

Learning Activity: Paper Cranes – Following Instructions and Getting Unstuck

Learning Behaviours: Getting Unstuck, Following Instructions

Teacher: LNB **DATE:** 5/8/05 **Class:** 7F English

Aim: To present students with a problem where they would need to follow a series of written instructions without the direct assistance of the teacher. The idea was to have students attempt to create an origami crane using instructions which were difficult in order for them to experience “getting stuck” and allow them to think about ways of “getting unstuck”.

There was no simple solution as each student interpreted the set of instructions differently, which meant that the learning activity was experienced differently for all. This allowed for a variety of responses/reflections showing a wide variety of ways to approach a task and to get unstuck.

The actual instructions can vary to suit any subject, but the ones used for this activity were:

<http://www.sadako.org/How%20to%20Fold%20Crane%20from%20Operation%20Peace%20Crane.htm>

<http://www.sadako.com/fold/folding.html>

http://www.cs.cmu.edu/~sprite/Origami/crane_gif.html

Discussion Tool: *Reviewing Work / Journal Writing / Discussion*

ACTIVITY – READING INSTRUCTIONS

As part of their study of a text (*Sadako and the Thousand Paper Cranes*), students were given an A4 sheet of instructions on how to make a paper crane. The instructions were complicated and students were first asked to attempt to make a crane in the class. There was a variety of success and students were to continue working on the activity in isolation at home and to bring in their best effort on the Friday (five days later). The teacher was also involved. In the original class I had brought in a crane which was obviously not well made. This showed the students that the task was not simple and that the teacher was struggling with it too. This encouraged students to compete against the teacher and their peers.

JOURNAL WRITING

After displaying their efforts and giving a quick verbal explanation of how they went about it, students were asked to answer the following questions in their journal:

- How did you approach the task?
- What did you do when you got stuck?
- What advice would you give someone who is about to begin using the instructions to make a paper crane?

The class was then invited to read out their comments to the class in an unstructured way with the teacher prompting some of the students to offer their insights.

The student comments were then collected and typed up without any identifying features, which came to three pages of comments.

DISCUSSION

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The comments were distributed to the class a few weeks after the activity. Students read the comments in small groups of 3-4 without any teacher direction – they were just to read the comments and talk with others in their group about them.

Then the teacher asked the students to identify the comments which were helpful or “good advice”. They did this by underlining the comments or using a highlighter, initially by themselves and then with discussion among their small group.

As homework (or journal writing to be done at home) students were asked to explain their reasons for choosing three comments as “good advice”. Then they were asked to reflect on their own approach to the task in relation to these three pieces of advice and respond to two questions.

- 1. How would you use this advice to help you in your next assignment or project?**
- 2. Is this advice useful for all of your subjects or just English? Explain with examples.**

Student Comments

Student Comments – Following Instructions

How did you approach the task?

I thought it was hard but then I lost the sheet.

I didn't do it because I lost my sheet and didn't have any time anyway.

I followed the steps and then I got up to Step 4 and then I got frustrated and then I gave in.

When I first saw that we had to make a paper crane I thought that I couldn't do it. And I couldn't. It turned out really bad.

I got the piece of paper and started folding. It was hard and I got frustrated and started again about six times.

It was hard until I got the hang of it. After Step 6 it got harder and harder.

I took it step by step.

It was easy when I worked out number five.

It was hard at first but then it got really really easy.

I got passed all of the steps up to Step 6 and I got stuck and couldn't get past it.

I approached the task by sitting on the couch and trying to follow the instructions while watching 'Lost'.

I only got up to Step 5 because it didn't give you enough information.

I didn't do the paper crane because I was doing the mouse maze.

When I first looked at how to make a paper crane it looked really hard.

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What did you do when you got stuck?

The instructions were confusing.

When I got stuck I took it apart or read the step again or asked mum for help. The instructions looked hard but when you read it, it made it easier to understand.

When I got stuck I ate a bowl of ice cream and at long last I finally made a crane-like thing. The instructions were very, very confusing.

I ended up getting stuck six times and it was always on Step 6 so I gave up and gave it to mum and then she did one and I copied her folding marks.

I followed the instructions carefully but it didn't work out the first time. I got frustrated and gave up. The second time when I got stuck I tried folding it lots of different ways until it looked like the picture on the instructions.

When I got stuck I kept going but then I got frustrated and gave in.

I got stuck at Step 6.

I got a piece of paper and the instruction sheet and I read the instructions step by step. It was really hard. I tried a million times.

The instructions were really bad. When I followed the instructions it finished as a screwed up piece of paper. I just looked at the pictures and made it look like the pictures. I ignored the words and followed the diagrams.

I just read the question again and again. The instructions were kind of hard to understand.

I tried to get help but they couldn't do it either.

When I got stuck I re-read the questions and then kept on trying. The instructions weren't too good but the pictures were better.

When I got stuck I asked my mum and dad for help. When they helped me I kept going. I didn't like some of the instructions because some were too confusing like Step 6 was really confusing.

I got frustrated and folded it different ways until it looked right. The instructions were stupid.

When I got stuck I got really frustrated and I kept following the instructions. In the end it didn't work out and I just gave up. The instructions were really bad on Step 5. I followed the instructions and it didn't turn out like the picture so I folded what the pictures looked like and I kind of got it right.

I asked for help but they didn't know what to do. I got frustrated and chopped it up.

I got stuck at Step 12 but did it in the end after a few tries. The instructions were not too good.

When I got stuck I stopped and I either unfolded it and started again or I chucked it in the bin and watched TV for a while. The school instructions were hard to understand and I forgot to take them home so I used my own instructions.

What advice would you give someone who is about to begin using the instructions to make a paper crane?

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Start work as soon as possible and don't lose the instruction sheet.

Don't follow the instructions. Follow the diagrams.

I would let them suffer because we got no advice.

Shut up and work it out yourself. (if it was someone who was my friend) I would say that it is easier when one of the sides are coloured.

The instructions were confusing and hard to read so I used my own instructions sheet.

Just keep trying and don't give up after one try. And to make it easier colour one of the sides and then fold it.

I would tell them to read the step slowly and be prepared to stuff it up.

The advice I would give someone would be it is hard but don't give up. You will get it soon – be patient.

I think it would be fun if I could do it.

I would tell them to have a go and keep on trying.

Tell them not to do it unless they wanted to win a prize and not to follow the instructions we got.

Try making paper airplanes first. Start with the easier ones, the normal ones, then some hard ones. Try using a paper plane book. Then try the paper cranes.

The instructions were really hard to follow and they weren't very well written.

Teacher Journal

What is my intention? What do I want to achieve?

I wanted to have the students work through a problem on their own, especially a problem which was based on a particularly difficult or obscure set of instructions. The point of this exercise was to give the students a chance to overcome or challenge the problem as well as experience success in doing so.

The activity was short taking up one lesson and then followed up by four days of students working in their own time on the instructions. I wanted the task to be short so that students were able to focus on it rather than give up because of time lag.

What happened?

I set myself up as a learner as well as the students by bringing in a miserable attempt at a paper crane which I had tried to make following the instructions I was giving the class. My pitiful attempt spurred the class on to "beat" me, to show that they were capable of doing what the teacher couldn't.

My perceived "failure" was a great starting point which illustrated the difficulty of interpreting instructions, the limitations of writing instructions, and (of course) the idea of persistence and lateral thinking. By the end of the

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first class no one had managed to progress past the level I had reached with my own crane, but they were all still motivated and determined to get it right.

As the days past, students came up to me and told me of their progress. Some were enlisting the aid of their parents or older siblings who knew how to fold cranes, while others were trying different kinds and sizes of paper.

The day of the presentations was fantastic. I was truly amazed at the number of students who actually conquered the instructions and brought along really good examples of cranes.

Some students had not even tried to make a crane beyond the first class, but many others had. Each member of the class, including myself, was asked to explain how they went about the project and to display their finished work. Then they were asked to record these thoughts in their journals, finishing up with a class vote on the best cranes in a variety of categories: Most Colourful, Smallest, Biggest, etc... with prizes given.

What was my role?

My role was of learner and observer. The actual instructions came from the internet and were deliberately vague and obscure. I discussed the limitations and benefits of using instructions and then provided the students with materials and a deadline.

What feelings and senses surround the event?

I feel it was very successful. It was short and culminated in some interesting and challenging responses from students in their journals. Even the students who considered themselves as having "failed" by not creating a crane, had interesting and useful things to say.

The sharing of student comments was also fantastic, with students recognising their own comments in black and white, but without having to share their identity with the class (unless they wanted to). I felt that each student was able to feel some accomplishment by seeing their positive comments being discussed as part of a class.

What was I thinking? What was I feeling?

I was frustrated that I couldn't fold a perfect paper crane, but honestly I didn't spend as much time on it as I expected my students to. Next time, I would like to treat it as much of a learning experience for myself as I expected it for the students. I was very impressed with the skill and designs of the paper cranes at the end of the time, and the way in which the entire class accepted the success of others. They really seemed to feel that the exercise was a success – that they had learned something.

What might I change next time around?

The instructions were very difficult. I can't even find another copy of the actual instructions – but the links above should suffice.

Next time I would offer two versions of instructions so that students were working off different sets, which would then allow them to discuss the limitations and advantages of each set.

I also think this could be expanded to other areas of my course.

Pictures of the Activity: