional, national and international) scale. On numerous occasions, the organization has been asked to speak about the *Chain of Life Program*, which is considered innovative and exemplary. What’s more, the organization has received an impressive number of accolades and various forms of support, confirming the extent of its scope and the vitality of its existence. To learn more, see Appendix A. Chain of Life and its education program shine here and outside Québec and Canada, and the relevance of the education program warrants a closer look. In short, Chain of Life is paving the way for an education rooted in civic engagement, the image of a society that assumes responsibility through collective social capital, of which education is the vector.

2.2.1 History of Chain of Life

Chain of Life³¹ has a unique history marked by altruism and the dedication, determination, perseverance and passion of a highly dynamic team. A woman of heart, its founding president, Ms. Lucie Dumont, created Chain of Life when she was a secondary school ESL teacher and education advisor. Following a classroom visit and the moving testimony of a young Ontarian who was traveling across Canada to talk about organ donation, and who was himself awaiting a transplant, Ms. Dumont set up a committee composed of teachers, students and a staff member from the Centre de services scolaire de Kamouraska—Rivière-du-Loup. Together, in 2007, they designed the very first website to raise awareness about organ and tissue donation. In the wake of this, the creation of stimulating educational activities gave rise to an innovative LES on organ and tissue donation. An LES “is composed of a context, which is associated with a problem, and a set of complex tasks and knowledge-related learning activities [...] and enables students to delve deeper

³⁰ Free translation of: “Éduquer ‘des citoyens actifs et responsables dans la société, tout au long de leur vie [...] constitue la base de la mission de l’école québécoise” (Gouvernement du Québec, 2023, p. 5).

³¹ Chain of Life: <https://chainedevie.org/en>

into the problem”³² (Gouvernement du Québec, 2007b, p. 5). The LES produced by Chain of Life underwent several rewrites by an experienced team, as well as several in-class validations. At the same time, a number of invaluable partners came on board, including Transplant Québec, who validated the scientific information on organ and tissue donation in the LES. In addition, their important contribution enabled the organization to obtain substantial financial assistance from Desjardins to produce the Chain of Life toolkit and design a new website. Finally, in April 2014, after seven years of work requiring energy, determination, commitment and passion, the *Chain of Life Program* officially came into being. As previously mentioned, in 2017, Chain of Life became a charitable organization. The altruistic commitment of the organization can be seen as “a new way of expressing citizenship, extending the dynamics of the organization’s social responsibility”³³ (Conseil d’État, 2018, p. 59).

Organ and tissue donation education enables teenagers aged 15 to 17 to make a personal and informed decision about an important social issue. Not only does this education reach students but also their families. Indeed, families discuss organ and tissue donation at home, sharing personal viewpoints and making their personal decisions regarding organ donation known. Through the *Chain of Life Program*, young people become ambassadors for families, and thus increase discussions, a civic gesture of capital importance to help reduce the number of refusals by families; therefore, increase the number of organ donors. Hence, the slogan: “Youth made aware = Well informed families = More lives saved!” In this perspective, the vision of the Chain of Life organization is the following.

- **Chain of Life’s Vision** – That the *Chain of Life Program* be taught in all secondary schools in Québec—even elsewhere—in order to contribute to saving more lives by capitalizing on the power of young people as agents of change.

The *Chain of Life Program* is also a reminder of the “extreme power of combining the worlds of education and health”³⁴ (Transplant Québec, 2021, p. 5). Young people learn to appreciate the fragility of life and the importance of adopting healthy lifestyle habits in order to maintain a healthy body. Below is Chain of Life’s mission, which is twofold and based on dialogue.

- **Chain of Life’s Double Mission Based on Dialogue** – a) To educate young people aged 15 to 17 about organ and tissue donation so that they may become ambassadors for family discussions. b) To make young people and the general public aware of the inestimable value of a healthy body and the importance of taking care of it.

³² Free translation of: “est composée d’un contexte associé à une problématique et d’un ensemble de tâches complexes et d’activités d’apprentissage liées aux connaissances [...] et permet aux élèves d’approfondir la problématique” (Gouvernement du Québec, 2023, p. 5).

³³ Free translation of: “un nouveau mode d’expression de la citoyenneté, prolongeant la dynamique de la responsabilité sociale” (Conseil d’État, 2018, p. 59).

³⁴ Free translation of: “toute la force de combiner le monde de l’éducation et de la santé” (Transplant Québec, 2021, p. 5).

More specifically, the *Chain of Life Program* is offered in Québec schools, in Secondary Cycle Two (in Secondary IV or Secondary V) in ESL. It is taught by qualified teachers who believe in the values of the program, its didactic and pedagogical strengths and its rich educational content. The following are the values inherent to the *Chain of Life Program*, whose approach is respectful and intergenerational.

- **Solidarity** – The education program raises students' awareness that a society functions better when everyone contributes to its collective well-being. By becoming ambassadors for family discussions on organ and tissue donation, students are actively involved as responsible citizens. A gesture that ultimately helps save lives.
- **Altruism** – Agreeing to donate one's organs and tissues is a conscious and voluntary act of generosity and compassion.
- **Health** – The education program teaches young people awareness of the priceless value of a healthy body and the importance of taking care of it. By adopting a healthy lifestyle, an individual acts upstream to help reduce the growing number of chronic illnesses, including diabetes and hypertension, two real health problems that are on the rise every year.

In addition to the education provided in the classroom through its education program, Chain of Life organizes activities to raise public awareness of the vital role played by each link in the chain of life. For example, each year, the Chain of Life Challenge³⁵ marks *World Organ Donor and Transplant Day*, promulgated by the World Health Organization³⁶ on October 17. On this occasion, young and old alike climb to the top of mountains across Québec and around the world. As Canadian Blood Services³⁷ puts it, the Chain of Life Challenge is “a large gathering where everyone in the donation chain comes together to support Chain of Life, a unique education program, [...] creating a movement uniting all those who are touched by organ donation directly or indirectly.”³⁸ In this way, individuals from the education sector (students, parents and teachers) and from the health sector (doctors and nurses), but also the general population (organ recipients, donor families and citizens), elite climbers and public personalities rally together to bring hope to those waiting for a transplant.

In the welcome area of each venue where the Chain of Life Challenge takes place, a large placard (1.21 x 0.81 m.) provides information about organ and tissue donation, the Chain of Life organization and its education program (Appendix B). Year after year, the Québec media pick up on this event, highlighting the solidarity between education, health and citizens who unite for the cause: “Organ donation education is essential, that’s the message doctors and citizens across Québec have been sending.”³⁹ The Chain of Life Challenge is an activity of solidarity and support for Chain of Life and its educational mission. As its founding president points out, aside from the significant impact from educating young people, “What can truly facilitate organ donation are improving organizational structures in hospitals, supporting families, training

³⁵ Chain of Life (2024). *Climb for Education About Organ and Tissue Donation: October 12–14 and 19–20 2024*. <https://chainedevie.org/en/take-action/take-on-the-challenge>

³⁶ World Health Organization: (In French) <https://www.journee-mondiale.com/74/journee-mondiale-du-don-d-organes-et-de-lagreffe.html>

³⁷ Canadian Blood Services: <https://www.blood.ca/en>

³⁸ Société canadienne du sang (2022). *Professional Education – Learn. Share. Advance. Chain of Life Challenge*. <https://profedu.blood.ca/en/chain-life-challenge>

³⁹ La Presse (2021). *Défi Chaîne de vie – Gravier des montagnes pour sensibiliser au don d'organes* [Chain of Life Challenge — Climbing Mountains to Raise Awareness of Organ Donation]. (In French) <https://www.lapresse.ca/actualites/2021-10-17/defi-chaine-de-vie/gravier-des-montagnes-pour-sensibiliser-au-don-d-organes.php>

healthcare professionals and educating the general population.”⁴⁰ In October 2023, the Chain of Life Challenge highlighted organ and tissue donation education⁴¹ by paying tribute to donor families, an “opportunity to show them that they are supported and to start a discussion about organ donation at home.”⁴² As for the 2024 Chain of Life Challenge,⁴³ it honours volunteer police officers from the Canadian Organ and Tissue Donors Association who provide emergency organ transport, a crucial responsibility that is largely unrecognized by the general public. Taking collective responsibility and acting together are inevitable solutions to the problem of organ and tissue donation, where the Chain of Life organization plays a vital role, not only by educating young people, but also by reaching out to and rallying together the major stakeholders in this issue as part of a unifying social project.

Collective initiatives, such as walks and climbs by students and teachers, as well as by dedicated citizens, are also organized in solidarity with the cause.⁴⁴ During climbing expeditions almost everywhere in the world, “elite climbers carry the Chain of Life flag to the summit.”⁴⁵ In fact, the Chain of Life flag has reached the highest mountain peak on every continent in the world, including Everest! In addition to these inspiring actions, there are other civic gestures, such as that of the two cyclists who, in the summer of 2022, pedaled 5,000 kilometres across Canada⁴⁶ to raise funds for Chain of Life. These are individuals who volunteer their time, their talent and their dedication. In other words, “From so many small gestures, come so many great things” in a magnificent demonstration of solidarity within the population for the cause and in support of school education!

⁴⁰ La Presse canadienne (2022). *Des donneurs de don d’organes escaladeront des montagnes au Québec et à l’étranger* [Organ Donors Are Climbing Mountains in Québec and Abroad]. (In French) <https://www.noovo.info/nouvelle/des-donneurs-dorganes-escaladeront-des-montagnes-au-quebec-et-a-letranger.html>

⁴¹ Journal Le Nord (2023). *Dons d’organes : des témoignages poignants pour sensibiliser les étudiants* [Organ donations: Poignant testimonials to raise student awareness]. (In French) <https://www.journallenord.com/actualite/dons-dorganes-des-temoignages-poignants-pour-sensibiliser-les-etudiants>

⁴² Info dimanche, société (2023). *Défi Chaîne de vie, au-delà du don d’organes* [The Chain of Life Challenge, Beyond Organ Donation]. (In French) <https://www.infodimanche.com/actualites/societe/594988/au-dela-du-don-dorganes>

⁴³ Vimeo (2024). *Promotional Video for the 2024 Chain of Life Challenge* [Promotional Video for the 2024 Chain of Life Challenge]. (In French) <https://vimeo.com/1010586107>

⁴⁴ Chain of Life (2024). *Let’s Walk or Climb for Chain of Life!* <https://chainedevie.org/en/take-action/organize-a-walk-or-a-climb-with-the-flag>

⁴⁵ Chain of Life (2024). *Mountains and Transplants: A Good Parallel.* <https://chainedevie.org/en/take-action/climb-with-the-flag>

⁴⁶ Radio Canada – ICI Ottawa-Gatineau (2022). *Pédaler 5 000 km à travers le Canada pour la sensibilisation au don d’organes* [Pedaling 5,000 km across Canada to raise awareness about organ donation]. (In French) <https://ici.radio-canada.ca/nouvelle/1902372/couple-velo-cycliste-outaouais-don-organes>

2.2.2 Chain of Life Program

First of all, the *Chain of Life Program* is taught in almost every region of Québec, in some one hundred public and private secondary schools, reaching tens of thousands of young people every year. To date, over 300 ESL teachers (including ESL education advisors) have followed the day-long training offered by the organization to ensure that they are properly prepared and equipped to teach the education program and to network with the “great Chain of Life family.” As well, in much smaller numbers, school principals are also involved. In addition, doctors, nurses, transplant recipients and donor families collaborate on the education program through various contributions (e.g., touching testimonials, educational videos).

“Students are actors of change in our society, and it’s the school’s mission to prepare them to participate in this society”⁴⁷

Plan stratégique 2023-2027 – Ministère de l’Éducation
(Gouvernement du Québec, 2023, p. 20)

During the training, a pedagogical toolkit, teaching-learning material and other tools equated to a meaningful and dynamic LES are provided to participants (free of charge). The LES is closely linked to the QEP (Gouvernement du Québec, 2007a) for Secondary Cycle Two (in Secondary IV and Secondary V). More specifically, the *Chain of Life Program* is directly aligned with the ESL program in the subject area Languages by promoting the mobilization and development of competencies that enable students to improve their communication skills while fostering an attitude of openness. Furthermore, the education program aims to integrate and consolidate knowledge, know-how and interpersonal skills related to two broad areas of learning in the QEP (Gouvernement du Québec, 2007a), namely, *Health and Well-Being and Citizenship and Community Life*. In addition, in August 2023, the new *Secondary Culture and Citizenship in Québec Program* (CCQ) (Gouvernement du Québec, 2024) emerged. Although it was optional during the 2023–2024 school year, the program will become mandatory in all Québec schools during the 2024–2025 school year. At the heart of the CCQ program (Gouvernement du Québec, 2024), the following three goals are pursued: “prepare to exercise citizenship in Québec; aim for recognition of oneself and of others; pursue the common good” (p. 3). Participation in the CCQ program (Gouvernement du Québec, 2024) enables students to “develop analytical, reflexive and relational skills by engaging in dialogue and critical thinking, so that they will be prepared to fully exercise their role as citizens of Québec at their current stage of life and in the future” (p. 3) In more specific terms, this program defines citizenship as the “institutionalization of the connection between individuals and a political community through the granting of rights (civil, political and social) and their associated obligations and responsibilities [...] that foster recognition of oneself and of others as well as the pursuit of the common good” (Gouvernement du Québec, 2024, p. 3). This citizenship is inscribed in culture as “a set of more or less formalized ways of thinking, feeling and acting, which are shared and bring people together as part of specific and distinct collectivities” (Gouvernement du Québec, 2024, p. 5). In short, it is through dialogue and the development of critical thinking that young people are able to grow and mature as citizens rooted in the culture of Québec society. In order to do this, LESs that are “meaningful, open and complex” (Gouvernement du Québec, 2023, p. 14) will stimulate the two following competencies: Competency 1 – *Studies cultural realities*; Competency 2 – *Reflects on ethical questions*. It is through dialogue that “students develop their ability to listen, their self-esteem and their openness to others” (Gouvernement du Québec, 2024, p. 5), while critical thinking is an “evaluative, substantive and self-correcting practice that makes use of a variety of resources to determine what is reasonable to hold to be true or to do” (Gouvernement

⁴⁷ Free translation of: “Les élèves sont des acteurs de changement dans la société, et l’école a pour mission de les préparer à participer à cette société” (Gouvernement du Québec, 2023, p. 20).

du Québec, 2024, p. 5). In the long term, LESs must result in a reflexive process regarding civic practices “that involve various ways of expressing ideas and points of view. When engaging in dialogue, students are encouraged to be attentive, discerning and respectful of the dignity of others, while critically examining ideas, points of view and reference points. In this way, they work toward taking their place as citizens in Québec society and participating actively and constructively in democratic life” (Gouvernement du Québec, 2024, p. 6). From then on, citizen participation translates into “a citizenship of each day, made of commitment and solidarity, that reconnects with a fundamental dimension of citizenship: exemplary action. Being a citizen means first and foremost committing to the service of the common good in daily life”⁴⁸ (Conseil d’État, 2018, p. 14).

While developing the three ESL competencies, the LES in the *Chain of Life Program* also proposes a variety of effective approaches and strategies using resources that spark young people’s interest, motivation and civic commitment through the practice of dialogue and critical thinking. In fact, the LES is meaningful because, not only does it prompt students to ask real questions, but it also encourages them to express themselves openly and to freely take charge of their own lives, thereby increasing their motivation and commitment (Houssaye, 1993). Moreover, the activities students engage in allow them to develop cross-curricular competencies (e.g.: Uses information, Exercises critical judgment, Cooperates with Others and Communicates appropriately). Organ and tissue donation is certainly a sensitive topic because it touches upon personal values and is the focus of societal debates. Hence, its ability to foster the development of a range of competencies in students, who “will discuss it among themselves, exchange their different points of view, seek to convince—even influence—each other”⁴⁹ (Hirsch & al., 2015, p. 6) because they “are measuring the ramifications it has on the vary exercise of their citizenship”⁵⁰ (Hirsch & al., 2023, p. 11). As Maxwell & al. (2023) point out, broaching a sensitive issue in class “provides the perfect opportunity for students to develop their intellectual autonomy and critical thinking skills and for teachers to educate them about the democratic values of the society in which they live”⁵¹ (p. 24). Thus, the LES satisfies the recommendations of the ministère de l’Éducation regarding the role of teachers who “work to create an atmosphere conducive to dialogue between members of the learning community in the classroom, where each person feels they can express themselves freely” (Gouvernement du Québec, 2024, p. 14). According to teachers, the *Chain of Life Program* is a turnkey, captivating program that “joins a framework of school-based knowledge and academic outcomes”⁵² (Lebrun & al., 2006, p. 353) through its three components: education, health and social values.

⁴⁸ Free translation of: “une citoyenneté du quotidien, faite d’engagement et de solidarité, renoue avec une dimension fondamentale de la citoyenneté : l’exemplarité par l’action. Être citoyen, c’est d’abord s’engager au service du bien commun dans la vie quotidienne” (Conseil d’État, 2018, p. 14).

⁴⁹ Free translation of: “vont en discuter entre eux, échanger leurs différents points de vue, chercher à se convaincre, voire à s’influencer mutuellement” (Hirsch & al., 2015, p. 6).

⁵⁰ Free translation of: “en mesurent les retombées dans l’exercice même de leur citoyenneté” (Hirsch & al., 2023, p. 11).

⁵¹ Free translation of: “est une occasion privilégiée d’amener les élèves à développer leur autonomie intellectuelle et leur pensée critique, en plus de les éduquer sur les valeurs démocratiques de la société dans laquelle ils et elles vivent” (Maxwell & al., 2023, p. 24).

⁵² Free translation of: “s’insère dans un rapport aux savoirs scolaires et aux finalités éducatives” (Lebrun & al., 2006, p. 353).

First of all, the *Chain of Life Program* consists of the Teacher's Guide, *Celebrating Life Through Organ and Tissue Donation* (Chain of Life, 2015). This comprehensive, full-colour guide, which includes images and photos, incorporates accurate and relevant information on organ and tissue donation, as well as a glossary of pertinent terms. Well organized and easy-to-use, the guide is self-explanatory. Stimulating activities to be carried out in class are explained, leaving room for the teacher's creativity. Also included are evaluation cues, suggestions for pedagogical differentiation to reach all students and additional activities. For each activity, there's a table summarizing the task to be carried out, the approximate time required and the competencies targeted, as well as the didactic material and tools to be used. The variety, quality and relevance of these tools are particularly worth mentioning because they reach students directly and effectively and support their learning in a highly motivating educational environment. Here are a few examples as an idea of the richness of the teaching-learning material and other tools: instructive videos produced by specialists; meaningful testimonials (by teachers and students, as well as transplant recipients and donor families); declarative texts and a touching audio letter; a dynamic PowerPoint presentation and a bilingual, interactive website; a poster of the human body; role-play cards; a USB key filled with resources. To sum up, this material and tools are based on authentic, true-to-life situations to help young people grasp the realities of organ and tissue donation. As well, the teaching-learning material and other resources provide concrete support for active teaching and give teenagers everything they need to form their own enlightened, personal opinion. In addition, procedures and grouping (individually, in dyads, in teams or as a class) are suggested. Second, a 24-page student booklet, illustrated in black and white for photocopying, is available. The following are the main topics covered in the education program.

- The organs and tissues that can be transplanted and the people involved in the donation and transplantation chain.
- Facts and myths surrounding organ and tissue donation.
- The waiting list for an organ.
- Constraints (lack of organs, brain death, limited number of potential donors) and the allocation of organs.
- The importance of making a personal and informed decision about organ and tissue donation and communicating it to your loved ones.
- Health and the essential role organs play.
- Healthy lifestyle habits.
- Certain ethical issues.
- Scientific advances like the artificial heart and stem cells, etc.
- Values of solidarity, generosity and altruism.
- The celebration of life.

It is clear that the *Chain of Life Program* supports the development of Competency 1 – *Studies cultural realities*, from the CCQ program (Gouvernement du Québec, 2024) by encouraging students to practise good citizenship during which they “discover the possible areas of freedom and action as well as the guidelines that provide a framework for collective life in Québec” (p. 16) regarding organ and tissue donation. From the same program, Competency 2 – *Reflects on ethical questions*, is also developed by facilitating through dialogue students' capacity “to understand a situation from an ethical standpoint and to build on an in-depth examination of concepts, points of view and their foundations to choose reference points and responses that foster the recognition of oneself and of others and the pursuit of the common good as part of the informed exercise of citizenship in Québec” (p. 21) regarding organ and tissue donation. Put another

way, in Secondary Cycle Two (in Secondary IV and Secondary V, the two years for which the *Chain of Life Program* is intended), students will learn about organ and tissue donation through themes targeted in the CCQ program (Gouvernement du Québec, 2024), including relationships and compassion, justice and equality and the quest for meaning and world visions.

In other words, at the heart of the *Chain of Life Program*, teenagers are educated about organ and tissue donation so that they can make an informed, personal decision on the issue and, at the same time, become aware of the inestimable value of a healthy body. Indeed, organ and tissue donation education is a “golden opportunity” to bolster healthy lifestyle habits among students. In a context where the demand for organs for transplantation far exceeds the supply—namely due to the ever-increasing incidence of chronic illnesses—it is essential to address the health problems associated with poor lifestyle habits that affect our vital organs (heart, lungs, kidneys, liver, etc.). The guiding principle underlying the health component of Chain of Life is: “awareness of the rarity of organs increases their value; therefore, the importance of keeping them healthy.” What’s more, teenagers become agents of exchanges within their families and within society, present and future, as part of a citizenship of commitment. The latter “is a citizenship rooted [...] in sharing with others”⁵⁴ (Conseil d’État, 2018, p. 61). From this perspective, educating young people is undeniably a solution to be prioritized as a context conducive to the development of civic values, guaranteeing the success of organ and tissue donation among the population. In short, Chain of Life and its education program embody a unifying societal project that mobilizes citizen actions, echoing a crucial issue: organ and tissue donation.

“Educational success is about [...] the adoption of values and attitudes and the development of competencies that will lead to responsible citizens who are ready to play an active role [...] in their community and in society”⁵³

Plan stratégique 2023-2027 – Ministère de l’Éducation
(Gouvernement du Québec, 2023, p. 1)

⁵³ Free translation of: “La réussite éducative vise [...] l’adoption de valeurs et d’attitudes ainsi que le développement de compétences qui formeront des citoyennes et citoyens responsables, prêts à jouer un rôle actif [...] dans leur communauté et dans la société” (Gouvernement du Québec, 2023, p. 1).

⁵⁴ Free translation of: “est une citoyenneté vécue [...] dans le partage avec d’autres” (Conseil d’État, 2018, p. 61).

3. OBJECTIVES OF THE EVALUATION

In light of the above, it seems of interest to document the use of the *Chain of Life Program* as well as its teaching and the effects it has on students, not only through the representations of their teachers but also through those of specialists in organ and tissue donation. With this in mind, the general objective and four specific objectives underlying this evaluation are as follows.

General Objective

To create a portrait of the role of organ and tissue education in the ESL classroom in Secondary Cycle Two and the innovative contribution of the *Chain of Life Program* in this respect

Specific Objectives

1. To characterize the teachers' appreciation of the training, pedagogical toolkit, teaching-learning material and other tools.
2. To establish the rationale for organ and tissue donation education in the classroom as well as for the *Chain of Life Program* and its use.
3. To identify teachers' representations of the effects of students' participation in the education program and how the effects transfer to families.
4. To contextualize the issue of organ donation in Québec: Education in answer to some of the challenges and the contribution of Chain of Life.

Next, the methodology used to document the objectives is explained.

4. METHODOLOGY

The evaluation was carried out in the spring and fall of 2022. Focused on utilization (Patton & LaBossière, 2018), it resulted in a descriptive study (De Ketele & Roegiers, 2015).

To do this, we gave a voice to the players involved in order to identify their representations. Representations, “as a psychological reality”⁵⁵ (Denis & Dubois, 1976, p. 543), correspond to how an individual understands and adapts to his environment (Durkheim, 1898). Both organizer and product of action (Vergnaud, 2007), representations invoke an image grounded in practical knowledge (Mannoni, 1998). Thus, individual (cognitive) representations correspond to stored knowledge (Bernoussi & Florin, 1995) referring to a person’s experience (Le Ny, 1985). Representations can also be social if they are shared and anchored within a group with similar characteristics (Moscovici, 1975, 1988). As Abric (2001) explains, they are “an organized and structured set of information, beliefs, opinions and attitudes”⁵⁶ (p. 82). Social representations act as a “form of knowledge, developed socially and shared, having a pragmatic goal and contributing to the construction of a reality common to a social entity”⁵⁷ (Jodelet, 2003, p. 53). From this comes the interest in bringing to light the representations of those who participated in the evaluation. While individual representations are relevant to a person’s own personal experience, representations that are common and shared socially reflect the consensual dimensions encompassing “good practices.”

4.1 Methods and Means of Collecting Data

The evaluation used both quantitative and qualitative methods (Creswell & Guetterman, 2018) for data collection and analysis (Pluye, 2012, p. 130), without seeking a mixed method. On both explanatory and comprehensive levels (Silva & Sousa, 2016, p. 177), these two methods complement each other so that the advantages of one make up for the weaknesses of the other (Péladeau & Mercier, 1993, p. 116) in order to obtain a more complete and nuanced portrait of the contribution of the *Chain of Life Program* to organ and tissue donation education in the ESL classroom in Secondary Cycle Two.

The quantitative method provides access to new knowledge through data that are equivalent “to observation records” (Fox, 1999, p. 29) by focusing on regularities, trends, recurrences, averages and numerical data (Boudreault & Cadieux, 2018). The qualitative method makes it possible to “describe, interpret, find meaning, explain complex situations, get to know what is particular (individuals or groups)”⁵⁸ (Santiago-Delefosse & Del Rio Carral, 2017, p. 30). In the context of this evaluation, it was to better “understand the meaning [...] of situations and actions, [of the] particular context [and] process by which events and actions take place”⁵⁹ (Maxwell, 1999, p. 42).

⁵⁵ Free translation of: “comme réalité psychologique” (Denis & Dubois, 1976, p. 543).

⁵⁶ Free translation of: “ensemble organisé et structuré d’informations, de croyances, d’opinions et d’attitudes” (Abric, 2000, p. 82).

⁵⁷ Free translation of: “forme de connaissance, socialement élaborée et partagée, ayant une visée pratique et concourant à la construction d’une réalité commune à un ensemble social” (Jodelet, 2003, p. 53).

⁵⁸ Free translation of: “décrire, interpréter, donner du sens, expliquer [des] situations complexes, connaître les singularités (individus ou groupes)” (Santiago-Delefosse & Del Rio Carral, 2017, p. 30).

⁵⁹ Free translation of: “comprendre la signification [...] des situations et des actions, [du] contexte particulier [et du] processus par lequel des événements et des actions ont lieu” (Maxwell, 1999, p. 42).

Methods and Data Collection – Data collection used the following three tools.

- a) An online questionnaire completed by the teachers forming the sample.
- b) A one-on-one interview comprising a sub-sample of the teachers who completed the questionnaire.
- c) A focus group interview with specialists.

4.2 Sampling

The targeted population corresponded to all those who had taken the training provided by Chain of Life. The sampling chosen is called convenience sampling (Etikan & al., 2016) because the selection criterion was based on the voluntary participation of those who had received the training.

Teachers were invited to complete an online questionnaire, after which they were solicited to take part in a one-on-one interview. On April 21, 2022, Chain of Life sent an invitation e-mail to 263 secondary school ESL teachers, five of whom were also education advisors for ESL. On May 5, 2022, a reminder e-mail was sent out to them.

Questionnaire – A total of 40% of them (n=104/263 people) accepted to complete an online questionnaire in the language of their choice (4 in French and 100 in English). The number of years of teaching experience they had was divided equally between those with (more than 20 years' seniority and those having fewer than (under) 20 years, whether in secondary school teaching or as specialized ESL teachers in Secondary Cycle Two. Keeping this in mind, the expertise of the people in secondary school teaching can be broken down as follows: 54 people (51.92%) with more than 20 years' experience and 50 people (48.08%) with 20 years' experience or less (n=34 with 11–20 years' experience [32.69%] and 16 with 2–10 years' experience [15.38%]). As for those who taught ESL, the breakdown of the sample is the following: 50 teachers (48.08%) with more than 20 years' experience and 54 teachers (51.92%) with 20 years' experience or less (n=34 with 11–20 years' experience [32.69%] and 20 with 2–10 years' experience [19.23%]). The sample is spread across 15 of Québec's 17 administrative regions, which represent all the regions⁶⁰ where the training was offered by the organization.

One-on-One Interview – Subsequently, 15 people (10 women and 5 men) who taught/had taught the education program participated remotely in a one-on-one interview in the language of their choice (1 in French and 14 in English). The similarity is also observed between the people with more than 20 years' seniority and those with fewer than 20 years' experience teaching in secondary school, while a slight difference exists between the two groups teaching ESL. The expertise of the participants in secondary school teaching can be broken down as follows: 8 individuals (53.33%) with more than 20 years' experience and 7 individuals (46.66%) with 20 years or less (n=4 with between 16 and 20 years' experience [26.66%] and 3 with between 6–10 years' experience [20.00%]). As for those who taught ESL, the sample is spread out as follows: 6 individuals (40%) with more than 20 years seniority and 9 individuals (60%) with 20 years or less (n=6 with 16–20 years' seniority [40%] and 3 with 2–10 years' seniority [20%]). The sub-sample is spread over the eight administrative regions of Québec where the education program is taught. Table 1 below shows the sociodemographic characteristics of the people who answered the questionnaire and the people who participated in the one-on-one interview.

⁶⁰ At the time of the evaluation, no training was offered in Gaspésie–Îles-de-la-Madeleine and Nord-du-Québec.

Table 1. Sociodemographic Characteristics of the Questionnaire Sample and the Sub-Sample of the One-on-One Interview				
Characteristics	Questionnaire (n=104)		Interview (n=15)	
Gender				
Female			10	66.66%
Male			5	33.33%
Language Chosen by the Respondents				
French	4	3.84%	1	6.66%
English	100	96.15%	14	93.33%
Number of Years Teaching Secondary School				
2–5 years	3	2.88%		
6–10 years	13	12.50%	3	20.00%
11–15 years	11	10.58%		
16–20 years	23	22.12%	4	26.67%
Over 20 years	54	51.92%	8	53.33%
Number of Years Teaching ESL				
2–5 years	6	5.77%	1	6.67%
6–10 years	14	13.46%	2	13.33%
11–15 years	10	9.62%		
16–20 years	24	23.07%	6	40.00%
Over 20 years	50	48.08%	6	40.00%
Regions of Québec				
01 – Bas-Saint-Laurent	11	10.58%	2	13.33%
02 – Saguenay–Lac-Saint-Jean	2	1.92%	1	6.67%
03 – Capitale-Nationale	6	5.77%	1	6.67%
04 – Mauricie	5	4.81%		
05 – Estrie	10	9.62%	1	6.67%
06 – Montréal	4	3.85%		
07 – Outaouais	3	2.88%	1	6.67%
08 – Abitibi-Témiscamingue	3	2.88%		
09 – Côte-Nord	1	0.96%		
12 – Chaudière-Appalaches	3	2.88%		
13 – Laval	6	5.77%		
14 – Lanaudière	16	15.38%	3	20.00%
15 – Laurentides	13	12.50%	2	13.33%
16 – Montérégie	18	17.31%	4	26.67%
17 – Centre-du-Québec	3	2.88%		

Questionnaire – Teachers who completed the questionnaire (n=104/263 people) attended the training on the LES provided by the Chain of Life organization between 2013 and 2022 (at the time of the evaluation), that is, over a period of eight school years. As shown in Table 2 below, there were between 17 and 19 people (16.35% and 18.27%) during three school years and 13 or 14 people (12.50% and 13.46%) during three

other school years, for a total of six school years. The 2020-2021 school year (2 people or 1.92%) and 2021-2022 school year (7 people or 6.73%) are indicative of the COVID-19 pandemic in Québec,⁶¹ during which public health measures were put in place.

One-on-One Interview – As far as the one-on-one interview is concerned, participation in the training by the 15 teachers spans six of the eight school years in which the training on the LES was given (no one in 2020-2021). The 2014–2015 school year boasts the largest number of these teachers (n=6, or 40%). Table 2 below shows when the training was followed by teachers who completed the questionnaire and those who took part in the interview.

School Years	Questionnaire (n=104)		Interview (n=15)	
2013–2014	19	18.27%	2	13.33%
2014–2015	14	13.46%	6	40%
2015–2016	14	13.46%	1	6.67%
2016–2017	17	16.35%	2	13.33%
2018–2019	18	17.31%	2	13.33%
2019–2020	13	12.50%	1	6.67%
2020–2021	2	1.92%		
2021–2022	7	6.73%	1	6.67%

Questionnaire – Although 40% of the people invited to participate answered the questionnaire (n=104/263 people), only 35% of them (n=91/263 people) have taught the education program. Consequently, for the purposes of this evaluation, **we focused our attention on the 91 teachers who have taught the Chain of Life Program** (questionnaire and interview). The number of years teaching it, whether in Secondary IV or Secondary V, ranged from one to four years for 61 individuals (67.03%) and from five to eight years for 30 individuals (32.97%). However, a teacher can work at both levels. In Secondary IV, while 52 individuals (57.14%) have never taught the program, 39 individuals (42.86%) have. In Secondary V, while 15 people (16.49%) have never taught the program, 76 (83.52%) have implemented it in their groups. This is almost twice as many teachers as in Secondary IV.

One-on-One Interview – The teachers participating in the one-to-one interview all have taught/taught the education program for at least two years (without specifying at which level, Secondary IV or Secondary V). In Secondary IV, 10 teachers have taught/taught it between two and four years and 5 teachers, between five and eight years. In Secondary V, 8 teachers have taught/taught it between two and four years, compared to 7 teachers, between five and eight years. Table 3 presents these results.

⁶¹ Institut national de santé publique du Québec (2024). *Ligne du temps COVID-19 au Québec* [COVID-19 Québec timeline]. (In French) <https://www.inspq.qc.ca/covid-19/donnees/ligne-du-temps>

Table 3. Number of Years Teaching the Education Program				
Characteristics	Questionnaire (n=104)		Interview (n=15)	
Number of Years Teaching the Education Program, Regardless of the Level				
1 year	18	19.78%		
2 years	13	14.29%	2	13.33%
3 years	17	18.68%	3	20.00%
4 years	13	14.29%	3	20.00%
5 years	11	12.09%	2	13.33%
6 years	3	3.30%	2	13.33%
7 years	8	8.79%	1	6.67%
8 years	8	8.79%	2	13.33%
Number of Years Teaching the Education Program in Secondary IV				
Never	52	57.14%		
1 year	18	19.78%	2	13.33%
2 years	9	9.89%	2	13.33%
3 years	4	4.40%	2	13.33%
4 years	2	2.20%	4	26.67%
5 years	4	4.40%	2	13.33%
6 years			1	6.67%
7 years	2	2.20%	1	6.67%
8 years			1	6.67%
Number of Years Teaching the Education Program in Secondary V				
Never	15	16.48%		
1 year	17	18.68%		
2 years	20	21.98%	2	13.33%
3 years	11	12.09%	3	20.00%
4 years	10	10.99%	3	20.00%
5 years	6	6.59%	2	13.33%
6 years	4	4.40%	2	13.33%
7 years	5	5.49%	1	6.67%
8 years	3	3.30%	2	13.33%

Focus Group Interview – The focus group Interview was conducted remotely with four organ and tissue donation specialists widely recognized in their respective field of health or education. To do this, two groups (n=2 in French; n=2 in English) were formed. The focus group interview in French took place with Dr. Pierre Marsolais, an internist, intensivist and the organ and tissue donation coordinator at the Centre intégré universitaire de santé et de services sociaux du Nord-de-l'Île-de-Montréal (founding president of *Mission du Dr Marsolais*⁶²) and Ms. Catherine Jolivet, a teacher in France (co-president of the association *Al.é.lavie, Alexis, une énergie pour la vie*⁶³). The focus-group interview in English took place with

⁶² Dr. Pierre Marsolais – *Mission du Dr Marsolais*: <https://missiondrmarsolais.org>

⁶³ Ms. Catherine Jolivet – *Al.é.lavie, Alexis, une énergie pour la vie*: <https://www.alelavie.fr>

Ms. Jenny Ryan,⁶⁴ a scientific communications specialist at Canadian Blood Services (head of the in-school education portfolio) and Ms. Wendy Sherry,⁶⁵ a resource nurse in organ and tissue donation at McGill University Health Centre (a builder of a culture of donation).

4.3 Instrumentation

The evaluation used three methods of data collection to document the general objective, which was to establish a portrait of the role of organ and tissue donation education in the ESL classroom (in Secondary Cycle Two) and the innovative contribution of the *Chain of Life Program* in this regard. To this end, three instruments were developed: an online questionnaire, a semi-structured one-on-one interview guide and a focus group interview guide. The three instruments were first written in French and validated. They were then translated into English and validated. It should be noted that for both the questionnaire and the interview, participants were asked to fill in a sociodemographic information form beforehand. The instruments are available in Appendix C.

4.3.1 The Online Sociodemographic Information Form

The sociodemographic information covers the social and demographic aspects of the sample by allowing us to characterize the teachers who completed the questionnaire and those who participated in the individual interview. The sociodemographic information form consisted of dichotomous (e.g., yes or no) and multiple-choice questions, that is, “a series of possible answers arranged in a specific order” (Fortin & Gagnon, 2016, p. 329). Open-ended questions were also included. This form provided the following information, among others, for each participant: the number of years spent teaching secondary school and the number of years spent teaching ESL in Secondary IV or Secondary V; the administrative region in Québec; the school year in which the training on the program was followed; the number of years spent teaching the education program to various groups in Secondary IV and/or Secondary V.

4.3.2 The Online Questionnaire

The purpose of the questionnaire is to “gather factual information about known events or situations, attitudes, beliefs, knowledge, impressions and opinions”⁶⁶ (Fortin & Gagnon, 2016, p. 326), as well as representations (De Ketele & Rogiers, 2015). Flexible and versatile in its structure and administration (Durand & Blais, 2016), the online questionnaire followed a Likert-type ordinal response format (Carifio & Perla, 2007) with five modalities (degrees) of response choices available to participants. These five degrees of response were presented on a continuum as follows: strongly agree; agree; agree somewhat; disagree; strongly disagree. This allowed the respondents to situate where they stand according to a given statement rather than be questioned directly about their personal choices (Roussel, 2005). Globally speaking, three questions each contained between three and seven points on which the teachers were asked for their opinion. The responses were used to document the first three specific objectives of the evaluation, which were to characterize their appreciation of the training by the organization, the pedagogical toolkit, the teaching-learning material and the other tools provided (objective 1); to ascertain the merits of school-based education and the education program (objective 2); and to identify the effects the program had on students and their families (objective 3).

⁶⁴ Ms. Jenny Ryan: <https://www.blood.ca/en/taxonomy/term/892>

⁶⁵ Ms. W. Sherry: <https://muhc.ca/our-stories/article/talking-organ-and-tissue-donation-nurse-clinician-wendy-sherry>

⁶⁶ Free translation of: “une série de réponses possibles, disposées selon un ordre déterminé” (Fortin et Gagnon, 2016, p. 326).

Validation of the questionnaire (in French and in English) was carried out by members of the board of directors of the Chain of Life organization. And, last but not least, the organization sent out the questionnaire by e-mail during the third week in April 2022. Teachers were invited to use the hyperlink in the email to connect to the *SurveyMonkey* platform, where tracing the digital source is impossible. To complete the questionnaire (in French or in English), approximately twenty minutes were required.

4.3.3 Semi-Directed One-on-One Interview Guide

In particular, the one-on-one interview makes it possible “to make the other’s universe explicit [and] it aims to understand the other’s world”⁶⁷ (Savoie-Zajc, 2016, p. 343). The aim of the semi-structured one-on-one interview was to explore the first three specific objectives in greater depth by identifying the participants’ representations of “their feelings, thoughts and experiences on predetermined themes [...] organized around a series of questions”⁶⁸ (Fortin & Gagnon, 2016, p. 320). The themes retained for the one-on-one interview guide were: interest in the Chain of Life organization (four questions); teaching the education program (five questions); the training provided by the organization and the education program itself (four questions).

Like the questionnaire, the one-on-one interview guide was validated (in French and in English) by members of the board of directors of the Chain of Life organization. Finally, the one-on-one interview, which took between 30–45 minutes, was conducted (in French or in English) between mid-May and the first week in July 2022 by one of the researchers.

4.3.4 Semi-Directed Focus Group Interview Guide

The focus group interview “allows for a deeper understanding of the responses provided”⁶⁹ (Geoffrion, 2016, p. 402) “by creating a suitable social environment in which group members are stimulated by the ideas and perceptions of their peers”⁷⁰ (Fortin & Gagnon, 2016, p. 322). Carried out with specialists, the latter aimed to contextualize the issue of organ donation in Québec by situating the purpose of education and the contribution of the Chain of Life organization (objective 4). Keeping this in mind, the semi-directed focus group interview guide was elaborated by the president of the organization and the researchers in collaboration. It comprised six questions and a series of sub-questions.

The semi-directed focus group interview guide was also validated (in French and in English) by members of the board of directors of the Chain of Life organization. Approximately 60 minutes long, the focus group interview was moderated (in French or in English) by the president of the organization and one of the researchers during the month of September 2022.

⁶⁷ Free translation of: “de rendre explicite l’univers de l’autre [et] vise la compréhension du monde de l’autre” (Savoie-Zajc, 2016, p. 343).

⁶⁸ Free translation of: “leurs sentiments, leurs pensées et leurs expériences sur des thèmes préalablement déterminés [...] organisés autour d’un ensemble de questions” (Fortin & Gagnon, 2016, p. 320).

⁶⁹ Free translation of: “permet une compréhension plus approfondie des réponses fournies” (Geoffrion, 2016, p. 402).

⁷⁰ Free translation of: “en créant un environnement social propice dans lequel les membres du groupe sont stimulés par les idées et les perceptions de leurs pairs” (Fortin & Gagnon, 2016, p. 322).

4.4 Data Analysis

As part of a descriptive study, data collection makes use of two methods of analysis: a quantitative method (answers to the questionnaire) and a qualitative method (comments made during the one-on-one interview and the focus group interview).

First of all, the anonymous questionnaire generated descriptive statistics that Albarello & al. (2007) define “as the set of methods for enumerating, classifying, synthesizing and presenting quantitative data about a group of individuals”⁷¹ (p. 11). To this end, univariate analyses—of frequencies and percentages, for example (Howell, 2008), were carried out for the purpose of summarizing the information “in order to make it more intelligible, more useful or more easily communicable”⁷² (Fox, 1999, p. 5). As such, the results stemming from the questionnaire “provide new information and allow us to describe”⁷³ (Boudreault & Cadieux, 2018, p. 154) the teachers’ representations regarding how the *Chain of Life Program* is used and its contribution to organ and tissue donation education in the classroom.

Second, the one-on-one interview and the focus group interview were transcribed verbatim in their entirety. The verbatims of the one-on-one interview were anonymized, while for the focus group interview, the specialists accepted that their names be used. Next, the verbatims in English were translated into French. Finally, a rigorous process enabling an interpretative reading (Huberman & Miles, 2003) of the comments was carried out through a content analysis according to Bardin (2013), and through a process of codification, we were able to “extract meanings [and] configurations”⁷⁴ (Paillé & Muchielli, 2021, p. 73), “identify regularities and detect trends”⁷⁵ (Fortin & Gagnon, 2016, p. 365). Accordingly, the results of the one-on-one interview and the focus group interview bring us “closer to the inner world, representations and intentionality of the human actors engaged in symbolic exchanges”⁷⁶ (Van der Maren, 1996, p. 103) in order to better ascertain the contribution of the education program.

In short, while the questionnaire underscored common, shared values, and the one-on-one interview focused on delving deeper into key elements, the focus group interview made it possible to situate and clarify a range of information related to organ and tissue donation on a societal level.

4.5 Limitations of the Evaluation

As with any study, this evaluation has a number of limitations of various forms. First of all, the lack of prior research on the *Chain of Life Program* and its implementation in Québec secondary schools limited us to a descriptive, utilization-focused evaluation in order to provide an initial portrait of this innovative and unique school-based initiative. Second, the convenience sampling was made up of volunteers corresponding to just over a third of the total number of teachers who had taught the education program, that is, (n=91 people) for the questionnaire and one-sixth of the latter for the interview (n=15 people). Third, the distribution of the

⁷¹ Free translation of: “comme l’ensemble des méthodes de dénombrement, de classement, de synthèse et de présentation de données quantitatives relatives à un ensemble d’individus” (Albarello & al., 2007, p. 11).

⁷² Free translation of: “afin de la rendre plus intelligible, plus utile ou plus aisément communicable” (Fox, 1999, p. 5).

⁷³ Free translation of: “fournissent de nouvelles informations et permettent de décrire” (Boudreault et Cadieux, 2018, p. 154).

⁷⁴ Free translation of: “extraire des significations [et] des configurations” (Paillé & Muchielli, 2021, p. 73).

⁷⁵ Free translation of: “relever des régularités et déceler des tendances” (Fortin & Gagnon, 2016, p. 365).

⁷⁶ Free translation of: “du monde intérieur, des représentations et de l’intentionnalité des acteurs humains engagés dans des échanges symboliques” (Van der Maren, 1996, p. 103).

questionnaire and the one-on-one interview was spread out between mid-May and the first week of July, a particularly busy period for teachers. Thus, both the type of sampling and the time constraint caused by the data collection period had an effect on the sample size, making it impossible to generalize the results. Furthermore, the fact that it was the organization that sent out the online questionnaire and ensured the follow-up (reminder e-mail) may have caused a desirability bias among teachers or may have been perceived as an accountability issue by them, even though the questionnaire was anonymous. Fourth, validation of the instruments (questionnaire, one-on-one interview guide and focus group interview guide) was carried out by members of the organization. In addition, the instruments, written in French and translated into English, were validated by the same individuals. Consequently, there was no outside validation. Fifth, the majority of the teachers completed the questionnaire in English and participated in the one-on-one interview in English. Thus, a bias linked to their translation is possible (e.g., ambiguity in some of the wording). Also, the verbatims of the one-on-one interview and the focus group interview were translated into French for the purpose of analysis. As such, it is possible that there may be a bias associated with the translation. Finally, the questionnaire was completed anonymously, so no direct correlation can be established between the answers provided in the questionnaire and what was said during the one-on-one interview. Responses collected from the questionnaire were used exclusively in univariate (one-way) analyses.

Despite the limitations outlined above, the evaluation constitutes a first descriptive look at the teaching of organ and tissue donation to secondary school students. It enables the identification of teachers' individual representations, as well as those they share, regarding their experience surrounding the *Chain of Life Program* and its effects on students and their families.

5. PRESENTATION AND DISCUSSION OF THE RESULTS

The presentation of the results of the utilization-focused evaluation highlights the representations of those who participated in the descriptive study. Centred on their common and shared representations, these results document the overall objective, which was to form a portrait of the role of organ and tissue donation education in the ESL classroom in Secondary Cycle Two and the innovative contribution of the *Chain of Life Program* in this respect.

To achieve this, both quantitative and qualitative methods were used, with each providing distinct information and enriching the other (Bugeja-Bloch & Couto, 2021). Consequently, this establishes a “dialogue” between the results of the questionnaire⁷⁷ completed by teachers who have taught the *Chain of Life Program* (n=91 people), the one-on-one interview in which some of the latter took part (n=15 people), as well as the focus group interview conducted with specialists (n=4 people).

The results provide information on each of the specific objectives by the combination of various themes identified in Table 4 below. They are then presented and discussed further in subsequent sub-sections.

Specific Objectives	Themes
1. To characterize teachers’ appreciation of the training, pedagogical toolkit, teaching-material and other tools	The relevance of the training offered by the Chain of Life organization
	The pedagogical toolkit, teaching-learning material and other tools as essential resources
2. To establish the rationale for organ and tissue donation education in the classroom as well as for the <i>Chain of Life Program</i> and its use	The benefits of organ and tissue donation education in the classroom
	Alignment of the <i>Chain of Life Program</i> with the teaching of ESL
	The teaching of the education program and how the teaching-learning material and other tools are used
3. To identify teachers’ representations of the effects of students’ participation in the education program and how the effects transfer to families	The effects the education program has on students’ learning
	The effects the education program has on families, from school to home
	Les effets teaching the education program has on teachers
4. To contextualize the issue of organ donation in Québec: Education as an answer to some of the challenges and the contribution of Chain of Life	Donor families
	Access to resources by the hospital sector and for education
	Educating the general population
	The Chain of Life organization: fostering collaboration between education and health

⁷⁷ **Questionnaire** – Please note that the respondents were invited to indicate their level of agreement on a scale of 1 to 5 (strongly agree; agree; agree somewhat; disagree; strongly disagree) for each statement. Considering that very few individuals ticked “disagree” (D) or “strongly disagree” (SD), these degrees of disagreement are indicated by letters in parentheses.

5.1 Characterizing the Teachers’ Appreciation of the Training, Teaching-Learning Material and Other Tools

5.1.1 Relevance of the Training Offered by the Chain of Life Organization

Questionnaire – The issue surrounding organ and tissue donation is not generally your typical topic of conversation in everyday life, nor is it part of initial teacher training programs in French-language universities in Québec. While organ and tissue donation education heralds good practice, educating teenagers in a school setting can be described as *avant-garde*. Therefore, on the questionnaire, teachers were asked to indicate their level of knowledge regarding organ and tissue donation prior to receiving the training from the Chain of Life organization. Although a little over a quarter of them (28.60%) state that they did in fact have a very strong or strong degree of previous knowledge about the issue, fewer than a seventh of the respondents (13.19%) agree only “somewhat” with this statement. Finally, by disagreeing or strongly disagreeing, a little over half of the teachers (58.25%) claim they had no knowledge per se or no knowledge at all about organ and tissue donation beforehand. Regardless of their level of knowledge about organ and tissue donation, four-fifths of the teachers (81.31%) consider that the training provided by Chain of Life is essential for them to be able to teach the education program and less than one-sixth (15.38%) have a mixed opinion, indicating that they only “agree somewhat.” Appreciation of the training provided by the organization reveals representations that are common and shared in a significant way by a good proportion of the sample, who considers it fundamental. Table 5 below shows the results.

Table 5. Relevance of the Training Offered by the Chain of Life Organization	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	Before the training, the teachers had knowledge about organ and tissue donation	4	4.40%	22	24.18%	12
	28.60%				(40 D and 13 SD)	
Teachers believe that the training by Chain of Life is essential in order to be able to teach the education program	41	45.05%	33	36.26%	14	15.38%
	81.31%				(2 D and 1 SD)	

One-on-One Interview – During the one-on-one interview, teachers were very appreciative of the training provided by Chain of Life. Analysis of the verbatims establishes an interrelationship between the quality of the training, which is practical, and the thoroughness and the accuracy of the information provided, but also on the excellence of the dynamic and energizing presentation, which sparks the desire to teach the education program. Although the qualifiers used vary, the comments reflect the effectiveness of the training, making it both possible and stimulating to teach an authentic and important issue. Here are a few segments from comments that were expressed individually.

Extracts from the One-on-One Interview

- It’s rare that I take part in a workshop at the School Service Centre that I enjoy so much.
- During the training, I felt at ease, in my place and already competent!
- I “loved” the training session, which was full of information, comprehensive and really dynamic. The excellent presenters shared real-life teaching experiences.
- Many teachers attended the session. Those who had been teaching the education program for several years explained the strategies they used with their students, and this was very helpful and satisfying.

- During the training, the hands-on activity was extremely well thought-out, tangible and very stimulating. Taking part in it gave me the confidence I need to teach the education program. I felt I was capable of teaching the LES.
- The hands-on training includes authentic and moving testimonials that make you think. It's easy to imagine the positive effects the education program will have on the students and in "real life."
- During and after the workshop, you'll say to yourself, "Wow, teaching about organ and tissue donation really does matter!"

Focus Group Interview – The focus group interview with the specialists (n=4/4) revealed common and shared views on the importance of training teachers. Dr. P. Marsolais points out that teachers need to be trained and supported in order to “tackle a subject as delicate and difficult as organ and tissue donation.” In the same vein, Ms. C. Jolivet adds that, during initial teacher training at university, teachers were not shown how to teach this issue, so they “really need to be trained.” For her part, Ms. J. Ryan emphasizes the organization’s excellent work in offering teachers “the opportunity to teach a subject 'forever.'” For Ms. W. Sherry, Chain of Life is “an example, an extraordinary model of what can be done” regarding organ and tissue donation education in the classroom.

5.1.2 The Pedagogical Toolkit, Teaching-Learning Material and Other Tools as Essential Resources

Questionnaire – During the training, participants receive a pedagogical toolkit, teaching-learning material and other tools equivalent to a relevant and meaningful LES. Teachers who completed the questionnaire are clearly satisfied, as the vast majority (95.60%) state that the pedagogical toolkit, teaching-learning material and other tools are indispensable resources for effective teaching. Appreciation of this outstanding turnkey material provided by the Chain of Life organization yields representations that are significant because they are common and shared across the sample as must-have resources. Table 6 below presents the results.

Table 6. Pedagogical Toolkit, Teaching-Learning Material and Other Tools as Essential Resources	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	The pedagogical toolkit, its teaching-learning material and other tools are indispensable resources.	52	57.14%	35	38.46%	3
	95.60%				(1 SD)	

One-on-One Interview – The teachers’ reflections during the one-on-one interview concur on the undeniable quality of the pedagogical toolkit, its teaching-learning material and other tools, which they describe as valuable and essential turnkey material. An analysis of the comments shared by several participants reveals the following qualities of the Chain of Life material: very well thought-out; high quality; easy to use; flexible; detailed and complete; rich in relevant information; both precise and easy to understand; highly interesting activities and varied tasks that are motivating for teenagers. Here are a few additional details about the material mentioned individually.

- The Information about the human body and how it works is understandable and adequately presented.
- The videos have a direct, immediate and energizing effect.
- The examples are relevant as they are drawn from real-life situations.
- The stories of Stéphanie, Vincent, Hélène and others are authentic and captivating.
- They make it possible for both students and teachers to imagine and “feel” the reality of organ donation.
- The oral activities give rise to lively debates and discussions among the students.
- The texts, videos, role-plays and listening tasks are diversified and help students build knowledge.
- Young people like statistics that surprise and unsettle them, but which, at the same time open their minds to listening, the need to understand and discussion.
- The interactive activities involve teamwork, which motivates their commitment to organ and tissue donation.
- The final writing task asks students to “take action” and presents them with three options: write a letter (e.g., to their family) to explain their wishes regarding organ donation; write a feature article in which they inform other students about organ donation; compose a narrative text. What the kids write is very touching.

Focus Group Interview – During the focus group interview, the specialists (n=4/4) reveal common and shared representations regarding the quality of the education program, the pedagogical toolkit and its teaching-learning material. In this regard, Ms. W. Sherry draws our attention to a particularly interesting fact, noting that “Chain of Life is a bilingual organization. So, I look at what has been created in Québec as a transferable 'pilot project.'” In concrete terms, the bilingual website (the sections *Teach*, *Raise Awareness*, *Read/View* and *Take Action*, as well as the information, testimonials and videos) is a distinct advantage that provides greater visibility among both Francophones and Anglophones. Moreover, since the LES, the teaching-learning material and other tools developed by the organization are in English, they are adaptable and transferable to the rest of Canada and other English-speaking countries, as well as to any country offering ESL or English as a Foreign Language courses. Naturally, the education program could be adjusted to the reality of these countries.

5.2 Establishing the Rationale of Organ and Tissue Donation Education in the Classroom as well as for the *Chain of Life Program* and Its Use

5.2.1 The Benefits of Organ and Tissue Donation Education in the Classroom

Questionnaire – The relevance of educating young people about organ and tissue donation is very obvious to the teachers who completed the questionnaire since the *Chain of Life Program* clearly sparks students' interest, as it does theirs. More specifically, nearly all the teachers (95.61%) confirm that their students appreciate the material covered in class, while four-fifths of them (83.51%) mention the dynamic learning environment in the classroom when presenting the LES. Last but not least, three-quarters of the respondents (74.72%) state that organ and tissue donation education should be integrated into the QEP (Gouvernement du Québec, 2007) in Secondary Cycle Two. The benefits of organ and tissue donation education are therefore reflected in representations that are significantly common and shared by a high proportion of the sample. Table 7 that follows presents the results.

Table 7. Relevance of Organ and Tissue Donation Education in the Classroom	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	Students appreciate the material covered in the LES	38	41.76%	49	53.85%	4
	95.61%				(0)	
The LES on organ and tissue donation education in the classroom creates a dynamic learning environment	34	37.36%	42	46.15%	15	16.48%
	83.51%				(0)	
Organ and tissue donation education should be integrated into the QEP	51	56.04%	17	18.68%	19	20.88%
	74.72%				(4 D)	

One-on-One Interview – An analysis of the teachers' responses during the one-on-one interview leads to the general finding that they all believe unequivocally in the benefits gained by educating students about organ and tissue donation, the relevance of the LES and the interest it generates. In addition, they all agree that Secondary Cycle Two is the ideal level for teaching the program since by then, students are mature enough, not only to discuss and debate about this sensitive subject, but also to make a personal and informed decision regarding it. However, many teachers insist on the importance of their role on two levels. First, to create a classroom environment of respect, where students feel comfortable discussing openly and expressing their opinions on organ and tissue donation, without feeling judged for their personal decision, whatever that may be. And second, to refrain from imposing their own vision, but rather to act as a "transmitter and catalyst" of information in an environment where freedom of expression is valued. Here are a few extracts from individual comments.

- It's a current topic of social and societal interest that informs young people and motivates them to become responsible citizens.
- Students are very attentive and surprised by a lot of things because it's a new and stimulating subject. They learn a lot!
- Organ and tissue donation is an engaging subject for young people and they really get into it.
- The students work in teams and debate their ideas vigorously.
- The LES fosters a climate of mutual sharing between the students and the teacher. It's extraordinary!
- In Secondary Cycle Two, young people discuss organ and tissue donation enthusiastically, and it's the right time for them to make a personal decision about donating their organs.

Focus Group Interview – During the focus group interview (n=4/4), the specialists voice common and shared representations regarding organ and tissue donation education, which they perceive as a crucial issue for society. And while these specialists definitely agree that organ and tissue donation education is of the utmost importance for secondary school students, they also target their families. First of all, regarding the relevance of the education program, Ms. C. Jolivet attributes its excellent quality to the fact that it is “a 'real teaching sequence' designed by experienced teachers.” Ms. J. Ryan points out that this program, “so extraordinary, comprehensive and inspiring for students” also has an impact on teachers, as “it 'educates' them to teach” about organ and tissue donation. Ms. J. Ryan adds that the *Chain of Life Program* “sets itself apart from all other programs [...]; its teaching 'creates young lifelong advocates.’” In a global vision of organ and tissue donation, Dr. P. Marsolais points out that “education has benefits in all respects and at all levels [...], it's a question of understanding.” As Ms. W. Sherry explains, “When families have had a discussion on the subject previously, it has a facilitating effect on making a decision in a critical situation.”

5.2.2 The Alignment of the *Chain of Life Program* with the Teaching of ESL

Questionnaire – The relevance of the *Chain of Life Program* to ESL teaching is demonstrated by a consensus that emerges from the positive responses of the teachers who completed the questionnaire. In fact, almost all of them (94.50%) affirm that the education program is perceived as an added value to the ESL program. In an equal proportion (94.50%), they agree that the LES facilitates the development of the three ESL competencies in the QEP (Gouvernement du Québec, 2007a), that is, C1 (Competency 1) - *Interacts orally in English*; C2 (Competency 2) - *Reinvests understanding of texts*; C3 (Competency 3) - *Writes and produces texts*. What's more, a slightly lower, but still high, percentage (90.11%) mention that the LES is entirely in line with the ESL program in the QEP (Gouvernement du Québec, 2007a). Finally, when participants are asked whether ESL is the right subject for the educational mission of organ and tissue donation in the classroom, more than three-quarters of them (76.92%) “strongly agree” or “agree,” while a quarter of them (21.98%) “agree somewhat” and one person (1.10%) indicates “disagree.” The reason for this is that many secondary schools implement interdisciplinary projects in which the education program is shared with other subject areas in the QEP (Gouvernement du Québec, 2007a). From this perspective, the *Chain of Life Program* is taught on a broader scale, (in collaboration with teachers from other subjects) and becomes an added value to these other subject areas (e.g., languages, French, mother tongue; social sciences; personal development; mathematics, science and technology). The relevance of the education program is expressed most significantly by its compliance with the QEP (Gouvernement du Québec, 2007a)

and ESL teaching, where most of the teachers in the sample express common, shared representations. Table 8 below highlights the results.

Table 8. Alignment of the <i>Chain of Life Program</i> with the Teaching of ESL	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	The integration of organ and tissue donation education into the ESL program in the QEP is seen as an added value	52	57.14%	34	37.36%	4
	94.50%				(1 D)	
The LES facilitates the development of all three ESL competencies	44	48.35%	42	46.15%	2	2.20%
	94.50%				(2 D and 1 SD)	
The LES is fully in compliance with the QEP	50	54.95%	32	35.16%	6	6.59%
	90.11%				(2 D and 1 SD)	
ESL is the ideal subject for promoting the educational mission of organ and tissue donation in the classroom	44	48.35%	26	28.57%	20	21.98%
	76.92%				(1 D)	

One-on-One Interview – The responses given by the teachers during the individual interview leave no doubt as to the alignment of the LES with ESL teaching and the QEP (Gouvernement du Québec, 2007a). Above all, the added value of integrating organ and tissue donation education in ESL lies in the uniqueness of the subject itself. Indeed, many of the participants highlighted the following characteristics. First of all, LES is said to be authentic and sensitive. Young people have heard little or nothing about organ and tissue donation. It’s a universal and powerful subject, referring to the will to live for some people, or to “live on in other bodies” for donor families. Second, the LES clearly develops the three ESL competencies and their components. In effect, students construct their knowledge through the LES, which enables them to exchange and discuss a timely topic that sparks curiosity and fosters highly interesting discussions (Competency 1). The many reinvestment tasks (listening activities, videos, etc.) are meaningful and provide numerous opportunities for students to gain a better understanding (Competency 2) of the issues surrounding organ and tissue donation. Writing an article or a letter addressed to a real audience corresponds to the production of a meaningful text (Competency 3) in an authentic situation. Third, the evaluation of the key features of each competency is entirely feasible as the evaluation criteria are easy to apply. Finally, it is clear to those interviewed that the education program was created by experienced ESL teachers who knew how to transfer their expertise into designing a high-quality education program. In short, teaching the *ESL Chain of Life Program* is by no means an overload for teachers, but rather a “facilitator” for developing and mobilizing the ESL competencies. Here are just a few examples of what teachers had to say.

Extracts from the One-on-One Interview

- In ESL, there were no life-saving LESs about real people (videos) whose lives depended on overcoming real problems. The education program takes us further than school does because we are helping society progress and we’re changing our world.
- Young people want to express their opinions about organ and tissue donation. This involves listening, speaking and writing in English. And so, they develop the ESL competencies in order to build their arguments. Great stuff!
- In ESL classes, students discuss in groups (Competency 1). Since they’re excited by the subject, their exchanges are dynamic. Students also need to appropriate different types of information (Competency 2). This is possible in the LES because of all the activities, texts to read, questions that precede the

videos, etc. Finally, students produce texts (Competency 3) with enthusiasm. In other words, they're interested in organ and tissue donation!

- C2 (Competency 2) has two components: comprehension and reinvestment of information. The C2 tasks go beyond simple comprehension.
- Part of the ESL program is learning how to develop and support an opinion. The LES is a motivating way to work on this with the students because they will be able to transfer what they learn into everyday life.
- The three ESL competencies can be developed in various ways. In addition, the *Chain of Life Program* is probably the best one I've ever seen where you can evaluate each one of them.
- In an ethical debate, we evaluate how convincing the students' arguments were to get the organ they needed.
- It's easy to teach the LES because everything's there and it's about real life!

5.2.3 The Teaching of the Education Program and How the LES Material and Other Tools Are Used

Questionnaire – Teachers who completed the questionnaire were asked to indicate what approximate percentage of ESL teaching-learning material and tools they used in their teaching. First of all, in the QEP, there are two distinct, articulated and evolving programs: the Core Program (ESL) and the Enriched Program (EESL).⁷⁸ Added to these are the differences of the groups linked to specific characteristics and needs of the students. And, just as teachers may teach in both Secondary IV and Secondary V, they may also work with groups in both programs; therefore, the differences observed in the representations. Generally speaking, just over three-quarters of teachers (75.83%) confirm that they use between 75–100% of the material and tools, while just under a quarter (24.17%) say they use 50% or less. Although the exact reason for these variances is not known, three-quarters of the sample have common and shared representations regarding the merits of the teaching-learning material and tools. Table 9 below details the results.

Table 9. (Approximate) Percentage of the Teaching-Learning Material and Other Tools Used to Teach the LES		
Percentage	Questionnaire (n=91)	
100%	21	23.08%
75%	48	52.75%
50%	11	12.09%
25%	6	6.59%
Less than 25%	5	5.49%

Along the same lines, Chain of Life regularly enriches the LES by making new teaching material and tools available. At the time of data collection, the organization had just added another section to the new version of the website and uploaded new material in the form of complementary activities. Although the latter had just been added to the website, almost a quarter of the teachers (23.08%) said they were already familiar with them. This is most certainly an expression of their motivation and investment in the education program. What's more, of the 21 teachers who were already aware of the existence of the complementary activities, one-third of them (33.33%) rated their added value as "excellent," another third as "good" and the third as "average." Thus, the representations shared by these 21 teachers in the sample highlight the validity of the

⁷⁸ Gouvernement du Québec (2024). *Secondary English as a Second Language Program – Official Documents*. (In French) <https://www.quebec.ca/education/prescolaire-primaire-et-secondaire/programme-formation-ecole-quebecoise/secondaire/anglais-langue-seconde>

tools by rating them as having from “average” (33.33%) to “good” and “excellent” (66.66%) added value. Table 10 below shows the results.

Table 10. Familiarity with the Material Available in the New Section of the Website (Complementary Activities) and Its Added Value		
Knowledge/Added Value	Questionnaire	
Familiar with the New Tools (n=91)		
No	70	76.92%
Yes	21	23.08%
Added Value of the New Tools (n=21)		
Excellent Added Value	7	33.33%
Good Added Value	7	33.33%
Average Added Value	7	33.33%

One-on-One Interview – The teachers interviewed explain that because of the flexibility of the LES and the wealth of teaching material included, the education program can be adapted for Secondary IV or Secondary V. What’s more, the choice is left up to the teacher. This same flexibility also goes into choosing the Enriched ESL Program (EESL) over the Core Program (ESL). According to the respondents, while the teaching-learning material is sufficient in and of itself, it also leaves room for creativity and teachers who wish to modify or enhance it to meet the particularities of a group or the special needs of certain students. Here are a few statements gleaned from the verbatims.

Extracts from the One-on-One Interview

- The education program and its teaching material are adaptable according to the ESL program (“core” or “enriched”) we are teaching.
- Because the LES is very well constructed, it can be easily adapted to practise the ESL competency that students need to work on.
- Within the same class, we have students at different levels. It’s possible to use the teaching material in a variety of ways and enrich it even.
- In the student booklet, graphic organizers like a Venn diagram and K-W-L chart (what I know/what I want to know/what I learned) help students organize and structure their ideas.
- The reinvestment tasks proposed in the LES are flexible, thanks to the wide range of teaching-learning material available. It’s all great!
- Depending on their level of ESL, when students have to write a persuasive or argumentative text, I add questions to help them develop their thoughts or arguments. It’s easy to differentiate our teaching.
- In addition to the final writing task (Competency 3), there are suggestions for a final production task (e.g., video clip, public service announcement, poster). This allows students to express themselves according to their talents.
- The material is wonderful for getting students to communicate even more in English.

Focus Group Interview – A number of common and shared representations surface from the discussion with the specialists (n=4/4) in the focus group interview with regard to the array of possibilities opened up by the LES and its teaching-learning material. Different, but complementary strengths stand out. First of all, Ms. J. Ryan points out that the education program “must be taught” in Secondary IV or Secondary V because that’s when young people can get their driver’s license, “an important time to apply what they’ve learned in class and ‘take action’” by signing their consent to donate their organs. Second, specialists agree on the contribution the LES and didactic material make to health. For Ms. C. Jolivet, the LES and didactic material “open the door to a review about how organs function and [...] disease.” She goes on to explain that the program “really allows us to reflect on death and illness [because] death is nonetheless a part of life. It’s extremely important to think about it.” Dr. P. Marsolais adds that “it’s also about presenting all the links in the chain of life. It’s about understanding the great complexity” of the context of organ and tissue donation.

5.3 Identifying Teachers’ Representations of the Effects of Students’ Participation in the Education Program and How the Effects Transfer to Families

5.3.1 The Effects the Education Program Has on Students’ Learning

Questionnaire – The *Chain of Life Program* has a formative effect on students. Nearly all the teachers (97.80%) who completed the questionnaire said that the program enables teenagers to make a personal and informed decision about organ and tissue donation. In addition, over four-fifths (84.62%) agree that the education program helps students appreciate and develop values like solidarity, generosity, altruism and good health. As such, it is in line with the second focus of development (participation, cooperation and solidarity) of the broad area of learning, Citizenship and Community Life, in the QEP (Gouvernement du Québec, 2007a, p 13). With regards to health, according to a similar percentage of teachers (83.52%), bringing the issue of organ and tissue donation into the classroom would also have positive effects on the health of young people by making them more aware of the value of their organs and tissues and the need to take good care of them. In fact, awareness of the rarity of organs increases the value of organ and tissue donation. In this way, young people become agents of change in favour of a culture of organ and tissue donation and by the same token, the adoption of healthy lifestyle habits. In other words, the education program not only helps students establish connections between the classroom and “real life,” but it also encourages them to act responsibly, consistent with the focuses of development in the broad area of learning, Health and Well-Being in the QEP (Gouvernement du Québec, 2007). In sum, the effects of the *Chain of Life Program* on various aspects of student learning highlight representations that stand out significantly as being common and shared among a large number of teachers in the sample. Table 2 below presents the results.

Table 11. Effects the Education Program Has on Students’ Learning	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	Students are equipped to make a personal and informed decision about organ and tissue donation	56	61.54%	33	36.26%	1
	97.80%				(1 D)	
Students appreciate and develop values like solidarity, generosity and altruism	31	34.07%	46	50.55%	12	13.19%
	84.62%				(2 D)	
Students become aware of the value of their organs and the need to take care of them	21	23.08%	55	60.44%	11	12.09%
	83.52%				(4 D)	

One-on-One Interview – The one-on-one interview provided an opportunity for teachers to expand on the benefits of the education program. It's worth noting that all of them pointed out the thoroughness of the information provided, which enables students to make a personal and informed decision about organ and tissue donation. They also highlighted formative effects like the appreciation and reinforcement of values and good health. All in all, the education program stimulates students in a concrete way by encouraging exchanges that, in turn, foster self-reflection. The *Chain of Life Program* goes beyond the teaching of ESL by encompassing notions related to health, citizenship and the well-being of oneself and others. Below are a few examples that are indicative of what the teachers had to say.

Extracts from the One-on-One Interview

Making a Personal and Informed Decision

- As a teacher, I'd say that the presentation of the education program holds 100% of the students' attention as they ask lots of questions to find out more.
- Young people can make a personal and informed decision because they have all the information they need.
- Organ and tissue donation is a sensitive subject that brings out strong emotions. It attracts their attention and raises questions.
- Students get the chance to express personal ideas and emotions, develop critical thinking skills and examine issues in greater depth.
- In class, teenagers plead a cause and then hold a debate about its consequences. They feel deeply affected by human problems and suffering.
- Some young people make a conscious decision in class to give their consent, but some have to "fight" at home to get their parents' approval. They learn to take a stand on a reality they care about.
- Young people learn to face the issue of organ and tissue donation and become responsible citizens.

Appreciating and Reinforcing Values

- Students understand that organ and tissue donation is a question of respect and giving, as well as a commitment to their own values—to sincerity, to being genuine and to helping others.
- The education program instils openness and listening to different points of view. Students respect each other's decisions and show empathy towards others because they feel "connected."
- Teenagers speak openly and wear their emotions on their sleeve. They understand what's important and think about their families. Likewise, their words and tone of voice demonstrate confidence and self-assurance.
- Students tell me they really enjoyed discussing organ and tissue donation. Their words are mature and they are aware that their decision can change the lives of others.
- The education program opens the minds of the students, who say they want to become more involved in saving lives. As such, through a social issue, it fosters personal and social development in a spirit of generosity.

Health

- Students learn that their organs have “their own built-in health.”
- At their age, teenagers understand how lucky they are to be healthy.
- The “message goes through” because being healthy or not is a reality.
- The education program raises awareness and provides information. In turn, this encourages young people to change their health habits.
- We talk about consequences and autonomy and making choices about diet, exercise, vaping and so on.

Focus Group Interview – The interview with the specialists (n=4/4) brings to the forefront common and shared representations about how understanding a sensitive issue leads young people to “become responsible citizens.” Ms. C. Jolivet invokes the idea that “thinking about organ and tissue donation gives meaning to life.” For Ms. J. Ryan, “Education is a fundamental element of lifelong community spirit.” As Ms. W. Sherry explains, dealing with organ and tissue donation in the classroom is “an amazing and empowering moment for [the students] and something that they’re never going to forget and which will permit them to move forward.” According to her, teens “are willing to debate everything because, at this age, they’re ready and able to question everything. They’re trying to learn more about themselves—and the education program is an excellent way to do so—but also to find out what they want to be and what they want to stand for.” Agreeing with Ms. W. Sherry, Dr. P. Marsolais points out that at this time in their lives, “young people want to change the world. The better informed they are, the better educated they are, the better our society will be.” In short, as Ms. J. Ryan puts it, the *Chain of Life Program* “is helping to shape the next generation of policy- and decision-makers” because students and teachers “are investing in something really important that gives back to the community.” For her, the *Chain of Life Program* is “a fantastic example!”

5.3.2 The Effects the Education Program Has on Families, from School to Home

Questionnaire – Educating about organ and tissue donation in the classroom not only resonates with students, but it also has an impact on their parents. In fact, judging by common representations shared by more than three-quarters of the teachers who completed the questionnaire (78.03%), there is a transfer of information/knowledge and learning from school to home through family discussions. As well, nearly three-quarters of the latter (73.62%) also indicate that discussions on this subject do not seem to worry parents. In fact, a similar percentage (72.53%) believes that their students would act as ambassadors by leading the discussions in their families. As such, according again to common representations shared by over three-quarters of the sample, the impact of the education program extends beyond the classroom. This is significant and indicative of the influence and outreach of organ and tissue donation education in the school environment. Table 12 below shows the results.

Table 12. Effects the Education Program Has on Families	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	Students discuss the subject as a family	22	24.18%	49	53.85%	20
	78.03%				(0)	
Parents do not seem worried by the family discussions	52	57.14%	15	16.48%	15	16.48%
	73.62%				(2 D and 7 SD)	
Students assume the role as ambassadors	22	24.18%	44	48.35%	17	18.68%
	72.53%				(8 D)	

Entrevue individuelle – Organ and tissue donation education is not confined to the classroom, but rather transcends school walls. During the one-on-one interview, the teachers stated that, while they couldn't guarantee that all their students did in fact discuss organ and tissue donation with their parents, they did "know" that most of them did so at home. Organ and tissue donation is an issue that really resonates with young people and they feel the need to talk about it with their parents, to find out what they think and share their personal views with them. The effects the education program has on families are therefore manifest in the transfer of knowledge by the students, who initiate family discussions. For illustrative purposes, here are a few statements expressed individually.

Extracts from the One-on-One Interview

- Some parents told me that their child had shared this serious subject with them.
- Students were eager to talk about it with their families and peers.
- Young people are at the age of deciding for themselves. They discuss their intentions with their parents. The discussion leads the parents to make their own decision.
- I've had parents thank me for introducing the subject in class. They said their child encouraged them to become donors and every member of the family signed their consent.
- In Secondary Cycle Two, students become increasingly aware of how lucky they are to be healthy, and they also realize that they can save lives, so they talk about it.
- The education program addresses a concrete issue that interests, not only the students, but also their parents.
- The education program has a real impact. One of my former students phoned to tell me that her family had donated her grandfather's organs.

While the term “ambassador” is not universally accepted because of the variety of actions it can engender, three-quarters of those interviewed indicate that students have discussions with each other, express their opinions and defend their positions. Through these diversified exchanges, they in turn become “educators.” One teacher mentions that young people sense they are part of “something bigger than themselves.” As a result, organ and tissue donation grabs their attention! Finally, one teacher declares that, as citizens and part of society, the entire population should have access to the essential information provided in the *Chain of Life Program*.

Focus Group Interview – During the focus group interview, the specialists (n=4/4) share common representations regarding the importance of educating families and the impact of the *Chain of Life Program* in this respect. Dr. P. Marsolais points out that “the more that families—and individuals in general—are educated, the fewer refusals there will be because people will understand the importance of organ and tissue donation. You have to take the time to explain it to them! As Ms. C. Jolivet points out, “It’s essential for donation to make sense to families; therefore, education is a must.” Ms. J. Ryan also insists that “education is very important,” pointing out that addressing this issue in school helps reach parents and “educate a younger generation for a better future.” Along the same lines, in addition to agreeing with Ms. J. Ryan regarding the direct and immediate effects that education has on students and their families, Ms. W. Sherry speaks about “generational transferability” (of acquired knowledge, know-how and interpersonal skills) since “today’s young ambassadors will become tomorrow’s parents.” Ms. J. Ryan concludes that “It’s not just a question about deciding to become an organ donor, but also about helping others become informed and passing on the access to information [...] to those who need it.”

5.3.3 The Effects Teaching the Education Program Has on Teachers

Teaching the *Chain of Life Program* not only affects students and their families; it also has an impact on the teachers who completed the questionnaire. In fact, virtually all of the respondents (95.60%) confirm that they enjoy teaching the LES because it contributes to better educating young people about on organ and tissue donation and also because it’s such a critical social issue. Furthermore, a very similar percentage of teachers (94.51%) agree that teaching the education program boosts their sense of personal satisfaction. Thus, the positive effects of teaching the LES in the *Chain of Life Program* are reflected significantly in common and shared representations voiced by the respondents. Table 13, which follows, transcribes the results.

Table 13. Effects Teaching the Education Program Has on Teachers	Strongly Agree		Agree		Agree Somewhat (D and SD)	
	The teachers enjoy teaching the LES, which contributes to better educating their students about an important societal issue	55	60.44%	32	35.16%	4
	95.60%				(0)	
Teaching the education program enhances the teachers’ sense of personal satisfaction	39	42.86%	47	51.65%	4	4.40%
	94.51%				(1 SD)	

One-on-One Interview – For the teachers interviewed, the factors influencing their initial personal interest in the *Chain of Life Program* can be grouped as follows: the need to take care of the human body; knowing someone, and their family, who has received or donated an organ; having already talked with their own teenagers about the importance of donation and their personal choice; a meaningful subject that really matters. On a professional level, the effects of teaching the education program seem, above all, centred

around being able to share a concrete issue that involves the transmission of values in an atmosphere of transparency that brings teachers and young people closer together. Below, a few of the comments made by one or other of the respondents.

Extracts from the One-on-One Interview

- We talk about life and death, which is a very meaningful topic, both for my students and for me as their teacher.
- When we discuss organ and tissue donation in class, we get to know our students. It's exciting because I get to know them on a deeper level.
- Teaching the education program has changed me by bringing me closer to my students!
- It's one of the best programs I've ever taught!
- Teaching the LES provides a great opportunity for students and me to share values—to be sincere and authentic.
- Teens “love” discussing organ and tissue donation, and I “love” teaching it!
- There isn't enough information about organ and tissue donation in Québec. I'm teaching it so that I can change that.

5.4 Contextualizing the Issue of Organ Donation in Québec: Education as an Answer to Some of the Challenges and the Contribution of Chain of Life

Up to now, the results underscore the importance of organ and tissue donation education for students in Secondary Cycle Two, as well as the undeniable quality of the *Chain of Life Program*. Regardless of the direct impact it has on young people on a number of levels, the program gives them “a voice,” and they initiate discussions with their families. Ms. W. Sherry talks about the “domino effect” of the program, where students pass on the information to their families, who in turn, pass it on in the workplace and community until eventually, it reaches the general population. Nonetheless, as both Chain of Life and the specialists interviewed emphasize, organ and tissue donation still has its challenges.

In its brief, *Education at the Heart of Organ and Tissue Donation*,⁷⁹ presented to the Committee on Health and Social Services of the National Assembly of Québec “as an order of initiative aimed at studying ways of facilitating organ and tissue donation, in particular the implementation of a presumption of consent (Chaîne de vie, 2024), the organization states the following.

Education in schools enables young people to gain an in-depth understanding of the issues surrounding organ donation. They learn about the way the transplant system works, the pressing needs of patients waiting for organs, and the challenges faced by donor families, medical teams and everyone involved in the donation chain. (Chaîne de vie, 2024, p. 16)

In a similar discussion during the **focus group interview**, these same challenges are brought up by the specialists. According to Ms. J. Ryan, we need to “make sure that people have the information they need to make decisions or to choose not to become organ donors. In turn, Ms. C. Jolivet insists that it's absolutely essential to “promote a better understanding of what donation is, as well as what donor families and organ recipients go through.” As for Ms. W. Sherry and Dr. P. Marsolais, they point out that while educating young

⁷⁹ *L'éducation au cœur du don d'organes et de tissus*. (Original title)

people is fundamental, it's equally important to educate the general public and healthcare professionals. As Ms. W. Sherry puts it, "It's our duty to society!"

In order to gain a better understanding of these challenges and how to mitigate them, below is what the specialists had to say about accompanying donor families, accessing hospital resources, as well as educating healthcare workers and the general public. The collaboration between the education and health sectors generated by the Chain of Life organization will also be presented.

5.4.1 Donor Families

Donor families are a recurring subject of discussion among the specialists. First of all, Ms. W. Sherry points out that "it is very rare for a family to regret having said 'yes' to a deceased loved one's organ donation. On the other hand, approximately 10% of families are said to regret having said 'no.' And that's what we want to try to avoid." Along the same lines, Dr. P. Marsolais adds that "while the option of organ donation is very salutary for donor families, I've also noticed that these families have certain needs." In this regard, Chain of Life draws attention to the quality of support and accompaniment that donor families need, stating that "efficiency and humanity are the qualities that must guide the entire support team [...] in order to accompany donor families with respect and dignity"⁸⁰ (Chain of Life, 2024, p. 10). In particular, Ms. C. Jolivet, co-president of the French association *Al.é.lavie, Alexis, une énergie pour la vie*, expresses a lack of support and recognition for donor families. In a similar vein, Dr. P. Marsolais, founder of the *Mission du Dr Marsolais*, maintains that "the better support we give donor families, the more deserving we will be of the priceless gift these people give us!"

5.4.2 Access to Resources by the Hospital Sector and for Education

First of all, according to the specialists, access to resources is a major issue in the hospital environment. As Ms. J. Ryan openly states, "There is a serious problem with the availability of adequate resources in hospitals in order to enable donation." She goes on to point out that, among other things, "the exhaustion of donation coordinators and the resources available to support organ and tissue donation [...] impact people's ability to access donation and, ultimately, their hope to receive a transplant." Continuing in the same line of thinking, Dr. P. Marsolais draws attention to the challenge of providing access to resources because "not all hospitals are centres where organ transplantation is possible. So, the reason organ donation is restricted and we are 'not able to do everything we could do' is because of a limitation of resources." To this observation, in conclusion, he adds that "leadership and political willpower are needed."

On another level, while Ms. J. Ryan states that, "many families find comfort in donation," Ms. W. Sherry insists that we must "ensure that the donor family is fully engaged in the donation process so that it is relevant to them." In order for this to happen, according to Dr. P. Marsolais, emphasis must be placed on hospitals "supporting donor families, that is, how to approach them, then accompany them." For Ms. W. Sherry, "communication is about being receptive and available to families, to make sure they have everything they need to make the right decision." Finally, Ms. C. Jolivet stresses the need to educate healthcare professionals, as do Ms. W. Sherry and Ms. J. Ryan, reiterating how vitally important it is to do so. As for Dr. P. Marsolais, he goes even further, referring to in-hospital education as "one of the primary challenges for the success of organ and tissue donation."

⁸⁰ Free translation of: "l'efficacité et l'humanité sont les qualités qui doivent guider toute l'équipe d'accompagnement [...] pour accompagner les familles de donneur avec respect et dignité" (Chaîne de vie, 2024, p. 10).

5.4.3 Educating the General Population

According to the specialists we interviewed, educating the public is a “binding force” and, in part, a guarantee for the success of organ and tissue donation. Dr. P. Marsolais explains that “the question of organ donation is based on several factors, the most important of which is the public’s willingness to donate. Educating the general public is essential [because] the more that families are educated, the fewer refusals there will be.”

In order to give a consent that is valid and can be acted upon, a potential donor should, at the very least, have a minimum of information regarding, for example, conditions in the ICU, related delays, the challenge of understanding what is meant by a diagnosis of neurological death, and the emotional difficulties that accelerated mourning for loved ones can cause.⁸¹ (Bernier & Mageau, 2024, p. 40)

As for Ms. W. Sherry, she draws attention to the multiculturalism of Québec society, adding that “if school is the way forward, and I believe it’s an excellent starting point, we need to find a way to get ‘our’ cultural communities involved.” Similarly, Ms. J. Ryan asserts that “the classroom is unparalleled when it comes to reaching out to diverse cultural communities and their values.” In this respect, Ms. W. Sherry stresses that, in order to reach Québec’s pluralistic cultural reality, “We need to have real resources, at both the provincial and federal levels.”

5.4.4 The Chain of Life Organization: Fostering Collaboration Between Education and Health

The *Chain of Life Program* was not created in a vacuum nor does it “live” in one. On the contrary, the program has engendered a number of exchanges with the health sector, as well as collaborations that have developed over the years and continue to do so today. According to Ms. C. Jolivet, “The education program has created a relationship between education and health and the medical world.” For example, in 2024, Chain of Life designed a poster entitled “The Chain of Life - From Education to Transplantation” (Appendix University Health Centre). Not only is this poster being added to the education program, but it is also available for use in hospital settings to provide essential information on the “chain of life” and help raise public awareness of organ and tissue donation. As Ms. W. Sherry explains, “What Chain of Life brings to the table is very important: all the education, the many pedagogical components and all the various ways of ‘communicating education.’” For Chain of Life, working in collaboration and conjunction with other associations and organizations that promote organ and tissue donation, as well as with doctors, nurses and transplant recipients (Appendix E) is an invaluable and indispensable avenue. In addition, many medical professionals (doctors, nurses, etc.) accept to provide information to class groups (in person and/or remotely), to talk about their experiences related to organ and tissue donation and answer students’ questions. In short, Chain of Life’s collaborations can become springboards to a better understanding of organ and tissue donation, while at the same time introducing concrete solutions.

⁸¹ Free translation of: “Pour donner un consentement valide et susceptible d’être appliqué, un donneur potentiel devrait minimalement disposer d’informations sommaires relatives, par exemple, au contexte de soins intensifs, aux délais afférents, au défi de comprendre la notion de diagnostic de mort neurologique et aux difficultés humaines que peut occasionner un deuil accéléré pour les proches” (Bernier & Mageau, 2024, p. 40).

CONCLUSION

The overall objective of this utilization-focused evaluation was to provide a portrait of the role of organ and tissue donation education in the ESL classroom (at the secondary school level) and the innovative contribution of the *Chain of Life Program* in this regard. An analysis of the data collected from a questionnaire completed by teachers who had taught the education program (n=91), a one-on-one interview with some of them (n=15) and a focus group interview with specialists in the field (n=4) revealed common, shared representations. These clearly demonstrate the relevance of the *Chain of Life Program*, which is considered to be of excellent quality, as well as the benefits of education for young people, including its repercussions on families and the general population through a knock-on effect.

“The Ministère aspires to always further its actions, practices and policies by drawing on the results of research, evaluation and practice”⁸²

Plan stratégique 2023-2027 – Ministère de l'Éducation
(Gouvernement du Québec, 2023, p. 19)

The descriptive study revealed the following **three key findings**.

1. **FINDING 1 – Teachers' Appreciation of the *Chain of Life Program* and Its Alignment with ESL in Secondary Cycle Two of the QEP** (Gouvernement du Québec, 2007a)

A motivating and essential training that enables an understanding of the issues surrounding organ and tissue donation

- The training provided by Chain of Life is stimulating, comprehensive and enriching and leads to true ownership of the education program.

A unique, outstanding and high-quality education program, offering turnkey material perceived as indispensable

- The education program is very well constructed; easy to use and flexible; detailed and complete; rich in relevant and abundant information; both precise and easy to understand.
- The pedagogical toolkit contains multiple activities and complex tasks that are meaningful, varied, authentic and extremely motivating for students.

A close alignment between the education program and the teaching of ESL in Secondary IV and Secondary V, which also facilitates interdisciplinarity

- Organ and tissue education is an added value to the ESL program.
- The LES is fully in compliance with the QEP and facilitates the development of all three ESL competencies.
- The LES is a vector of interdisciplinarity with other subject areas in the QEP, thus fostering its expansion.

⁸² Free translation of: “Le Ministère aspire à alimenter toujours plus ses actions, ses pratiques et ses politiques en se fondant sur les résultats tirés de la recherche, de l'évaluation et de la pratique” (Gouvernement du Québec, 2023, p. 19).

2. FINDING 2 – The Positive Effects of the Education Program on Students, Their Families, Teachers and the General Population

Students who are equipped to make a personal and informed decision about organ and tissue donation and who act as responsible and socially engaged citizens

- Teenagers appreciate and develop the values of solidarity, generosity and altruism.
- The education program places value on openness, other points of view, a respect for decisions and the involvement of young people as ambassadors within society.
- Students have reached the legal age to voluntarily donate their organs and tissues after their death. They also have the maturity needed to make this personal choice responsibly after thinking it through thoroughly.

Parents who become informed through family discussions

- In class, students express themselves and develop critical thinking because they discuss a sensitive subject that means something to them, and they take it to heart.
- At home, knowledge and learning are transferred through family discussions. Young people become “educators.”

Teachers who embrace the cause of organ and tissue donation

- The education program is an invaluable support for ESL teachers.
- Teaching this sensitive and complex subject as part of the education program enhances teachers’ sense of satisfaction as they feel they are furthering young people’s education about a vital societal issue.

The “domino effect” of classroom education on the general population

- ESL is compulsory for all students in French-language public and private schools in Québec. As a result, education reaches a large number of students every year and they talk to their parents about it.
- The education of young people is transmitted to their families; parents transfer the information to their workplace and contacts, to reach the general population.

3. **FINDING 3 – The Power of Education as a Course of Action for a Culture of Organ and Tissue Donation, a Major Societal Issue**

- Education develops a culture of donation
- Educating young people is giving them the “power to act.”
 - By educating young people, we help them become guarantors of a more generous and altruistic society.

- Education at the service of health
- Making young people aware of the inestimable value of a healthy body through organ and tissue donation education, a leitmotiv for change and the adoption of healthy lifestyle habits.
 - Mobilizing informed young people for a healthier society.
 - Fostering closer ties between the education and health sectors by continuing and maximizing collaborations.

Ultimately, the relevance and excellence of the *Chain of Life Program*, to which the teachers subscribe, addresses a societal issue by educating students, citizens of today and tomorrow, about organ and tissue donation. Without a doubt, the education program makes it possible to educate young people by encouraging their commitment and “becoming” to act as actors of change. In other words, this program places teaching at the forefront of a vital issue where education is the first link in the chain of life.

For all of these reasons, **the Chain of Life organization can claim a number of key strengths**, some of which are outlined below.

- Chain of Life is a forerunner in organ and tissue donation education in the classroom. Its groundbreaking education program positions the organization as a pioneer and leader in the field.
- Chain of Life has accumulated a wealth of practical experience and a solid reputation in the field of organ and tissue donation education in the classroom. Over the years, teachers’ involvement in the *Chain of Life Program* has grown steadily, attesting to its relevance and effectiveness.
- Chain of Life has succeeded in developing an innovative, ready-to-use, high-quality education program that has created a buzz among teachers who believe in the merits that come from teaching it, in the undeniable effects it has on students and in the benefits of young people transferring what they learn to their families.
- Chain of Life successfully took on a huge challenge that required a concerted approach of professionals in the education and health sectors by creating a synergy of collaboration. A collaboration that continues to grow.
- Chain of Life offers the opportunity to promulgate Québec as a leader in organ and tissue donation education in the classroom.

“The Ministère wishes to [...] improve its partnerships in education, particularly with community organizations”⁸³

Plan stratégique 2023-2027 – Ministère de l’Éducation
(Gouvernement du Québec, 2023, p. 20)

⁸³ Free translation of: “Le Ministère souhaite [...] bonifier les partenariats en éducation, notamment avec les organismes communautaires” (Gouvernement du Québec, 2023, p. 20).

We hope this evaluation will provide concrete and useful information to private and public decision-making bodies in Québec so that they view the education of young people about organ and tissue donation—and its ripple effect on families and the general public—as a win-win response to the ever-increasing need for transplants. Education is a sure value that deserves our absolute and undivided attention.

In conclusion, if we were to make **one recommendation**, it would be that serious and concrete importance be placed on educating students about organ and tissue donation. In keeping with the foundation of the mission of the Québec school system, which is to teach students to be “active and responsible citizens throughout their lives”⁸⁴ (Gouvernement du Québec, 2023, p. 5), it seems clear that the *Chain of Life Program* is ideally suited to fulfilling this mission since its ultimate goal is to promote the power of education for a healthier Québec society and to mobilize the population as a whole in embracing the cause of organ and tissue donation.

⁸⁴ Free translation of: “des citoyens actifs et responsables dans la société” (Gouvernement du Québec, 2023, p. 5).

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APPENDIX A: Recognition and Support – Chain of Life (2008–2024)

2008	École secondaire de Rivière-du-Loup and the Centre de services scolaire Kamouraska—Rivière-du-Loup	<ul style="list-style-type: none"> • Partnership with Chain of Life since the beginning
	Mr. Mario Dumont, deputy and Leader of the Official Opposition of the National Assembly of Québec	<ul style="list-style-type: none"> • Motion before the National Assembly of Québec to support Chain of Life
2009	Fédération des centres de services scolaires du Québec (FCSSQ)	<ul style="list-style-type: none"> • Letter of Support • Presentation at a convention
	Société pour le perfectionnement de l'enseignement de l'anglais, langue seconde, au Québec (SPEAQ)	<ul style="list-style-type: none"> • Teacher of the Year Award presented to Ms. Lucie Dumont
2011	Transplant Québec	<ul style="list-style-type: none"> • Transplant Québec becomes a partner of Chain of Life
2014	Regroupement des responsables de l'enseignement de l'anglais, langue seconde (RREALS)	<ul style="list-style-type: none"> • Letter of support • Presentation of Chain of Life • Promotion of Chain of Life to ESL teachers
	Regroupement des conseillers et conseillères pédagogiques en anglais, langue seconde (RCCPALS)	<ul style="list-style-type: none"> • Entire collaboration in organizing training sessions in schools
2015	Société des écoles du monde BI du Québec et de la francophonie (SÉBIQ)	<ul style="list-style-type: none"> • Letter of support • Invitation to present Chain of Life at a SÉBIQ convention and collaboration to offer training during an annual convention
	Université de Sherbrooke	<ul style="list-style-type: none"> • Award in education
2017	Société d'Action nationale de Rivière-du-Loup	<ul style="list-style-type: none"> • Nomination of Ms. Lucie Dumont as Patriote de l'année for her involvement in a societal issue, organ and tissue donation education
2018	Transplant Québec	<ul style="list-style-type: none"> • Ambassadeur du don d'organes award presented to Ms. Lucie Dumont
	NHS Transplant Forum, Belfast, Irlande du Nord	<ul style="list-style-type: none"> • Guest speaker to present Chain of Life
	Apple, IBM, Rotary International, Lions international, Association féministe d'éducation et d'action sociale (AFEAS), etc.	<ul style="list-style-type: none"> • Several requests to give a presentation
2019	Mr. Bernard Généreux, federal deputy	<ul style="list-style-type: none"> • Declaration of support to Chain of Life before the House of Commons
2020	GalaMetro Star	<ul style="list-style-type: none"> • Award in the Category Education presented to Ms. Lucie Dumont
	Kidney Foundation of Canada	<ul style="list-style-type: none"> • Award at the national level
2021	Musée de la civilisation (June 10, 2021–October 10, 2022)	<ul style="list-style-type: none"> • Chain of Life spotlighted in the exhibition: <i>Generosity. From the Heart</i>
	Canadian Blood Services	<ul style="list-style-type: none"> • Article about Chain of Life
2022	City of Rivière-du-Loup	<ul style="list-style-type: none"> • Yves-Godbout Municipal Award presented to Ms. Lucie Dumont to highlight her commitment, generosity and impact on the community

2023	Canadian Association of Second Language Teachers (CASLT)	• H.H.-Stern Award presented to Ms. Lucie Dumont in recognition of her innovative teaching practices
2024	Katia Chapoutier, France Télévisions (with the participation of Chain of Life)	• Documentary France-Québec, Passeurs de vies [issues related to organ donation, the importance of accompanying donor families and education] / Distribution in France on October 17, 2024, <i>World Organ Donor and Transplant Day</i>

LETTERS OF SUPPORT

Political Sector

- Mr. Sébastien Schneeberger, deputy of Drummond—Bois-Francs
- Mr. Justin Trudeau, Prime Minister of Canada

Associations

- Fédération des comités de parents du Québec (FCPQ)
- Canadian Blood Services

Health Sector

- Dr. Frédérick D’Aragon, intensivist-anesthesiologist, CHUS | professor at the Faculty of Medicine and Health Sciences at Université de Sherbrooke and chairholder of the Justin Lefebvre Research Chair on organ donation
- Ms. Sara Lemieux-Doutreloux, ex-resource nurse and clinical executive advisor at the Centre intégré universitaire de santé et de services sociaux (CIUSSS) de l’Estrie – Centre hospitalier universitaire de Sherbrooke (CHUS)
- Dr. Marie-Josée Raboisson, cardiologist et director of the transplant and heart failure program, Centre hospitalier universitaire (CHU) Sainte-Justine | Assistant clinical professor at the Faculty of Medicine at Université de Montréal
- Dr. William Wall, retired transplant surgeon | Author of the children’s book, *The Ant Who Needed a Transplant* (2023)

Video Testimonials

Numerous testimonials from doctors, transplant recipients, donor families and teachers

APPENDIX B: Large Poster on Tagboard: Chain of Life - Organ and Tissue Donation Education



A Mission to Serve Life

Chain of Life is an organization that helps save lives and improve the quality of life of others who are ill, through its unique education program on organ and tissue donation.



EDUCATION ABOUT ORGAN AND TISSUE DONATION:

YOUTH MADE AWARE WELL-INFORMED FAMILIES MORE LIVES SAVED



Organ Donation Education: A Lever of Action for the Adoption of Healthy Lifestyle Habits

Chain of Life is...

A Leading Education Program

Featuring a holistic, intergenerational approach, the Chain of Life Program educates young people aged 15-17 about organ and tissue donation during their ESL classes. The learning and evaluation situation (LES) is built around stimulating activities interspersed with up-to-date scientific information, moving testimonials and true stories.

The goal is not to convince students, but to inform them about an important social issue. It enables young people to make an informed personal decision about organ and tissue donation. They are then encouraged to act as responsible citizens by becoming ambassadors for family discussions, thereby helping save more lives.



A Vision for a Culture of Donation and a Healthy Society

That the Chain of Life Education Program be taught in all secondary schools in Québec (and even elsewhere) to help save more lives by leveraging the power of young people as agents of change!



Quality Training

The one-day training prepares teachers to teach the Chain of Life Program. In addition to giving them a good overview of the material and an approach to follow, the training answers many questions, dispels fears and helps people network. It's a dynamic training that elicits rave reviews from all concerned.



Innovative Teaching Material

A top-quality pedagogical toolkit on organ and tissue donation is distributed free of charge to participants during the training. A turnkey material, developed over a period of seven years by a team of experienced educators, with the collaboration of Transplant Québec for the validation of the medical and scientific content.



A Bilingual Website Rich in Information and Testimonials

The Chain of Life website was developed through donations collected in part during the Chain of Life Challenge. There you'll find, among other features, informative texts, short videos by leading transplant specialists and teaching testimonials.

chainedevie.org

Chain of Life Makes Headlines in Québec and Elsewhere

An education program that is generating a great deal of interest beyond our borders, with a golden opportunity to position Québec as the leader in organ and tissue donation education.

Media coverage throughout Québec thanks to the Chain of Life Challenge and the Chain of Life Walk organized by certain schools.

A motion before the Québec National Assembly in 2009 and one before the House of Commons in Ottawa in 2018.

A program for which the founding president has received numerous awards, including the Prix Ambassadeur from Transplant Québec, the Prix an education from the Université de Sherbrooke, an award at the national level from the Kidney Foundation of Canada and the H. H. Stern Award from the Canadian Association of Second Language Teachers (CASLT) in recognition of innovative teaching practices.

The Chain of Life flag has reached the highest peak on every continent in the world, including Everest!

There is currently nothing comparable in terms of depth of the content for students of this age. This learning tool is unique, brilliant and up to date, enabling students to learn language while reflecting on a reality that leaves no one indifferent. The use of technological tools brings added value to this excellently developed education program. It's truly a marvelous project!

— Isabelle Boucher, professor/teacher at Université de Québec-Chicoutimi

Chain of Life instills in students and their families knowledge about health and organ donation that also provides them with a lifelong altruistic mindset. Just think of what a society like this could accomplish!

— Dr. Damien Fugère, Consultant Kidney Physician, Bellair, Québec (retired)

"The Chain of Life LES absolutely blew me away! First of all, there are touching stories based on real cases. These stories make us realize that accidents happen so quickly and that it's our duty as children to talk to our parents about organ donation so that if something unfortunate happens to us, they will make the decision we would have wanted. I was surprised to learn that doctors will always approach the families.

In fact, the unit never ceased to surprise me from beginning to end. I'd like to thank the people who created the Chain of Life Program because it's been a lot of fun learning. I hope that all students in Québec get the chance to experience this project because it allows us to talk about a subject that saves lives."

— Florence Ouellet, student at École de Montagne, Boucherville

Young ambassadors rallying together throughout Québec.

Please note - To make the large poster easier to view, it is presented in letter format on pages 60-63.



EDUCATION ABOUT
ORGAN AND
TISSUE DONATION:

YOUTH MADE **AWARE**
WELL-INFORMED **FAMILIES**
MORE LIVES SAVED



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The Chain of Life flag has reached the highest peak on every continent in the world, including Everest!

"A sincere thank you to the Chain of Life teachers in Québec for leading the way and becoming a beacon for all of Canada."

— Canadian Blood Services

Chain of Life is...

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The goal is not to convince students, but to inform them about an important social issue. It enables young people to make an informed personal decision about organ and tissue donation. They are then encouraged to act as responsible citizens by becoming ambassadors for family discussions, thereby helping save more lives.



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"There is currently nothing comparable in terms of depth of the content for students of this age. This learning tool is unifying, brilliant and up to date, enabling students to learn language while reflecting on a reality that leaves no one indifferent. The use of technological tools brings added value to this excellently developed education program. It's truly a marvellous project!"

— H  l  ne Boucher, professor/lecturer at
Universit   du Qu  bec Outaouais



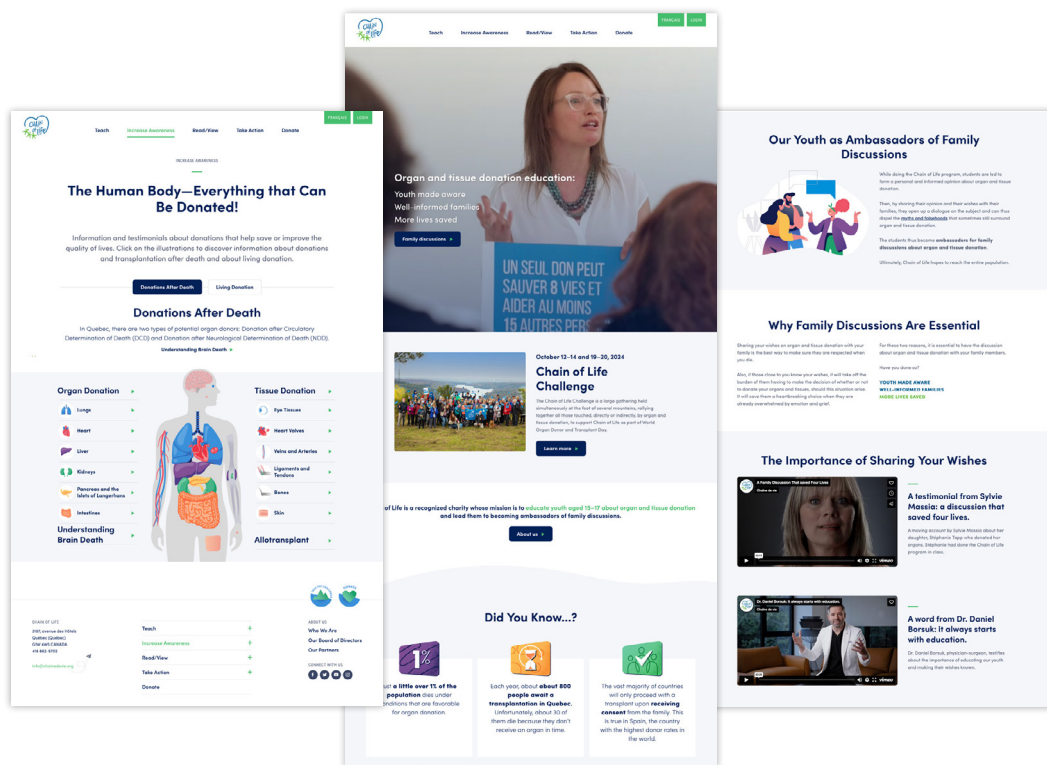
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chainedevie.org



Organ Donation Education: A Lever of Action for the Adoption of Healthy Lifestyle Habits

In the course of their learning, students are also made aware of the inestimable value of a healthy body and the importance of taking care of it by opting for healthy lifestyle habits.

In a context where the demand for organs for transplantation far exceeds the supply, it is essential to address the health problems that affect our vital organs and that are often linked to poor lifestyle habits. One of the driving forces behind the health component of the *Chain of Life Program* is the awareness that the scarcity of organs increases their value, making it all the more important to keep them healthy.



Thus, Chain of Life aims not only to bring young people to become ambassadors of family discussions about organ and tissue donation, but also to mobilize as ambassadors for the adoption of healthy lifestyle habits.



Young ambassadors rallying together throughout Québec.



“The Chain of Life LES absolutely blew me away! First of all, there are touching stories based on real cases. These stories make us realize that accidents happen so quickly and that it’s our duty as children to talk to our parents about organ donation so that if something unfortunate happens to us, they will make the decision we would have wanted. I was surprised to learn that doctors will always approach the families.

In fact, the unit never ceased to surprise me from beginning to end. I’d like to thank the people who created the *Chain of Life Program* because it’s been a lot of fun learning. I hope that all students in Québec get the chance to experience this project because it allows us to talk about a subject that saves lives.”

– Florence Ouellet, student at École de Mortagne, Boucherville

“Chain of Life instills in students and their families knowledge about health and organ donation that also provides them with a lifelong altruistic mindset. Just think of what a society like this could accomplish!”

– Dr. Damian Fogarty, Consultant Kidney Physician, Belfast, Northern Ireland

APPENDIX C: Evaluation Instruments

1. Online Sociodemographic Information Form (teachers)
2. Online Questionnaire (teachers)
3. Semi-directed One-on-One Interview Guide (teachers)
4. Semi-directed Focus Group Interview Guide (specialists)

**Organ and Tissue Donation Education in the Classroom (Secondary Cycle Two):
Chain of Life's Education Program from Québec**

ONLINE SOCIODEMOGRAPHIC INFORMATION FORM

(teachers)

1. For how many years have you been teaching (did you teach)?

- a) At the secondary level.
 - Less than two years
 - 2 to 5 years
 - 6 to 10 years
 - 11 to 15 years
 - 16 to 20 years
 - More than 20 years

- b) In English as a second language (ESL).
 - Less than two years
 - 2 to 5 years
 - 6 to 10 years
 - 11 to 15 years
 - 16 to 20 years
 - More than 20 years

2. In which region of Québec do you teach, or did you teach?

- | | |
|------------------------------|-----------------------------------|
| 01 – Bas-Saint-Laurent | 10 – Nord-du-Québec |
| 02 – Saguenay–Lac-Saint-Jean | 11 – Gaspésie–Île-de-la-Madeleine |
| 03 – Capitale-Nationale | 12 – Chaudière-Appalaches |
| 04 – Mauricie | 13 – Laval |
| 05 – Estrie | 14 – Lanaudière |
| 06 – Montréal | 15 – Laurentides |
| 07 – Outaouais | 16 – Montérégie |
| 08 – Abitibi-Témiscamingue | 17 – Centre-du-Québec |
| 09 – Côte-Nord | |

4. During what school year did you receive the training on the LES *Celebrating Life* from Chain of Life?

- 2013–2014
- 2014–2015
- 2015–2016
- 2016–2017
- 2018–2019
- 2019–2020
- 2020–2021

4. Please mention the number of years you have taught the *Chain of Life Program* in Secondary IV and/or Secondary V.

- Secondary IV: ____
- Secondary V: ____

4. What (approximate) percentage of the tools in the LES *Celebrating Life* from Chain of Life did you use or are you currently using in your teaching?

- 0%
- 25%
- 50%
- 75%
- 100%

*If you would like to add anything, please do not hesitate to do so: ____

**Organ and Tissue Donation Education in the Classroom (Secondary Cycle Two):
Chain of Life's Education Program from Québec**

ONLINE QUESTIONNAIRE

(teachers)

1. On a scale of 1 to 5 (1 being Strongly Agree and 5 being Strongly disagree), how would you rate the LES *Celebrating Life* from Chain of Life?

- This LES is entirely aligned with the Québec Education Program.
- This LES facilitates the development of the three ESL competencies.
- This LES is easily integrated and adds value to my teaching.
- The pedagogical toolkit, the teaching-learning material and other tools are indispensable tools.
- The training offered by Chain of Life is essential.
- Organ donation education should be part of the Québec ESL school curriculum.
- English as a second language is the ideal subject for this educational mission on organ and tissue donation in the classroom.

* If you would like to add a comment, please do not hesitate to do so: ____

2. Are you familiar with the material available in the new section of the Chain of Life bilingual website (complementary activities)? www.chainedevie.org

- No
- Yes

* If so, do you find that this material is an added value (1 being a weak added value and 5, a strong added value)?

3. On a scale of 1 to 5 (1 being Strongly Agree and 5 being Strongly Disagree), what effects does this education program have on students and their families?

- Teaching this LES created great group dynamics in the classroom.
- Students liked learning more about organ and tissue donation.
- Students are better equipped to make an informed and personal decision about organ and tissue donation.
- Students discussed this subject with their families.
- Students are more aware of the value of their organs and the need to take care of them.
- Some parents expressed their reservations or concerns to me after having a family discussion about organ and tissue donation.

* If you would like to add anything, please do not hesitate to do so: ____

4. On a scale of 1 to 5 (1 being Strongly Agree and 5 being Strongly Disagree), how would you rate each of the following?

- Before following the Chain of Life training, I had some knowledge about organ and tissue donation.
- I enjoy teaching the LES because I feel I am furthering young people's education about a vital social issue.
- Teaching the education program enhances my sense of personal satisfaction.

* If you would like to add anything, please do not hesitate to do so: ____

An immense thank you for having answered this questionnaire!

**Organ and Tissue Donation Education in the Classroom (Secondary Cycle Two):
Chain of Life's Education Program from Québec**

SEMI-DIRECTED ONE-ON-ONE INTERVIEW GUIDE

(teachers)

THEME 1 – Interest in Chain of Life

- 1. Globally speaking, what does the *Chain of Life Program* mean to you?**
 - a) Professionally?
 - b) On a personal level?
- 2. Talk about your initial interest and motivation for Chain of Life.**
 - a) Initially, why did you agree to follow the training offered by the Chain of Life organization?
 - b) What keeps up your motivation to teach the *Chain of Life Program*?
- 3. Please explain the links between the *Chain of Life Program* and the competencies to develop in English as a second language (ESL).**
- 4. What is unique about the subject of organ and tissue donation and the way it is broached in the *Chain of Life Program* and in the activities it generates?**

THEME 2 – Teaching the LES *Celebrating Life* from the *Chain of Life Program*

- 5. Briefly describe the activities you do in class with your students as part of the *Chain of Life Program*.**
 - a) Do you make changes? Please explain why.
 - Do you ever adapt activities by modifying them, adding other tasks or using different material?
 - Please give examples.
 - b) The *Chain of Life Program* includes a set of tools.
 - Which ones do you find the most useful? Please justify your answer (Explain why).
 - Are some of these tools less useful?
 - c) From your experience, which activities seem to appeal most to students? Please explain why. On the other hand, which activities seem to appeal to them less? Please explain why.
 - d) To what extent have these activities become routine (easy) in your teaching?
 - e) Would you like to add anything about the *Chain of Life Program*?

6. In your opinion, what does the *Chain of Life Program* mean to your students and what effects did you observe?

- a) What have your students learned from the activities in the *Chain of Life Program* that you taught (this year or in past years)? Please provide concrete examples.
- b) What and how does the *Chain of Life Program* contribute to students' personal and social development? Please give concrete examples.
- c) More specifically, concerning organ and tissue donation, from your experience, what effects does this education program have on students?
- d) Do certain activities in the *Chain of Life Program* seem to you to have a particular impact (or effects) on your students? Please explain why by giving concrete examples.
- e) Could the competencies developed by the students been developed without the contribution of the activities in the *Chain of Life Program*?
- f) Would you like to add other effects of the *Chain of Life Program* on your students?

7. In your opinion, to what extent do students assume the role of ambassadors of family discussions about organ and tissue donation?

- a) For whom (their families, other students and the community)?
- b) In what context and how? Please give concrete examples.
- c) Did you observe any differences in multiethnic groups or in groups with particular characteristics?

8. Would you say that the *Chain of Life Program* educates about organ and tissue donation and enables students to make a personal and informed decision regarding this issue? Please justify your answer (Explain why).

9. Parallel to this, do you think the *Chain of Life Program* helps young people realize the value of a healthy body and the importance of taking care of it? Please justify your answer (Explain why).

THÈME 3 – Training Received from Chain of Life and Its Education Program

10. How would you rate the training provided by Chain of Life?

- a) Was it sufficiently complete and practical?
- b) What information did you learn that was most useful to you?
- c) Do you have any other comments to add about the training?

11. To conclude, two questions regarding the clientele targeted.

- a) In your opinion, do you think it would be better to offer this education program in Secondary IV or in Secondary V? Please justify your answer (explain why).
- b) Also, would it be feasible to present organ and tissue donation to students in Secondary I and II, or even in elementary school? (Explain why).

12. Last of all, do you have any other elements to propose to the Chain of Life organization?

13. Would you like to add anything else?

A huge thank you for your participation in the interview!

SEMI-DIRECTED FOCUS GROUP INTERVIEW GUIDE

(specialists)

1. Globally speaking, what is the issue of organ and tissue donation like in the world, in Canada et in Québec? Please define, characterize and situate the issue.

- Lack of organs and tissues (donor rarity, etc.).
- Lack of human (medical, donor families, etc.) and financial resources.
- Inexpediency ou inefficacy of administrative structures (infrastructures, support given to the medical team to accompany families, the urgency to act, refusal by families, etc.).
- Gaps in the information disseminated to the public (false beliefs, social media, etc.).
- Need to inform the population (about sustaining or prolonging life for organ retrieval, etc.).
- Etc.

2. What are the challenges facing organ and tissue donation in 2022? Please specify what they are and explain their importance.

- Ethical, political, legal, moral (personal and societal values), etc.
- Problems observed (increase in organ trafficking, the notion of human dignity, etc.).
- Organ and tissue donation, a touchy subject.
- Emphasizing living donation.
- Etc.

3. Do you think that organ and tissue donation education is indispensable? Please explain why and mention the possible or expected impacts.

- Targeted population (children, teens and families).
- Decision-making bodies to be contacted (levels of government, organizations, etc.).
- Education as a solution to the problem of organ and tissue donation.
- Challenges for education (developing a donation culture, promoting the value of donation, etc.).
- Education as a leverage (supply and demand).
- Desired effects of education (mobilization, teenagers as agents of change, etc.).
- Importance de réunir éducation et santé (inestimable value of a healthy body, etc.).
- Etc.

4. Why do think Chain of Life is a frontline organization in Québec? Please state its strengths and impacts.

- Its scope (Chain of Life Challenge; various awards; etc.).
- Its credibility.
- Its visibility and Image.
- Its impact (save lives).
- Already established in numerous schools in Québec: enhancing the value of teaching and the teaching profession.
- Etc.

5. The *Chain of Life Program* is taught in Québec in Secondary Cycle Two in ESL. Why is this relevant? Please discuss its potential effects

- The choice of in-school education.
- The clientele targeted (ideal age, etc.).
- Strengths of the education program (promote et support living donation; inform young people adequately about the issue; promote an exchange of ideas, a reflective decision et the practice of dialogue; etc.).
- Direct interrelationship with the *Programme de formation de l'école québécoise* (Gouvernement du Québec, 2007a) (promotion of healthy life habits, etc.).
- Hours spent at school and interactions between students and teachers.
- Appreciation of young people as ambassadors of family discussions and actors of change.
- Etc.

6. Is there any other information that you would like to add on this subject?

Thank you very much for your participation in the discussion!

APPENDIX D: Chain of Life Poster – The Chain of Life, From Education to Transplantation



APPENDIX E: Chain of Life's Effective Collaborations

Over the years, Chain of Life has succeeded in rallying together a number of leaders from the education and health sectors. Many of them have since become notable collaborators.

Organizations

- Canadian Organ and Tissue Donors Association (CODA): <https://acdo.ca/index.php/en>
- Canadian Kidney Foundation, Québec Divison: <https://kidney.ca>
- *Fondation Famille Léger*: <https://fondationfamilleleger.com>
- Héma-Québec: <https://www.hemaquebec.ca/en>
- Canadian Blood Services: <https://www.blood.ca/en>
- Transplant Québec: <https://www.transplantquebec.ca/en>

Association/Mission (Doctor)

- Ms. Catherine Jolivet, *Al.é.lavie – Alexis, une énergie pour la vie* | French Association (support to those close to donor families): <https://www.alelavie.fr>
- Dr. Pierre Marsolais, interniste, intensiviste, coordinating physician of organ and tissue donation at Centre intégré universitaire de santé et de services sociaux (CIUSSS) du Nord-de-l'Île-de-Montréal and founding president of the *Mission du Dr Marsolais* in support of donor families: <https://missiondrmarsolais.org/en>

Regroupements en anglais, langue seconde

- Regroupement des conseillers et conseillères pédagogiques en anglais, langue seconde (RCCPALS): Internet site reserved for members
- Regroupement des responsables de l'enseignement de l'anglais, langue seconde (RREALS): Internet site reserved for members

Doctors

- Dre. Nassiba Alami-Laroussi, paediatric cardiologist at Centre hospitalier universitaire (CHU) Sainte-Justine in Montréal
- Dr. Prosanto Chaudhury, abdominal organ transplant physician at Centre universitaire de santé McGill (CUSM) in Montréal, associate professor at Université McGill and medical director of organ donation at Transplant Québec
- Dr. Olivier Diec, nephrologist and head of the medical team at Centre de néphrologie de l'Hôpital Charles-Lemoyne in Longueuil
- Dre Geneviève Huard, hepatologist, clinical associate professor at Université de Montréal and medical director of the transplantation program at Centre hospitalier de l'Université de Montréal (CHUM)
- Dr. Michel Lallier, pediatric surgeon at Centre hospitalier universitaire (CHU) Sainte-Justine in Montréal
- Dr. Stephan Langevin, anesthesiologist and intensivist at Centre hospitalier universitaire (CHU) Hôtel-Dieu in Québec City

- Dre Marie-Josée Raboisson, cardiologist at Centre hospitalier universitaire (CHU) Sainte-Justine in Montréal, clinical assistant professor at the Faculty of Medicine at Université de Montréal and directrice du programme de greffe et défaillance cardiaque at CHU Sainte-Justine in Montréal
- Dr. Matthew Weiss, pediatric intensivist at Centre hospitalier universitaire (CHU) de Québec, clinic professor at l'Université Laval and medical director of organ donation at Transplant Québec

Nurses

- Ms. Sara Lemieux-Doutreloux, ex-resource nurse and clinical executive advisor at Centre intégré universitaire de santé et de services sociaux (CIUSSS) de l'Estrie – Centre hospitalier universitaire de Sherbrooke (CHUS)
- Ms. Wendy Sherry and M. Andrew Chan, nurses in organ and tissue donation at Centre universitaire de santé McGill (CUSM) in Montréal

As well, many other valuable collaborations with transplant recipients, donor families, living donors, teachers, education advisors, and so on.

