

Using Jenga[®] to Teach System Theory

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Objective: Students will be able to learn about system theory and its components

Course: All communication courses that address system theory

System theory, which attests that any change in one component of a system will change other components (Kuhn, 1974), is fundamental to the communication discipline (Littlejohn, 2002). Students are often provided with verbal metaphors (e.g., the machine metaphor) when learning about this theory but many times are not shown its complexity in an engaging manner. Additionally, teachers are rarely able to facilitate student learning by using various learning styles when discussing a single concept or idea. This classroom activity is meant to aid students' learning of system theory through the use of visual, auditory, and kinesthetic means.

The Activity

This activity takes approximately 30 minutes, but may vary depending on the instructor's coverage of the theory. The instructor must come prepared with Jenga[®], which is a wooden block-building game. Most students will be familiar with Jenga[®] because of the game's popularity. Traditionally, players take wooden blocks out of a tower of blocks and stack them on top of the tower. The goal is to keep the tower standing as it becomes weaker. The player who makes the tower collapse during his or her turn loses the game (an online demonstration of how Jenga[®] is played can be seen at www.hasbro.com/jenga). Before class, the instructor should place a small table in the middle of the classroom (students can be seated in any arrangement). The instructor should keep the game hidden from the students until it is time to be used.

The instructor should introduce and define system theory. A context for this concept should also be provided. The context of family communication will be used here for illustrative purposes, since it is applicable to a number of communication courses (i.e., family, interpersonal, conflict communication). After the instructor has introduced and defined the topic, he or she should reveal Jenga[®] from a hidden location (the lectern, a bag, etc.) and place the game on the table in the middle of the room.

The instructor should explain how Jenga[®] itself is a system and ask the students to imagine that the game represents a specific system related to topics covered by the

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course. For example, the instructor might explain that Jenga[®] represents an entire family system. The instructor can ask the students to provide a personal or hypothetical example that might create change in a family (e.g., changing residence, addition of another family member, parent illness). Students should then be told that each Jenga[®] block represents a change in the family system. Next, the students stand around the table and are requested to pull out one block and stack it on top of the wooden tower. As each student pulls out a block, they provide their example and explain how the family may be affected. As students rearrange the blocks and give their examples, the instructor can reinforce how the Jenga[®] system is visually changing at the same time. After all students have participated, they should return to their seats.

Debriefing

After the students return to their seats, the instructor should lead a debriefing, which may include introducing and explaining more system theory concepts. Some possible debriefing explanations and questions are listed below:

1. The instructor may wish to begin by asking questions and/or providing explanations aimed at basic system theory concepts. For example, the instructor might explain and/or ask questions related to concepts such as *open* and *closed systems*, *objects*, *attributes*, and *environment*.
2. After a general understanding of system theory is provided, asking discussion questions and providing explanations of concepts has proven to be effective: How did Jenga[®] visually change as the blocks were removed and stacked on top of the tower (e.g., open spaces existed instead of a solid block, the tower became taller)? How do families (visually) transform when changes occur? Additional concepts such as *principle of nonsummativity*, *inputs*, and *outputs* could be raised.
3. What structural changes occurred as more blocks were removed from Jenga[®] and restacked on the top? (e.g., became less stable). What may happen when families endure structural changes at a rapid pace? The concept *morphogenesis* could be introduced.
4. As a Jenga[®] player, how was each person forced to adapt and cope with the system? (e.g., required to evaluate, measure, anticipate, and plan). How do family members cope with change? The concepts *balance* or *homeostasis* and *equifinality* could be raised.
5. The instructor could ask students to continue to pull pieces out until the tower falls over, or the instructor could pull blocks out until Jenga[®] falls. Ask the students to explain in detail why Jenga[®] fell over (e.g., uneven stress, too much weight). Why do families fall apart? Concepts to introduce at this point may include *information* and *entropy*.
6. How could the tower have been made stronger to avoid the fall? (e.g., strategic placement, even balancing, not removing supportive pieces). How can family systems be made stronger?

Variations

There are a number of variations that can be made using this activity. For example, to represent the formation of a family, the instructor can pass out individual blocks and have students build a tower/system from the ground up. As they build the tower, system theory concepts and examples can then be provided. The tower that the students build, without using the plastic holder that comes with the game, will likely not be straight and compact. It is difficult to build the Jenga® tower perfectly without the holder; however, students will probably attempt to build a tightly knit and straight unit in an attempt to make a perfect tower. The attempt to build the best tower can lead to further discussion questions related to the tendency to have a perfectly running system (i.e., the ideal family, Trenholm & Jensen, 2004). Another variation using Jenga® is to divide the blocks into groups to discuss how families have *internal relationships*, *subsystems*, and *hierarchies*, as well as the effects of each subsystem on the entire system.

With a little creativity, Jenga® can also be useful for teaching other communication concepts and theories. For example, it might be useful to demonstrate the interrelationship of concepts in coordinated management of meaning's *hierarchy of meaning*, or illuminating *costs* and *rewards* in social exchange theory.

Appraisal

Undergraduate and graduate students have received this activity quite positively. Not only do all students participate by physically changing the Jenga® tower and by providing examples, but as a whole they have been eager to verbally participate during the debriefing and discussion because of the open and engaging environment created by the activity. When asked to discuss system theory on exams, students were able to clearly explain system theory and its components, as well as provide personal and hypothetical examples. Many students also noted that the activity was memorable. The one limitation is that Jenga® costs \$12.99 if purchased new. However, the instructor might consider borrowing the game from family, friends, colleagues, or students, as it is quite popular.

Acknowledgements

The author would like to thank Carol A. Docan, Sara J. Morgan, two anonymous reviewers, and the editor for their insightful feedback on this manuscript.

References and Suggested Readings

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