Mathematics & Science Centre: Expanding for Student Success

Detailed Design

VANIER
CÉGEP/COLLEGE

Haritos Kavallos

Produced on April 12, 2013

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Revisions

Version	Editor	Date
1.0a	Haritos Kavallos	April 12, 2013

Prepared by Haritos Kavallos, Mathematics & Science Centre Coordinator, Vanier College.

Contents

Document Overview

This document will examine an intervention that was proposed in the High-Level Design document based on the request initiated by Safiya Simon – former MSC Coordinator – who sought to expand the MSC's peer tutor offerings beyond the pre-university science programs.

The intervention will be expanded to include detailed information related to design, development and execution. Specifically, the following intervention will be considered:

- ❖ **Early Detection of At-Risk Students**
    - o Form that a professor fills out and submits to the MSC professionals that recommends a specific at-risk student for remediation. The MSC professional provides feedback to the professor concerning the student and their progress with remediation (*retrieved from HLD*).

Note that an expanded version of this document should eventually be produced to include a micro view of all the proposed and approved recommended interventions as outlined in the High-Level Design.

As a reminder, each proposed intervention outlined in the High-Level Design document aims to achieve a subset of the following three performance objectives:

- ❖ **Objective 1:** Students will determine whether or not they require academic support early on in a given semester.
- ❖ **Objective 2:** These students will recognize and seek academic support and follow through with the recommended remediation as needed.
- ❖ **Objective 3:** Students will achieve academic success and transition from new student to a Cégep graduate within the expected time-to-completion.

The listed performance objectives collectively lead to achieving the primary task:

- ❖ Ensure continued and increased student success rates by expanding the Mathematics & Science Centre's academic support service to include help for students in three-year career programs.

This document will conclude by proposing a formative and summative evaluation that will address the above mentioned intervention.

Early Detection of At-Risk Students

Intervention Overview

Early detection of academic difficulty is important in ensuring that academic support is provided early enough to make the most positive difference. It is also worth mentioning that it is not enough to identify struggling students, these students need to be guided to the right service centers (see *Awareness Campaign* in High-Level Design document) – especially in career-programs where students currently have no academic support areas to serve their needs.

This intervention proposes that faculty work with the MSC in order to detect academic weakness in their students within the first three weeks of the semester. Furthermore, this intervention aims to create a meaningful feedback loop between: identified students, teachers, and the Centre.

Goal	Identify at-risk students and create a feedback loop between relevant performers.
Form	Formal feedback
Medium	Several different mediums will be used during various parts of this intervention: • At-risk students will be flagged by teachers using an *electronic form*. • Flagged students will be contacted by MSC professionals via *internal email (MIO).* • Flagged students will be requested to meet with MSC professionals' *in-person*. • Feedback of flagged students will be sent to their teachers via *email*.

Objectives Addressed

This intervention aligns with all three previously mentioned objectives:

❖ **Objective 1:** Students will determine whether or not they require academic support early on in a given semester.
❖ **Objective 2:** These students will recognize and seek academic support and follow through with the recommended remediation as needed.
❖ **Objective 3:** Students will achieve academic success and transition from new student to a Cégep graduate within the expected time-to-completion.

Target Performers

This intervention targets students at Vanier College who are at-risk. Vanier College (2004) defines at-risk and failing students as those who meet the following conditions respectively: (1) students who are currently passing but have an average that borders a failing grade for a given class or, (2) students who are currently not meeting the academic requirements and thus have an average equal to less than 60 percent for a given class.

The success of this intervention also requires the participation of teachers and MSC professionals whom both play a key role.

Background & Rationale

Students who are struggling academically are only formally reached out to by the college during mid-term assessment period. The mid-term assessment takes place once during the middle of a semester where academic professionals conduct a calling campaign to inform at-risk or failing students of their situation and let them know of remedial help that exists around the college specific to their needs.

Although no formal procedure exists to identify at-risk students before mid-term assessments, several teachers have taken it upon themselves to notify the MSC of at-risk students early on, usually by sending an email with a list of flagged students several points during a semester. This intervention is inspired in part by that process.
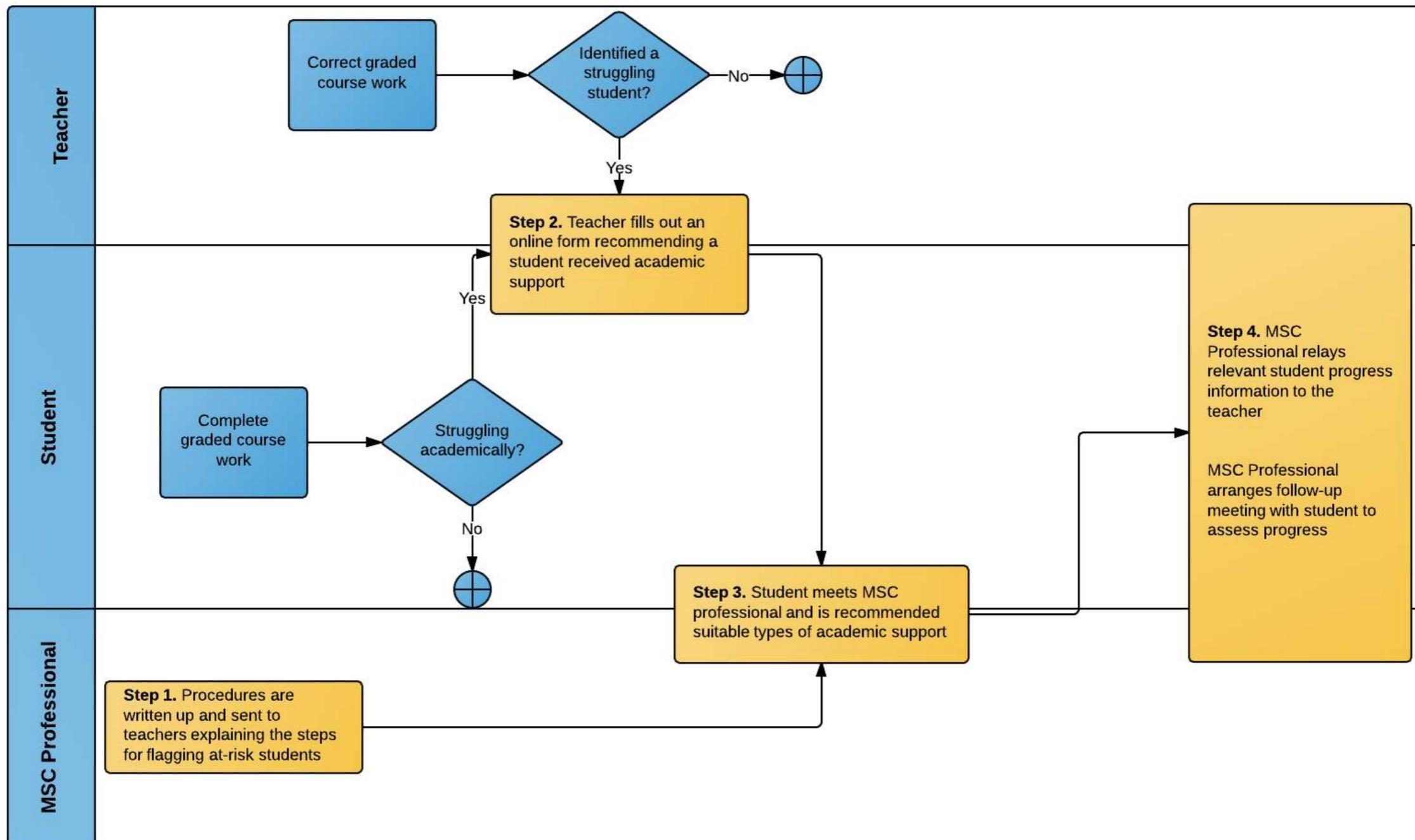
This intervention will aim to help close the following two gaps:

❖ Performers are not always informed early in the semester of where they can go to seek out academic help.

❖ Performers often seek academic support as a last resort; often too late into the semester for it to be completely effective.

By implementing this recommendation, students in need of help are less likely to be missed and will have access to all the right information in order to obtain academic help early during the semester or as soon as they fall into the *at-risk* or *failing* category. Ultimately, this intervention increases the chance for student success.

Process Map

The following map outlines the flow of actions that must be taken by various performers:

Teacher

Correct graded course work

Identified a struggling student? —No→ ⊕

Yes ↓

Step 2. Teacher fills out an online form recommending a student received academic support

Student

Complete graded course work

Struggling academically?

Yes

No ↓ ⊕

MSC Professional

Step 1. Procedures are written up and sent to teachers explaining the steps for flagging at-risk students

Step 3. Student meets MSC professional and is recommended suitable types of academic support

Step 4. MSC Professional relays relevant student progress information to the teacher

MSC Professional arranges follow-up meeting with student to assess progress

The steps identified in the above diagram are expanded on in greater details in the sections that follow.

Modify the Peer-Tutoring e-System

In order to successfully implement the outlined intervention, it is important to modify the existing I.T. infrastructure to properly support *Step 4. Feedback Loop between Performers* (see below).

Currently, MSC tutors have access to a portal that allows them to: log their completed hours, build their availabilities, and accept or deny private tutoring requests. Although they can log their hours, there is no mechanism in place that allows them to associate subsets of hours to individual tutees, nor is it possible to log feedback for specific tutees. Without such metrics, the MSC professionals have no efficient way of tracking progression for at-risk students who have been paired up with an MSC tutor.

The modification of the peer-tutoring e-system would therefore allow for the integration of a new module that:

- ❖ Allows peer-tutors to log the amount of hours spent with a given tutee per week.
- ❖ Allows peer-tutors to report on a given tutee's progress on a weekly basis.
- ❖ Allows MSC professionals to generate concise reports outlining hours completed and progress made between a given peer-tutor and tutee.

A proposed design of the tutor's web-interface for the module is shown in **Figure 1**.

Developers at Vanier College estimate that the integration of this module will take one working week (34 hours) to complete. This module must be operational before the start of the fall 2013 semester when this intervention will take into effect.

Figure 1 – Mockup of the added student tracking module for tutors.

Step 1. Procedure for Teachers

The success of this intervention relies in large part on the teachers. Since teachers are the front-line and touch point between the College and the students, they play a critical role in ensuring that at-risk students are detected as early as possible.

Since this initiative is new, the first step involves establishing a procedure that teachers can be encouraged to follow for flagging at-risk students.

The following draft document is proposed:

Figure 2 – Introducing the intervention and outlining procedures (email for teachers)

Subject: **Your Help: Initiative to recommend at-risk student**

Dear << Insert teacher's first name >>:

The Mathematics & Science Centre has been working to increase student success here at Vanier by expanding its services. Early detection of students who are at-risk is important in ensuring that we, as academic support professionals can recommend them help sooner rather than later when it's often too late. In doing so, we need your help.

Your Participation
No one within the College knows your students academically like you do. As such, we want to work with you to help them when they need it most. An electronic form has been developed that will allow you to easily send a recommendation to the Mathematics & Science Centre for any student you have noted as being at possible risk. The electronic form to report at-risk students is accessible at: http://vaniercollege.qc.ca/msc/recommend - Please read on for more information.

Benefits of Involvement
By actively participating by recommending at-risk students, the benefits are:

- Your at-risk students will become informed that academic support exists.
- Your at-risk students will be encouraged to follow through with academic support early enough to make a difference that they will be thankful for.
- Your at-risk students will have the chance to improve their overall class grades such that they will no longer be considered *at-risk.*

How it will work
1. Within the first 3 weeks of the semester (and after you have evaluated the students on at least one graded assignment or test) assess which students are struggling based on their resulting grades.
2. Recommend the struggling students to the Math & Science Centre:
   http://vaniercollege.qc.ca/msc/recommend
3. We will in turn reach out to these students and arrange a meeting with them where we can assess their difficulties and either recommend them to the proper services or more likely, arrange for them to receive academic support through the Centre.
4. We will contact you via email with brief information about the meeting and a list of academic support services that we have offered the student based on their need.
5. One of the support services we will recommend is peer-tutoring. Students will be paired up with a tutor that can best assist them and we will work with the tutor to track progress for the student.

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6. We will arrange a follow-up meeting two weeks after the initial meeting to determine his or her reaction with respect to the services suggested. If something is not working out as well as it should be, we will look at alternatives for the student in question.
7. Finally, we will send you a report on each flagged student's progression based on the frequency that you have requested while filling in the online recommendation form.

If you have any questions or concerns, please do not hesitate to contact me directly at locale 7501, reply to this email, or see me in person in F-540A.

Thank you,

Haritos Kavallos
Coordinator, Mathematics & Science Centre
Vanier College Room. F-540A
kavalloh@vaniercollege.qc.ca
514.744.7500 locale 7501

The message outlined in **Figure 2** is subject to review for approval by the Director of Services for Students. It is suggested that the message be sent via internal email to all mathematics, science and three-year program teachers twice during a given semester: once during the first week of classes, and again just before mid-term as a reminder.

Furthermore, getting teachers onboard would prove more successful if the information came down to them through their respective coordinators.

The following draft document should be emailed to relevant department coordinators:

Figure 3 – Getting teachers onboard (email for department coordinators)

Subject: **Initiative to detect & recommend at-risk student**

Dear << Insert Coordinator's name >>:

The Mathematics & Science Centre has been working to increase student success here at Vanier by expanding its services. Early detection of students who are at-risk is important in ensuring that we, as academic support professionals, can recommend help sooner rather than later when it's often too late. As such, one of the things we have done is put in-place a system that will allow teachers to easily recommend struggling students to the Mathematics & Science Centre.

In an effort to encourage further participation from teachers, I would like to know if it would be possible for you to bring this initiative up during your next department meeting. Alternatively, I would be happy to attend your department meeting and deliver a quick ten minute debriefing to your teachers and take any of their questions.

Please note that information outlining the procedures for recommending at-risk students to the Centre have been sent to teachers within your department. The same information can be found attached to this email.

If you have any questions or concerns, please do not hesitate to contact me directly at locale 7501, or by replying to this email.

Thank you for your time and I hope to hear from you soon,

Haritos Kavallos
Coordinator, Mathematics & Science Centre
Vanier College Room. F-540A
kavalloh@vaniercollege.qc.ca
514.744.7500 locale 7501

This segment of the intervention has the following goals:

❖ Inform relevant coordinators and teachers of the formal system and procedures put into place to detect and promptly offer academic support to at-risk students.
❖ Encourage teachers to proactively participate in doing their part to help their students succeed.
❖ Inform teachers that they can bring any questions and concerns they have to the MSC professionals.

Step 2. Flag / Recommend Students

If Step 1 of this intervention is successful in pulling in teachers, the next step is for teachers to actually recommend at-risk students through the use of an online form. The form does not need to be developed since it already exists through The Learning Centre who uses the form to encourage English teachers to recommend students for help. The form can be accessed here: http://vaniercollege.qc.ca/tlc/referral/

As outlined in Step 1, the form link will be provided to teachers through the email message. Furthermore, it will be added as a sidebar link on the Mathematics & Science Centre website (http://vaniercollege.qc.ca/msc).

The form will look to collect the minimal amount of information required from teachers. Since filling out this form for each struggling student adds a level of overhead that teachers would otherwise not have been used to, it is important to make the process as quick and easy as possible to avoid discouraging a teacher from filling out the form. The suggested form design in **Figure 4** simplifies the process for teachers by:

(1) **Being short and to the point.** Porter (2008) agrees that large forms requiring a lot of information from users are much more likely to be ignored by users.
(2) **Include auto-complete functionality.** The first three fields in the form will be designed to help teachers by automatically retrieving information based on what is being typed into those fields.
   a. The first field will allow the teacher to identify the student by either their full names or by student ID. If the system picks up two students with the same name, e.g.:

   The student ID associated with each retrieved record is specified and since a student ID is unique, a teacher will be able to ensure that the correct student has been identified.

b. The next two fields: *course title* and *course instructor* also function similarly to the first field. For teachers, their email address is also included to differentiate them from others within the college that share the same name.   e.g.:

| Maggie Bron | bronm@vaniercollege.qc.ca |
| Maggie Bron | bronmag@vaniercollege.qc.ca |

Teachers have the option of how involved they would like to be in terms of receiving progress reports for each of their flagged students. The drop-down menu will allow teachers to select whether to receive reports once, twice, or four times during a semester. Frequency of reports will also be dependent on when the student was flagged during the semester.

Figure 4 – Electronic form that teachers can use to recommend at-risk students

Constraint to consider: Vanier College information policies currently prevent most College professionals from having direct access to student information on a real-time basis. As such, the recommendation form is a good solution; however, we acknowledge that it does add a layer of overhead for teachers that

would be avoided entirely if MSC professionals could access student data as entered by teachers on the online grade tracking system.

Step 3. Meeting with Students

MSC professionals will be able to track teacher recommendations (as outlined in Step 2) by accessing the information through the existing e-systems portal. Since the system is checked daily, professionals will be able to act on new recommendations within 24 hours of receiving them.

Within 24 hours of receiving new recommendations, MSC professionals will send the following proposed MIO (student internal email) to students:

Figure 5 – Reach-out and arranging a meeting (email sent to the student)

Subject: **Meeting: Receiving Academic Support**

Hello << Insert Student's first name >>:

My name is <<insert professional's first name>>; I work as an academic professional for the Mathematics & Science Centre here at Vanier. At the Mathematics & Science Centre, a large part of our mission is to help students succeed academically when it comes to math, science or technology related courses.

On that note, one of your teachers has suggested that you could be doing better in at least one of your classes. I would like to invite you to come and meet with me in F-540A to discuss how we can help you get back on track and do well on your upcoming assignments and exams. If you are interested, please reply to this MIO with your preferred availabilities. The meeting will not last more than 30 minutes.

If you have any questions, please do not hesitate to ask.

Best regards,

<<Insert professional's full name>>
Academic Professional, Mathematics & Science Centre
Vanier College Room. F-540A
<<insert professional's college email address>>
514.744.7500 locale 7501

When a suitable time for an appointment is arranged, the student will meet one-on-one with an MSC professional. The interview will be scheduled to take approximately 20 to 30 minutes and will focus on the following:

- ❖ Building rapport with the student.
- ❖ Gaining an understanding of why the student is struggling academically.
    - o Determine whether the issue is academic, or whether there is another underlying issue that is preventing the student from focusing on their course work.

- ❖ Determine if the Mathematics & Science Centre can offer the student the appropriate type of academic support.
- ❖ Assessing the level of academic support required for the student.
- ❖ Propose the different academic support options available for the student through the Mathematics & Science Centre.

MSC professionals are encouraged to gauge a discussion by bringing up the following questions with students while coming off as: genuine, helpful, and empathic to their situation. Follow up questions should be asked as deemed appropriate by the professionals.

Figure 6 – List of questions

Have you been to the Math & Science Centre before?

How much do you know about this Centre and what it does for students?

Can you tell me a little bit about yourself? Is this your first semester at Vanier? Are you coming here fresh from high school?

How many courses are you taking this semester? Do you find that to be a lot of courses?

What program are you currently studying and how are you honestly finding it so far?

What is your schedule like in terms of class? Do you have a lot of breaks?

Are you working anywhere at the moment? How many hours are you working every week?

What would you say is the reason you are having difficulties in <<insert course name>>?

How are you doing in your other courses?

Have you been doing anything to try to help yourself do better in <<insert course name>>? For instance, have you spoken with your teacher or gone to seek help during office hours?

Have you considered getting help through the College?

The meeting will conclude with the MSC professional recommending at least two academic support options from the following list of available services:

- ❖ **Peer-tutoring** (one-on-one or drop-in in person or online)
  - ○ *This is almost always recommended to students*
- ❖ Online tutorials (*in development as part of another intervention*)
- ❖ Weekly teacher led review sessions
- ❖ Peer study groups
- ❖ End of semester peer-tutor led crash courses

Step 4. Feedback Loop between Performers

The final part of this intervention is to establish a system that allows the various performers to communicate feedback to each other, feedback that will help to ensure that the primary job is attainted partly through this intervention.

Follow-up email from MSC professional to Teacher
After meeting with the student, the MSC professional will be responsible to writing up an email to the teacher that initially placed the recommendation. The email will first acknowledge that the student has met with the professional and then briefly outline the support services that were recommended to the student. Finally, the email will conclude with a note on whether or not the student has agreed to pursue the suggested academic help.

The following template will be modified accordingly for each email sent.

Figure 7 – Follow-up email template

Subject: **Academic support for recommended student: <<Insert student's full name>>**

Dear << Insert teacher's first name >>:

We have received your recommendation for <<Insert student's full name>>.

The student and I had the chance to meet on <<Insert date>> to determine how the Math & Science Centre could help increase their academic performance in your class.

The following two recommendations were suggested:

1.   <<Insert first recommended academic support type>>
2.   <<Insert second recommended academic support type>>

The student has <<agreed/disagreed/unsure>> about following through with the recommended suggestions.

If you have any questions, please do not hesitate to contact me.

Thank you for taking the time to get involved.

Haritos Kavallos
Coordinator, Mathematics & Science Centre
Vanier College Room. F-540A
kavalloh@vaniercollege.qc.ca
514.744.7500 locale 7501

Student progress report sent from MSC professional to Teacher

When recommendations are placed, teachers will have the option to specify how often they want to be contacted about a student's remedial progress. Reports will be sent to teachers directly by the MSC professional who has taken charge of meeting with the specific student. The reports will be sent to teachers through email and will be as brief as possible while still offering enough information to give the teacher an idea on the student's progress with the academic support service offered.

Figure 8 – Suggested report format (sent in the form of a PDF via email)

Mathematics & Science Centre: Student Progress Report

Recommended Student: <<insert student's full name>> (SID: <<insert student's ID num.>>)
Professional: <<insert name of MSC professional>>
Date Referred: <<YYYY-MM-DD>>
Tutoring Hours Complete: <<insert hour count as retrieved from the e-system>>

Chronological progress details provided by the student's assigned tutor:

Week of MM/DD to MM/DD   <<insert progress comment as inserted by the tutor>>

Week of MM/DD to MM/DD   <<insert progress comment as inserted by the tutor>>

Week of MM/DD to MM/DD   <<insert progress comment as inserted by the tutor>>

…

The above report will be automatically generated by the e-System and would be editable as needed by MSC professionals. Since peer-tutoring will almost always be recommended as an academic support solution, the information included in these reports will primarily come from the student's assigned peer-tutor (through the use of the new module detailed in the above section: *Modify the Peer-Tutoring e-System*).

Follow-up meeting between student and MSC professional

Two weeks after the initial meeting with a student (see Step 3); the MSC professional who met with the student in the first place will arrange a follow-up meeting. The goal of the follow-up meeting is to assess how the student is feeling about the academic support and to determine if the student should continue to pursue the recommended academic support service or whether a different recommendation is needed.

The meeting will take place much like the first meeting (see Step 3), one-on-one in a casual and friendly manner in the Math & Science Centre office F-540A.

The following questions should be asked:

Figure 9 – Follow-up questions with student

How is your semester going so far?

How are you feeling about <<insert course name>> now that you've had the chance to start receiving help?

Do you feel that <<insert recommendation #1>> and << insert recommendation #2>> has helped you improve in some way over the course of the two previous weeks?

Do you plan on continuing to use the academic support service provided?

What have you been doing to help yourself do better in <<insert course name>>?

Is there any other way that you feel we could help you out?

Do you have any other comments you would like to share?

It is up to the professional's discretion whether there is a need to ask any additional follow-up questions. The results gathered should be recorded electronically by the professional for future reference and statistical uses.

Timeline

The following is a proposed timeline for implementing this intervention. Note that this timeline does not include time required to design, develop and implement the remaining interventions proposed in the High-Level Design document.

	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.
1					Fall Semester / A13					
2	Design	Development			Implementation / Initial run of intervention					
3				(1) (2)	(3)					
4										(4) (5)

This timeline is subject to approval by the Director of Services for Students. If the timeline is followed, this intervention would take approximately 3 months to complete – just in time for the fall semester.

Row 1: Depicts academic details related to Vanier College pertinent to the intervention.
Row 2: Depicts different phases of this proposed intervention.
Row 3: Depicts details related to the proposed formative evaluation plan.
Row 4: Depicts details related to the proposed summative evaluation plan.

Legend:
(1) Technical & Editorial Review, (2) Usability Testing, (3) Ongoing Feedback
(4) Individual Performance Evaluation, (5) Performer Satisfaction Evaluation

Formative Evaluation of Intervention

Technical Review

This review will focus on evaluating the integrity, functionality and overall reliability of the web-systems put in place as part of this intervention. This includes the: online recommendation form, the new peer-tutoring e-System module and any automated email functionality as specified in earlier sections.

Once the web systems are in place, two peer-tutors, a teacher (if available) and an MSC professional will be responsible for running a complete walkthrough of the early detection process as outlined in this document. As with the expert review that follows, this review will be completed before the start of the fall 2013 semester.

The following document will be sent out to the individuals who will be involved in the technical testing. Upon completing the testing, the information gathered will be forwarded to Vanier Communications where the web developers will make necessary fixes. A second round of technical testing will take place if required.

Technical Review: Early Detection of at-risk students

While conducting the walkthrough, focus on functionality problems, and technical errors encountered. Do not focus on English correctness such as: grammar, sentence structure, and spelling.

Any questions should be directed to Haritos Kavallos, kavalloh@vaniercollege.qc.ca (Room F-540A).

Reviewer: _____ Date Conducted: _____ / _____ / _____

I. Error Report List

Issue #001	
Issue Location (specify web page where it occurred):	
Issue Description:	
Steps required to re-produce the Issue described:	

((More Issue boxes needed …))

Prepared by Haritos Kavallos, Mathematics & Science Centre Coordinator, Vanier College.

((continued))

II. Additional Comments

Expert Review

In order to ensure that all the above proposed materials have been written without grammatical or spelling errors, the materials will be sent to The Learning Centre where two professionals will review the content in detail. Upon receiving the results from The Learning Centre's assessment of the content, the corrections will be made to the templates. As specified by the timeline above, this review would need to be complete before the start of the fall 2013 semester in late August.

Email that will be sent out to two different Learning Centre Professionals:

Hello <<insert staff members first name>>:

Thank you for agreeing to conduct an editorial review of the materials put together for the *early detection of students who are at-risk* in mathematics, science, or technology courses. Please read and follow these instructions. If you have any questions or concerns, do not hesitate to contact me at: kavalloh@vaniercollege.qc.ca, or via my College extension: 7501.

The purpose of this review will be to focus on language correctness. Specifically, focus on grammar, spelling, use of vocabulary, and sentence flow and structure.

Instructions
1. In Microsoft Word, open the document (materials.docx) which contains all the written materials that have been put together.
2. Make any required changes directly within the document (please enable track changes) and make use of the comments feature as needed in order to add in any notes that will help to explain corrections.
3. If you have any additional comments, please include them at the end of the document.
4. When you have completed the review and are confident with the changes you have proposed, save the document and email it back to me.

If possible, please return this to me within 4 days of receiving it.

Thank you kindly for your time,

Haritos Kavallos
Coordinator, Mathematics & Science Centre
Vanier College Room. F-540A
kavalloh@vaniercollege.qc.ca
514.744.7500 locale 7501

Usability Testing

The goal behind usability testing is to determine how performers feel about: functionality, use-of-easy, appearance, layout design, and information completeness. To test usability, three rounds of pilot testing will take place: round 1 will examine the system through the teacher's perspective; round 2 will examine the system through an MSC professional's perspective, and round 3 through the peer-tutors perspective. Both candidates will not have previously been exposed to the systems. Although other performers are involved, their interaction with the web systems put in place as part of this intervention is either minimal or non-existent.

Both rounds of pilot testing will be conducted in the following manner:

1. The tester will be put in front of a computer and observed by the web developer, the MSC coordinator, and the instructional designer.
2. The tester will be asked to voice their thoughts out loud throughout the process.
3. Each observer will be given an observation sheet (see below) which they will be required to complete while watching the tester go through a number of steps.
4. When the tester has gone through the process, he/she will be asked to complete a questionnaire (see below) that focuses on usability.

Observation Sheet Sample: (completed by the observers)

Observer: _____ Date Conducted: _____ / _____ / _____

Tester: _____ Tester Role: _____

Start Time: _____ End Time: _____

Task Performed	Number of clicks	Comment/Notes
1.		
2.		
3.		
4.		

Additional Comments:

Usability Questionnaire Sample: (completed by the testers)

Full Name: _____ Date: _____ / _____ / _____

Thank you for agreeing to take part in this usability pilot test. If you have any questions or concerns, do not hesitate to ask the observers.

1. Was the information you needed to proceed easy to find?   □ Yes   □ No
If no, please comment:

2. Was the information provided clear at every step?   □ Yes   □ No
If no, please comment:

3. Was the flow between the different tasks clear to you?   □ Yes   □ No
If no, please comment:

4. Were you confused at any point during the walkthrough?   □ Yes   □ No
If yes, please comment:

5. Is there room for improvement in the presentation, flow, or information?   □ Yes   □ No
If yes, please comment:

6. What element did you like most throughout the walkthrough process?

7. What elements would you say need improvement?

8. Additional Comments and suggestions:

Ongoing Evaluation

Collecting feedback should also be done throughout the semester – every semester. As with any solution, there is always room for improvement and as such, it is important to be aware of where those improvements can be made in order to facilitate the process for all performers. Ongoing feedback will be collected from three performers: students, teachers, and MSC professionals.

(1) **Students**: The Performer Satisfaction survey shown in the Summative Evaluation that follows this section will be used as a way of measuring feedback from students on an ongoing basis.

(2) **Teachers:** On the webpage that includes the student recommendation form (see Step 2 and Figure 4), a button will be included that links to a different form that contains one text-area that would invite teachers to offer feedback whenever they feel it necessary. A teacher could choose whether or not to include their name and all inputted feedback would be automatically sent to the MSC shared email account that all professionals are required to check on a daily basis.

(3) **MSC Professionals:** Every Friday, professionals have a round table to discuss and reflect on the events that took place throughout the week. Feedback will be included in two of these round table discussions (one during a Friday in the middle of the semester and the second during a Friday near the end of the semester). Each professional will bring up the following with respect to this intervention: challenges encountered, what has been working well, and what could be improved on.

Summative Evaluation

Performer Satisfaction

Students who have been recommended for academic support and have attended an initial meeting with an MSC professional will receive an automated MIO a week before the end of the semester where they will be requested to complete a short online survey to determine their level of satisfaction.

MIO message:

Hello <<insert student's first name>>:

Thank you for using the services offered by the Mathematics & Science Centre.
In an effort to continually improve our services, please take a few minutes to complete our anonymous survey at:
http://surveymonkey.com/vanier-msc-student-survey

Thank you,

The Mathematics & Science Centre Team
Vanier College Room F-540A
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Survey:

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1. **I was referred to the following services by the Math & Science Centre (check all that apply):**
   (1) Peer-tutoring (one-on-one or drop-in in person or online)
   (2) Online tutorials (in development as part of another intervention)
   (3) Weekly teacher led review sessions
   (4) Peer study groups
   (5) End of semester peer-tutor led crash courses

2. **I used the following services (check all that apply):**
   (1) Peer-tutoring (one-on-one or drop-in in person or online)
   (2) Online tutorials (in development as part of another intervention)
   (3) Weekly teacher led review sessions
   (4) Peer study groups
   (5) End of semester peer-tutor led crash courses

3. **I started using the Math & Science Centre academic support services _____ into the semester.**

   1-3 Weeks   4-7 Weeks   8-11 Weeks   12-14 Weeks

4. **I dedicated an average of _____ *hours per week* to academic support this semester.**
   (1) None
   (2) 1-2 hours
   (3) 3-5 hours
   (4) 6+ hours

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5. **With regards to the services suggested by the Math & Science Centre, I am _____:**

   Very Satisfied   Satisfied   Somewhat Satisfied   Not Satisfied

6. **By receiving help early on during the semester, I feel that _____ (check all that apply):**
   (1) I am more capable of being an autonomous learner
   (2) I have seen an improvement in my grades
   (3) I am more confident and comfortable with the course material
   (4) I was able to overcome most of the difficulties I was having

7. **What did you *like most* about the services offered by the Math & Science Centre?**

   _____

   _____

   _____

8. **What did you *like the least* about the services offered by the Math & Science Centre?**

   _____

   _____

   _____

9. **Do you have any comments or suggestions?**

   _____

   _____

   _____

Engagement

There are several ways performer engagement can be measured. The most notable way would be to determine whether there has been an increase in the number of students actively seeking academic support through the Centre. If teachers are committed to identifying and recommending struggling students, then the MSC can personally reach out to a lot more students and invite them to seek the help they need – thus, more students potentially being prepared for academic success. Since statistics are kept every year, the number of students assisted (mostly through peer tutoring) can be retrieved from 2012-2013 and compared with the numbers that will be gathered at the end of 2013-2014. If the numbers show a significant increase in the number of students helped, then this would show a solid level of engagement.

Individual Performance

Evaluation at this level will aim to verify whether individual performance is met for at-risk students (*regardless of whether they used the services after being recommended by a teacher or not*).

The following would be completed by the MSC coordinator or another professional for every student that decides to receive academic support through the Centre. Since the MSC e-System stores the bulk of the information collected from tutors and tutees, it can easily be queried in order to complete a checklist per student.

Student Success Checklist

Student Full Name: _____ Student ID: _____

Academic Program: _____

Required Help in: _____

Course Instructor: _____

Requested Academic Support on: _____/_____/_____

Academic Support began on: _____/_____/_____ (if known)

Performance Tasks to Complete	Check	Notes
Student was flagged / recommended to receive academic support by the course instructor.		
Student met with an academic professional from the Centre.		
With help from an academic professional, student was able to determine an appropriate academic support type.		
Academic support was sought within the first three weeks of the semester.		
Student attended scheduled follow-up meeting with academic professional.		
Completed the recommended academic support type.		
Student has shown a grade improvement in the course he/she received academic support in.		

Aggregated Evaluation

Ultimately, this intervention must accomplish the stated primary job of *helping to ensure and increase academic student success* and as a result, decrease the attrition rate and minimize the number of students who exceed their expected time-to-completion.

Since academic success is best defined by course grades, the success of this intervention with respect to the primary job can be determined by the following:

❖ For students who are recorded as having received academic support early on during the semester, their grades for a given course prior to receiving academic support should be compared with their grades after having started to get help from the MSC. The final course grade must also be factored in for each observed student.

❖ Given a course, compare the final grade of students who have started to receive academic support by week three of the semester with students who have received the same academic support starting after the mid-semester point. The idea here would be to evaluate whether early detection and assistance can lead to a better overall academic standing as opposed to students who seek/are sent to get help later.

References

Carliner, S. (2003). *Training design basics*. Alexandria, VA: ASTD Press.

Porter, J. (2008). *Designing for the social Web* (First.). Berkeley, CA: New Riders.

Vanier College. (2004). *Mid Term Assessment Guide*. Retrieved April 12, 2013, from

http://www.vaniercollege.qc.ca/main/midterm.html