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To the Moon! — A Launch Pad for Encouraging Students to Express Their Opinions

Writing persuasive essays can be challenging. It not only requires the higher-level critical thinking skills of analysis, evaluation, inference, and explanation of arguments (Facione 1990), it also asks writers to consider multiple points of view and to reconcile clashing values (Bean 1996). If you add these cognitive demands to those of writing in general *and* doing so in a second language, then composing a persuasive essay is asking quite a lot. But for my students, the most frightening aspect of the task stems from having to express their opinion. The majority have never been asked to give their view on anything, let alone persuade someone to agree with them in writing.

To gently lure students into the scary world of writing well-reasoned persuasive essays, I break down the process into bite-sized pieces by first showing them, in a student-centered way, what they already know how to do—namely, develop their opinions orally about a topic that has no right or wrong answers. This approach takes a lot of the pressure off them so they can devote their mental energy to organizing thoughts and supporting their points of view. The hard part—writing—comes later. The rationale for this approach is best articulated by Brown, Collins, and Duguid (1989): "By beginning with a task embedded in a familiar activity, it shows the students the legitimacy of their implicit knowledge and its availability as scaffolding in apparently unfamiliar tasks" (38).

This process begins with a four-part exercise I call "To the Moon!" The exercise encourages students to develop and orally defend their choice of four volunteers who will be part of a team to colonize Earth's moon. This oral exercise prepares them for subsequent written work. As Bean (1996, 7) states, "Good writing… grows out of good talking." While the content of this exercise is original, the framework is adapted from similar ones found in many discussion books.

MOON FACTS

Distance from Earth: 240,000 miles (386,242 km)
Temperature:
Day: 253°F (123°C)
Night: –387°F (–233°C)
Surface appearance:
(a) Craters (from meteorites bombarding it); largest is 1,300 miles (2,092 km) across.
(b) Mountains (actually the rims of the craters) over 10,000 feet (3,048 m) tall
Gravity: About six times less than the gravity on Earth
Air (atmosphere)**:** None; gravity is too weak to hold an atmosphere.
Water: None found yet
Sound: None since there is no air, which is needed to conduct sound. When the Apollo astronauts were out on the moon's surface, they could talk to each other and to the mission control center only by using the radios in their air-filled helmets.

(Source: http://lunarscience.nasa.gov/kids/moon_facts)

Figure 1. Fact sheet about the moon

Step 1: Previewing information about the moon

First, I have students pool their knowledge about the moon using the short fact sheet in Figure 1 as a prompt (you could also have students do their own research before starting this exercise). This activity helps everyone understand what conditions the moon team will face.

Another preparatory step before students are told about the exercise is to ask them what qualities they would look for in a team they might send to the moon. This focuses students' thinking before they have to choose from among the volunteers.

Step 2: Developing individual arguments

Students then receive the assignment to read the mission statement in Figure 2, review the background characteristics of ten volunteer team members in Figure 3, and select four of the ten volunteers to send to the moon. Students should work independently at first, using the worksheet in the Appendix to explicitly state their reason(s) for either choosing or rejecting each potential team member. Working on their own initially is important because they need to feel ownership of their opinions and be explicit about their own reasoning without influence from anyone else. As Klooster (2001, 27) states, "No one can think critically for you."

Step 3: Reaching consensus as a group

Next, I ask students to get into groups of three or four and reach a consensus about which four individuals should be chosen for the mission to the moon. This group exercise means that some students, and perhaps all, will probably have to change their minds. But in

MISSION STATEMENT: TO THE MOON!

Your country is in a race to colonize the moon. It wants to gain strategic positioning and assert control over its minerals. Your government is sending a team of four volunteers to choose and prepare the site on the moon for future missions. These people must be able to survive the three-day journey to the moon and the return flight. Moreover, they must live in very severe conditions until they establish the first outpost. That process could take several months. Survival is not guaranteed. Which four people would you choose to make up the first team to travel to and colonize Earth's moon?

Figure 2. Mission Statement

defending their reasoning, group mates must support their choices with evidence, much as they will be doing in their persuasive paper.

Step 4: Reporting the final decision

The final step is to ask each group to report its decisions to the class. I keep a tally on the board of the votes each volunteer passenger receives. Once the reporting of the groups is complete, we look at the final tally and discuss the class's responses. Why were certain people never selected for the mission? What criteria did students use to exclude them? Who would students choose if they could include a fifth person? Since there is no right or wrong answer, they feel free to state their opinions.

Uncovering assumptions

After the completion of Steps 1–4, the class looks at the assumptions that were made—that is, beliefs we take for granted. With so little information on each passenger, it is not surprising that students make assumptions, but it is instructive to have the assumptions pointed out. For instance, everyone in my classes, without exception, assumes that all of the volunteers are male. How, I ask them, do they know this, since there is no indication of gender in the description? The answers usually spring from a stereotype they hold regarding particular roles in their society.

Here are other assumptions they have made. The Scout is one of the most popular selections among college-age students, who say he is young and healthy, as well as a team builder and an expert in survival techniques. Surprisingly often, however, I hear (usually female) students question others' choice of the Scout for duty since "his" parents are elderly, and they are concerned the parents will die while he is away. When I ask older participants (in their 40s and 50s) to play this

Volunteer	Age	Background
1. Military Strategist	49	• Retired • Expert in developing strategic plans for war
2. Computer/Communications Expert	19	• Has prison record for theft
3. Doctor	48	• Extensive knowledge in the problems of weightlessness • Forced to give up medical license in malpractice suit
4. Instructor in Flying and Navigation	27	• Has trained on moon shuttle simulation equipment
5. Astronaut Trainee	35	• Has one year of training • Has two young children
6. Mechanical Engineer	49	• War hero with shrapnel wounds that cause chronic pain
7. Geology Professor	32	• Specialist in lunar atmosphere and terrain • Is in a wheelchair
8. Chef	42	• Army cook who can make nutritious food • Weak heart but otherwise good physical condition
9. Photojournalist	51	• Retired • Will write about and photograph the mission and keep records
10. Scout	20	• Expert in survival techniques • Team building experience and leadership skills • Has elderly, sick parents

Figure 3. Background characteristics of ten moon team volunteers

game, no one ever chooses the Scout, precisely because he is too young and inexperienced.

Being aware of our assumptions is a cornerstone of critical thinking. For unless we are conscious of them, we build our reasoning on information that may not be shared by other readers (Elder and Paul 2009). To help students uncover their assumptions, Elder and Paul (2009, 25) list three questions teachers might ask to see if the assumptions make sense:

1. *What am I taking for granted?* In the case of the Scout, students assume a male will automatically fill this role. Would they have chosen the Scout if the profile revealed that character was a female?
2. *Am I assuming something I shouldn't?* Are students assuming that a young person (Scout) is as competent as an older person (Military Strategist)?
3. *What assumption is leading me to this conclusion?* Are students being sexist or ageist in their thinking? What data or experiences do they have that support their conclusions about women being less able than men?

Organizing principles

After looking at assumptions, I ask students if they had any overarching principle they used to rank the team members in order of importance. In other words, did they choose the team based on the members' expertise that would facilitate their trip to the moon, as in the case of the Astronaut Trainee? Or did they believe that finding talent and skills (such as those possessed by the Geology Professor and the Mechanical Engineer) once the team members landed was more important? Did they want to select only those people with survival skills (such as the Chef and the Doctor)? Or did they choose one person from each of those categories? Looking for a theme or organizing principle is quite useful when students begin formulating thesis statements, because it shows them they need to look at higher-level concepts instead of supplying random, unrelated pieces of information or support.

Increasing oral and written fluency

Second language learners often do not create enough text because they are unfamiliar with the subject matter. But after participating in this exercise, they are now well versed in the facts and their own opinions. This accumulation of knowledge increases fluency in subsequent tasks since they can more easily attend to the other demands of writing, including grammar, organization, topics sentences, and effective transitions. Students are now better prepared to tackle the following writing assignments:

- A letter to one of the people not chosen, explaining their reasoning
- A letter of congratulations to the team members, letting them know why they were chosen and what the mission is expected to accomplish
- A speech to government officials about the final decisions
- A newspaper article announcing the selection of the team members
- A report to government officials, presenting recommendations about who (and who not) to choose
- A letter from one of the newly selected team members informing a friend or former teacher about the honor

These assignments give students practice in writing from different points of view, in various genres, and to different audiences, as well as practice in manipulating tone and vocabulary.

Building on student confidence

To take advantage of the newfound confidence they have developed around expressing opinions orally, students could write a letter to persuade the selection committee to choose a friend (or themselves) instead of one of the other team members. Because this assignment is written based on students' own knowledge, it does not entail research, yet it still requires them to present reasons and support them. Moving on to a more academic assignment, you can consider having students research the history of attempts to reach the moon. This research might lead to a persuasive essay to a government agency to convince them about the importance of developing their own program to colonize the moon. Students could then trade letters and respond to them as if they were a government spokesperson presenting their reasons why they accept or refuse such a request. Other assignments might

include writing an editorial for a newspaper or magazine; students could also complete one of the following tasks:

- Conduct historical research. Students could conduct research about what it was like for any of the famous explorers to prepare for their trips to, for example, the New World or the North Pole. It might be interesting to write about any kind of brave exploration done by people from their own country. What are the conditions the explorers would face both on the voyage to the new destination and upon arrival at the site? What skills and knowledge would a team need to overcome those challenges? This assignment gives students practice in conducting research for a specific purpose, thinking through the problems facing the group, and designing their own "dream team" to carry out the mission. This is an excellent way to develop students' critical thinking skills because they must put forth their explanations and support them.
- Writing reflections. Students could also reflect on the following topics: Which of their reasons were different from other group members' reasons? Which of their group members' ideas did they accept? Were they able to change group members' minds about any moon team candidate? How might they restructure or rephrase any of their original arguments in order to make a stronger case? How did their group reach a consensus about the choices? Did they feel comfortable with their group's choices? In what ways have their assumptions changed as a result of this exercise?

Developing critical thinking skills

This exercise aims to bolster students' confidence in developing and supporting opinions in a nonthreatening environment, and it expands critical thinking skills in a number of ways:

1. It helps students identify and challenge assumptions, a cornerstone of critical thinking. If our assumptions are correct, then our conclusions can be trusted. According to Paul and Elder (2006, 59), "critical thinkers are able to recognize and articulate their assumptions. They assess their assumptions for justifiability." These assumptions can stem from our upbringing; our attitudes towards age, sex, and race; and even problems with language, to mention only a few factors. Since emotions can also color our views on cultural issues, that is all the more reason to uncover why we believe what we do.
2. It is student centered. As Tsui (2008) reports, "Active learning techniques and a student-centered approach by faculty seem to boost students' sense of self-efficacy, which in turn provides students with the self-confidence to practice their [critical thinking] skills in front of others, including their peers" (211).
3. It exposes students' thinking to analysis by others. If students are to reason critically, they need to become independent thinkers who examine their ideas and expose them to scrutiny by others (Elder and Paul 2009). As Tsui (2008) notes, "Many of the instructional activities (e.g., class discussion, small-group work, and class presentations) promote the notion that students' ideas and thoughts warrant public articulation and group analysis" (211). In doing so, students begin to see themselves as part of the teaching and learning process.
4. It helps students generate writing and become more fluent. Writing can become drudgery if students are asked to think *and* write at the same time. Relying more on their oral skills first will facilitate subsequent writing tasks.
5. It sets the stage for further argumentation. Once students build a knowledge base and understand the arguments and supporting evidence they want to use, writing will not seem as scary.
6. It helps them learn from each other. No one knows everything, including the teacher. When students pool their knowledge and give suggestions on writing and other tasks, they feel important. Moreover, it allows the teacher to pay attention to other goings-on in the class.

Conclusion

For teachers, this exercise is important because it paves the way for future assignments that build on the self-assurance students have acquired around developing and

stating opinions publicly, weighing data, creating support, and defending their decisions. You may be surprised how much interest and excitement this exercise generates among your students. Many told me they fervently discussed their choices afterwards and even took the exercise home to parents, siblings, and spouses for another round. It seems a lot of knowledge can fit into one tiny space capsule!

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Appendix Selection Criteria Worksheet for Choosing Moon Team

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Potential Team Member	Reason(s) You Chose This Person	Reason(s) You Rejected This Person
1. Military Strategist		
2. Computer/ Communications Expert		
3. Doctor		
4. Instructor in Flying and Navigation		
5. Astronaut Trainee		
6. Mechanical Engineer		
7. Geology Professor		
8. Chef		
9. Photojournalist		
10. Scout		