

# Student Journals: The 30-day challenge

*At the 2012 Teaching through Problem-Solving Summer Institute, many of educators noticed how, over just a few days, Bill Jackson helped students learn to use journals to record, extend, and reflect on their mathematical thinking. Bill told us about a “30-day challenge” from Akihiko Takahashi that sparked his initial work to support journal-writing. Here are Bill's and then Akihiko's thoughts about student mathematics journals.*

**Bill Jackson:** Several years back, I observed Akihiko for 6 days teach 2 lessons per day to my seventh grade students on area of parallelogram. Each day he taught one class using electronic geoboard software and the other using a regular geoboard. (He was comparing the two for his doctoral thesis.) At the end of each lesson, he asked the students to reflect in writing, using the prompt "Today I learned... " At the beginning of the next day's lesson, he passed out a sheet with a typed-up version of several of the responses, and he called on students to read them aloud to the class. Often the responses moved from simple to more complex. This is how students reviewed the prior learning and made the link to the next lesson. I found it very powerful and I asked him to explain to me how he did it. After he explained it, I said "It is a great idea but a lot of work." He issued a challenge: Try it for a month and if you do not find it useful, then don't do it anymore. I accepted the challenge and have used it ever since.

I accepted Akihiko's challenge because I wanted my kids to have a better experience in their math class. Seeing Akihiko teach my students was a real eye opener. Afterwards, I felt that the students were being cheated when I taught. Akihiko did certain things that really engaged them and cemented their learning, one of which was the journal writing. I wanted to learn to teach better, like him.

At the time, I was teaching at Paterson School Number 2, in Paterson, New Jersey. We were intensely engaged in lesson study. I used journals in some research lessons and several teachers decided also to try it.

I began by giving students the prompt, "Today I learned..." Akihiko advised me to write a brief comment on each student's entry, so I did that. The kids were really eager to read my comments each day. Akihiko also advised me to keep track of whose entries I typed up, so that I would get to everyone. After a while I found it was not so hard to do and I became quite proficient and quick. The kids were so happy to see their journal entries typed up each day and they would say things to me like, "Are you going to show mine tomorrow?" It really helped both them and me to summarize the big ideas of each lesson and connect each lesson to the next. The students' journal writing improved over time as they saw what their peers were writing, saw the power of illustrations, etc. Although I am not in the classroom as much as I used to be, all of these changes are still part of my practice.



Thirty days is enough time to get a good start – to get the hang of it and see the kids improve. Notice whether the students' writing becomes more mathematical. Notice the emotional (affective) element. Akihiko would always include something emotional, like "Now I really get it!" I hope this helps.

*If you're thinking about taking up the 30-day challenge, Akihiko has the following additional advice.*

**Akihiko Takahashi:** When you choose journals to type up, here are some additional suggestions:

- 1) Choose students who did not share their thinking during the lesson. Sometimes these quiet students prefer to write their ideas in their own notebook. In this way, you can engage more students in mathematics.
- 2) Choose students who wrote how they came to their conclusion/solution. Often we cannot see how students think. Once students see the importance of writing about their process, more students will share their thought processes rather than just their answers. Students might say things like "First I did this way but I changed it because someone show me more effective way." Or "First I did not understand but I figured it out by talking with my friend...."
- 3) Choose students who wrote specific event(s) or thought(s) rather than general statements.

Using a few students' journals at the beginning of the next class, as Bill described, helps students see what teachers value in journals. This is much powerful than giving points or grades for each journal. Students learn more from seeing their friends' notes than by receiving a grade from the teacher.

Through journal writing, students learn to reflect on and write about the process of their learning. Likewise, journals provide a great way for teachers to reflect on their teaching. If only a few students write about the central point of the lesson, then the lesson did not go well. The teacher needs to revise the lesson plan for the next day.

If teachers want to use student journals to reflect on their instruction, it is best **not** to specify what students should write. An open-ended prompt like Bill mentioned best serves both students and teachers.