

JITT Notes: 3/24/06 UP faculty workshop on brain-based learning (Zull's book)

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What is JITT (Just-in-Time Teaching)?

- The heart of the JITT method is a collaborative FTF discussion session built around involving students in internet-based “warm-ups,” such as short quizzes, puzzles, or other tasks that require them to comprehend and apply their textbook readings prior to class.
- The instructor “collects” the warm-ups via email prior to class, using them to build and adjust the lesson plan “just in time” so it responds more directly to the students’ evident interests and topic knowledge.
- The JITT process helps create a feedback loop involving students’ out-of-class, web-based prep and the teacher’s subsequent adjustments (instruction, resources) to students’ submissions--which consequently help shape students’ next round of knowledge.

How I implement it

- Each student in my upper-division courses emails me two higher-order-learning-focused DQ’s (application, analysis, synthesis, and evaluation levels) each week; one rooted in the main course text reading, the other from one of each week’s required supplemental research articles. Their questions are due via email by noon on the day prior to class.
- I incorporate the best / most relevant of those submitted DQ’s into the day’s lesson plan, either as DQ’s, interactive lecture points, or activities. I attach students’ names to their contributions, and I feel free to clean them up grammatically and conceptually first...
- I lead two short workshops in class to aid the quality of their questions, but also to signal the levels of attention and investment I expect from this weekly assignment.
 - On day one, a 15-minute workshop on crafting open-ended discussion questions using Bloom’s taxonomy of cognitive educational objectives as a framework
 - On day two, students in small groups identify high quality questions from among those submitted (anonymized), and unpack reasons for those quality judgments.
- I give pass-fail credit for timely and appropriate discussion question submission each week.

Conceptual benefits

- Generating higher-order questions pushes their integration of the cues they've taken in via their reading. Helps learners be motivated, focus, communicate, study, synthesize information, learn, and address relevant open-ended, "real world" problems that appeal to them.
- Helps me narrow the field of focus for class time – I can dig around near their points of relevance, challenge, risk, interest and critique, facilitating more intrinsically motivated interest in the course topics.
- Encourages more thorough digestion of the book's content – helps experientially reinforce my talk about students using the book as a "co-teacher" of the class.
- Recognizing their own web-expressed issues and questions in the FTF setting adds to their ownership of and engagement in the learning feedback loop. Data from one site revealed dramatic drops in course attrition rates once JITT was implemented, a change the researchers attributed to an increased sense of class community and engaged attendance, which reduced some causes of attrition
- Their provoke-able investment in classroom topics and interaction leads to better, more autonomous learning; perhaps incorporating questions from a range of students also affirms those learners' senses of affiliation and competence in the class – important needs related to intrinsic learning motivations.

Pragmatic benefits & costs

- I can presume content comprehension as a starting point (can work on application, analysis, synthesis, evaluation together in class; my "co-teacher" is good at recall and comprehension-oriented learning).
- More engagement in course readings, classroom learning activities, and course-related peer interactions.
- Adds to my awareness of students' interests and experiences relative to course topics and learning goals. Fewer awkward silences = more fun to lead the class to learning outcomes.
- DQ's come pre-typed, thus a simple pasting job to transfer into useable forms. I can ignore the bad ones, use the good (always enough). DQ's also come time-stamped & easily e-filed for grading purposes.
- Adds 'tortoise' element to course's otherwise 'hare' grading opportunities - difficult to pass the class without participating in this activity each week.
- Any pedagogical system that holds students' ideas up to be utilized can be risky in terms of potential face threat for the people involved; setting up situations like that each week forces me to practice, monitor and adapt my own instructional / interpersonal abilities to keep students focused on course ideas and practices.
- Increases my credibility (perceived competence & concern, especially) and influence with my students.

Conclusion

Although I spend time analyzing, selecting, organizing, and integrating their questions into a useful and coherent lesson plan each week, those "costs" pale against the ease with which the DQs are collected, credited, and used. In return I receive an inside look at the pattern of my students' interests in, thoughts about, and experiences with a given week's course topics. I also became privy to a palette of pedagogical possibilities that were much less available to me prior to asking for this kind of integration-related interaction from my students.