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DEV. OF A UNIV./COLLEGE PATHWAY FOR ACADEMIC SUCCESS REMEDIATION

Development of a University/College Pathway for Academic Success Remediation

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Abstract

Some students have difficulty in achieving success in the first year of study. Programs are intensive and do not include capabilities to recover from deficiencies affecting academic performance. A mechanism is needed for students to break off from their program, and address their specific deficiencies, before returning. The University of Ontario Institute of Technology (UOIT) and Durham College have developed a pathway for enhanced academic success to support students requiring remediation. The proposed pathway is done in such a way that successful students will be eligible to earn a General Arts and Science certificate concurrently with the continuation of their University degree.

In the academic success pathway, students that have been suspended from UOIT will be given the opportunity to enter a Durham College program that will address academic success related deficiencies. The students will undergo an assessment process to identify their specific needs and will have access to academic advisors at both institutions for guidance. Upon successfully completing the program, the student returns to University with a position reserved in their program of study allowing for a semester reduction in the time lost due to suspension.

This program allows for the student to focus on other academic deficiencies upon their return to UOIT. The program also allows students to recognize that they are not in the right program or at the right academic level and choose to transfer to the College or apply to switch University programs during the remedial semester. Regardless of the pathway taken, the student is provided the opportunity to be successful in obtaining the academic education that they are suited for.

Keywords: university/college pathway, remediation, credit recognition, academic success

Introduction

University student retention is one of the most studied enrolment management concepts in academia, with large amounts of theoretical and empirical research that has influenced campuses around the world. Although the considerations surrounding student retention are many and complex, the definition of retention is fairly straightforward. Berger, Ramirez and Lyons (2012) defines retention as “the ability of an institution to retain a student from admission through graduation” (p. 9). It is important to understand that the Berger definition is centred on the academy’s capacity to retain students. As Hagedorn (2012) affirms, the term retention is used in the context of the institution, whereas the term persistence is used to define a student’s ability to persevere to graduation.

Various retention theories have been the foundation for much of the empirical research that has been conducted in the academy over the last 30 years. In particular, the often-cited Tinto’s (1994) work *Leaving College* presents a theoretical model developed in the late 70s and early 80s of student departure that posits the main reason that students fail to persist is lack of integration with the academy. Tinto’s longitudinal model of institutional departure (Figure 1) displays a variety of external factors that influence students’ goals and commitments upon entering university. When connected with institutional experiences, these combined factors result in the level of integration with the academy and ultimately the outcome, or the students’ ability to persist.

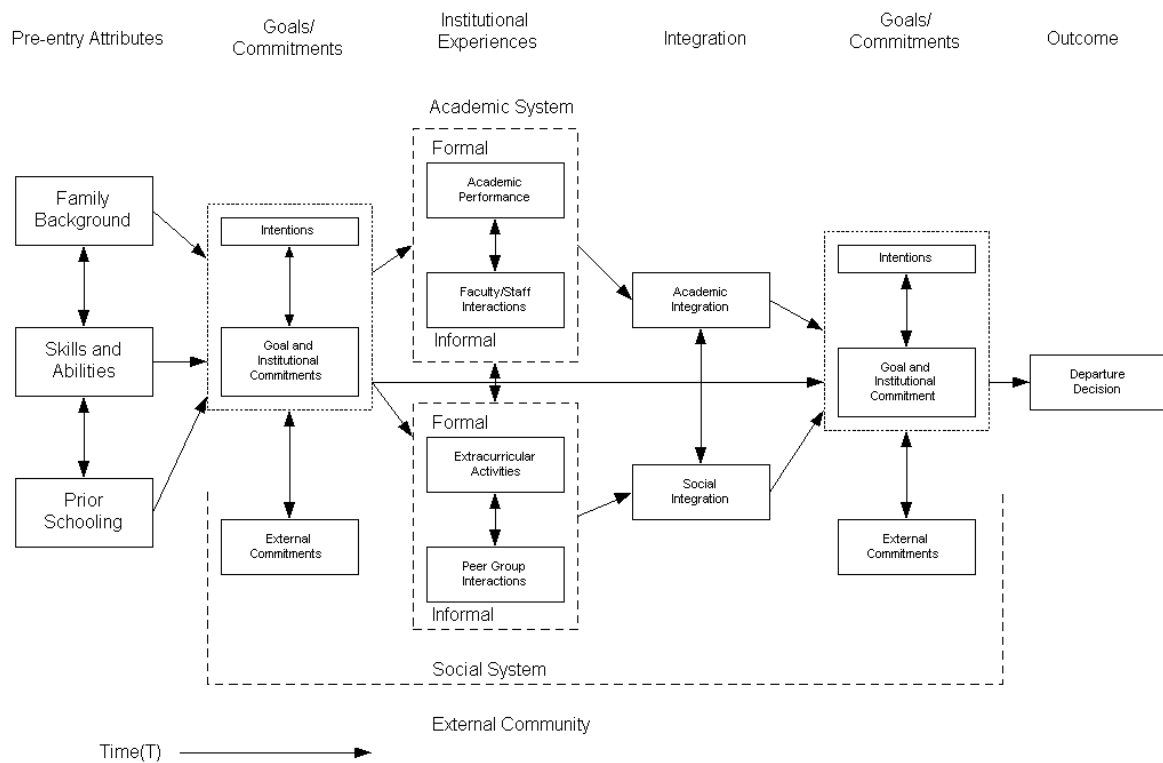


Figure 1. Tinto's Longitudinal Model of Institutional Departure

Tinto's model shows the true complexity of retention, as it displays a diverse set of factors both institutional and non-institutional that affects student success. In short, to understand fully the issues surrounding an institutions ability to retain students, it is important to look beyond the academy.

Swail (2004) presents a model that takes the work of Tinto and others and simplifies the influencing factors of retention into a geometric model (Figure 2). Like Tinto, Swail centres his model on the student experience, but has three main categories – cognitive, social and institutional – that combine to form the main influencers of student persistence.

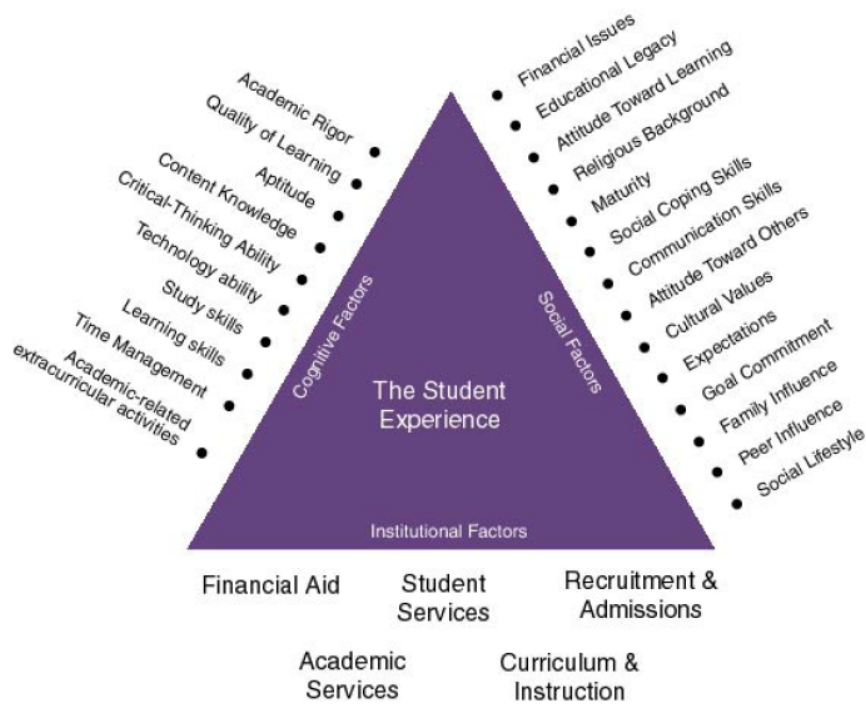


Figure 2. Swail's (2004) Geometric Model of Student Persistence and Achievement

Swail's model attempts to take the theoretical constructs of previous retention models and move to a model in practice. Finding equilibrium in the three factors affecting the student experience can assist institutions in developing retention strategies that are committed to achieving student success both socially and academically.

Both Tinto and Swail identify student success factors that reach beyond the academy and in practice would be differentiated from one institution to another. As social demography and institutional factors are unique to each institution, it is important to build retention strategies that reflect institutional realities. In developing a retention strategy for

UOIT, it will be first important to understand the unique set of circumstances surrounding student persistence at the university.

Case Context

UOIT and Durham College Pathway Partnerships

In the summer of 2004, DC and UOIT initiated multiple diploma-to-degree pathway programs (Pathway Programs) to facilitate completion of degrees, diplomas, and certificates across both institutions. Some Pathway Programs include “bridge courses” that college students must complete to qualify for admission into certain university degree programs; other Pathway Programs do not include bridge courses, meaning that qualified college students may enroll in university courses directly (i.e., direct entry). There are currently over 30 different Pathway Programs allowing mobility of students between the two institutions. Analysis of the aggregate GPA data in this study clearly indicates that, in general, Pathway students outperformed their traditional four-year university counterparts by a significant margin in almost all disciplines even though some students claimed they struggled early in their programs to meet university standards in critical thinking and writing skills (Percival et al, 2015).

Durham College General Arts and Sciences

The General Arts and Science Program (GAS) at Durham College provides students with upgrading, exploration, and preparation opportunities for a broad spectrum of future academic pursuits while earning an Ontario College One Year Certificate. The GAS program attracts a wide range of student types including those that come directly or recently from either high school or another post-secondary program. There is also significant representation of mature students looking to return to work or start a new career.

The GAS program has experienced strong growth in recent years. Current annual enrolment exceeds 700 students with intakes offered in September, January and May. For

several years, DC and UOIT have collaborated on a number of joint program initiatives. Four of the ten GAS pathway streams offered in the 2015-2016 academic year are specific to UOIT. These include two transfer articulation agreements in liberal arts and forensic psychology where GAS graduates may enter directly into year 2 of the corresponding UOIT programs. There are also two preparation articulation agreements for nursing and engineering. Combined, these existing UOIT pathways represented 40% of total GAS enrolment in the fall of 2015.

Retention and Student Success at UOIT

The ability of students to persist to graduation is becoming increasingly difficult as more students face competing life challenges that affect their ability to focus on academics. In the past, most first year students lived in residence with well-defined costs and known financial supports. They were able to concentrate on their studies as opposed to the duties of self-care. The first year University experience gave students the time to develop the life skills necessary to succeed on their own. Today, a growing number of undergraduates are working full-time in order to pay for their education and/or their cost of living. Many have family and dependent responsibilities that affect both their available financial support and their time available to perform tasks. In order to address both financial and family issues, many students also face long commuting hours. Further, the role and expectations of the family have also significantly changed. Universities that wish to be successful in retaining students to graduation need to pay close attention to the realities surrounding the 21st - century student.

Student persistence at UOIT is largely seen as a first-year problem. Students leave the university for various reasons; however, the majority are suspended or dismissed for failing to achieve satisfactory academic standing. Of course, these failures do not always reflect cognitive or academic issues as they are likely due to a myriad of variables. In fact, the UOIT

student enrolment profile is unique, and in many cases issues surrounding student retention are atypical of retention norms. For example, high school grade point average (HSGPA) is generally a basic predictor of student success, and as a university's aggregate HSGPA increases so does retention. Across Ontario for instance, universities with higher admissions averages typically retain students better than those with lower admissions averages. However, UOIT has been experiencing the opposite effect with a steadily increasing HSGPA and a regression model between HSGPA and academic performance in first year shows very little association between high school grades and undergraduate success until HSGPA reaches above 86 per cent (Stokes, 2014).

Although the grade distribution of early leavers has a slightly higher percentage of students between 70 and 79 per cent when compared to total enrolment, the reason for leaving cannot be tied to HSGPA alone. However, students with the highest HSGPA (over 86 per cent) all reach clear academic standing, and so the correlation between HSGPA and undergraduate persistence is stronger with students presenting higher secondary school grades. Perhaps one of the reasons that average secondary school grades are not a strong predictor of student success at UOIT lies in the changing characteristics of undergraduate students in Ontario.

As participation rates have increased significantly in the past two decades, societal influences affecting students have also changed. In particular, a steady flow of immigration into the Greater Toronto Area (GTA) has brought a wave of undergraduates who are new Canadians or who are the children of new Canadians. These students have grown up with the additional challenges – financial, social, cultural and/or language barriers – accompanied with establishing a family in a new country (Wittebrood & Robertson, 1991). What is more, UOIT students seem to have heavy competing commitments to academic study. The 2011 National Survey on Student Engagement (NSSE) shows that almost half of UOIT students

are working between 10 and 30 hours a week. (Stokes, 2014) A similar number are commuting to campus between 6 and 30 hours per week; a number far greater than the provincial average.

Although these factors are undoubtedly affecting student success, the UOIT problem is further complicated by the fact that we retain fewer students who are from Durham Region than students who live in areas further from the university. The number of hours that UOIT students spend at part-time jobs is a telling indicator of the financial difficulties that are connected with undergraduate study today. With the advent of the Ontario tuition grant in 2012, it is estimated that 85 per cent of UOIT students receive some sort of financial assistance. A compounding factor that underscores student time and financial commitments is the above average proportion (52 per cent) of students with dependent responsibilities is 14 per cent higher than the provincial average. In short, the circumstances surrounding academic performance are far more complex than just the cognitive ability of the student but includes lack of some non-academic skills.

Program Development Process

An interdisciplinary team was established to work on the development of a student success pathway. This team included University faculty/Associate Deans, a staff member from student life, a member from the registrar's office, the director of GAS programs at the College, and a senior administrator from both institutions. This team included individuals familiar with existing pathway programs, program development and administration, and first year student challenges. They also represented a breadth of expertise from engineering, math, business, and communications.

The initial discussions for the development of the program focused on the definition of success for the project, determination of eligibility for the program, and the high-level

program level learning outcomes. Research from existing pathway programs, admission requirements for university entry, and student retention schema were all considered.

The definition of success considered here was the completion of further higher education. This is different from the more common definition of returning the student to their original program for completion. The intent was to allow the student the flexibility to explore their current program and other programs in both the University and College. Figure 3 shows the conceptual model of the various pathways for achieving success. Using this definition, the project would be successful if the student decided to follow any of the green or yellow paths in the conceptual model depicted in Figure 3. The retention pathway will be designed with tools or experiences for the student to choose between returning to the University or staying in College. If the student stays in college, they can complete the college program or they can then bridge back to the university to an appropriate program. In all such cases, the student has achieved success.

While some causes for not achieving success are indeed academic in nature, it was found that the majority of poorly performing students are encountering difficulties due to other issues. These issues include: exam anxiety, lack of study skills, long commutes, need to work, schedule conflicts, poor time management, family commitments, financial crisis, stress, loss, or other issues that impose a social or personal burden upon the student. Before University, the students were relatively sheltered and these issues were not familiar to them. Hence, the student has to deal with academia and new life situations at the same time.

The program level learning outcomes were focused on providing students with the skills to be successful in an academic program. Based on the initial analysis of student challenges, these skills included self-advocacy, note taking, time management, managing group work, financial budgeting, and reflection. Although writing and numeracy skills were identified as an area for improvement, the committee did not fixate on these skills in isolation

of the social supports. No transfer credits were considered for the courses included in the General Arts and Science Student Success Pathway program (GAS-S). Any transfer credit at the university level was left to the discretion of the Dean of each university program. This early decision allowed the program to be designed based on identified student needs and reduced any restriction to fit into specific existing course structures.

The initial conceptual model of the GAS-S pathway program included a couple of key elements. The first element is that evaluation and reflection were critical elements that would be integrated into the program structure. This includes student self-evaluation and reflection on the challenges they faced while at the University, both academically and socially. It also includes evaluations on student learning styles, personality, and career aptitudes to help students better understand their interests, strengths, and potential options to improve their areas of weakness. It also includes evaluative mathematics and writing skills assessments to help students focus on specific topics for greater customization of the program. These evaluations are integrated into the course work throughout the GAS-S program.

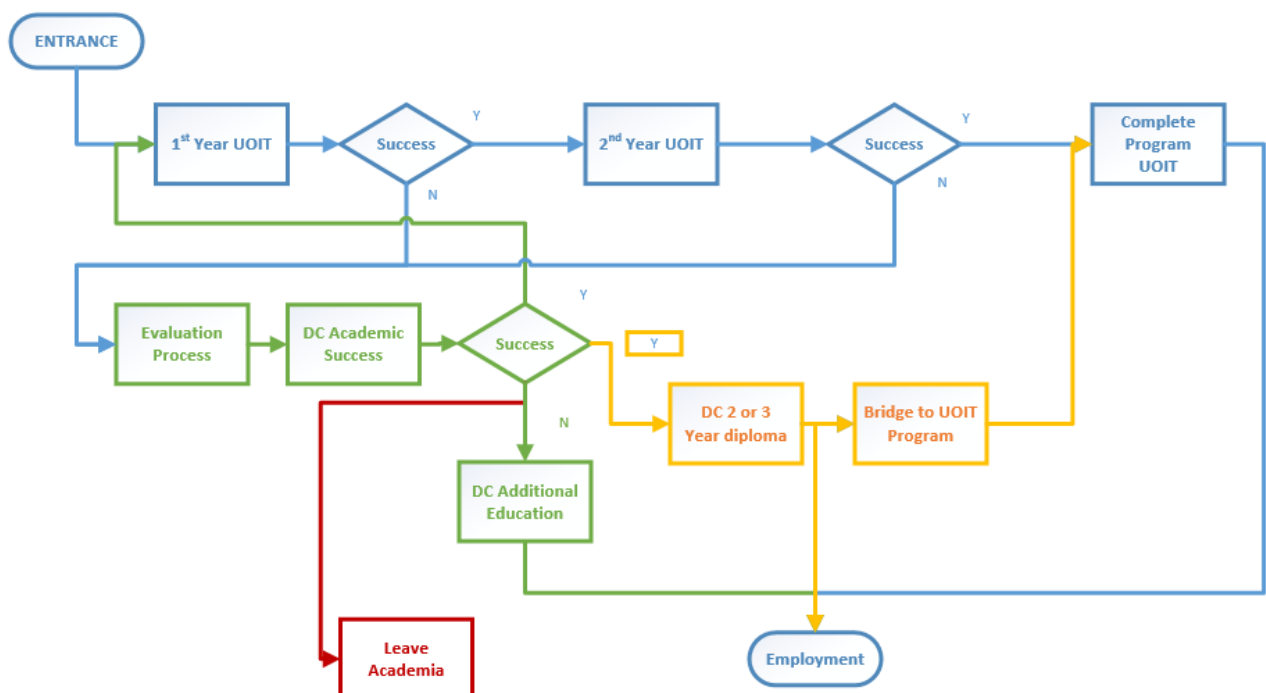


Figure 3. Conceptual model of the GAS-S Pathway program

The second element is that the program would focus explicitly on first year students from across all program disciplines in the University. This decision helped keep the learning outcomes focused on basic knowledge and skills and also helped to ensure that there would be sufficient demand in the courses for financial viability of the program. This also focused the timeline for the program offering to be in the spring/summer semester (May to August) to provide an incentive of early re-admission to the University and place students in a position to be able to start fresh in the Fall semester in either a university or college program. This timeline helps to mitigate any potential concerns with course offering scheduling and optimizes space usage at the College.

Interdisciplinary Development Team

In order to develop the GAS-S pathway program, a truly interdisciplinary team was required. This included individuals from both institutions as well as across the various academic disciplines. In particular, senior leaders were required to support the development of the program, resource allocation, and ensuring the program was approved through the various institutional quality assurance processes. Representatives from student life and the registrar's office ensured that logistical elements, research and experience on student supports, and financial aid were considered. The inclusion of diverse faculty members who also served administrative appointments in their school or faculty helped build internal support for the program as well as content expertise for the courses. The senior academic leaders from the two institutions also helped to build support throughout senior administration, including with the variety of Deans affected by the program. Although the project team represented a diverse set of skills and backgrounds on their own merit, the team was able to bring broader perspectives from their resources and integrate them into the development of the program. These individuals accessed their network of colleagues through a consultative process as depicted in

Figure 4. By including such a wide variety of individuals and areas in the development process, the team was able to gain approval for the program across all University faculties and key College departments in a short time.

In particular, the academic advisors played a critical role in describing their experience with student challenges. They worked with the project team to provide a summary of common student concerns in the first year of their programs, anecdotal evidence of challenging courses, and research in the role of advising to support retention. This information helped to shape both the types of electives as well as the topics included in the academic success course. Information from the student life and student support services provided insight into the use of student support resources on campus, the types of math and writing challenges faced by many students, and some insight into time and stress management concerns expressed by students. They also provided key information on the resources that would be available at both institutions to support the students throughout the GAS-S program, their potential re-integration to the University environment or transition to programs at the College. The faculty experts at both institutions provided their specific knowledge on the collection of learning outcomes envisioned for the courses in the program. This included reflecting on the skills expected at the University and the known best practices used in existing courses at the College.

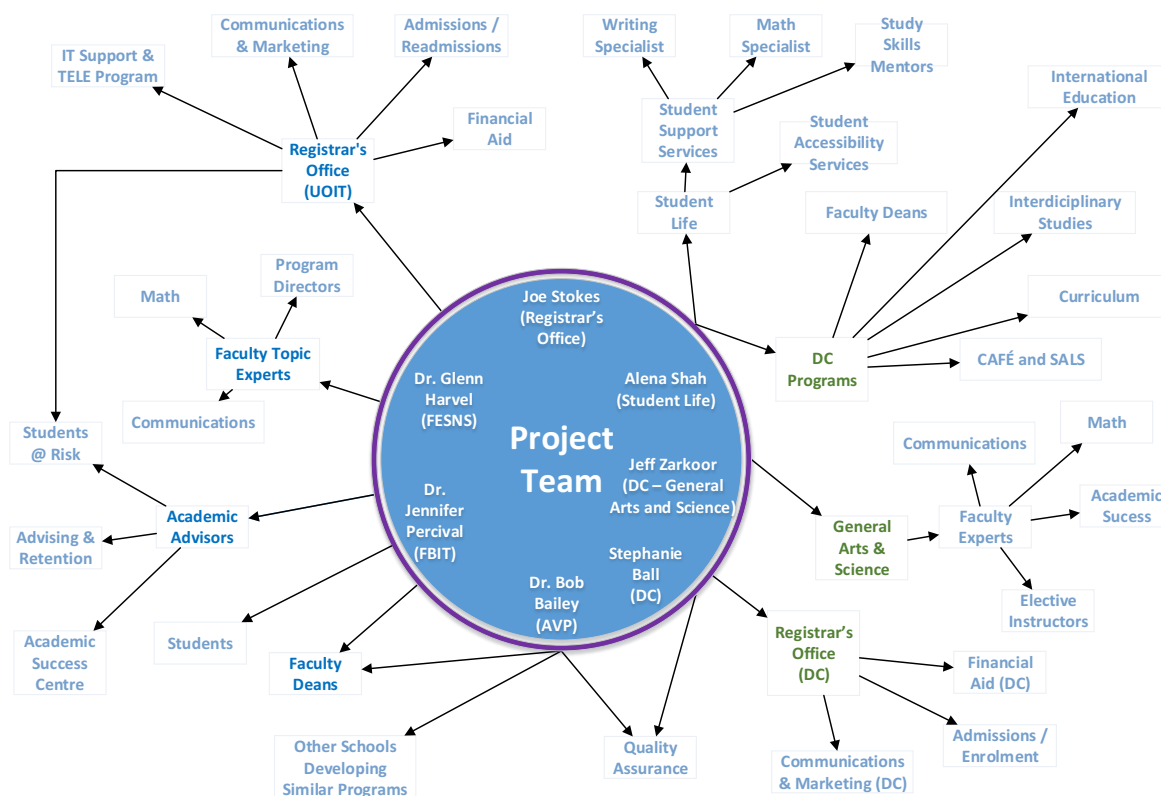


Figure 4. Mindmap diagram of program design consultations

Shift from Courses to Program Outcome and Learning Experience

Based on the comprehensive consultation process used in the collection of student challenges and skills needs, the project team set about first determining the initial structure for the GAS-S program. The team needed to balance the financial viability of the pathway against any specific university program need. The best way to leverage existing best practices, tools, and courses already developed for other general arts and science pathway programs was also considered. Early on the decision was made to ensure a similar full-time workload for students to enable them to put into practice the time management and study skills necessary for successful re-integration. In order to support the potential completion of a general arts and science certificate, we also had to ensure that at least 50% of the required courses were completed at the College. These decisions set the number of courses in the GAS-S program for the spring/summer semester to be 6. In prioritizing the students' preparation needs, three main areas of concerns surfaced; numeracy or basic math skills,

communication skills, and academic success skills. It was determined that the remaining courses would be chosen by each student, with consultation from their academic advisor, from a set of electives representing the broad spectrum of programs at the University. With this as the general structure which varied only between the numeracy needs of the programs (Table 1), the team started to brainstorm the desired learning outcomes for each area from the perspective of student skills and learning outcomes. The program team did not look at any specific course outlines until the learning outcomes desired for the program had been determined. This process allowed the program team to brainstorm in a collaborative way the various challenges and skills necessary to overcome those challenges without trying to fit existing course structures. The results from this open approach can be seen most prevalently in the communications courses and academic success course.

Table 1. *GAS-S core course requirements structure based on originating program*

| Course | Engineering | Science | Health Science | Information Technology | Business | Social Science |
|--|--------------------|----------------|-----------------------|-------------------------------|-----------------|-----------------------|
| Fundamentals of Academic Success | √ | √ | √ | √ | √ | √ |
| Fundamentals of Personal Communications | √ | √ | √ | √ | √ | √ |
| Fundamentals of Interpersonal Communication | √ | √ | √ | √ | √ | √ |
| Fundamentals of Mathematics for Science and Engineering | √ | √ | √ | √ | | |
| Fundamentals of Mathematics for Social Science and Business | | | | | √ | √ |

The final GAS-S program structure includes four core courses and two electives to maintain the academic pace expected at the university level. The core courses are: academic success, a double weighted fundamentals of communication course, and a math fundamentals course. In the academic success course, the students concentrate on improving their life skills with particular focus on time management, study skills, self-advocacy and financial management. The double communication course is essentially 1 course on individual

communication and 1 course on group communication. The courses cover fundamental literacy, verbal and written communication and comprehension but also focusses on communicating with authority and self-advocacy. The math fundamentals course is expected to ensure numeracy skills are present for day-to-day success. The two electives are also selected in consultation with the University academic advisor to provide the student with improved preparation for their specific academic program (Table 2).

Table 2. *GAS-S elective course structure*

| Course | Engineering | Science | Health Science | Information Technology | Business | Social Science |
|--|-------------|---------|----------------|------------------------|----------|----------------|
| Fundamentals of Computer Programming | √ | √ | √ | √ | | √ |
| Biology I | | √ | √ | √ | | √ |
| Chemistry I | √ | √ | √ | √ | | √ |
| Physics I | √ | √ | √ | √ | | √ |
| Introduction to Psychology - An Applied Science | | √ | √ | | √ | √ |
| Intermediate Computer Application | √ | √ | √ | | √ | √ |
| Introduction to Sociology | | √ | √ | | √ | √ |
| Introduction to Business Management | | | √ | | √ | √ |

When creating the learning outcomes for the communication course, the focus was to strengthen and further develop the student’s reading, writing and verbal communication skills. As the outcomes were being created by the curriculum team, it became apparent that this course needed to be double weighted and themed around two methods of communication: Personal and Interpersonal. Each theme was then developed into a three-credit course.

The first communication course begins with a focus on personal communication and building skills that would assist a student in communicating their own ideas clearly and effectively. Outcomes focused on building personal communication capacity at the post-secondary level: being able to notice verbal cues within lectures, properly researching and

writing an effective paper, presenting, writing professional emails, and similar activities. For this course, it was recognized that students needed opportunities to not only learn about skills and strategies of communication, but also to practice them through intentional activities built-in to the curriculum. Through the first half of the course, students complete a personal reflective journal and ‘mock’ research report to support this process.

The second course focuses on interpersonal communication. Learning outcomes developed built off of, and utilized, skills developed in the first-half but with an emphasis on application in a ‘group’ context. Outcomes that were created considered interpersonal communication interactions a student would have regularly, in a day-to-day context. For example, working with others on a group presentation or research paper, resolving conflict between partners or group members, recognizing different cultural cues when communicating, developing a respectful counterargument to a point made by a team member, etc. When developing these outcomes, consideration was given to their applicability, and skill transfer, to a number of scenarios (such as the workplace) students encounter outside of the class. This course would wrap-up with the students completing a group report and presentation, as well as submitting their final personal reflective journal. The reflective journal is an additional tool to help the student and academic advisor in developing an appropriate study plan.

The math learning outcomes were considered from a number of perspectives. The initial decision was to split the students into two cohorts for mathematics; Science, Technology, Engineering and Math (STEM) programs and social sciences and commerce programs based on the different math pre-requisite high school courses necessary for the various programs. This decision also allowed for specific applications of the mathematical concepts to be explored in a context that would be meaningful to the students. The committee discussed concerns around math preparedness with faculty members teaching

calculus and introductory math courses to identify the key skills necessary for success. The Faculty of Business and Information Technology was also part of a study on math preparedness and these results were integrated into the discussion. Finally, research on math remediation courses was also considered. Using this data, a set of learning outcomes and topics were developed for STEM and social sciences and commerce programs. The majority of both courses focus on basic numeracy skills including ratios and fractions, linear equations, and interpreting the meaning of results. The major difference between the two mathematics courses was in the inclusion of trigonometry in the STEM version.

When considering the content for the academic success course, we also looked for opportunities to integrate with other core courses of the program. This included note taking with the communications course and financial budgeting with the mathematics course. It was decided that the academic success course would be designed around a final deliverable of a complete student success plan for the upcoming year. This plan includes an academic schedule, study plan, and financial budget. These plans would demonstrate the student's reflection on the challenges they faced in the previous year, their understanding of their personal learning style, and their planned use of student learning supports. An outcome of the course could also potentially include the student's identification that their previous program was not a good fit for their desired career and the request to transfer to a more appropriate program at either the University or College. The learning plan document would then be a valuable tool for the student to use in monitoring their own progress and in discussions with their program academic advisor throughout the next academic semester.

The determination of potential electives was in some ways one of the easier decisions for the team. After discussion with academic advisors and representatives from a number of programs, it was determined that the objective of this pilot was not to try to provide transfer credits or duplicate first year courses in any particular program. Instead, we would include a

small variety of courses that would enable student to practice key skills such as writing, report preparation, and using computer applications in their particular field of interest. The inclusion of a computer related course was also important as it is a requirement for any General Arts and Science certificate. Given this, the program team explored courses that were in existing pathway programs from the College to the University. This would also provide students with valuable courses in their area of interest if they decided to pursue a College certificate or diploma at the end of their first GAS-S semester.

The elective courses selected were done on a program basis to ensure there would be three to four options for students to consider. Originally, a table was developed that prescribed the set of potential electives for the students by program. After discussing with the Deans of the various programs, it was determined that the selection of electives would be left to each Dean as some preferred to leave students the option of any elective while others wanted to ensure specific courses were chosen. The ability to support this flexibility and customization was seen as a strength of the semester design.

Pilot Program Results

The development of the program presented several challenges. The development of timelines and communication between the various academic units shown Figure 4 were extremely important for establishing success. Each group believes they play a major role in the success of any student and thus provides a strong variety of input and feedback into the program development.

There are several items that required timely decision-making and communication. Related to this challenge was the establishment of the proper sequencing of events and sharing of information between the various academic units. These included issues such as input into scheduling to preserve space in the fall for the student, timing of registration processes, communication of finance related issues and establishment of timing for student

loans, enrolment, etc. While doing this, it was extremely important to keep the academic advisors on board with the program, allow them some freedom in their work, and yet strive for a consistent message across multiple programs.

Another significant challenge was due to the overlap of terms between the two institutions. DC's spring semester started prior to the completion of UOIT's winter term. Thus, special arrangements had to be made to ensure students would be made aware of the program and registered in a timely manner. To this end, DC arranged for three personal 'student in a day' registration sessions, the first of which were held on the Friday of the first week of the spring semester. Two more registration sessions were held on the Wednesday and Friday of the second week.

An additional challenge is related to branding. As the program is joint between the college and the university, one challenge was determining the correct identity of the program. As the program is a form of bridge between the two institutes, ownership of the program in terms of registration and financial costs becomes important from a government funding perspective. It was important for proper branding of the program such that students were clear regarding their enrolment status, pathway options available, and financial obligations. The clear identity also was importance for curriculum governance at each institution and pathway options in the institutes respective academic calendars.

Despite these challenges, the pilot program was developed and the first pilot is currently underway. The program obtained support from the various academic units including Senior Management, Faculty Deans, Academic Advising staff, and the Registrar staff. The pilot program launched with 96 entering the program and a waiting list of 17 students. The original pilot enrolment target was for 40 students and the supply was filled at the first registration session. This demand shows strong interest in the program considering that students had only 3 days between receiving their suspension letters and the first

registration period. Following the first registration session, DC officials managed to secure space and additional faculty to accommodate almost 2.5 times the initial enrolment target.

Demand in the next year is expected to be higher due in part to word of mouth regarding the success of the program but also that we will be advertising the program to students earlier in the process. We will be considering a pre-selection process to expedite interest. This is important so that students can find (a) the financing to take the program and (b) secure their habitat for the summer. The short noticed received this year is one reason why just over 115 of the 401 suspended students demonstrated interest in the program. An additional impact was that academic advisors stopped promoting the program after it reached capacity after only 1 week as we had exceeded the available capacity, 96 students, in the pilot of the program.

The work resulted in the following lessons learned:

- Retention is not only a technical skills problem; there are many causes
- Engage the broad base of student support providers early to get a diverse view
- Interdisciplinary approaches can provide cost-effective and innovative solutions
- Be student-focused and not focused on ownership of courses/topics
- Focus on the big picture not detailed course topics
- The curriculum mapping and development is one of the smaller aspects to building the pathway

Retention is a result of a failure to academically succeed. Several of our colleagues consider that the lack of success in a particular topic is due either to inadequate teaching methods/performance in the classroom or due to a lack of pre-requisite skills. While it is certainly true that these two issues can exist, this work has shown that distraction from academia due to deficiencies in life skills is a major contributor affecting retention. If the students have the life skills, they may still be weak and fail a course, but are unlikely to fail all of them. Hence, it is just as important to solve the non-technical issues as well as the technical issues facing retention.

For the pathway to be effective, it is important to engage the broad base of student support available at both institutions. The earlier this is done, the higher the probability in being able to launch the pilot successfully. The students obtain their information from multiple sources and hence it is important for all sources under academic control to be providing the same information and level of support to optimize success.

Many of the retention programs currently underway are often discipline specific and hence they address the needs of that particular discipline. However, expanding such a program to other disciplines is not simply due to competing priorities in the various academic units. Starting from scratch with an interdisciplinary approach and using as broad a team as possible will result in greater buy-in across multiple academic units. It also developed some innovative ideas for the academic success and communication courses.

Having a 'big picture' yet student-focussed approach is very important. It is too easy to become bogged down in details that attempt to address a specific learning outcome. Instead, by concentrating on the student's needs for success and capturing the overall vision, the result is a flexible program that the students can identify with and a program that can be monitored and upgraded through a continuous improvement process. This resulted in an interesting observation that the curriculum development portion of the work was not where the major effort was required. Instead, it was interdisciplinary communication amongst the various academic units and timely and effective communication with the students that required the major work.

Recommendations and Conclusions

UOIT and Durham College have created a pathway for academic success to address, in part, the retention issue experienced by students at UOIT. The program has been developed and implemented. The pilot project was expanded to more than double the original target size due to the popularity of the program. Preliminary findings suggest that the program is

working yet will include some students that are still unwilling to learn. Further study into why students are entering the program yet unwilling to learn from it may be required.

As with any such initiative, there remain questions. It should be cautioned that we have only just embarked on the initiative. We look forward to being able to report on additional lessons learned, adaptations made, and the successes to come in future papers. The next steps for this work are to assess the performance of the students in the GAS-S program and to determine the reasoning behind their choices for selecting the different pathways open to them. It follows that the downstream success of the students in the various pathways will be evaluated.

Additional future work will consider modifications to and expansion of the program and scale up to allow for more students to attend the GAS-S program and to expand or modify the program to include upper year students that need academic remediation.

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