

If suitable facilities exist at your institution, you can arrange to have your class videotaped, and then you can observe yourself. If you haven't done this before, brace yourself; from personal experience I know that this can be a shock.

Finally, you can ask permission to observe a colleague's class and discuss it with them afterwards. Watching someone else can give you ideas that you can adapt to your own purposes in your classroom.

### How Can You Minimize Harm to Your Career?

Efforts like those described here will not only help you reach your teaching goals, they will demonstrate to your colleagues that you are committed to becoming an effective teacher and are taking steps to make that happen.



Harriet Pollatsek

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## Handling Negative Student Evaluations

*Deanna Haunsperger*

We put in hours preparing for what will be one hour of class time, hours grading and making constructive comments on homework and exams, hours working with students in our offices. Yet a negative comment written by a student in one minute on a midterm or end-of-term evaluation can feel devastating. We want to feel that our work is appreciated; we want our students to like us; and if you are tenure-track or undergoing regular reviews, a small collection of negative evaluations can have real consequences. What should you do if you find yourself in that situation?

### Get Ahead of the Problem

The best way to handle negative evaluations is to hear them during the term while the class is still in session. It's much easier to address and resolve things that your students

*Deanna Haunsperger is a professor of mathematics at Carleton College. Her email address is dhaunspe@carleton.edu.*

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believe are problems when you can still respond directly in the class. For that reason, ask for feedback from your students throughout the term. This can be as informal or formal as you like: pass out quarter-sheets of paper at the end of class with the words "Keep, Stop, Start"<sup>3</sup> on them to find out what they like about class, what they want you to stop, and new ideas they have for improving their learning experience; check their understanding of a certain topic in class; inquire about the class dynamics; see if they feel comfortable asking questions. Check in with your class once a week or throughout the term as you find helpful, but at least once in the middle to catch any problems that are occurring while they can still be corrected. Students are much less likely to give negative feedback after the course is finished if they felt heard during the term.

Use what you learn to make adjustments to the class and point out to the students that you're making a change because it was requested on the evaluations. Explain why some adjustments are not feasible for your class, if that's the case. Students appreciate being heard, and that may cause them to invest more into the class and to take more ownership of the class.

If students complain about bad classroom dynamics, like some students routinely interrupting other students who are speaking, a problem often suffered by women in a mathematics classroom, you can have a classroom discussion about the importance of building a safe community in your classroom so that all students feel respected and comfortable enough to speak up. If you're not sure how to deal with some particular classroom dynamic, ask a trusted colleague to sit in on your class and give you feedback or to help you figure out how to lead a discussion about the issues.

If students are concerned about the workload of your course, explain to them that their education is a full-time job (if that's the type of school you're at), so they should be spending 40 hours per week on their courses combined. That means that on your course, they should be spending approximately  $(40-n)/m$  hours on homework for your class each night, where  $n$  is the total number of hours they are in class each week for their regular academic classes, and  $m$  is the number of regular academic classes they are taking. If, on average, the class is spending much more time than that, then you should adjust your expectations for their workload. If an individual is spending much more time than that, then you should discuss with that person opportunities at your institution for individual tutoring or study skills counseling. Just having a conversation about your expectations for workload (best done on the first day of the term) alleviates some disgruntlement about length of homework assignments.

<sup>3</sup>This idea came from a conversation with Rochelle Gutierrez recently; she uses "Go, Stop, Start."

If large numbers of students complain that your exams are too hard or that you ask questions that are too far afield from their homework, take a look at your exams with fresh eyes. Make sure that there are some questions on every exam that a student who has been attending class and putting in a reasonable effort on their homework can do.

If students are confused about your presentation of some material in class, hold an extra, optional review of the material or record yourself doing some examples—they will appreciate the extra effort that you put in to help them understand the concepts.

### If the Reviews Come from a Class That's Over

It's more difficult to resolve issues that come from a class that has already ended. Your senior colleagues will want to know that you are aware of the issue and working to rectify it or prevent it from happening in the future. You should address it in your annual statement or your prospectus for tenure. Acknowledge that the course didn't go as you'd hoped, and how you plan to address such issues in the future. Explain who you're consulting for advice or what you're reading/learning to know what to do if it happens again. If you disagree with what the students said, don't dig your heels in and protest that the students were wrong; find a kernel of truth in what they said and address how you're going to adjust the class the next time. Everyone's teaching evolves over time; you need to show that you are ready and willing to learn from your mistakes.

### Reviews about Your Ability to Teach the Class

If you're a young professor (especially a young woman or member of an underrepresented group), it's quite common, unfortunately, for students to call into question your ability to teach the class. This is not appropriate, not to mention unfair, but it happens, and you need to find ways to combat this until your age or graying hair gives you the gravitas to prevent it from happening. There's no easy solution. People I know choose to show their expertise through demonstrating difficult examples. When I was younger, I would talk to my class about the culture of mathematics: What does it mean to earn an advanced degree in mathematics? What's research like? How is knowledge shared among professionals? I would take that opportunity to explain more about my own research, talks I'd given at conferences, papers I'd written, etc.

Listen for ways that you undercut your own authority in the classroom, and avoid them. A phrase like "I'm not sure how to approach this problem; let's try this way together" may make you feel like you're leading a team of adventurers exploring a new area of math, but some students will hear that you have no more knowledge or experience of the material than they do. If class starts late often because students are talking with each other and you are happy that a community is forming amongst your students, some students may think you're not in charge of your classroom. Having

good classroom management skills is something you may need to be vigilant about until they just become a habit.

Although students need some agency in the class, some control over their own education, they often feel more comfortable when they know the structure that they are working within. On the first day of class it's good to set up expectations for the classroom. There are likely some expectations that are not negotiable: all students should be treated with respect and treat each other with respect; everyone should feel safe in the classroom; students should act honestly and honorably. There are also some expectations that could be negotiated: the policy on arriving late, eating during class, raising hands or not before asking questions. By having these conversations, you're setting up standards for your classroom, and you're also showing that even though it's going to be a community effort to learn the material, you're in charge. Have a clear beginning and ending to your class. Good classroom management can help ameliorate the "problem" of being young.

### The Big Picture

Keep in mind that everyone, even the most experienced or popular professor, gets negative feedback. After you read your reviews, make a list of things you want to try the next time you teach the class. Those ideas can go in a folder with your notes for the class so that you see them when you next teach it; more general ideas can be kept in a general folder on teaching. These folders can also be useful when you are writing to colleagues or the administration about things you've learned about teaching for tenure or continuing appointment reviews. Also, make sure you add some notes to yourself about things your students liked in the class as well so that the next time you teach it, you get the treat of remembering what was successful.

If you aren't sure how to interpret your evaluations, ask a trusted colleague, departmental mentor, or friend to read them and give you feedback. I sometimes ask a friend to help me see the many good comments in the evaluations because I'm too obsessed with the few negative ones.

Teaching well is like cooking well—you not only need to make sure you have all the necessary ingredients and they are fresh, but also need to make sure they are combined in the right way. It's not unusual to take a favorite recipe and tweak it again and again, always looking to make it just a little bit better.

Everyone makes mistakes. Everyone has bad days. Everyone gets negative reviews. It's what you do with the information that's important.



Deanna Haunsperger

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## What Do I Do When My Paper or Grant Is Rejected?

*Julia E. Bergner*

It can be a frustrating experience: you've worked for months or years to write a paper that you're proud of, only to have it rejected when you submit it to a journal. Does this mean that all is lost? Similarly, what about when you come up with great ideas for a grant proposal only to have it not funded? These experiences can be some of the most frustrating parts of being a mathematician, yet ones most of us have to face. Thus, it is important to learn how to deal with rejection and move forward without despairing about your worth as a mathematician.

An unsurprising first reaction to the rejection of a paper can be disappointment and even anger. Upon receiving such news, I am sure that I've been misunderstood or that the paper has been sent to an inordinately picky referee. Are these things true? Perhaps, sometimes. But I also know from experience that I am not thinking straight in that moment, and I need time before I can respond more appropriately. For a collaborative project, venting with a coauthor about the mutual disappointment can be helpful, too.

So, how can you get a more productive view of what happened? A rejection of a paper often still comes with a referee report, which can provide a useful source of constructive feedback. Even if not, there are usually still at least a few sentences from the editor about why the paper was rejected. As with reading any referee report, positive or negative, I often find it helpful to read through those comments, but not work on addressing them right away. A criticism I might initially find annoying I might later acknowledge to be a good point that I had not considered, or I might realize that the source of a misunderstanding was poor exposition

on my part. For example, I once felt that one of my papers had been rejected because the referee had completely misunderstood the point of the paper. But when I looked back at how I'd written it, I had not sufficiently explained what I was trying to do, and what I saw as the main theorem had not been emphasized. So of course the referee had missed the point! I revised both the introduction to the paper and the build-up to and statement of the main theorem. I resubmitted the paper to a similarly ranked journal, and it was accepted.

Many journals now employ a "quick opinion" system, in which someone is asked for an assessment of the suitability of the paper for the journal without doing a thorough review. If this opinion is favorable, then the paper goes to a referee for a more detailed review. The advantage of this system is that if your paper is not deemed suitable, you get that response quickly and can move on to trying elsewhere. It can be incredibly frustrating to submit a paper, not hear back for a year, and then get no more useful feedback than that the paper is fine but just not up to the standards of that journal. The disadvantage of this system, on the other hand, is that your paper can be rejected without being looked at carefully. In this system, again, it is all the more important to have the goals and main results of the paper stated clearly.

Here are some recommendations for following up on the rejection of a paper. Read any referee reports or comments that you received about the paper. Especially if you are upset, let it go until you can think more rationally about it. Then, go back and read the feedback again. If the paper just wasn't up to the standards for the journal, try to identify another one that might be a better fit. If you received more detailed comments, take them seriously and revise the paper accordingly, as seems appropriate. Be sure to consider any suggestions made by this referee before submitting to another journal, just in case the same person is asked to review the same paper again. All is not lost in this case; a referee who thought that a paper was not suitable for the previous journal might think that you made a more appropriate choice this time.

Above all, do not give up. Your paper might need to be improved in some way, whether in content or in writing style, but it is still likely that it is publishable if the results are correct. Good papers go unpublished because authors get discouraged and quit trying, which is unfortunate.

Perhaps you have heard that if all your papers get accepted to the first place you send them, then you aren't being ambitious enough in choosing journals. After my first several papers were all accepted to the first place I tried, I took this advice to heart. I quickly got several rejections! Nonetheless, over the years I have had papers accepted in journals I might not have expected. It is, admittedly, much harder to take such risks when you are applying for jobs or being considered for a promotion in the near future and want the paper accepted quickly.

*Julia Bergner is a professor of mathematics at the University of Virginia. Her email address is [jeb2md@virginia.edu](mailto:jeb2md@virginia.edu).*

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