Before & After: Ignatian-Based Just-in-Time Teaching Prompt

Just-in-Time Teaching (JiTT) is a two-step learning approach that combines online learning activities with active learning opportunities in the classroom (see Novak et al., 1999; Marrs and Novak, 2004; Watkins and Mazur, 2010). As part of this approach, students work with subject matter content outside of class and submit pre-work assignments or activities before scheduled class meetings. An instructor then uses this pre-work to create targeted questions, discussion opportunities, or student feedback for subsequent, in-class learning activities.

What follows is an annotated revision of a JiTT lab instruction prompt for a social sciences quantitative methods course, which incorporates key elements of the Ignatian Pedagogical Paradigm. The intent behind this JiTT exercise is to have students familiarize themselves with subject matter content and prepare for an in-class lab exercise.

JiTT prompt BEFORE Ignatian pedagogy revisions:

Week 5 Overview: We're examining ordered choice models this week, with Lab 3 serving as the hands-on component. Lab 3 is comprised of two parts. Part 1 involves pre-class reading and responding to chapter questions. Part 2 is a lab exercise held in-class on Tuesday, October 15, using 2014 NES (National Election Survey) data.

Part 1 (complete before class): In preparation for the lab, complete the following individual work:

1. Read Chapter 5 (pp. 183-222) in Long and Freese; and
2. Submit your answers to the post-chapter questions on Canvas, using the assignment link in Module 5 by Monday, October 14 at 11:59pm. I will send the key to the chapter questions by the end of class on Tuesday so you can check your answers to the problem-sets with the solutions.

Part 2 (complete during class): Create and submit a lab report using the 2014 NES data set by the end of class using the assignment link on Canvas. Your dependent variable is feelings toward whether the war in Iraq has increased or decreased the threat of terrorism (iraq_terror).

Your lab report should contain the following:

1. A description of the model you run using multiple predictor variables to explain the DV. Your model must include at least three predictors. Describe what they are, and provide summary statistics for these variables and any control variables you decide to include in the model (with a justification for their inclusion).
2. Run and explain whether your model passed:
    a. The Parallel Regression Assumption (PRA), using the Brant test; and
    b. Model specification, using the link-test check.
3. A detailed interpretation of your model (regardless of whether your model failed these diagnostic checks or not), using the following:
    a. Odds ratio;
    b. Individual predicated probabilities; and
    c. Graphing predicted probabilities.

Your submitted lab report must contain all components, with clear explanations and references to the data and tests you perform. Interpretations must be stated correctly in the third section to receive full points.

JiTT prompt AFTER Ignatian pedagogy revisions:

Week 5 Overview: We're examining ordered choice models this week, with Lab 3 serving as the hands-on component. Lab 3 is comprised of two parts. Part 1 involves pre-class reading and responding to questions on ordered choice models. Part 2 is an in-class, group lab exercise on Tuesday, October 15, using 2014 NES (National Election Survey) data.

Part 1 (complete before class): In preparation for the lab, read Chapter 5 (pp. 183-222) in Long and Freese and respond to the following prompt in the discussion board, "Ordered Choice Models," on Canvas by 11:59pm on Monday, October 14:

1. As you worked through the chapter, which point made the most sense, and which point did you understand the least?
2. How are ordered choice models different from previous models we've examined so far in class?
3. How could you use an ordered choice model for your final research project in the course? Try to fill in the model, but don't worry about running the model or reporting any diagnostics or interpretations.

Part 2 (complete during class): This is a group lab that provides class time to think collaboratively about ordered choice models. As part of this lab, your group is tasked with submitting a lab report using the 2014 NES data set by the end of class using the assignment link on Canvas. Your dependent variable is feelings toward whether the war in Iraq has increased or decreased the threat of terrorism (iraq_terror).

Your lab report should contain the following:

1. A description of the model you run using multiple predictor variables to explain the DV. Your model must include at least three predictors. Describe what they are, and provide summary statistics for these variables and any control variables you decide to include in the model (with a justification for their inclusion).
2. Run and explain whether your model passed:
    a. The Parallel Regression Assumption (PRA), using the Brant test; and
    b. Model specification, using the link-test check.
3. A detailed interpretation of your model (regardless of whether your model failed these diagnostic checks or not), using the following:
    a. Odds ratio;
    b. Individual predicated probabilities; and
    c. Graphing predicted probabilities.

Your submitted group lab report must contain all components, with clear explanations and references to the data and tests you perform. Interpretations must be stated correctly in the third section to receive full points.

REFERENCES

Commented [ER1]: Shifting this pre-work from an individual exercise to a collaborative discussion board enables students to reflect on their learning in relation to their peers.

Commented [ER2]: This "muddiest point" format provides students with an opportunity to identify misconceptions they have about the material or learning process. In addition, students are provided with an opportunity to think about their individual learning contexts by sharing strategies for how they're approaching the readings and how they're processing information, and instructors can use this student feedback to shape future content or approaches in the classroom (evaluation) (Angelo and Cross, 1993).

Commented [ER3]: Adding this question encourages students to connect their prior learning and knowledge with new information they're processing.

Commented [ER4]: This application question provides students with an opportunity to act on their learning by thinking about the model in relation to their research interests and final project. This provides meaning in the learning process, and encourages them to apply their learning in different contexts.

Commented [ER5]: Shifting this, again, from individual work to a group assignment enables students to think about, and process, information in relation to their peers to check for understanding and identify misconceptions.

Angelo, T.A., & Cross, P.K. (1993). *Classroom assessment techniques: A handbook for college teachers.* Jossey Bass: San Francisco, CA.

Marrs, K. A., & Novak, G. (2004). Just-in-time teaching in biology: Creating an active learner classroom using the Internet. *Cell Biology Education*, 3(1), 49–61.

Novak, G, Patterson, E.T., Gavrin, A.D., & Christian, W. (1999). *Just-in-time teaching: Blending active learning with Web technology*. Upper Saddle River, NJ: Prentice Hall.

Watkins, J., & Mazur, E. (2010). Just-in-time teaching and peer instruction. In S. P. Simkins & M. H. Maier (Eds.), *Just-in-Time Teaching Across the Disciplines, and Across the Academy* (pp. 39–62). Stylus Pub.