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Optimizing the Success of Struggling Students: A Proven Strategy

Hichem Hajaiej

Abstract

In this article, we present an intervention that helped the majority of borderline and struggling students succeed in their Precalculus course. The author first implemented the Tailored Action Plan for Struggling Students (TAPSS) in the Fall semester 2018 for the Precalculus class he was teaching. The results were so impressive that in his role as coordinator of the Precalculus course, he extended this approach to all sections of the Precalculus course in Spring semester 2019. This technique has contributed significantly to the unprecedented pass rates of students who have taken Precalculus during the last three semesters. That rate is now 86%. Prior to the redesign, the pass rates in Precalculus were less than 50%. TAPSS is applicable to any discipline (scientific or literacy) and any students' level (upper division or lower division). It has the advantage of being independent of the educational system.

Keywords: Follow-through, Intervention, Mastery, Plan, Student success

Introduction

Since the educational reforms made by the Emperor Charlemagne in 789 CE, one of the greatest challenges in education has been to find effective ways to help borderline and struggling students succeed. For centuries, specialists have tried many approaches to meet this challenge; the most recent ones are Tutoring Programs, and Supplemental Instruction / Early Alert Systems. Although little evidence supports the effectiveness of tutoring programs, tutoring has a long, documented history as a reliable method of improving student achievement, (Slavin, 1983). As a supplement to classroom teaching, tutoring was generally considered the most powerful technique for increasing underachieving students' reading skills, (Burns, Senesac, & Symington, 2004). However, the claim that "any form of tutoring is effective" is contradicted by the results described in some recent papers; see, for example, "Mathematics Tutoring and Student Success," (Madsen & Ingram, 2010). The results of this study showed that there was no difference between the grades of the students who took advantage of the tutoring service and students who did not. In part, this is due to the fact that some tutors do not engage students. They simply give them the method that they need to use; students then mimic it without really understanding the concepts involved. They remember the method for a short time, but forget it before the end of the semester.

Furthermore, the costs involved in the administration of a tutoring center are significant! Aware of these important pedagogical and financial concerns, many colleges have tried to avoid them by implementing a

Supplemental Instruction (SI) model that promotes active learning. Such programs are typically administered by a university office. The process begins by the fourth week of the semester, when this office sends a request to instructors, asking them to identify the students about whom they are concerned. Teachers also provide specific details regarding these students. Matters of concern about student performance include missing assignments, unsatisfactory assignments, lack of class participation, irregular attendance, lack of preparedness for class, and low test/quiz grades. The office then contacts the students, informs them of the concerns, and informs them that they need to attend Supplemental Instruction sessions or meet with an academic coach (depending on the nature of the problem -- personal skills or scientific skills). The results of numerous surveys that we administered to 354 students showed that more than 75% of them were not happy about receiving a message with 'bad news' from an 'unknown entity' not obviously associated with their course. The message was perceived as unfriendly and unwelcoming by more than 60% of students contacted. Worse still, for some of these students, the message had such a negative effect that it prompted them to drop out of school. They felt that they had been treated very unfairly. We have no evidence about the last statement, but the correlation seems obvious. The minority of students -- those who did not perceive this message as some sort of punishment -- attended the SI sessions. These sessions were set up in the following way. 'Good students' (students who had done well in the course in the past and were now well advanced in their academic programs) were recruited by the office to be SI leaders. The leaders then ran engaging sessions for the students who were experiencing difficulties in the course. Unfortunately, however, this method has important drawbacks. These are related to the choice of the 'good students' and their andragogic, scientific and social skills. In addition, the costs involved in running this office, as well as those involved in training and paying these SI leaders, are significant for any college. Furthermore, selecting, monitoring, and supervising the leaders is a demanding task, especially since the leaders are themselves students, with many other commitments of their own. Finally, very few students regularly attended the SI sessions. In short, SI programs are quite costly, yet produce only 'minimal results'. However, we did find that students who *regularly* attended SI sessions that were led by *effective* SI leaders improved significantly (note that the attendance must be consistent and the leader must be effective). Unfortunately, this represents a minority of students, despite the significant expenses. This is certainly unsatisfactory, especially for a comprehensive university whose main mission is to serve all students in an inclusive, equitable, friendly, and welcoming environment.

So the programs involving tutoring and supplemental instruction have not produced the desired results. Recently, researchers have tried to understand the reasons for this and to suggest solutions. Two papers attracted our attention: 'Evidence-based peer tutoring program to improve students' performance at the University' Arco Tirado, Fernandez- Martinez, and Hervas-Torres (2020). The authors proposed an interesting model based on the study of Topping in 2015. They provided a very clear, detailed explanation in the Introduction. The second paper was 'Best practices in tutoring services and the impact of required tutoring high risk students', by Vance, (2016). Based on a study case, she presented criteria for determining the success of tutoring centers. These two models are very interesting, but, in the author's opinion, they are too complex for colleges to implement. Aware of the imperfections of the two programs that the vast majority of colleges use to help struggling students, the author was determined to find an effective strategy for students, which would also minimize the cost for campuses.

General Framework and Main Motivation for the Creation of TAPSS

In the years before Fall 2018, an overwhelming number of entering first-year students were informed by the university that they were not ready for college-level mathematics. These students were required to enroll in one or two developmental (remedial) math courses before they could enroll in a college-level math course. Developmental courses have been shown to delay the time to graduation for historically underrepresented students. For STEM majors, the time spent in developmental coursework was significant. Under the previous policy, a student who started with Beginning Algebra (the first-semester developmental math course in the previous system) would have to take mathematics courses for a minimum of three semesters before being able to enroll in Calculus I. This situation led the university system to eliminate the decades-old system of remediation for underprepared students. In the early summer of 2017, the CSU Chancellor's Office issued an executive order which eliminated developmental courses. Effective Fall 2018, all entering first-year students at a CSU campus could enroll in a college-level math course in their first semester. Per the executive order, campuses could elect to employ a "stretch" or co-requisite instructional model to replace remediation. At the university, the author participated in the re-design of the Precalculus course sequence using a co-requisite instructional model. In this model, prerequisite topics are introduced "just in time" in the introductory college-level course. Consequently, a student needing remediation did not have to wait a semester before enrolling in a college-level math course. The co-requisite instructional model can be implemented in different ways. The version we chose for the Precalculus course ensures that the algebra prerequisites needed to master the topics in Precalculus are introduced to students in a timely fashion by embedding these algebra skills within the Precalculus course.

At the university, the Precalculus courses are Math 1081 (Functions), Math 1082 (Functions with a lab-sheets activity), Math 1083 (Trigonometry), and Math 1040 (Math 1081 and Math 1083 combined -- for STEM majors). Math 1081 (3 semester units) and Math 1082 (3 semester unit + 1 activity unit) are now the first semesters in a two-semester Precalculus sequence; they cover the algebra component of Precalculus. These two courses do not cover trigonometry. The difference between Math 1081 and Math 1082 is that Math 1082 includes just-in-time support for algebra prerequisite topics, while Math 1081 does not. Depending on the requirements of their major, students who have passed Math 1081 or Math 1082 may go on to take Math 1083 (Trigonometry).

The 'weakest students,' called Category 4 students, are placed in Math 1082. Under the old university remediation policy, the vast majority of these students would have been required to take courses in beginning and intermediate algebra (two semesters of developmental math) before they could enroll in Precalculus. Students placed in Math 1081 are generally Category 2 or 3 students. Under the old policy, these students would only have needed to take a course in intermediate algebra (one semester of developmental math). As soon as we began the implementation of our Precalculus model, the author realized the necessity of having a powerful and effective tool to be able to help these two groups of students. The elimination of the remedial program at the university system, which has also occurred at many other American colleges, created an urgent need for an innovative, creative and effective andragogic intervention that would help students learn in one semester a group

of topics which in former times they were given at least three semesters to master. Our new strategy, which is described below, is suitable for all borderline and struggling students.

Method

The Tailored Action Plan for Borderline and Struggling Students (TAPSS)

As the coordinator of thirty sections of Precalculus each semester at the Department of Mathematics at the university, the author was determined to find a new strategy that would enable struggling and borderline students to succeed in their studies. An effective approach must take into account the psychological, social, and cognitive aspects of students and instructors. The plan we developed can be implemented in other disciplines. Instructors can carry out the approach by themselves or with the help of an SI leader. At a university which has an office that manages an SI program, we would recommend the second alternative; this method has the considerable advantage of reducing expenses, since the action plan is tailored. The SI leader would get a predetermined, targeted workplan for each student who attends the workshop (see next section for more details). In the next section of this paper, we will describe our self-contained approach and discuss the results. We will also present the data we collected and the results we obtained when the program was carried out during the academic year. The results in summer sessions were even better, but the context was very different, as students took only one class, and most of the instructors taught only that one class.

Aware of the importance of the problem and of all obstacles preventing Precalculus students from succeeding, the author was deeply convinced that the solution should be provided by the instructor. The teacher is the person who has the best knowledge of his/her students, and the individual most empowered to help them. Some instructors simply do not have the appropriate tools to help students, or they do not have time to think about effective ways of intervention. Instructors were being told or led to believe (by others) that they were teaching weak students and that there was not very much that they could do to help these students. This is so wrong! We first worked with some of the instructors to help them deal with their preconceptions, even before working with students on that crucial matter. In the meetings with the instructors, we provided concrete examples of failing students who eventually became A students in some of the author's previous classes. This had the effect of piquing the curiosity of the instructors – many of them wanted to know how this was possible. This created the opportunity for us to introduce to them the tailored action plan strategy to help borderline and struggling students. In the following description of the action plan and the guidelines for instructors, the word 'you' refers to the instructor.

1. Create a Reality Check Test. Then administer it to all of the students on the first day of class. This 15-minute pop quiz of five or six questions should cover the important concepts that any Precalculus student must master in order to be able to stay up with the class. (Example: For Math 1081 and Math1082, the fundamental concepts would include solving equations, the order of operations, and adding, subtracting, and multiplying complex fractions.) A sample is provided for instructors.
2. Determine which students do not have complete mastery of the fundamental concepts. Try to understand why student A does not understand concept B. Does A have some misconceptions? If so, you need to determine them. Does A have concentration problems (perhaps observe A in class)?

3. Send each of the students whose performance on the test is borderline (65% to 74%) or struggling (below 65%) a very friendly and welcoming email (see section 8 for an example). Include in this email problems as well as references to videos. The problems and videos should be tailored to address the concepts that the student has not yet mastered, as revealed by the student's work on the reality check. Use as many learning channels as you can. Ask the student to do all the problems. Give the student a specific due date by which he/she must send you their work. A one-week deadline is a good idea, as students usually have a lot to do during the first week of the semester.
4. Once the students have sent you their work, reach out and thank them for their effort. Tell them clearly that you appreciate and value their hard work. Then later, meet with each student to determine which problems were the most helpful. Make it clear to the student that his/her success is important to you and that you will make the necessary time and effort to help him/her. If students have still not mastered some of the concepts, you have to be honest with them and tell them exactly where they are in their progress. Invite them to come to your office hours, provide further explanations, and make sure that they really understand the concepts. If several students have not mastered the same concepts, you could have them all come at the same time and arrange for them to work in groups. For many students, this is very beneficial, since it enables struggling students to see that they are not alone in having difficulties.
5. If a student's work is past due, you should reach out to him/her with a very friendly message. Kindly ask the student what is going on and if he/she needs help with solving the problems. Ask if the videos dealing with the concepts were useful. How does he/she feel about the class in general? Is he/she enjoying working in a group? Is the class pace OK? These students must understand that you are willing to help them and that you want them to succeed. Some of them are convinced that they will fail. Others suffer from math anxiety. Most of them do not feel comfortable doing math.
6. Repeat this process after each test. A test is a good checkpoint, but it should not be the only one you use. Attendance, participation, and homework are also good barometers. Be a vigilant observer. Complete the table of TAPSS results after each session (see below for an example).
7. Share with each student his/her progress in each of the topics that he/she is trying to master. It is crucial that you continue to follow through in subsequent weeks. Patience, Perseverance, and Persistence (P³) are important not just for underprepared students, but also for the instructors who want to help them. TAPSS can only be successful if the teacher has the qualities mentioned above.

Results

After the implementation of the TAPSS, we observed a palpable improvement at all levels. The pass rate improved in all the Precalculus courses: Math 1081 (Precalculus -- Algebra), Math 1082 (Precalculus – Algebra, with an integrated workshop for Category 3 and 4 students), Math 1083 (Precalculus -- Trigonometry), and Math 1040 (covering all the material in both Math 1081 and Math 1083 – an intense course designed for STEM majors). Before the implementation of TAPSS, we were losing more than 40% of the students in some sections, with an average drop rate of 27% for all sections of Precalculus. This shocking number fell to 4% in Spring 2020 (which roughly represents one student in a class of 25 students). This has contributed significantly to the exceptional amelioration of the retention rate at the university in 2019. We also have noticed that the overall

pass rate for all sections of Precalculus increased from 49% to 81% over the past three semesters. Additional details are provided in Table 1. In reviewing this table, keep in mind that TAPSS was not implemented in all sections of Precalculus until Spring semester 2019.

Table 1. Average Drop Rate, Overall Grade, Overall Pass Rate over Semesters

Semester	Percentage of students who did not take the final exam	Overall grade	Overall pass rate
Fall 2018	27%	53%	49%
Spring 2019	16%	65%	68%
Fall 2019	9%	79%	77%
Spring 2020	4%	84%	87%

In Spring 2020, the pass rates for Math 1081, 1083, 1082, and 1040 were 92%, 88%, 84%, and 82% respectively. Most of my instructors had pass rates that exceeded 80%. The overall pass rate for all sections of Precalculus was 87%. This was historic! The change of culture and the choice of the best andragogic practices had paid off. The vast majority of instructors had become convinced that that the TAPSS strategy provided the solution to our challenging situation. In the beginning, some instructors thought that TAPSS was a waste of time. Others had difficulties creating the TAPSS plans for their students. As the coordinator of all the Precalculus courses, the author worked with all of the instructors on their TAPSS plans until he was confident that all of them had achieved mastery in this new andragogic territory. The instructors were able to turn the tide, thanks to TAPSS and P³ (in symbols: TAPSS+P³= TS (Total Success)). Eventually, all of the Precalculus instructors came to realize that TAPSS was an excellent way to anticipate issues and to make sure that no students fell behind, which ultimately made their job much easier. One of the most challenging situations in teaching is managing a class in which there is a wide variation among the proficiency levels of the students. In this case, the instructor must find ways to keep everyone interested, involved, and motivated -- a tremendously hard mission in such a heterogeneous environment. Some of my Precalculus instructors began the semester with 20 struggling students in a class of twenty-five. By using the power of TAPSS and P³, they were able to help almost all of their students succeed. Table 2 below provides more details.

Table 1. Percentage Pass Rate of Borderline and Struggling Students over Semesters

Semester	Percentage of borderline and struggling students after the first reality check	Pass rate of borderline and struggling students
Fall 2018	82%	29%
Spring 2019	81%	64%
Fall 2019	76%	75%
Spring 2020	72%	81%

Borderline student: Grade between 65% and 74%; Struggling Student: Grade below 64%

Many instructors teaching other courses in our Department learned about TAPSS and very successfully implemented it in different courses.

Example of a Specific TAPSS

Using the table in an Excel sheet they have been given, instructors complete a TAPSS for each student whom they identify as needing help, based on their performance on the Reality Check Test. As a result of the success of this strategy, we are currently developing software that will automatically generate the TAPSS's for these students. The following example is the TAPSS for a student who was in the author's Math 1081 class in Fall 2019. This student underperformed in the Reality Check Test, but ultimately, she earned an A in the final exam.

1) Reality Check Test (15%) -- Day 1

Areas of weakness: Order of operations; adding, subtracting, and multiplying fractions; proper use of the distribution property.

Action Plan: The author created problems dealing with all these concepts and sent an individualized worksheet to the student with a very friendly and welcoming messaging (see Appendix). We also sent videos which explained these topics and solved some examples in a very clear way. We gave the student a due date to complete the worksheet and invited her to come to the office to go over her work (exactly one week after the first test).

Result: The student came to a one-on-one session with me. We went over some of the problems. She explained her solutions on the board. She still did not completely understand some concepts, but she had made good progress.

Action Plan: At the end of the meeting, the author offered words of encouragement and commended her for her efforts. He gave her additional problems involving the concepts that she still did not completely understand. The student was invited to return to the office the following week to discuss her progress.

2) Quiz 1 (27%) -- Week 2

Quiz 1 covered systems of equations and complex numbers.

Areas of weakness: Solving equations; solving systems of equations; computations involving complex numbers and the conjugate of a complex number.

Action Plan: The author created problems dealing with all these concepts, and sent a worksheet to the student, together with a very positive, encouraging message. The author also sent her videos which explained these topics and solved some examples in a very clear way. We gave the student a due date to complete the worksheet and invited her to return to the office to go over her work (exactly one week after the date of Quiz 1). I also let the student know about programs offering extra help that were available on campus (after I was convinced that she knew that I cared about her success).

Result: The student returned for another one-on-one session with me. We went over all the problems. Some concepts were not still completely understood. Additional time was certainly needed, but we were clearly on the right track. At the end of our meeting, the author took the student to an SI session. He introduced her to her SI leader, an excellent student whom he had taught two years ago. The author stayed with the student for thirty minutes to ensure that she felt comfortable with the SI leader. The SI leader and the student got along very well -- something which we had anticipated. The choice of this particular leader was not random; it was instead based on many criteria. It is also important to note that the author sent the student's TAPSS with all the worksheets to the SI leader in advance so that he was already familiar with the student's areas of weakness. Thus, the SI leader was well prepared to provide tailored help for this student. At a University that uses an SI program to provide help for struggling and borderline students, the leaders and students must be supervised and coordinated by the teacher him/herself.

Action Plan: The student was devoting more time and energy to her math studies. She was also getting help from two supervisors who were coordinating their efforts with one another. She needed to carry out additional practice in order to master the basic concepts, and feel more confident and less anxious. The SI leader and I needed to follow through on our efforts and keep working with the student, as well as offering her our encouragement.

3) Quiz 2 (69%) -- Week 3

Quiz 2 covered the definitions of relation and function, and interpreting the graph of a function.

Areas of weakness: The student was confused about interpreting graphs, but performed well on the other topics.

Action Plan: The author (1) created problems dealing with all these concepts and sent a worksheet to the student and her SI leader (in the same email -- the three of us were now a team!), (2) sent videos which explained the topic of weakness, and in which some examples were solved very clearly, (3) gave the student a due date to complete the worksheet, (4) invited her to come to the office to go over the material, and (5) asked the SI leader to reach out to the student and encourage her to continue attending at least one session per week.

Result: The student mastered the area of weakness very quickly this time.

Action Plan: In spite of the student's amazing progress -- she had advanced from struggling to borderline level - - it was crucial to have a follow-through plan. Complacency is the biggest risk for any struggling student (and her teacher). Monitoring, encouragement, and follow-up are absolutely essential.

We continued the above intervention cycle for 16 weeks. This student earned 80% in the first midterm, 94% in the second, and 97% in the third. She scored 98% in the final exam, and got an A in the course. This example is certainly not an isolated case. Our data shows that as a result of TAPSS, 14% of our struggling students eventually became A students, 56% became B students, and about 20% became C students.

Testimonials

The following are testimonials by instructors who enjoyed using TAPSS in the Precalculus courses and decided to implement it in other courses.

“I used the tailored action plan while teaching Math 1083 for two consecutive semesters. The tailored action plan implicitly takes into consideration that the process of learning is an individual activity that depends primarily on the student's current level of skills. This is especially important for borderline students because they often feel isolated due to their lack of confidence and have very low participation rates in class. During the in-class activities, I interacted with my students with the purpose of identifying their individual lack or poor level of algebra skills, confusion, and misunderstanding (as they happened). With this information, then I tailored individual action plans to address their individual needs. The result of this approach was that my students were able to learn more material and work at a faster rate, as compared to previous classes when I did not use this approach. The tailored action plan is important for the success of borderline students because it helps improve and develop better math skills necessary for more advanced courses and because it increases the student's level of confidence, which is so important for having a better outlook about learning. Although I am not teaching Math 1083 this semester, I am using the tailored action plan in my current classes during the summer term. My observations and results in my current classes using the tailored action plan are similar to what I experienced in Math 1083, and it is working better than before because now I have more experience using it. I would definitely recommend the use of the tailored action plan method to other instructors.” C A, (Math 1083)

“This method allows recognizing timely the difficulties encountered by each student. So the teacher can be more effective in restoring some of the missing knowledge by assigning specific practice assignments to each student. In this way, the teacher can take care of students' specific needs and encourage them to learn how to succeed.” M DeS (Math 1040)

“TAPSS helped me track students' struggles and progress in a timely manner. In particular, students made better use of office hours with me as we focused on the action plans. Sometimes students could not identify their own struggles/problems. With the plans, students got a chance to focus on the parts where they needed to review more and they knew that they would get help/support from the instructor and were more motivated to try harder.” S H (Math 1082)

“TAPSS has helped me plan and organize my strategy for helping struggling students and see what is effective, adjusting the plan as necessary and beneficial to tailor it to the particular student. It has helped me make my approach to helping students more scientific and systematic, as well as more personalized. This method is important because every student is an individual and must be helped in a unique way that is best for them, and planning helps to make the process more effective. Finding the student's weakness and figuring out the best tailored approach for helping the student are essential tools that have helped me become a more effective teacher. I have started using this approach in my other courses, due to its

effectiveness.” N S (Math 1082)

“TAPSS helped me identify specific problems faced by each student in a timely manner, so that I was able to come up with a strategy on time for the student to improve. It also provides an effective way to follow-up. This method encourages students to be aware of their situation, develop a sense of belonging and of being taken care of, and build a sense of commitment to their own success in learning.” J M (Math 1081)

“I love my teaching job and I deeply care about my students’ success. I am very thankful for learning about tailored action plan for borderline and struggling students from Professor X. Since I have applied this technique, many of my borderline students have been able to continue with the class and pass the course. I believe this technique works because it gives the students a road map. They feel that they are important and that their instructor cares about them.

I have used this technique in all my other classes. It takes time to create a good action plan and working effectively with our students. However, it is definitely worth the time. I strongly recommend it to all other instructors and promise them that it is very effective.” T G (Math 1082, Math 1085, Math 2050)

“Instead of having one plan fits all, the tailored action plan helped me to identify the specific needs of each student and how best to help him/her. I think it is important to students' success, since different students have different plans created to help them complete the course with their goals. When I emailed/talked to students who needed extra help, they realized that I cared about them and was willing to help them succeed in the course. I also use the tailored action plan in Math 1090.” L H (Math 1082, Math 1040, Math 1090)

All instructors that we surveyed said that they recommend TAPSS to other instructors.

Conclusions

TAPSS is a powerful and effective strategy that can play a crucial role in helping most borderline and struggling students succeed if it is properly implemented. It offers many advantages. It motivates instructors to think about each weakness of every student, as well as the reasons of this weakness. It encourages instructors to reflect on their students’ success by creating a plan to overcome each student’s learning difficulties. Moreover, it provides a highly quantitative follow-through technique that enables teachers to monitor each student’s progress and take appropriate action in a timely manner. It also enables instructors to measure the effectiveness of their interventions and to remedy the situation if a student had not yet mastered a concept. The results of the implementation of TAPSS in more than one hundred sections of the Precalculus courses were very impressive. We have strong reason to believe that the historic pass rates that we obtained in Precalculus are in large part due to this approach. In addition, we are convinced that TAPSS is even more effective when it is implemented with good teaching practices, such as active learning. We also strongly believe that in any situation involving the use of the SI model that was originally developed by the University of Missouri, Kansas City (UMKC), good

communication between the instructor and well-prepared SI leaders will ensure better results. Software that supports TAPSS will make this cooperation easier and more effective, and in addition, will optimize the teachers' use of time. TAPSS has also contributed to increase the pass rates in Calculus. It has certainly taught students to be great critical thinkers.

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Appendix: Example of the Initial Message to a Borderline or Struggling Student

Dear [student name],

I hope that this message finds you well. I am glad to have you in my class, and I am sure that we are going to have a pleasant and fruitful semester.

I want to reach out to you to let you know that after grading your Reality Check Test, I have noticed that you need to work on two concepts that are fundamental to success in this class. Your success is very important to me. I will make every effort to support you. I would kindly ask you to watch the videos listed in attachment, and then try the problems that I have created for you.

Please send your work back to me by MM/DD/YYYY. In the meantime, if you have any questions, please feel free to send me an email. I will respond quickly -- you will probably get an answer within one hour unless it is after 9 PM or before 6 AM!!

Please never forget your rights of a learner. As a student in this class, you have the right:

1. to be confused,
2. to make a mistake and to revise your thinking, and discuss your results and your concerns with your classmates and your instructor
3. to speak, listen, and be heard
4. to enjoy doing mathematics

We are here to support you so you can succeed in your academic goals.