



Teacher Companion for *Deliberative Scenario: The Use of Prescription Stimulants for Enhanced Academic Performance*

This teacher companion provides instructors with step-by-step instructions for facilitating deliberation. The deliberative scenario, “The Use of Prescription Stimulants for Enhanced Academic Performance,” is particularly well suited for science or health classes in high school and college, and can be used in a variety of other settings.

Phase 1: Before the Deliberation

Provide Background and Context

Provide students with “[Deliberative Scenario: The Use of Prescription Stimulants for Enhanced Academic Performance](#)” and with “[Guide to Classroom Deliberation for Students and Teachers](#).” Both are available on bioethics.gov in the *Education* section. If desired, assign additional readings on deliberation from the *Additional Resources* section in “Guide to Classroom Deliberation for Students and Teachers.” Ask students to think about the differences between deliberation and debate or discussion, and the goals and method of deliberation.

Clearly state the goal of the deliberation: to develop a consensus on a practical policy for the school system to implement regarding non-prescription use of stimulants.

Provide all students with the following readings (available online) to learn about cognitive enhancement.

- Room for Debate. (2015, April 1). Using Adderall to get ahead, not to fight A.D.H.D. *New York Times*. Retrieved April 19, 2016 from <http://www.nytimes.com/roomfordebate/2015/04/21/using-adderall-to-get-ahead-not-to-fight-adhd>.
- Presidential Commission for the Study of Bioethical Issues (PCSBI). (2015, March). *Gray Matters: Topics at the Intersection of Neuroscience, Ethics, and Society*. Washington, DC: PCSBI, pp. 27-45. Available at: <http://bioethics.gov/node/4704>.

Assign Roles

Option 1: Assign each student a role from among the following stakeholders: teachers, students, school administrators, clinicians (including a primary care physician, a psychiatrist, and a school nurse), parents, law enforcement officers, and other community members.



Option 2: Ask students to generate a list of stakeholders who would serve on the special purpose committee and assign roles from that list. The list should include participants with a wide variety of perspectives on the matter.

Note: You can also assign multiple students to the same role, as even people in the same role can have different perspectives. These readings provide additional perspective for each role.

Assign Role-based Readings

Based on a student's specified role, assign role-specific readings from the additional reading section at the end of this document.

Phase 2: During the Deliberation

Questions to Guide and Focus Deliberation

Remind students of the goal of this exercise: To practice democratic deliberation by considering many different perspectives, providing reasons for their arguments, listening respectfully to opposing viewpoints, and finding a way forward.

Instruct students to begin the deliberation by introducing themselves and stating which role they will play.

During the deliberation, ensure that the following questions have received sufficient attention. If a question has not been answered, pose the question to the group.

- What are the purposes of using prescription stimulants? Who could benefit and who could be harmed? (Empirical question: provides factual evidence)
- Is using this pharmacological intervention to enhance cognitive performance different from using older, more familiar methods, such as caffeine? How so? (Empirical question: provides factual evidence)
- Do prescription stimulants have enhancing effects on cognitive abilities? (Empirical question: provides factual evidence)
- What are the risks of using this type of intervention? (Empirical question: provides factual evidence)
- Who are the individuals likely to have access to the stimulants? (Empirical question: provides factual evidence)
- If shown to be safe and effective, who should be allowed to have access? (Normative question: provides answer to question of what we *should* do)
- What are the consequences to society if use of these stimulants becomes mainstream? (Thought exercise: includes possible factual and moral consequences)

Strategies to Improve the Deliberative Process



If some students are quiet or refrain from contributing, ask the class: Are there any views that have been left out? Whose views might those be?

If there is a swift and seemingly straightforward answer or a premature dominant view developing that could crowd out other views, ask the class: What are some other perspectives that we have not heard or considered yet?

Strategies to Improve Content

If students come up with recommendations without justification, ask the class: Do the suggested courses of actions treat people equitably? Treating people differently can be justified, but clear mutually understood reasons must be stated.

Scenario Shift

If the students reach consensus on recommendations with time leftover, you might introduce a shift in the scenario. Pick one or more of the following scenario shifts and ask students to discuss how this new information changes things.

- New evidence is revealed that prescription stimulants taken for enhancement do not alter academic performance. Will this information alter your policy recommendation? If so, how will you update it?
- The private school, Randolph Prep, decides to take no action to address the use of prescription stimulants. Would you update your recommendations after hearing this news? If so, how?
- You learn that a national body of medical professionals has developed guidelines instructing physicians to prescribe these drugs only to patients with a medical diagnosis that indicates a need for the stimulants. Would you change your policy recommendations based on the new guidelines? If so, what would you change?

Developing a Policy Recommendation

Ask the students to develop recommendations that reflect the consensus-driven process of deliberation. The recommendations should include mutually acceptable reasons for a policy choice.

Phase 3: After the Deliberation

Presenting the Policy Recommendation

Instruct students to write a half-page press brief for the local newspaper stating their recommendations and the justifications for them. Alternatively, ask students to present this information orally.



Assessment and Reflection

Ask the class to reflect on the process and outcome of the deliberation using the following questions.

- Do the recommendations provide reasons for a policy choice?
- Are all of the deliberators satisfied with the outcome? If not, was a dissenting statement included?
- Does this policy recommendation seem more legitimate than one decided by majority vote? By elected representatives? Why or why not?
- What are the strengths of deliberative decision making? What are the weaknesses?
- Is the set of recommendations contingent upon new facts or values coming to light? When would a new deliberation be needed?

Additional Role-based Readings

If the role assigned is a *teacher*, assign the following readings:

- Iowa State Daily Editorial Board. (2012, July 19). Editorial: Use of 'study drugs' gives unfair advantage. *Iowa State Daily*. Retrieved April 19, 2016 from http://www.iowastatedaily.com/opinion/article_383332fc-d057-11e1-9189-001a4bcf887a.html.
- Mariano, M. (2012, February 24). Adderall no substitute for good study habits, experts say. *The Independent Alligator*. Retrieved April 19, 2016 from http://www.alligator.org/news/campus/article_6c072ab4-5ead-11e1-9542-0019bb2963f4.html.

If the role assigned is a *student*, assign the following readings:

- Edwards, A. (2009, May 15). Neuroenhancers: Drug of the decade. *The Daily Emerald*. Retrieved April 19, 2016 from <http://www.dailyemerald.com/2009/05/15/neuroenhancers-drug-of-the-decade/>.
- TeenLife. (2014, May 19). Is Taking ADHD Medication a Form of Cheating? [Blog] Retrieved April 19, 2016 from <https://www.teenlife.com/blogs/taking-adhd-medication-form-cheating>.

If the role assigned is a *school administrator*, assign the following readings:

- Katz, M. (2012, October 4). Students Torn Over “Study Drug” Usage. *The Wesleyan Argus*. Retrieved April 19, 2016 from <http://wesleyanargus.com/2012/10/04/study-drug-usage-remains-issue-of-heated-debate/>.
- Chau, N. (2010, April 14). Editorial: Use of 'study drugs' gives unfair advantage. *The Daily Trojan*. Retrieved April 19, 2016 from <http://dailytrojan.com/2010/04/14/adderall-policy-changing-at-health-center/>.

If the role assigned is a *primary care physician*, assign the following readings:

- Schwarz, A. (2012, October 9). Attention Disorder or Not, Pills to Help in School. *New York Times*. Retrieved April 19, 2016 from http://www.nytimes.com/2012/10/09/health/attention-disorder-or-not-children-prescribed-pills-to-help-in-school.html?_r=0.



- Diller, L.H. (2009, April 28). A Misuser's Guide to Adderall. *The Harvard Crimson*. Retrieved April 19, 2016 from <http://www.thecrimson.com/article/2009/4/28/a-misusers-guide-to-adderall-the/>.

If the role assigned is a *psychiatrist*, assign the following readings:

- Kadison, R. (2005). Getting an edge—use of stimulants and antidepressants in college. *New England Journal of Medicine*, 353(11), 1089-1091. Retrieved April 19, 2016 from <http://www.nejm.org/doi/full/10.1056/NEJMp058047>.
- Aubrey, A. (2016, February 16). Misuse Of ADHD Drugs By Young Adults Drives Rise In ER Visits. *NPR*. Retrieved April 19, 2016 from <http://www.npr.org/sections/health-shots/2016/02/16/466947829/of-adhd-drugs-linked-to-increased-er-hospital-visits-study-finds>.

If the role assigned is a *school nurse*, assign the following readings:

- Farhadi, D. (2014, October 22). A look at the biology underlying Adderall use. *The Daily Wildcat*. Retrieved April 19, 2016 from <http://www.wildcat.arizona.edu/article/2014/10/a-look-at-the-biology-underlying-adderall-use>.
- Wang, S. (2014, September 23). For ADHD, supplements hold limited promise. *Yale Daily News*. Retrieved April 19, 2016 from <http://yaledailynews.com/blog/2014/09/23/for-adhd-supplements-hold-limited-promise/>.

If the role assigned is a *parent*, assign the following readings:

- Miami Hurricane editorial board. (2012, November 11). Magic pill can enhance focus, drive. *The Miami Hurricane*. Retrieved April 19, 2016 from <http://www.themiamihurricane.com/2012/11/11/magic-pill-can-enhance-focus-drive/>.
- Norton, A. (2015, November 23). ADHD Medications Linked to Sleep Problems in Kids. *US News and World Report*. Retrieved April 19, 2016 from <http://health.usnews.com/health-news/articles/2015/11/23/adhd-medications-linked-to-sleep-problems-in-kids>.

If the role assigned is a *law enforcement officer*, assign the following readings:

- Find the Federal regulations about Adderall using these resources.
 - Drug Enforcement Administration. (n.d.). Drug Schedules. Retrieved April 19, 2016 from <http://www.dea.gov/druginfo/ds.shtml>.
 - Drug Enforcement Administration. (n.d.). Federal Trafficking Penalties. Retrieved April 19, 2016 from <http://www.dea.gov/druginfo/ftp3.shtml>.

If the role assigned is a *general community member*, assign the following readings:

- Melnick, M. (2010, December 21). Adderall May Not Make You Smarter, But It Makes You Think You Are. *Time*. Retrieved April 19, 2016 from <http://healthland.time.com/2010/12/21/adderall-may-not-make-you-smarter-but-it-makes-you-think-you-are/>.
- Ojiaku, P. (2015, November 3). 'Smart drugs' are here — should college students be allowed to use them? *Washington Post*. Retrieved April 19, 2016 from <https://www.washingtonpost.com/news/speaking-of-science/wp/2015/11/03/smart-drugs-are-here-should-college-students-be-allowed-to-use-them/>.



Relevant National Educational Standards

Standards	Category	Sub-Category	Grade levels & bullets/skills	Page(s)
Next Generation Science Standards	Science and Engineering Practices in the NGSS (Appendix F) ¹	Practice 7	Grades 9-12: bullets 1, 6	13-14
		Practice 8	Grades 9-12: bullets 3-5	15
	Science, Technology, Society, and the Environment (Appendix J) ²	Core Idea 2	Grades 9-12: bullets 3, 4	3-4
Common Core ³	English Language Arts	Reading Standards for Informational Text	Grades 9-10: Skills 1-8	40
			Grades 11-12: Skills 1-7	
		Speaking and Listening	Grades 9-10: Skills 1-4, 6	50
			Grades 11-12: Skills 1-4, 6	
	Literacy in History/Social Studies, Science, and Technical Subjects	Reading Standards for Literacy in History/Social Studies	Grades 9-10: Skills 1, 2, 4-6, 8	61
			Grades 11-12: Skills 1, 2, 4-6, 8	
		Reading Standards for Literacy in Science and Technical Subjects	Grades 9-10: Skills 1, 2, 4, 5, 8, 9	62
			Grades 11-12: Skills 1, 2, 4, 5, 8, 9	

¹ Next Generation Science Standards. (2013). APPENDIX F – Science and Engineering Practices in the NGSS. Retrieved April 19, 2016 from <http://www.nextgenscience.org/sites/default/files/Appendix%20F%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>.

² Next Generation Science Standards. (2013). APPENDIX J – Science, Technology, Society and the Environment. Retrieved April 19, 2016 from http://www.nextgenscience.org/sites/default/files/APPENDIX%20J_0.pdf.

³ Common Core State Standards Initiative. (2010). Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects. Retrieved April 19, 2016 from http://www.corestandards.org/wp-content/uploads/ELA_Standards1.pdf.