

Power Posing for Increased Participation

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Power posing—assuming an expansive posture, such as hands on the hips and legs spread apart—has been shown to increase feelings of power, confidence, and willingness to take risks. Is it possible that two minutes of power posing in the university classroom could give students the confidence necessary to volunteer answers in a whole-class discussion? The results of this study support the researcher's prediction that assuming a powerful posture for two minutes in the classroom leads to increased voluntary participation in whole-class discussions. These results could have meaningful implications for teachers struggling with low participation rates in their classrooms.

両手を腰に当て、足を大きく広げるというパワーポーズは、人に力強さを感じさせ、その人の自信や挑戦心を高める効果があると証明されている。果たして大学での授業内クラス・ディスカッションにおいて、同等の効果は検証されるだろうか。本論では、仮説通り2分間のパワーポーズの使用によって、学生の自発的発言量が増加することが確認された。この研究結果は学生の自発的発言が少ないと大変な思いをしている英語教員にとって有意義な手助けとなるかもしれない。

In her book *Presence*, Amy Cuddy (2016) wrote that “receiving no feedback from a listener is often more disturbing than getting a negative response” (p. 225). Undoubtedly, teachers all across Japan have experienced this situation of “receiving no feedback” in their classrooms and understand how frustrating it can be. This study examines whether introducing expansive posture into the university language classroom can improve students' voluntary participation in whole-class discussions.

The Power Posing Controversy

Cuddy is a social psychologist who gained fame from her TED Talk, “Your Body Language May Shape Who You Are” (2012). In that talk, Cuddy presented the results of research that she and her cohorts had conducted in 2010 with 42 participants, revealing that maintaining high power body language (i.e., “power posing”) for only two minutes could lead to increased confidence, stronger feelings of power, and more willingness to take risks (Carney, Cuddy, & Yap, 2010). Another major finding from that study was that testosterone (the dominance hormone) levels rose in participants that had assumed high-power poses (e.g., sitting with legs apart and arms behind the head), and fell in those that had assumed low-power poses (e.g.,

sitting with legs crossed and arms wrapped around the torso). Contrastively, they found that cortisol (the stress hormone) levels fell in those that had assumed high-power poses, and rose in those that had assumed low-power poses.

In 2016, however, one of the study's original researchers, Dana Carney, issued a statement saying that after seeing the failure of subsequent studies to replicate the original results with regard to hormone levels (see Raney et al., 2015), and in light of research suggesting that the analysis of data in the original study had been deeply flawed (see Simmons & Simonsohn, 2017), she no longer believed that power posing had any positive effects. Cuddy (as cited in Singal & Dahl, 2016) responded that she had become “agnostic” about the effects of expansive posture on hormonal changes in the years following her talk, but has suggested that the more important finding of the original study was perhaps the effects that power posing had on the participants' mindsets, such as making people feel “confident, and assertive, and less stressed and anxious, and happier and more optimistic” (Cuddy, 2016, p. 207). A rebuttal to the Simmons and Simonsohn (2017) article, insisting that the results of the original power posing study were valid, was also published by Cuddy and two other researchers (see Cuddy, Schultz, & Fosse, 2018).

The Positive Effects of Body Language

Other studies have also claimed that expansive body language influences people's mindsets. Park, Streamer, Huang, and Galinsky (2013) found that when both East Asian and Western undergraduate students assumed two different expansive postures for three minutes, they felt more powerful and in control than those who had assumed low-power poses for the same length of time. Huang, Galinsky, Gruenfeld, and Guillory (2011) found that participants used more words associated with power on a fill-in-the-blank exercise after taking on an expansive posture, as compared with those who had adopted a constrictive posture.

In the classroom, there have been studies suggesting that students' posture and other physical behavior have direct consequences on their performance and/or attitudes. In a 2009 study, Briñol, Petty, and Wagner found that undergraduate students evaluated themselves more positively after sitting

with good posture as opposed to when they sat slouched over a desk. Noda and Tanaka-Matsumi (2008) found that improving the seated posture of second-grade Japanese elementary school students led to increased writing productivity. Moreover, a study done in the United States indicated that, in addition to physical improvements, mental and social well-being improved when yoga was introduced for 5-to-15 minutes a day in K-12 classrooms (Chen & Pauwels, 2014). What we do with our bodies does indeed seem to have an effect on our minds.

It is possible that Japanese students, who are often unaccustomed to speaking out in the classroom, and perhaps especially for those at highly competitive universities, could benefit from lowering their stress, boosting their confidence, and gearing themselves up to take more risks. If students' participation levels increase after assuming high-power poses in the classroom for two minutes, power posing could be implemented relatively easily in any classroom as a tool for creating a positive learning environment.

Methods

Participants

The 122 university students who took part in this study were all enrolled in one of this researcher's seven English Writing/Listening A courses—a required course for first-year students—at a high ranking public university in Japan. Students represented seven different departments: Electrical Engineering, Pharmacy, Law, Global Engineering, Agriculture, Faculty of Letters, and Engineering Science. No leveling beyond department classification was conducted, so levels varied greatly. Class sizes ranged from 16 to 21 students. In all of the classes, males outnumbered females (of the 122 participants, only 22 were female).

The classes met once a week for 15 weeks. Although the content for all of the departments was similar, three different textbooks were used across the seven departments, causing the classes to vary slightly in difficulty on any given class day. It should also be noted that the study took place in the students' first semester of university, so they were unacquainted with most or all of their classmates before the semester began. However, each group had multiple classes together throughout the week, so they had opportunities to get to know each other outside of the Writing/Listening course.

Procedure

In the ninth or tenth class of the semester, students were told that they would be doing a warm-up exercise. Then, pictures of people displaying high-power body language were projected on a screen. The poses

consisted of the five that Cuddy (2012) introduced in her TED Talk: (a) a *Wonder Woman* (standing with hands on hips, legs shoulder-width apart); (b) a seated pose with legs spread apart and one arm over an adjacent chair; (c) a reclining seated pose with one leg propped up on the other and arms behind the head; (d) a standing pose with hands firmly placed on the desk in front; and (e) a reclining pose with arms behind the head and feet on the desk. It should be noted that this last feet-on-the-desk pose was not used, as it would be considered very rude by Japanese social norms. In fact, a study by Park et al. (2013) found that participants from East Asian countries who engaged in such a pose for three minutes actually felt less powerful.

In the first class to undergo this study, students were instructed to take one of the poses (besides the feet-on-the-desk pose, which we acknowledged as a group would be very uncomfortable for most students). It was discovered, however, that when students were allowed to choose their own poses, they hesitated and looked around to see which poses their classmates were striking. Therefore, in other departments' classes throughout the week, students were assigned poses by the instructor. In the next two classes, for example, the back row was instructed to do the *Wonder Woman*, and the third row was instructed to sit with their legs apart and with one arm on the back of the adjacent chair (females were not assigned to this pose, as it might have violated the social norm of women not spreading their legs while seated). In the last four classes, it was found that having everyone assume the same pose was the easiest way to get all the students to participate quickly and with the least amount of visible discomfort. Because the *Wonder Woman* pose seemed to be the easiest to understand and the most suitable for both males and females, it was chosen as the default pose. Regardless of the length of time needed initially to decide on a pose, students in the classes assumed the poses for two minutes.

While students held their poses, the instructor introduced the original experiment conducted by Carney et al. (2010), focusing mainly on their findings about high power poses causing hormone levels to change and increasing the success of job candidates. The students were told that this warm-up was simply to lower their stress before participating in class and were not explicitly told that the poses were expected to increase their participation rates. After posing for two minutes, class was conducted as usual: small groups of three or four participants were made randomly, a group leader was chosen by the instructor, and students compared their answers on a previously assigned task. Following this,

the instructor led a whole-class activity in which students had the opportunity to raise their hands to volunteer answers to the questions that they had just discussed in groups.

From the first class of the semester, when a student raised a hand to volunteer an answer in a whole-class discussion, a plus was written next to the student's name on the class roster. This system was in place before, during, and after the power posing session, and was the principal method of determining whether or not power posing had any effect on active participation in whole-class activities. For the purposes of this study, because it was desirable to have as many students participate as possible, if a student raised a hand and gave an answer multiple times during one class period, his or her participation was only counted once.

Results

Participation in whole-class activities, as measured by hand-raising, was higher than average in all seven classes following power posing (see Figure 1). In the most extreme case—Electrical Engineering—the number of students who raised their hands to volunteer answers in the class rose by 63% from their average, and by 59% from their highest registered participation score (27%). The Letters class also experienced a 62% increase from their average, and a 58% increase from their highest score of 30%. All classes performed at the best level they had ever performed at before, and some showed a dramatic increase. Moreover, in all classes but Pharmacy, the participation rates remained higher in the class following the power pose class, and in the

case of Law and Global Engineering, they increased quite dramatically. This might suggest a lasting positive effect of power posing.

Discussion

It is impossible to say that power posing was the only factor accounting for the increased participation rates. With each lesson containing different content during the semester, and three different textbooks being used across the seven departments, students' participation was surely affected by content in every class. In addition, the number of times students were given the opportunity to raise their hands to give an answer in each class varied greatly as well. Dividing the classes into two groups and having one group assume high-power poses and the other assume lower-power poses (such as crossing their arms and legs) and comparing the two might have led to a more convincing argument that high-power posing was indeed the main factor in the students' increased participation.

The fact that this experiment was public (poses were assumed as a large group) rather than private, such as the previous studies on power posing were, might have affected the results in two ways. First, during the power posing activity, some students hesitated to hold the poses for the full two minutes, perhaps feeling self-conscious in front of their peers and the instructor. The instructor reminded students to hold the poses when this happened (and assured them that everyone looked equally silly), but this behavior might have had a negative effect on the outcome of the experiment. Second, some students may

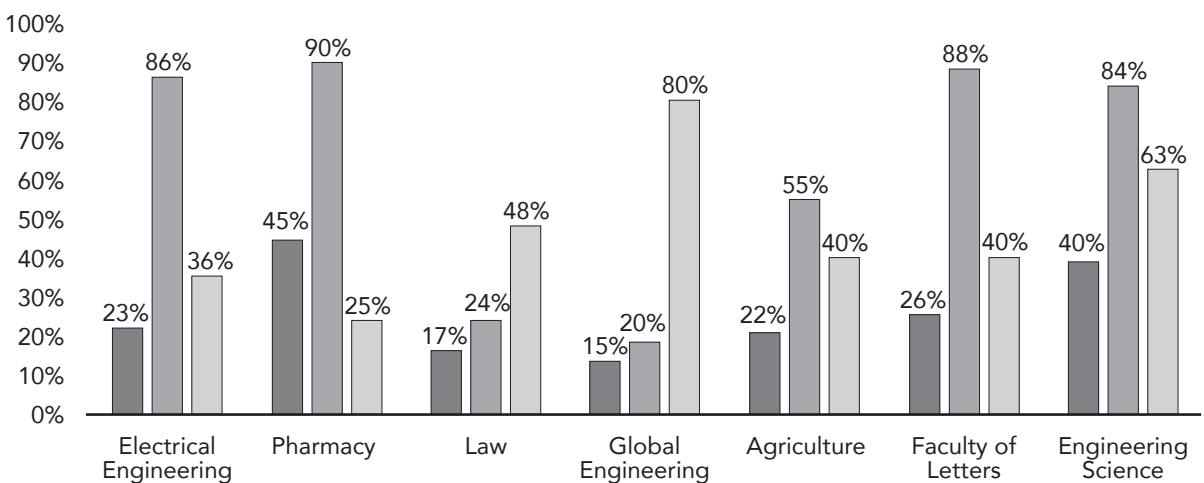


Figure 1. Participation by class before, during, and after the power posing treatment (Column 1 = Average participation rate before power posing; Column 2 = Participation in the power posing class; Column 3 = Participation in the following class after power posing).

have been affected by their classmates raising their hands rather than by the power posing itself. In other words, even if only a few students raised their hands as a result of their increased confidence and willingness to take a risk due to power posing, many more students might have raised their hands simply by following the lead of their hand-raising classmates.

Pharmacy was the only class in which the participation rates dropped off to below average in the class following power posing. One clear reason for this is that the students in this department had few opportunities to participate in that particular class. In fact, however, participation in the Pharmacy class remained low until the end of the semester. The emergence of two strong students who participated multiple times in every class discussion might have intimidated the others, or the students might have been tired from the extra reports and tests that come at the end of a semester.

Implications and Conclusion

Creating an environment in which students have the confidence and the willingness to participate actively in class is the goal of most instructors, and language instructors in particular. Most of us have used a variety of techniques to achieve this goal. It appears that having students assume high-power poses might not only have immediate effects, but also long-term effects on active participation. Though not every class showed a dramatic increase in participation rates, all classes performed at least at their best after participating in the power posing activity. Students seemed to bond over sharing the experience of power posing together in the classroom. If not used to enliven group discussions, then perhaps power posing can be used by instructors as a technique to help students prepare for other potentially anxiety-inducing activities, such as presentations or exams. As the activity appears to have no negative effects (besides perhaps a few students feeling awkward while posing), it is at least worth pursuing as a possible tool for instructors with students who are reluctant to participate.

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