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Q Success: Supporting underrepresented students in transition

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Executive Summary

This report provides an analysis of Q Success, a first-year transition program designed to help incoming direct-entry undergraduate students at Queen's University develop personal and academic skills through a series of seminars, delivered in-person and online in Fall 2015. Seminars focused on personal and academic goal-setting, self-care and self-management skills, building mental health resilience, academic skills and improving help-seeking behaviour. A particular focus of the research was on the participation of students from historically underrepresented and marginalized populations. Outcome measures included retention rates, GPA, a measure of thriving (the Thriving Quotient or TQ) (Schreiner, Pothoven, Nelson & McIntosh, 2009), and participants' ratings of the program.

The specific research objectives of this project are:

- To examine whether and how the in-person and online versions of the Q Success program can support the distinct needs and challenges of historically underrepresented university students; and
- To explore the cost-effectiveness and scalability of the virtual program model to inform its potential transferability across the higher education sector for the benefit of underrepresented students in diverse settings.

A total of 514 students registered for the program, of whom 293 participated. Data analyses indicated that members of historically underrepresented groups participated in the program at levels that were higher than expected. Participants expressed a high degree of satisfaction with the program and identified specific helpful elements. Q Success was successful in meeting its goals; however maintaining attendance over the course of the program, both in-person and online, was a challenge. More students were reached through the two online groups than across the five in-person groups, and costs did not vary greatly from the in-person delivery model.

In relation to outcome measures, Q Success had a minimal impact on retention rates between first and second year; this could be the result of a very high overall retention rate among first-year Queen's students and the relatively low program participation rate. Findings on the TQ measure showed a decrease in scores over the course of the program and limited predictive power for this measure. This finding is consistent with unpublished data on the TQ (E. McIntosh, personal communication, March 3, 2016). We suggest that our findings may indicate a tendency on the part of students to overestimate their sense of thriving at the beginning of the year. The adjustments and adaptation demands of the first few weeks in a more demanding academic environment may decrease the sense of thriving and move the scores to a lower level. Findings related to GPA also suggest that the program had little direct impact on this measure.

1. Introduction

The transition from high school to postsecondary education can be stressful and disruptive for some students. Canadian students transitioning from secondary to postsecondary institutions face significant personal and academic adjustment challenges. These challenges are complicated by contextual factors such as a changing youth culture, shifting demographics, a call for greater institutional accountability on the part of postsecondary institutions for student satisfaction and learning outcomes, as well as student well-being and safety issues (Hardy, Cox & Strange, 2010).

Common but stressful developmental transition issues include identity development, exploration of sexuality and development of meaningful interpersonal relationships (Kadison & DiGeronimo, 2004). In addition to these typical developmental transitions, there are challenges experienced as a result of moving into a new academic and social context. Academic transition challenges include the need to:

- adapt to a new living and learning environment;
- understand and meet new academic expectations;
- adjust to a more competitive academic environment;
- develop new learning strategies; and
- begin to map out academic and career goals.

Personal and social transition challenges include:

- developing self-management competencies;
- navigating peer social influences in a culture that may involve exposure to and experimenting with alcohol and other recreational substances;
- negotiating parental expectations;
- balancing involvement in co-curricular leadership opportunities and extracurricular activities; and
- dealing with financial-management stress.

For some students who belong to historically underrepresented groups in higher education (including members of racialized minorities, Indigenous students, and students with disabilities) there may be additional challenges, such as the experience of marginalization, prejudice and discrimination. For these students, the process of adjustment and development of a sense of connection may be more complex and demanding.

Complicating the academic, social and personal transitions is the vulnerability of this age group to mental health problems. Kadison and DiGeronimo point to a “steady and alarming rise in the severity of students’ mental health problems” in colleges and universities (2004, p.5). The years during which students are most likely to be enrolled in undergraduate education overlap with the time when mental health problems are likely to emerge. There is an increased awareness in the postsecondary sector of the need to provide mental

health supports and services on campus, as well as ongoing education and training regarding mental health, and indicators of emerging problems to this population.

This report describes an analysis of a transitional skills, non-credit program at Queen's University in the 2015–2016 academic year. Q Success was designed to support the achievement of two important and interrelated student and university goals:

- ensuring the personal and academic transition needs of incoming students are met, particularly for those who identify as members of historically underrepresented and marginalized student populations; and
- establishing an early touch-point to raise awareness regarding mental health, self-care and awareness of specific resources as they relate to student success in higher education.

2. Literature review

In a 2011 US survey, the National Resource Center for The First-Year Experience and Students in Transition, found that 87.3% of campuses reported having a first-year seminar as one of a suite of student experience and success programs and services (Padgett & Keup, in press, as cited in Keup & Petschauer, 2011).

First-year seminar programs are designed to successfully integrate incoming students. While they have a long history in the United States, they represent a relatively new but increasingly popular addition to student academic success programming efforts in Canada. A scan of Canadian postsecondary institutions identified a number of credit and non-credit courses for first-year students; these were designed with the goal of helping students to "acquire strategies for academic and personal success" (Mason, 2010, p. 68). In many of these Canadian institutions, a broad array of courses has been assembled into what are termed variously first-year seminar, University 101, or university success programs. The most common element in these programs is the goal of supporting students in their transition from high school to postsecondary education. Transition programs provide opportunities to integrate academic, personal and interpersonal transition issues that not only help students to meet the social and intellectual challenges of higher education, but also help address personal health, wellness and safety issues.

Studies have shown that first-year, full-time postsecondary students come from increasingly diverse social and cultural backgrounds, are diverse in their levels of academic preparation, and have diverse mental, and physical health care needs. First-year seminar programs appear to be effective in addressing the common challenges that these students face in adjusting to their new lives at college or university (Keup & Petschauer, 2011).

The following attributes have been suggested as characteristic of effective first-year transition programs:

- Development of the program is embedded in the framework of appropriate student development theory, including identity development, cultural diversity and student-led learning (for example, Barefoot & Fidler,1996);
- The program should begin early in the first term to ensure the greatest likelihood of impacting student engagement; research evidence suggests that students who fail to engage within the first six weeks of university tend to stay disengaged throughout their university career (Milen & Berger, 1997);
- For skill-development or in-person instructional programs, small classes or groups are ideal; and
    - Consistent membership adds to the "cohort effect," providing students with new avenues of social engagement (Engleberg & Mayhew, 2007, pp. 246);
    - Programs must allow time for discussion and activities; this is facilitated by small group sizes.

3. Rationale and benefits

Research has demonstrated that transitional-skills programs can be useful vehicles "for achieving the learning and developmental objectives" of undergraduate students (Keup & Petschauer, 2011, p.4). Such programs focus on four key areas:

(i) transition skills (navigating the academic, personal and social dimensions of a new environment);
(ii) academic skills (learning skills appropriate for the university setting);
(iii) self-management skills (dealing with the time and organizational demands of life in university); and
(iv) psychological resilience and mental health awareness (building on coping skills required for dealing with adversity, becoming aware of the elements of positive mental health and signs of mental illness).

The range of positive outcomes cited for such transition programs includes increased involvement in campus activities, interaction with faculty and student engagement; as well, specific academic changes are noted, including improvements in academic performance, critical reading, writing, and a commitment to lifelong learning (for example, Padgett, Keup, & Pascarella, 2013).

Transitional programs are diverse in their format and content. The unifying aspect is the aim to enhance personal/social and/or academic adjustment and to integrate students in their postsecondary institution (Keup & Petschauer, 2011). A review of transition programs suggests these consist of two broad categories of skill and knowledge development:

(a) Core academic competencies and awareness; and
(b) Broader life skills to support personal and academic success.

The former category can be conceptualized as academic support sessions, with both general content (for example, critical thinking and an introduction to academic integrity) and specific information (for example, writing for the sciences), and may include:

- Information literacy;
  - Navigating and using course selection and registration systems;
  - Navigating and using real and virtual library systems;
  - Navigating and using university information technology systems;
- An introduction to academic integrity in the postsecondary context;
- Critical thinking skills;
- Exam-preparation and writing skills;
- Dealing with anxiety regarding examinations;
- Organizational skills;
- Project management skills.

Life skills may include broader competences to support personal and academic success. These may be considered as extended orientation sessions that provide detailed information about campus resources, as well as practical strategies for self-care and self-management, mental health coping skills and an introduction to psychological resilience. Elements of these skills may involve:

- Awareness of university student services and resources;
- Stress management;
- Financial management;
- Healthy lifestyle/self-care;
- Psychological resilience;
- Mental health coping skills.

First-year transition programs may also help to:

- Reduce academic stress;
- Introduce students to both professional and peer-based resources and programs on campus;
- Increase awareness of mental health services and resources, and normalize conversations regarding mental health, thereby helping to reduce stigma regarding mental illness;
- Contribute to a better-informed and caring campus community.

Historically underrepresented and marginalized student populations

The application process for Q Success included a number of demographic questions that allowed students to optionally self-identify as having Indigenous ancestry, first-generation experience, international status, racialized identity and experience living with a disability.

These demographic questions permitted the examination of distinct needs, experiences and impacts in relation to historically underrepresented and marginalized student populations. While each of the underrepresented and/or marginalized student populations listed above is distinct, with varying issues and needs, they all may be at higher risk of personal and academic stress and distress as a consequence of facing challenges and barriers to achieving their full academic potential in higher education. The following may be contributing factors:

- Less access to social and cultural capital including networks to support their preparation for and navigation of academic cultures, structures and systems (for example, first generation, international, Indigenous students);
- Lack of adequate financial support and time to fully engage in university life and learning in and out of the classroom (for example, low income students who hold paid employment to support their studies);
- Language and cultural barriers that may interfere with access to and/or delivery of support services to achieve their academic potential (for example, some international students, Indigenous students);
- Social marginalization resulting in possible feelings of isolation and/or lack of belonging/connections to aspects of the university (for example, racialized students); and
- Social stigmatization resulting in barriers to reaching out for and receiving adequate support and accommodations (for example, students with disabilities, including mental health disabilities).

Findings from an evaluation of Q Success in its pilot year (2013) appear to confirm the different challenges these students (as an aggregate group) face in their transition (for example, greater challenges navigating academic and personal networks and support systems than their peers, both those participating and not participating in Q Success).

4. Program structure

In Fall 2015, two formats of Q Success were implemented: six 90-minute, in-person seminars, and six live online webinars. The online version of Q Success was developed to investigate whether this modality might be more amenable to students and/or more cost effective and scalable.

Table 1 provides an overview of the program structure and content. Table 2 contains a session summary. A full program description, including the learning objectives for each session, is included in Appendix A.

Sessions were held in weeks 1 to 6 of the first semester.

The content of the 2015 Q Success seminars was based on the current understanding of student development, and the developmental and academic needs of this age cohort. Programming was developed to respond to developing psychological resilience, academic and career planning, mental health education, as well as specific academically related skills (see Appendix A). Students were informed about the program and invited to register before arriving on campus.

Table 1: 2015 Program outline

In-person format	Virtual classroom format
Six in-class sessions	Six online sessions
Five cohorts	Two cohorts
Classes took place in group rooms on campus	Content delivered using Adobe Connect
1.5 hours per week supplemented by Facebook group led by peer educator	1.5 hours per week supplemented by Facebook group led by peer educator
Content delivered by student affairs professional and peer learning assistant or peer health educator	Content delivered by student affairs professional and peer learning assistant or peer health educator

Table 2: 2015 Seminar content (both in-person and online)

Session	Title	Content
1	Introduction and personal learning goals	• Introduction to the program • Understanding the transition process • Information on goal-setting • Identifying personal goals
2	How do I balance it all?	• Identifying academic goals • Self-management skills • Personal study schedule
3	Resilience: Successfully coping with life's curveballs	• Increasing personal awareness • Understanding stress and resilience • Identifying and using coping strategies • Understanding personal mental health
4	Maintaining a healthy, active lifestyle	• Identifying healthy lifestyle strategies • Selecting and integrating personal healthy lifestyle strategies • Locating health and wellness resources on and off campus • Nutrition: preparing a healthy recipe • Identifying strategies to support healthy sleep habits

Session	Title	Content
5	Preparing for end-of-term projects and tests	• Identifying end-of-term academic goals • Creating an individualized term calendar • Developing effective note-taking • Reviewing academic progress
6	Personal development, goals and career planning	• Reflecting on topics covered • Identifying key personal development strategies • Understanding Major Maps (university-based degree-planning program) • Developing a plan for success

5. Participant recruitment, registration and assignment

All program participants were first-year undergraduate students in their first semester at Queen's University.

Program promotion

Incoming first-year students were first invited to participate through an email invitation sent to every incoming student one week after the Ontario deadline for accepting offers of admission to the university (June 2015).

Program information and the online registration form (Appendix B) were housed on the Student Experience Office website, which was linked to and from multiple student services' webpages (for example, Student Affairs; Four Directions Aboriginal Student Centre, Student Academic Success Services, Residence Life).

The program was also promoted through multiple social media platforms, websites, and at the Summer Orientation to Academics and Resources (SOAR) program. Held in July, SOAR invites all incoming students and their parents or guardians to visit the campus for a day of presentations, discussion and activities. A flyer (Appendix C) advertising the program was also posted online and on campus for visits over the summer by incoming students and their parents.

Registration remained open for approximately eight weeks (June until the beginning of August).

Participant registration and assignment

Participants were assigned from the pool of registrants to one of seven cohorts: two online, three in-person, as well as two additional in-person cohorts for self-identified Indigenous students and those with a disability, based on their schedule, preferences and demographics.

Registrants were asked to select their four preferred times to attend Q Success sessions and to indicate times during the week when they would be unavailable. Students who identified as having Indigenous ancestry and those with a disability were given the additional option of joining in-person sessions designed specifically for these groups. Students were then randomly selected to participate in either online or in-person sessions, and were assigned to one of their four selected times. Students who identified as being a member of a historically underrepresented and marginalized population were placed in their most preferred timeslot.

Given the relatively low numbers of Indigenous, first-generation and international students among the first-year cohort at Queen's, a stratified random selection process was implemented to maximize the opportunity to effectively study the impacts of Q Success in these populations.

Indigenous students

Program registrants who self-identified as Indigenous were asked if they would like to participate in the Indigenous-specific cohort. All students who selected this option were placed in this cohort. From the remaining registrant pool of Indigenous students, participants were randomly assigned to one of the in-class or online cohorts.

Students with a disability

Program registrants who self-identified as having a disability were asked if they would like to participate in the specific cohort for students with disabilities. All students who selected this option were placed in this cohort. From the remaining registrant pool of students with disabilities, participants were randomly assigned to one of the in-class or online cohorts.

First generation students

From those who self-identified as first-generation, students were randomly assigned to one of the in-class or online cohorts, with the aim of balancing representation of first-generation students across the two formats.

International students

From those who self-identified as international students, applicants were randomly assigned to one of the three in-class or the virtual class cohorts.

Remainder of student registrants

Once self-identified Indigenous, international and first-generation applicants were randomly assigned to appropriate cohorts, the remainder of the applicants were randomly assigned to either the in-person or the online formats of Q Success according to the following process:

Student assignment to in-class cohorts

Students who indicated availability to participate in one or more of the in-class sessions were randomly assigned to a cohort according to their ranked scheduling preference. The random assignment process continued until the three in-person cohorts were filled.

Students not available for in-class cohorts

Students who indicated they were not available to participate in any one of the scheduled in-class sessions were combined with all other students who were not randomly selected into the in-class sessions. From this combined group, students were randomly invited to join one of the virtual classroom cohorts. If students declined to participate, the random selection and invitation process continued until the online cohorts were filled.

Table 3 reflects the assignment of all registrants into the Q Success cohorts:

Table 3: Q Success 2015 cohort assignments

Group	Number of students assigned (n)
Online *Group 1* *Group 2*	***369*** *176* *193*
In-Person *Group 1* *Group 2* *Group 3*	**127** *43* *40* *44*
Self-identified, In-Person *Indigenous Ancestry* *Students with Disability*	**18** *5* *13*
Total	**514**

Students who declined participation

Students who declined to participate because of schedules were sent information by email about services and resources available to them throughout the academic year. Four weeks into the fall term, the Q Success program coordinator contacted these students again by email and provided information about resources available on campus.

6. Data collection

Assessment instruments

a. Surveys

Participants completed pre-program (Appendix B: Registration form) and post-program self-assessment surveys (Appendix D), each consisting of 65 items. Both were administered and completed using FluidSurveys. A program evaluation was included at the end of the post-program assessment survey, and contained a mix of three Likert-scales and three open-ended questions (for example, "What were the most helpful aspects of the program for you?").

Demographic information was collected in all survey instruments, (consisting of Indigenous status, persons with disabilities, first generation to enter postsecondary education and member of racialized group).

Attendance data were collected at the start of each session (for in-person sessions), or saved at the time of user-login (for the online sessions). In the case of online session attendance, participants were instructed to log in using their first and last names, although some participants logged in with a pseudonym. In some cases, it was possible to identify students who used pseudonyms as user IDs by cross-referencing login timestamps and attendance lists, or by using smaller pieces of identifying information (for example, first names and initials). However, a small number of online participants could not be identified (n = 5) and data from these participants were not used in the analysis.

b. Thriving Quotient (TQ)

The Thriving Quotient (TQ) (Schreiner, Pothoven, Nelson & McIntosh, 2009) is a 32-item questionnaire designed to measure the academic, social and psychological aspects of a student's postsecondary experience that are most predictive of academic success, institutional fit, satisfaction with university, and ultimately graduation.

The 32 items are grouped into five scales:

- *Engaged Learning* — a measure of the degree to which students are meaningfully processing what happens in class, energized by what they are learning and continuing to think about it outside of class.
- *Academic Determination* — a measure of goal-directedness, investment of effort, and regulation of their own learning and use of time.
- *Positive Perspective* — a measure of optimism and explanatory style.
- *Social Connectedness* — a measure of involvement in healthy relationships and social support networks, whether on or off campus.

- *Diverse Citizenship* — a measure of the desire to make a difference in the community and openness to differences in others.

Higher scores on each of the scales indicate more positive functioning (higher thriving levels) in each area. More information about the TQ can be found at http://www.thrivingincollege.org/the-thriving-quotient/.

The TQ was included in both the pre- and post-participation assessment packages (see Appendix B and D.

Assessment timeline

The timeline for data collection and the instruments employed are shown below.

Table 4: Data collection — Q Success survey tools

Pre-program		
Application/Self-assessment survey Thriving Quotient	Sent by email to all first-year students (with targeted emails to underrepresented students and links available on multiple websites) Administered to participants	Application permitted student to prioritize interest in in-class vs. virtual programs; demographic information collected Baseline TQ
Post-program		
Post-program evaluation form Thriving Quotient	Sent online after program completion Administered to participants and control groups	Assess satisfaction and achievement of program objectives Measure change in TQ

A total of 223 students completed at least part of the post-program assessment survey.

Statistical analyses

All statistical analyses were performed using IBM SPSS Statistics for Windows, ver. 23.

7. Findings

Participation

A total of 878 students completed the Q Success registration form; of these, 514 were assigned to one of seven cohorts based on their chosen preferences.

Participation by members of historically underrepresented and marginalized populations

Students who identified as being a member of a historically underrepresented and marginalized population registered for Q Success at a higher rate than their proportion in the first-year undergraduate cohort.

Tables 5 and 6 show the proportion of students identifying as members of an underrepresented and marginalized population who opted in to Q Success, compared with that population's representation in the entire undergraduate first-year cohort, as indicated in the 2015-16 Enrolment Report (Table 5) and the 2015 Applicant Equity Census Results (Table 6).

Table 5: Program participation: Populations of underrepresented and marginalized students

Self-identified cohort	Cohort as a proportion of total first-year undergraduate population	Cohort opt-in as a proportion of Q Success registrants	Cohort opt-in as a proportion of total self-identified first-year cohort
Indigenous	63 of 4,514 (1.4%)	19 of 514 (3.7%)	19 of 63 (30.2%)
International	277 of 4,514 (6.1%)	73 of 514 (14.2%)	73 of 277 (26.4%)
First generation	190 of 4,514 (4.2%)	45 of 514 (8.7%)	45 of 190 (23.7%)

Source: Queen's 2015-16 Enrolment Report

Students who identified as belonging to more than one group are counted once under each group identified.

Table 6: Program participation: Populations of underrepresented and marginalized students*

Self-identified cohort	Cohort as a proportion of total first-year undergraduate population	Cohort opt-in as a proportion of total Q Success registrants	Cohort opt-in as a proportion of total self-identified first-year cohort
Students with disabilities	207 of 4,514 (4.6%)	53 of 514 (10.3%)	53 of 207 (25.6%)
Racialized	478 of 4,514 (10.6%)	139 of 514 (27%)	139 of 478 (29.1%)

Source: 2015 Queen's Applicant Equity Census Report Data. The census report is based on self-reporting and may not accurately represent the total number of students who identify as belonging to one or more cohorts.

Students who identified as belonging to more than one group are counted once under each group identified.

Table 7: Registration by modality: Populations of underrepresented and marginalized students

Cohort	Online registration	In-person registration
Indigenous ancestry	0 of 364* (0%)	8 of 145 (5.5%)
Persons with disability	9 of 364 (2.5%)	44 of 145 (30.3%)
Racialized	93 of 364 (25.5%)	44 of 145 (30.3%)
International	51 of 364 (14%)	21 of 145 (14.4%)
First generation	32 of 364 (8.8%)	13 of 145 (9.0%)

*Data from online participants who could not be identified (n=5) were not used in this analysis.

Attendance

Attendance data were gathered by taking a headcount of the number of students present at the beginning of each session. For online sessions, the number of unique users signed in to each Adobe Connect meeting was logged, then later collected and analyzed to remove any duplicate user IDs.

Table 8: Session attendance

	Number of students in attendance per session (attendees/total assigned to group)						
Assigned Group	**Session 1**	**Session 2**	**Session 3**	**Session 4**	**Session 5**	**Session 6**	**Mean**
Online (Group 1)	91/176 (51.7%)	65/176 (36.9%)	32/176 (18.2%)	30/176 (17%)	29/176 (16.5%)	19/176 (10.8%)	**44.6/176 (25.3%)**
Online (Group 2)	103/193 (53.4%)	61/193 (31.6%)	32/193 (16.6%)	29/193 (15.0%)	22/193 (11.4%)	17/193 (8.8%)	**44/193 (22.8%)**
In-person (Group 1)	28/43 (65.1%)	25/43 (58.1%)	N/A	9/43 (20.9%)	8/43 (18.6%)	5/43 (11.6%)	**12.5/43 (29.1%)**
In-person (Group 2)	22/40 (55%)	19/40 (47.5%)	14/40 (35%)	10/40 (25%)	10/40 (25%)	12/40 (30%)	**14.5/40 (36.3%)**
In-person (Group 3)	29/44 (65.9%)	18/44 (40.9%)	15/44 (34.1%)	7/44 (15.9%)	14/44 (31.8%)	11/44 (25%)	**15.6/44 (35.4%)**
Indigenous ancestry	4/5 (80%)	1/5 (20%)	2/5 (40%)	2/5 (40%)	1/5 (20%)	2/5 (40%)	**2/5 (40%)**
Students with disability	1/8 (12.5%)	6/8 (75%)	4/8 (50%)	3/8 (37.5%)	2/8 (25%)	2/8 (25%)	**3/8 (37.5%)**
Mean	**278/509 (54.6%)**	**195/509 (38.3%)**	**99/509 (19.4%)**	**91/509 (17.9%)**	**86/509 (16.9%)**	**68/509 (13.4%)**	**136.3/509 (26.8%)**

As noted above, data from five online participants were not used in the analysis.

In general, attendance decreased significantly in Week 3 (Figure 1). Attendance in the in-person cohorts for students with disabilities and self-identified Indigenous students showed slightly different patterns, although both of these cohorts had fewer than 10 students in each (Figures 2 and 3).

Figure 1: Average attendance by cohort

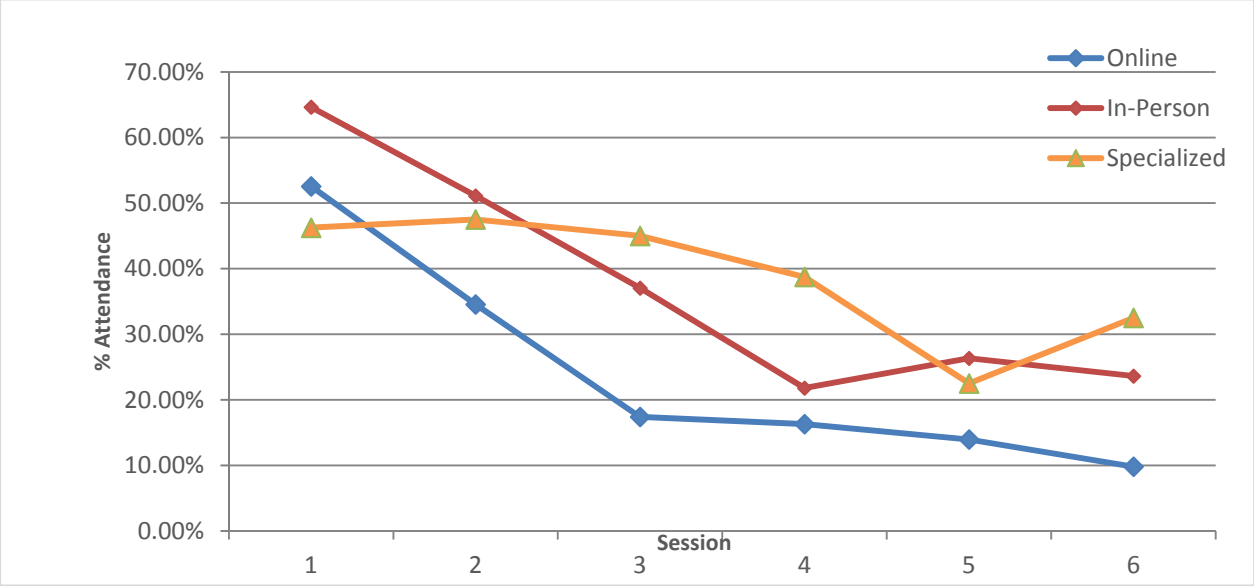


Figure 2: Session attendance: In-person cohort for students with disabilities (n=8)

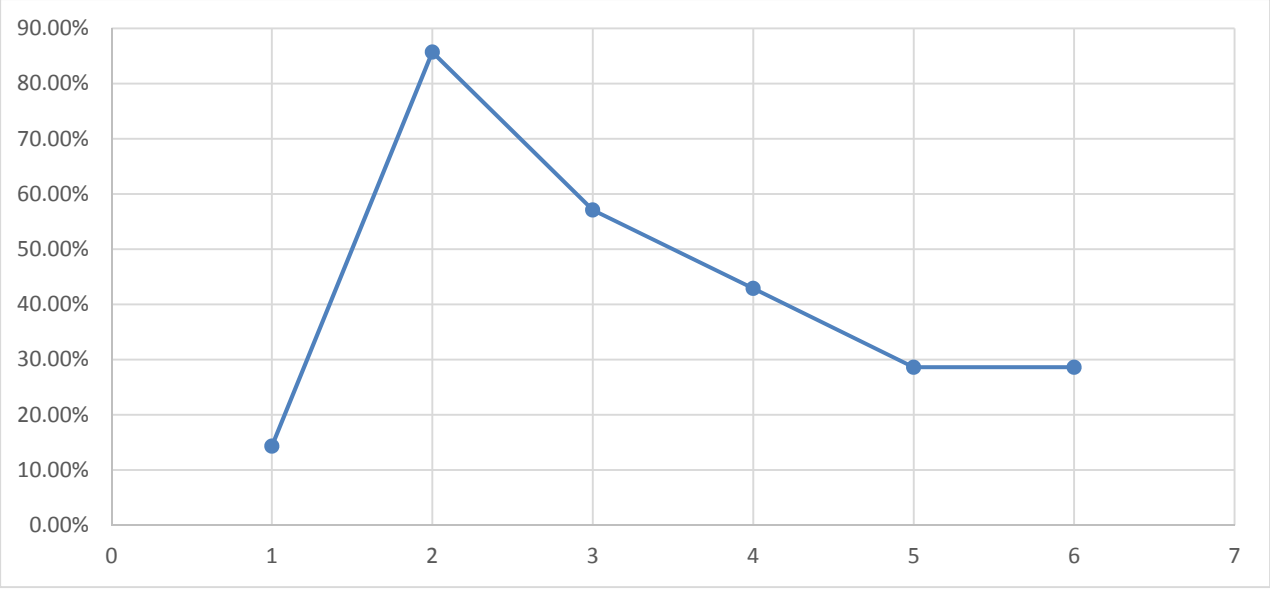
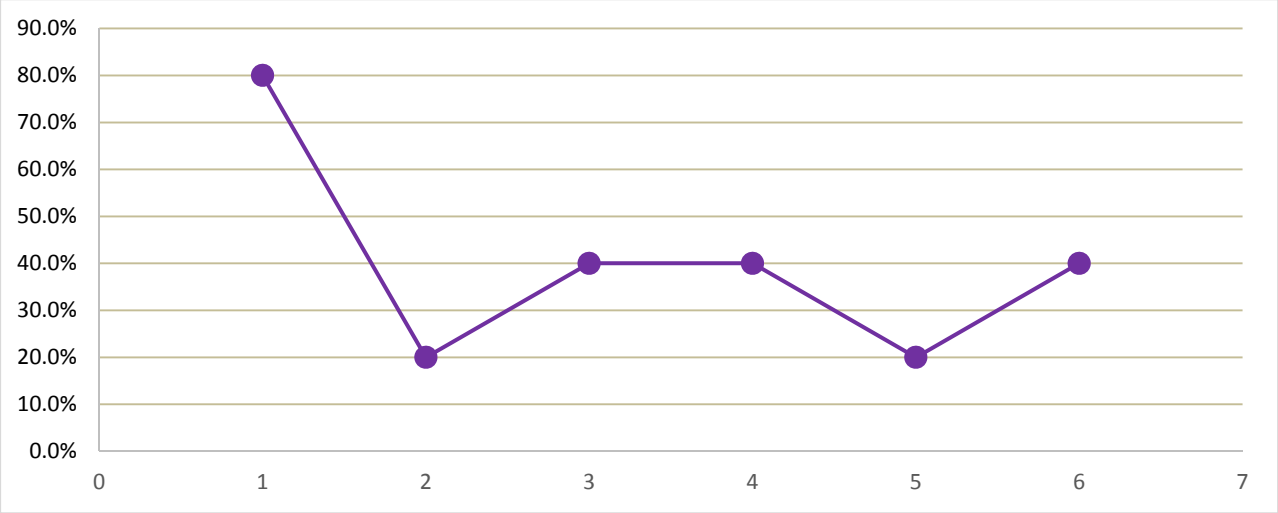


Figure 3: Session attendance: In-person cohort for self-identified Indigenous students (n=5)



Of the 514 students who were assigned to a Q Success cohort, 223 (43%) did not attend any of the sessions. Over all sessions and both modalities, only 2.5% of registrants attended all of their scheduled sessions.

When asked why they didn't attend sessions, participants' comments included the following responses:

> "I no longer felt the need to attend sessions, since my transition to university was great.
>
> "It was my parents' idea. I was planning on attending them, however, I was just always … busy doing something else and forgot."
>
> "My class schedule changed and therefore I was only able to attend a couple of the sessions."

The rates of session attendance among historically underrepresented and marginalized students was examined using linear regression. The results indicated that the international students attended more sessions (Mean number of sessions (*M*) = 3.06, Standard Deviation (*SD*) = 1.88) than their domestic counterparts (*M* = 1.99, *SD* = 1.83). This difference was statistically significant beyond the 0.5 level ($F_{(1,179)}$ = 4.93, p = .028). Racialized students attended fewer sessions (*M* = 1.24, *SD* = 1.4) than their non-racialized counterparts (*M* = 2.37, *SD* = 1.91). This difference was also statistically significant ($F_{(1,179)}$ = 13.21, p = < .001).

Average attendance at in-person sessions was 12% higher than for the online sessions (Table 8, above) for all cohorts.

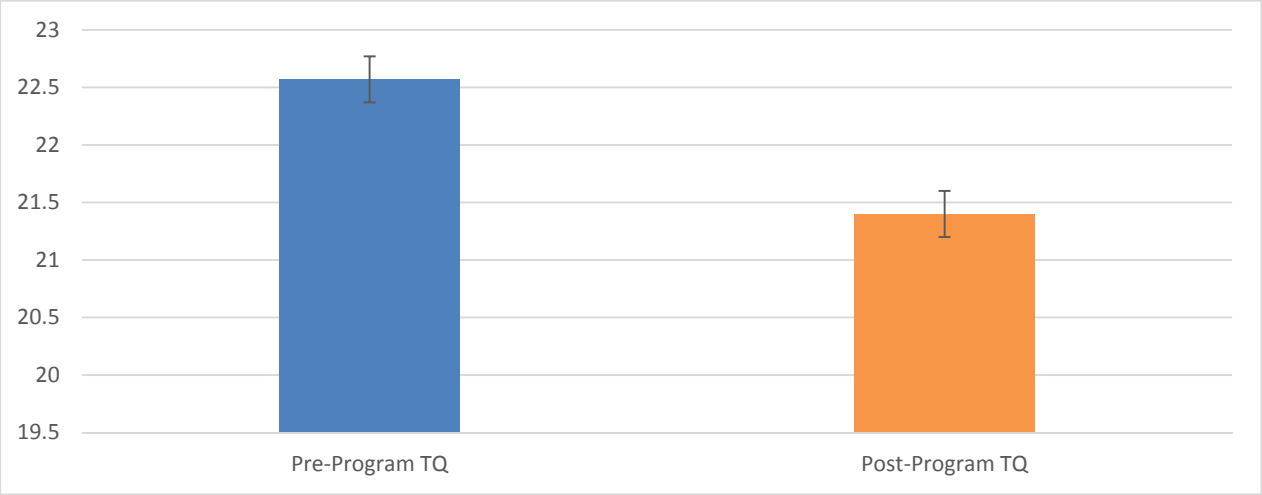
Thriving Quotient (TQ)

Analysis of TQ data was carried out using a Combined Total score for the five scales (Engaged Learning, Academic Determination, Positive Perspective, Social Connectedness and Diverse Citizenship). Separate TQ sum scores were produced for both assessments (pre- and post-program). These were then used to examine differences before and after completion of Q Success, as well as to identify and examine relationships between TQ and other variables of interest.

There was no significant difference in TQ total scores between applicants and participants: Q Success registrants who completed the pre-program assessment but did not participate in the program reported levels of thriving at the start of the semester similar to those who went on to participate in the program. An independent sample t-test showed no significant difference between mean TQ score for applicants (M = 22.96, SD = 3.65) and for participants (M = 22.61, SD = 3.06) on the pre-program assessment, t (515) = 0.24, p = n.s.

Average post-program TQ scores were lower than pre-program TQ scores: Q Success participants showed an average decrease of 1.17 in TQ sum scores over the course of the program. The results of an ANOVA showed significant within-subjects differences in pre- (M = 22.57, SD = 2.88) and post- TQ scores (M = 21.4, SD = 3.07), $F_{(1, 178)} = 43.633$, $p < .001$.

Figure 4: TQ scores before and after completion of Q Success



Attendance was not related to post-program TQ scores. Students' attendance in any of the sessions did not predict post-program thriving scores. Linear regression analyses were performed on the data of participants who completed the post-program assessment, using attendance (dummy-coded), modality (in-person versus online) as predictors of post-program TQ scores. The overall regression was not significant ($F_{(3, 177)} = .932$, p = n.s), with an R^2 of .045. Program attendance (β = -.050) was not a significant predictor of post-program TQ scores.

TQ and GPA

Post-program TQ scores did not predict GPA at the end of the academic year. Linear regression analyses showed that post-program TQ scores were not a significant predictor of overall GPA at the end of the 2015–2016 year ($F_{(2, 169)} = .726$, p = n.s. The linear regression model on overall GPA data included both post-program TQ scores and attendance as predictors. The overall model was not significant ($F_{(2, 169)} = .726$, p = n.s.). Neither TQ (β = .086) nor attendance (β = -.029) were significant predictors of year-end GPA.

TQ and online versus in-person

Modality was not a predictor of post-program TQ. Linear regression analyses were performed on the data of participants who completed the post-program assessment, using attendance (dummy-coded), modality (in-person versus online) as predictors of post-program TQ scores. The overall regression was not significant ($F_{(3, 177)} = .932$, p = n.s), with an R^2 of .045.

TQ and retention

Retention in year two (Fall 2016) of 2015–2016 Q Success participants (those who registered and attended at least one program session) (92.7% of *n* = 291) did not significantly differ from the retention of first-year undergraduates overall (94.1% of *n* = 4604). Retention from year one to year two at Queen's University is consistently high. Therefore, finding a statistically significant difference would be very unlikely.

Post-program survey

All students who registered for Q Success (including those who did not participate in any of the sessions) were asked to complete the post-program questionnaire (Appendix D).

Motivation(s) for registration:

Program evaluation questions were included at the end of the survey and permitted an examination of the students' motivations for registering. Findings are reflected in Figures 5 and 6 (historically underrepresented and marginalized populations). Participants were primarily interested in learning about academic support/learning strategies, healthy lifestyle choices and how to support their mental health. A significant proportion of participants registered on the advice of their parents. Many reported being "not sure" about why they registered. These findings are consistent across both the total participant group and the historically underrepresented and marginalized populations.

Figure 5: Reasons cited by participants for registering for Q Success
n=219 (respondents could provide more than one reason)

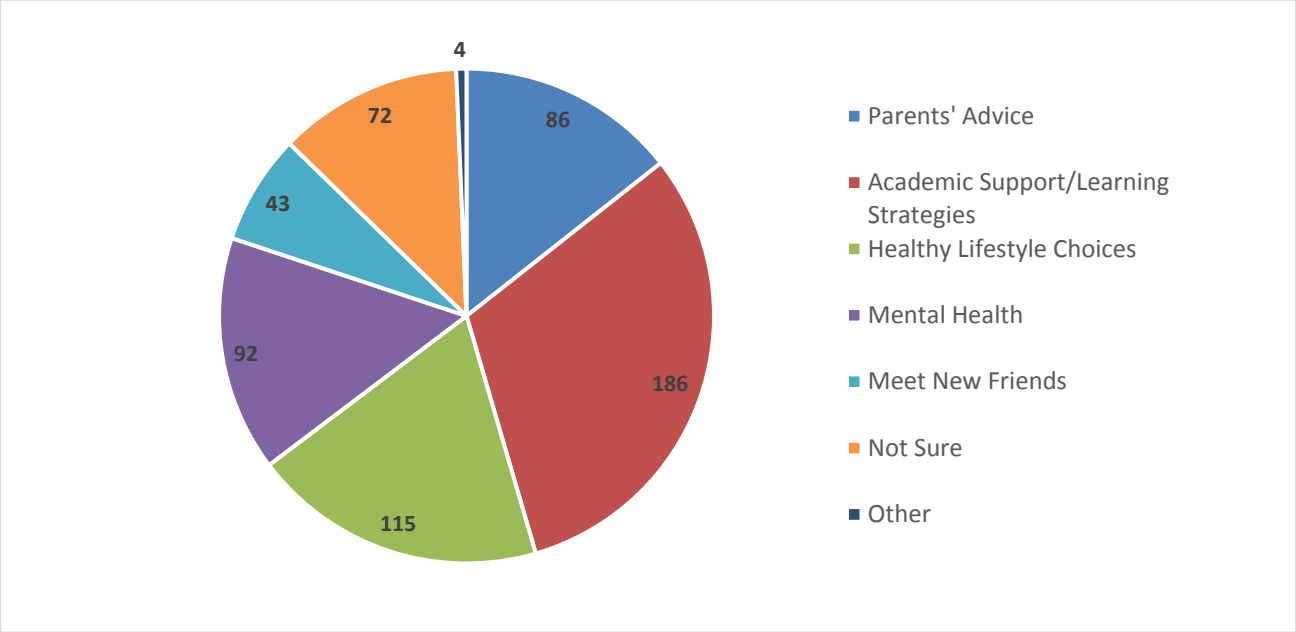
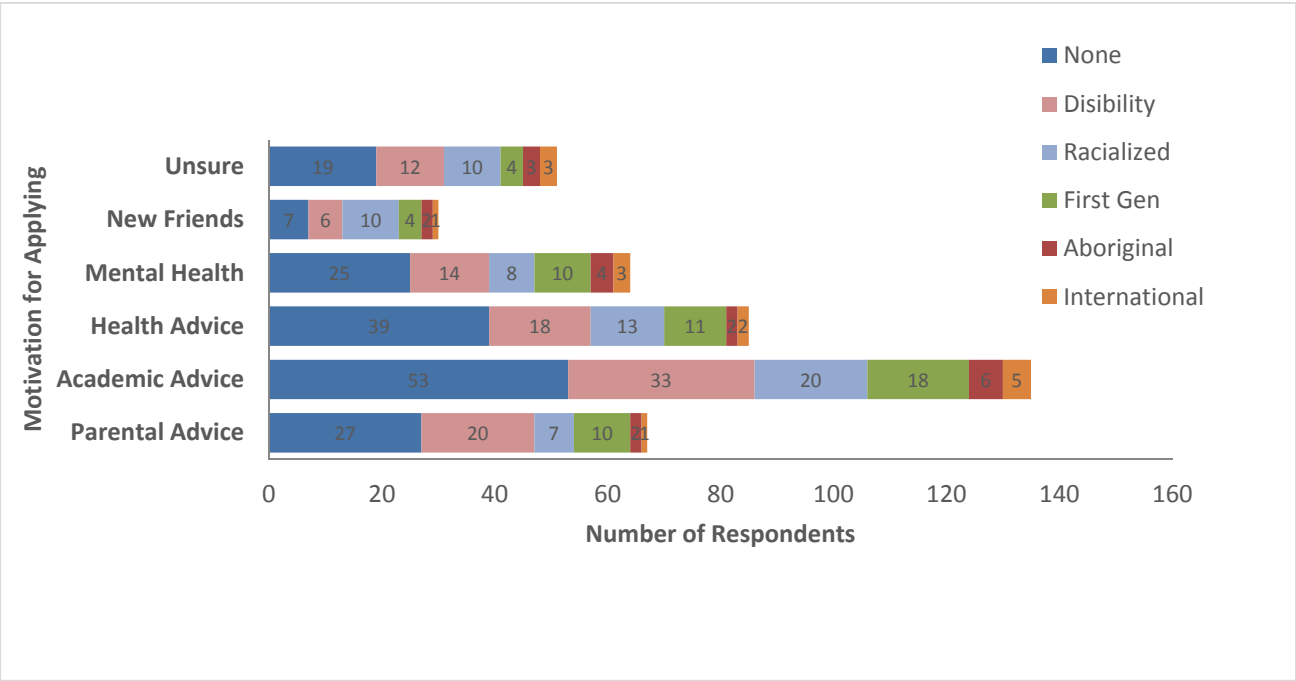


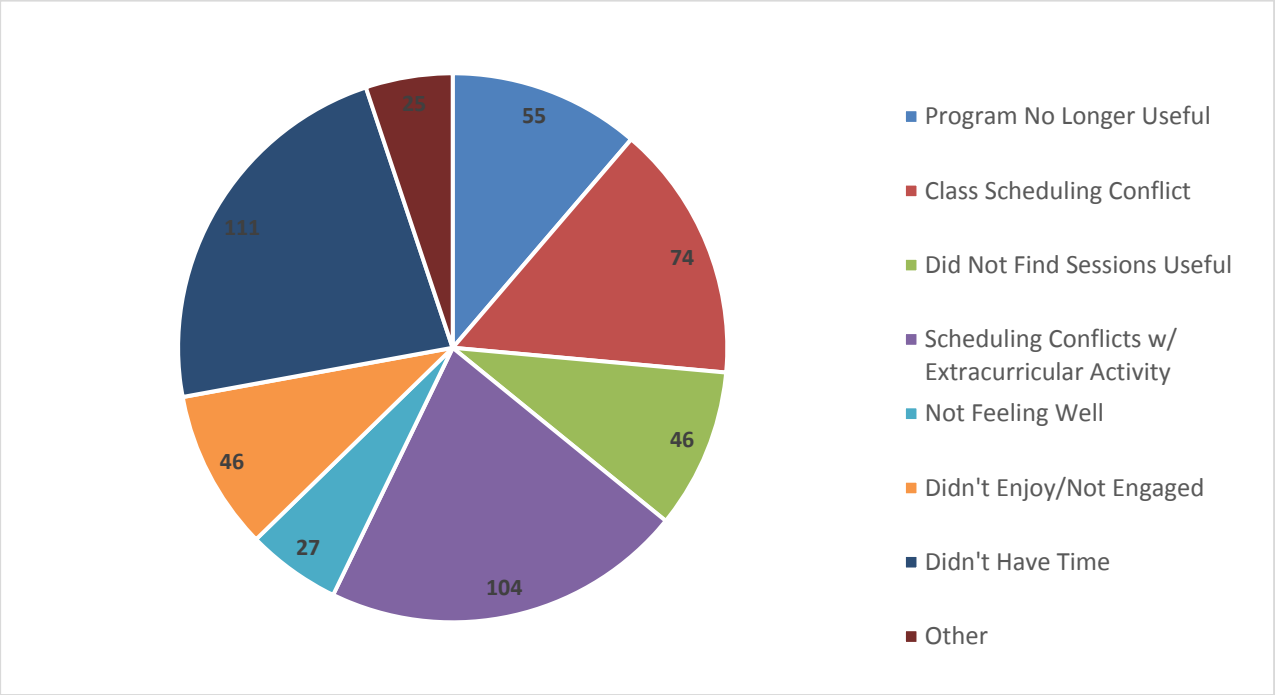
Figure 6: Reasons cited for applying (historically underrepresented/marginalized populations)



Missed attendance:

The survey explored the reasons why students discontinued attendance or did not attend (after having registered). Findings for this question are shown in Figure 7 below. A consistent theme was the difficulty students encountered in juggling and meeting all of their responsibilities. Participants reported that scheduling conflicts (with classes and extracurricular activities) were the primary reason for being unable to attend. A selection of student comments is included below.

Figure 7: Reasons for missed attendance



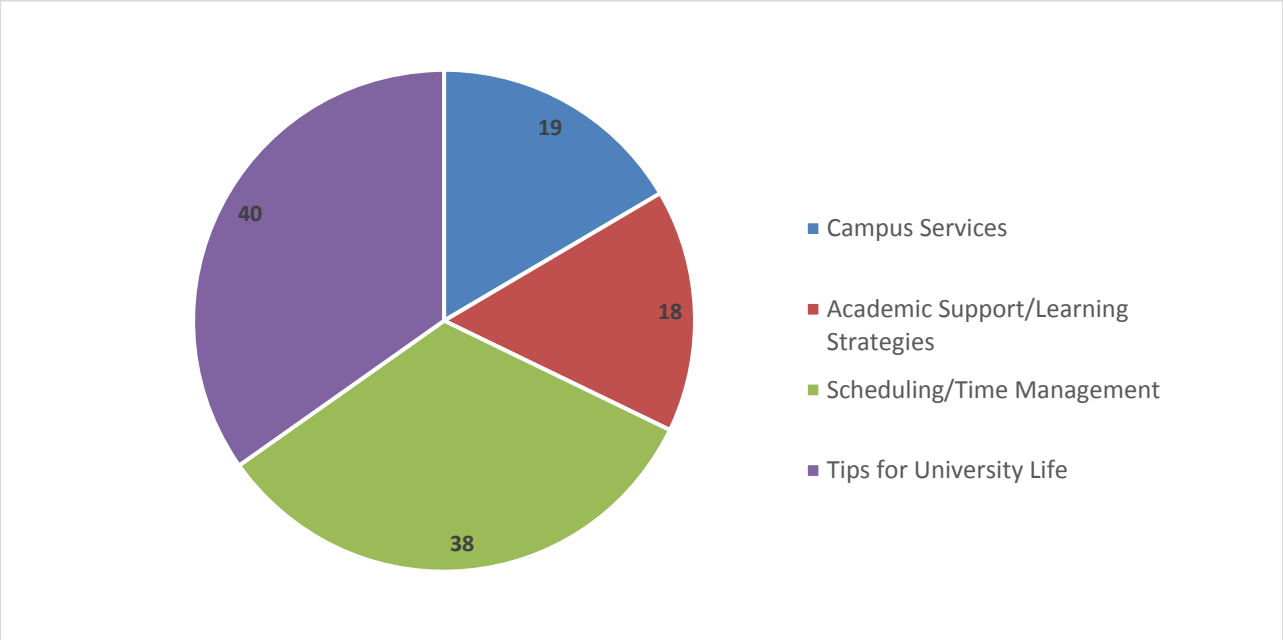
Student comments regarding missed sessions included the following:

> "I'm in engineering. A lot of the time I had assignments and reports I needed to work on that I thought were a higher priority than attending the sessions…"
>
> "So much homework needed to be done, I was not able to go."
>
> "The time of my Q Success session was the most convenient time for my group … to meet."
>
> "I regret not going..."

Most helpful program elements:

Students were asked which specific elements of the program they found helpful. These results are shown in Figure 8 below. Overall, students found the skill-building and practical advice components most helpful. A selection of student comments is included.

Figure 8: Most helpful elements of Q Success
n=115



Student comments about helpful program elements included:

> "How to study better, advice about mental health and sleep…"
>
> "Hearing people talk about what certain aspects of university was like and what I could expect in the first couple of weeks and months with relation to academics…"
>
> "The fact that the program leaders were always willing to help out and really took the time to foster relationships beyond these sessions…"
>
> "The instructors were really kind and understanding and gave great advice. As well, the documents each week were useful…"

"The real life stories from the mentors were very helpful."

"Upper year support and positive input on how to manage school."

"I loved learning about how to make a schedule that includes my academic, extracurricular and personal responsibilities and interests."

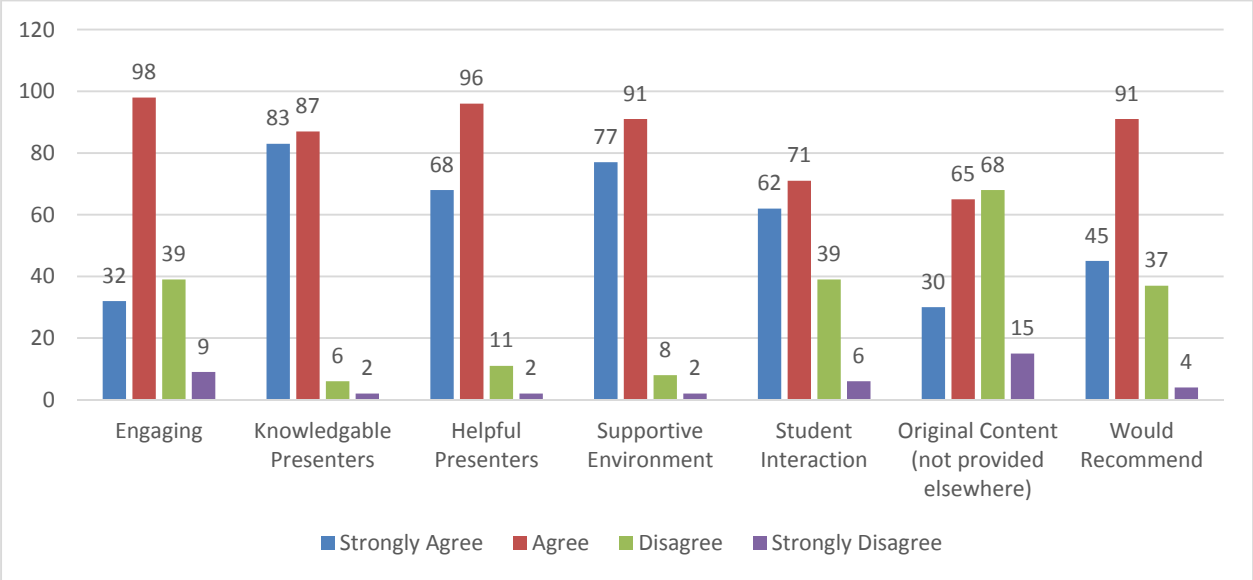
Student self-reported overall satisfaction

Program participants were asked a series of questions about their satisfaction with the program through an online survey (see Figure 9). Of 514 participants, 178 (35%) responded. Overall this feedback was very positive, with most students agreeing or strongly agreeing that:

- the program was engaging (73% of respondents);
- the presenters were knowledgeable (96%);
- the presenters provided helpful answers or referrals (93%);
- the peer mentors created a supportive learning space (75%);
- there was discussion and interaction between students (75%); and
- that the program provided them with support that they were not receiving elsewhere on campus (53%).

A majority of respondents (77%) indicated that they would recommend Q Success to other first-year students.

Figure 9: Overall satisfaction with Q Success



Student self-reported satisfaction: Online and in-person

All satisfaction ratings were higher for students who participated in the in-person groups, except the rating for presenter knowledge (see Table 9 below). Many students who participated in the online groups shared comments about wishing they had been able to participate in the in-person version of the program.

Table 9: Program satisfaction: Online versus in-person cohorts

	Online	In-person
	Percentage responding Agree or Strongly Agree	Percentage responding Agree or Strongly Agree
The program was designed and delivered in a way that was engaging.	70.3%	84.6%
The session presenters were knowledgeable about the content.	95.3%	94.9%
The session presenters provided helpful answers or referrals.	90.6%	97.4%
The peer mentors helped create a comfortable and supportive learning space.	93.0%	97.4%
The program allowed for discussion and interaction between students.	71.3%	89.7%
The program provided me with support that I was not receiving elsewhere on campus.	46.9%	74.4%
I would recommend this program to other first-year students.	74.8%	87.2%

8. Discussion

This evaluation of Q Success resulted in valuable information and findings which will be incorporated by Queen's University into planning for future program iterations, and which could be helpful to other institutions creating and/or assessing first-year transition programming.

Thriving Quotient

These findings indicate a decrease in thriving, as measured by the TQ, over the course of the program. This was also the case for students who did not attend any Q Success sessions, but who completed both pre- and post-program surveys. This would suggest that the thriving construct is not an effective one to document the changes that occur during the first semester in university or the impact of early transition programming.

Recently, investigators using this instrument have reported a similar decrease in TQ over the course of the first semester of university (E. McIntosh, personal communication, March 3, 2016). Taken together, these results suggest that the decrease in TQ may be a result of other factors that may include students' overestimating TQ elements prior to entering university. It may also be that TQ is not sensitive to the types of changes that students in first-year are likely to experience. The decline in TQ was not correlated with any measure of academic success (such as GPA at the end of the first year); the TQ was found not to be an effective measure to evaluate Q Success.

GPA and retention

We did not find an impact of Q Success on GPA or retention. This is perhaps not surprising primarily because GPA and retention may both be overly broad and therefore unresponsive measures of changes in functioning that result from the program. In addition, both GPA and retention are impacted by many other variables that could not be addressed in a six-week fall-term program.

Participation and participants of historically underrepresented and marginalized populations

As in previous years, the program attracted greater registration (in proportion to their overall numbers in the first-year class) among self-identified members of first-year historically underrepresented and marginalized populations — international students, students who self-identified as having Indigenous ancestry, first-generation students, students with racialized identity, and students with a disability. International students attended significantly more sessions than domestic students. Interestingly, while proportionally more students from these populations registered, students' motivations to attend Q Success were consistent across all student groups. The findings reinforce the notion that many students in these traditionally underrepresented and/or marginalized groups continue to see the importance of transition support programming.

Attendance and attrition

As noted above, 43% of registered participants did not attend any of the sessions; furthermore, attendance dropped markedly in most groups after session one. The results of the program evaluation show that 36% of respondents reported that they were unable to attend as a result of scheduling conflicts with their academic or extracurricular obligations. This pattern is not unusual; many students sign on for activities or groups at the beginning of the first term, only to drop them in the face of an academic burden they had not anticipated. This may have been compounded by other possible factors, such as "extrinsic motivation" for participation, namely parents who influenced student registration ("Parent's Advice" was a common motivation for registering — Figures 5 and 6). While the research literature emphasizes the benefits of an early start to transition programs, the timing may itself prove a disincentive to participation.

Program content and delivery

Q Success provided a valuable resource for students in their transition to becoming university students. Participants reported that the program helped them learn how to adjust to university life, and to access and use the services offered at Queen's. Among in-person attendees, it also fostered a strong sense of connection with mentors and peers, as they reported that the professional and student leaders created a supportive learning space.

Program content was developed based on knowledge of student development and on earlier experience regarding topics likely to be of interest. Students who participated in both the in-person and online versions reported that they found the program engaging and that it delivered supports that many students were not receiving from any other resource at the time (though this was more the case for in-person participants).

Program design, such as the use of peer mentors, knowledgeable staff members, and activities promoting discussion and interaction all received positive feedback. Most participants indicated that they would recommend the program to other first-year students.

Program design and scalability

Providing an online version of this six-week transition program had both pros and cons. The staff-to-participant ratio for online cohorts was much higher than for in-person cohorts, thus allowing the program to reach far more students per staff-hour of time spent.

Attendance declined over the course of the program, in both the online and in-person groups. While more students were reached through the two online groups than across the five in-person groups, average attendance at in-person sessions was 12% higher than for the online sessions for all cohorts. The reason for this difference in attendance is not clear; it could be the result of a number of factors, including the need for accountability in attending face-to-face sessions, versus the anonymity of participating online, or reported differences in engagement between the two versions. Student feedback was positive overall for students who participated in-person and online, but it was much stronger among those students who participated in-person. Many online participants commented specifically about a desire for at least some in-person interaction during the program.

The technology used to support the online version was already available on campus, so did not require an investment in new technology. Some time was spent adapting the program content for online delivery. The technology used allows the sessions to be recorded and viewed at any time; this may be used in future iterations of the program to further expand its reach and make the material available to more students. Other required resources, such as staff time to coordinate and promote the program, did not vary greatly with the introduction of an online component.

There is an inverse relationship between cost effectiveness/scalability and impact: while the online version was able to enroll more students, which it did, with fewer resources than would have been required to serve

the same number of students in person, it was not as positively reviewed by participants. In addition, the attendance rate was lower online than in person (see Table 8: mean online session attendance = 24%; mean in-person session attendance = 33.6%).

Research limitations

A key limitation of our analyses, specifically with regard to the use of the Thriving Quotient, was an inability to anticipate widespread changes in thriving resulting from outside factors. We have speculated that our results may be indicative of changes in students' self-perceptions and sense of self-efficacy due to the adjustment and adaptation demands of the first few weeks of their first semester in university. Thus, the sense of thriving seen as the semester begins is, in effect, inflated or buoyed; the decrease in TQ observed at the end of the program may be an adjustment in a more realistic direction.

As noted above, we were also limited in our ability to collect online attendance data with complete accuracy. This was due to students logging on to Adobe Connect sessions without using personal identification data as part of their user ID, as well as by students connecting to the sessions as a group using the same computer. However, these limitations are offset by the opportunity the format offered for students to ask questions anonymously and questions they would not have otherwise asked (that is, in an in-person session). The online format also provided students with an additional means of attending Q Success in a small group (sharing one computer), and it enrolled more students than the in-person sessions. As such, these limitations should be considered in a way that does not affect the format-based advantages as identified by participants.

9. Conclusions

New students continue to be motivated to access supports for their transition to university life and students from historically underrepresented and/or marginalized populations are registering for this programming at a proportionally higher rate. By adapting the Q Success program to include online as well as in-person cohorts, we investigated a way to scale the program in a cost effective and impactful way to reach students with high quality support.

Students who attended the online and in-person cohorts provided positive feedback about the program, and reported that it provided them with supports that were not being offered elsewhere. The program met its primary goals of ensuring the personal and academic transition needs of incoming students and establishing an early touch-point to raise awareness regarding mental health, self-care and awareness of specific resources as they relate to student success in higher education.

Unfortunately, even with students reporting that they found the program engaging and helpful, retention was a significant challenge, in both in-person and online formats. The first six weeks of first year are very busy and students reported that they had struggled to juggle other commitments with attendance at Q Success.

Delivering the program online, while a cost effective way to scale the program to reach a larger number of students, produced mixed success. We have learned that Adobe Connect is an effective, user-friendly platform to reach greater numbers of students (including those who are unable to attend the live sessions and small groups of students who attended online sessions together using the same computer). Students are engaged by online mentors and are able to see the issues facing their peers. They are also using the online platform to ask questions they would not feel comfortable asking at in-person sessions. While online participants gave the program positive ratings overall, many commented that they wished there had been opportunities to interact in person.

Using the TQ to attempt to measure the impact of the program on students' thriving demonstrated that this measure and construct may not be a useful way to assess the impact of first semester programming.

GPA and retention may also not be sufficiently sensitive to reflect the impact of this type of programming. Further exploration is needed to select or develop measures that will capture the types of changes produced by transition programs such as Q Success.

For Fall 2016, the online program was open to all first-year students to retain program reach, and the webinars were posted so that students could access the information at any time; the in-person component was changed from group sessions to a one-on-one peer mentoring program for self-identified members of historically underrepresented and marginalized population groups. This was done in response to the positive feedback to in-person sessions and the reported value of making personal connections, as well as the significant interest and participation in Q Success among these particular student populations.

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