NISOD
INNOVATION ABSTRACTS

September 24, 2020 ♦ Vol. XLII, No. 36

Using Job Instruction Breakdown Techniques to Facilitate Learning in the Classroom

Every day, people start new jobs or get promoted to positions that bring new sets of responsibilities and duties. In an effort to train this workforce, some organizations use Job Instruction Breakdowns (JIB) to outline a job's important steps, key points, and the rationale behind the key points. This exact technique can be used in academia to help breakdown concepts and theories to facilitate greater learning. Creating a way for students to more easily understand course material can increase grades, comprehension, and student retention.

The History of JIBs

Before entering the world of academia, I spent five years in food service management. I worked for a food and nutrition contract company and oversaw the feeding of patients in a 212-bed hospital. It was my responsibility to train numerous employees to perform job functions spanning from retail operations to patient dining procedures. The jobs varied quite drastically, as did the duties for each job. Training new employees eventually became a burden, until I discovered Training Within Industries (TWI).

TWI is an American organization that originated in the 1940s to help with war efforts. The large number of men who were drafted left wide gaps in the workforce. Suddenly, there was a tremendous number of new employees who required training, and quickly. TWI created the Job Instruction Breakdown in an effort to get the economy moving again and increase the manufacturing of goods and materials needed to continue supporting the military.

JIBs are capable of breaking down any task into three categories: important steps, or the primary functions of performing the job; key points, or any details within the steps that could make or break the operation; and the reasons or rationale behind key points. This table shows a simple JIB covering the use of hand sanitizer.

Applying Hand Sanitizer		
Important Steps	**Key Points**	**Reasons**
Apply sanitizer	·Cover entire hands	· Kills germs and bacteria
Rub hands together	· Palm to palm · Back of hands	· Cleans entire surface of the hand
Rub fingers	· Thumbs · Interlace finger · Rub backs of fingers with palm · Rub tips of fingers with palm	· Active part of hands · Cleans the sides of fingers · Clean knuckles · Cleans under fingernails
Air dry	· Let sanitizer dry	· Germs can survive while hands are wet

I have used this tool in the classroom to help students understand cyclical functions in the human body, such as the Krebs cycle, hormonal releases and responses, or nutrient binding and breakdown in cooking.

JIBs in Action

The first time I used this technique was when I taught the stages of the menstrual cycle in a Nutrition Through the Life Cycle course. I lectured over the topic using the course textbook and several videos, but I could tell that some students were not following the sequential release of hormones and the transition between the two phases of the menstrual cycle. I had been thinking about using JIBs prior to this moment, so I decided to create an impromptu breakdown on the whiteboard in the classroom.

Creating this breakdown took a 390-word portion of the day's lecture and turned it into a 196-word table that illustrated the cyclical nature of menstruation. Teaching the cycle then was as simple as having the students move from left to right on the table, first memorizing the important steps only. Once the nine important steps of the cycle were memorized, they explored each step's key points. This was done until the important steps and all associated key points were known and understood. Lastly, they moved on to the reasons that further reinforced the key points.

In addition to creating these breakdowns to facilitate learning and understanding, I found it helpful to have students work as a group to create their own breakdowns. I used this approach when teaching the Maillard Reaction in my Experimental Foods course. Students worked together to create a breakdown to understand this non-enzymatic browning reaction of food and the reduction of glucose, fructose, and galactose. What was at first a chemical reaction they struggled to follow soon became a breakdown that they worked on as a group to fully understand.

Conclusion

Using JIBs in the classroom helps decrease the time it takes to teach students new concepts and ensures that there is stability and continuity in students' understanding of course material. This strategy also provides students with the opportunity to work as a group to flesh out the critical points of lessons, create important steps, and determine their key points and reasons. Ultimately, using the Job Instruction Breakdown methodology has been an invaluable tool for me in my experience as a manager and as an instructor.

Eric West, Assistant Professor, Dietetics

For more information, contact the author at Arkansas State University, ewest@astate.edu.

Don't miss Eric's upcoming presentation, "Combating Common Nutrient Deficiencies and the Impacts They Hold on the College-Age Population," part of our Overcoming Food and Housing Insecurities Online Convening on October 28!

September 24, 2020, XLII, No. 36

www.nisod.org |

 Innovation Abstracts is published weekly during the fall and spring terms of the academic calendar, except Thanksgiving week, by NISOD, College of Education, 1912 Speedway, D5600, Austin, Texas 78712-1607, (512) 471-7545, Email: abstracts@nisod.org