



## Tips for New (and Seasoned) Instructors

Education Notes

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Do you ever feel overwhelmed in your role as a new instructor? If the answer is yes, then welcome to the club! New instructors have many demands, such as learning institutional and departmental expectations, teaching courses for the first time, creating course materials and assessments and developing teaching practices/styles. It may seem daunting at first, but there are many simple steps that you can take to alleviate some of these burdens to maximize your time, energy and overall enjoyment of teaching. The following tips are a combination of lessons learned from experienced colleagues that we are delighted to share with you.

### Do not reinvent the wheel or start from scratch

Don't hesitate to reach out to your fellow instructors who have previously taught the same course. Kindly ask them to share their teaching materials, such as lecture notes, worksheets, problem sets, and assessments. Many instructors are more than willing to offer their course materials which can help guide you in your course preparation. You can then adapt the shared materials to your teaching style, bring your own perspective to the classroom, introduce your own examples, activities and creative touches that showcase who you are as an instructor. On the flip side, share your own successful teaching materials and experiences to benefit fellow math instructors.

Our colleagues are our most valuable assets. It may take several months to feel comfortable in a new job, so ask questions, seek help and find out what supports are available to you.

### Find a mentor

Ask a colleague who has previously taught the same course or a similar course to be your mentor. They can provide you with invaluable insights into student demographics, learning habits as well as potential challenges or specific misconceptions that students often encounter in a course. They can share instructional approaches and teaching resources that have proven successful in the past. They can help you develop proactive strategies to address common stumbling blocks and overall better address the specific needs of your students. They've been through it all and can guide you through the maze of hardships and delights that students face.

Creating effective assignments, quizzes and tests requires both time and practice, so if possible ask your mentor to review your assessments. They can offer feedback to ensure that your assessments are written clearly, aligned with course learning outcomes, and test the material at an appropriate level for your specific student population.

Acknowledge the time and effort your mentor has given you. And remember, when you're in a position to do so, pay it forward. Share your own experiences and support fellow educators on their journeys. Together, we can build a community that thrives on knowledge, growth, and collaboration.

### **Use the '+1' method**

We can spend hours upon hours improving our notes, slides, assessments and other teaching materials; however, it is important to consider how these efforts translate to our students' learning experience. While it may be tempting to perfect every detail, you will soon hit the point of diminishing returns and waste a lot of time and effort that might be best spent elsewhere. Work on a class until you arrive at an inflection point when materials have reached a high level of quality and effectively support your teaching objectives. At this point, shift your focus from refining existing content to incorporating new elements that can enhance the learning experience.

You will be tempted here again, this time to try out many different ideas. From the student perspective, too many new tasks and activities can be overwhelming due to the constant context switching. From the instructor perspective, you need enough information to assess the impact of each new addition on student engagement and comprehension (not to mention practice running a specific activity). So use the '+1' method: add one new thing, such as an active learning activity or a different type of assessment, each time you teach a course. This incremental approach will ensure you understand how the modifications affected the learning experience. It will also allow you to make deliberate and gradual adjustments in future courses and continuously improve your teaching practice over time.

### **Get student buy-in**

Student buy-in is crucial for creating a supportive classroom atmosphere and an effective learning environment. Take time to explain why you are using a particular teaching technique: perhaps it is a strategy you believe will enhance their understanding of a concept or it is an activity that will improve their communication. By sharing your rationale, you can help students understand the purpose and relevance of the approach, which will increase their motivation and willingness to engage with it.

It is also important to acknowledge that trying something new might not work as you expected, so have an honest discussion about that in advance of the activity, following it, or both. Gathering student feedback will not only help you fine-tune the approach for future iterations, but it also allows students to play an active role in shaping their own educational experience, creating a sense of ownership and investment in their learning journey. Moreover, students often appreciate the opportunity to contribute to the improvement of the course and help their future peers.

### **Survey your class throughout the term**

Do not wait until the end of the term to collect student feedback as you can likely address many common concerns during the term. Do a survey a few weeks into a course or incorporate regular surveys into the semester. Make sure to include both content-specific and general questions: while understanding how well your students are comprehending the material is crucial, it is also important to seek their feedback on other parts of your teaching practice. Ask about your handwriting (in size and clarity), speech (loudness, speed, clarity), course structure (frequency of assessments). Address the feedback in class and highlight how you plan to implement the changes so students understand that their voices are being heard and their opinions matter.

### **Do not take it personally when students don't do well**

As an instructor, you will work with a diverse group of students with various learning preferences, abilities and backgrounds, each with their own strengths, weaknesses and personal experiences. In reality, this means that no matter how hard you try, you simply won't be able to please everyone or ensure that every student succeeds. It's just not possible. This is why it is crucial to remind yourself that an instance of poor student performance or a piece of negative feedback is not a reflection of your worth as an educator or quality of your teaching as a whole.

Of course, it is important to diversify your teaching techniques and be open to feedback that can help you grow professionally and personally. But it is essential to separate your worth as an educator and a human from the outcomes or feedback you receive. Remember, each student's journey is influenced by many factors that are completely out of your control. Focus on finding creative ways to meet the diverse needs of your students and keep nurturing that passion for growth and learning within yourself, your peers and your students.

### **Take notes**

There are often many moments throughout the term that we want to make note of. Did that class run smoothly? Did the student enjoy the example? Was the midterm too long or too difficult? Was this particular topic hard for students to grasp? We may notice these important questions

and answers, but we often don't write them down. Our minds and schedules are busy enough without having to remember all of these tiny (yet crucial) details. One way to combat this is to take notes.

As much as possible, take notes on what went well and what did not go well. These notes will help you to make adjustments during a course and, most especially, changes to the course for the next iteration. This is important if you are not due to teach the course again for many terms/years.

### **Do peer teaching observations**

One of the best ways to gain new insights and fresh ideas for your own teaching is by attending other instructor's classes. By observing how other educators engage with their students, present the material and manage classroom dynamics, you can gather valuable inspiration that you can adapt and incorporate into your own teaching style. Imitation is the sincerest form of flattery after all.

Moreover, observing the class from the non-instructional position is a transformative experience: the perspective from the back of the room offers a completely different vantage point. Many institutions have a Centre that focuses on teaching and learning and they may offer formal versions of peer teaching observations. Check out if yours does and give it a try.

As a new instructor, you face a multitude of demands and responsibilities that come with the role. However, by implementing some simple strategies, you can make the most of your time and energy both in and out of the classroom. Finding a mentor to guide you, fostering student buy-in, seeking feedback and surveying your class early on are just a few tips to enhance your teaching journey. Always remember that you are not alone in this adventure. Welcome to the amazing world of teaching!

If you are looking for more resources with ideas to apply to your teaching, here are a few of our recommendations:

- "How Learning Works: Seven Research-Based Principles for Smart Teaching" by [Susan A. Ambrose](#), [Michael W. Bridges](#), [Marsha C. Lovett](#), [Michele DiPietro](#), [Marie K. Norman](#)
- "Teaching in Higher Ed" podcast with Bonni Stachowiak
- Rabbit Math project for inspirational ideas <https://www.rabbitmath.ca>
- First Year Math and Stats network, seminars and various resources <https://firstyearmath.ca>

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