
Chapter 2 - Groups as Structured Open Systems

Summary

The intent of this chapter is to encourage students to see a group as a complex interaction of various elements. We also want students to recognize that groups are not isolated from the larger environment but act within and are influenced by it. They especially need to realize that most task groups operate within larger groups (organizations). Chapter 2 presents a general systems framework for organizing the many concepts important to understanding how groups function.

Objectives – These objectives should be met after reading/reviewing this chapter.

1. Explain what a theory is and why systems theory is a useful perspective for studying small group communication.
2. Define and give examples of a system.
3. Define inputs, throughput process, and outputs of a group system.
4. Explain why communication is at the heart of a group's throughput process.
5. Describe the role of the group's environment.
6. Compare and contrast open and closed systems.
7. Describe what interdependence means to the functioning of a small group system.
8. Explain the role of feedback in helping a system adapt to changing circumstances.
9. Explain why all groups experience multiple causes and multiple paths.
10. Explain synergy and explain why sometimes groups exhibit positive or negative synergy.

Sample Lecture Notes

- I. "The Jamaican Winter Olympic Bobsled Team" case study
 - a. Several elements and their unique interaction affected the team:
 - i. Various member abilities
 - ii. The team's game plan
 - iii. Leadership within the team
 - iv. One member's ability to assess the team's competency, earn member's trust, and motivate them to find their own style of sledding
- II. What is a theory?
 - a. Griffin defines theory as a "map of reality," something that helps us navigate unfamiliar terrain and make decisions.
 - b. A theory both describes relationships between elements and shows how to get from one element to another.
 - c. Good theories are both practical and reliable.
- III. Overview of General Systems Theory
 - a. Developed by a biologist, Ludwig von Bertalanffy as a way to explain complex living organisms
 - b. The human body as an example, various systems works together to allow the entire system to perform tasks
 - c. Although groups are composed of individual members, those members are interdependent and as they interact form a social system that becomes its own entity
 - d. Many individual elements affect the dynamics of a group:
 - i. Reason the group was formed

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- ii. Personalities of the group members
 - iii. Information available
 - iv. Type of leadership
 - v. How the group handles conflict
 - vi. How successful the group has been
 - e. No single element functions alone – they all interact continuously
- IV. The Small Group as a System
- a. Definition of a system
 - i. System defined: A set of elements that functions as a whole because of interdependent relationships
 - ii. Small group functions interdependently with the environment
 - b. Concepts Vital to Understanding Systems based on Katz and Kahn.
 - i. Inputs defined: All the elements of a system that are present at the outset, or the initial raw materials of the system
 - 1. Members' attitudes
 - 2. Abilities and experiences of the members
 - 3. Information or items brought into the group from the outside
 - 4. Group's purpose
 - ii. Throughput processes defined: Influences on the system that result from actual activities within the group as it goes about its business
 - 1. Activities within the group
 - 2. How roles, rules and leadership develop
 - 3. How members handle conflict
 - 4. How members evaluate information
 - 5. Verbal and nonverbal behaviors in the group
 - 6. All of our throughputs are affected by one another
 - iii. Outputs defined: Those tangible and intangible products or achievements of the group system emerging from throughput processes
 - 1. The results
 - 2. A final paper or presentation
 - iv. Environment defined: Systems do not exist in a vacuum but are embedded in multiple surroundings or contexts
 - 1. A classroom is pleasant or ugly, noisy or quiet
 - 2. The small group system is linked to its environment, which in turn affects communication processes within the small group itself
 - 3. Bona Fide Group Perspective defined: groups both influence and help shape those same environments that shape the group. This mutual influence occurs for several reasons:
 - a. Group members belong to other groups
 - b. Groups coordinate with other groups within the same organization
 - c. Frequent internal/external communication over groups goals
 - d. Members bring a variety of interests, ways of speaking and mental models of effective group problem solving
 - e. All of these factors affect how members create their sense of "group"
 - f. CD: Use "apply now" on page 36 to further elaborate Bona Fide Group Perspective

4. Research supports the impact of the environment on a group. Broome and Fulbright show that organizational factors in the environment beyond a group's control has negative effects on the group's performance.
 5. Virtual Groups Defined: a group in which members do not communicate with each other in the same time and place. This alters traditional small group concepts:
 - a. Virtual groups deal with tasks that are more multi-dimensional than traditional groups
 - b. Virtual group members may not know who to contact for more information
 - c. Formal positions of power rarely exist
 - d. Decision making procedures guided by "parent" organizations rather than internally as in traditional groups
- c. Characteristics of Systems
- i. Open system defined: Such systems have a free exchange of information with their environments; that is, inputs and outputs flow back and forth between the system and its environment
 1. High levels of interaction
 - ii. Closed system defined: Such systems have limited flow of information between themselves and their environment
 1. No completely closed system
 2. Little interaction
 - iii. Boundary spanners defined: Members who scan the environment and help information flow back and forth
 1. Brings relevant information to the group
 2. Connects group to useful people/resources
 3. Protects group from outsiders
 4. Boundary spanners tend to do two main things:
 - a. Look for ideas and support by *scouting* information
 - b. Help protect the group from outside influences by *bringing up the border*
 - iv. Because closed and open systems have advantages and disadvantages boundary spanners can manage to have more positives without negatives. See Pacific Gas & Electric example on page 40.
 - v. CD: Use the "media and technology" textbox on page 41 to apply the impact of technology on group's as open systems.
 - vi. Interdependence defined: The elements of a system are interdependent such that all elements mutually influence each other
 - vii. Feedback defined: The return of system outputs as system inputs, which allows the system to monitor its movement toward goals and make necessary changes
 1. To be helpful, feedback must be clear, accurate and grounded in sound reasoning
 2. The best way to give feedback is to "sandwich" it between items of positive feedback
 3. Feedback will be evaluated regarding source and content
 - viii. Multiple Causes and Multiple Paths
 1. The complex nature of groups makes it impossible to pre-determine where a group will end up

- a. The concept of equifinality suggests that groups can start out at very different places but end up at the same place
 - b. The concept of multifinality suggests that groups starting out the same may end up at different places
- 2. In groups, many factors produce the final outcome. Multiple causes defined: No single system input determines system outputs, instead system outcomes are the result of numerous, interdependent factors
 - a. Multiple reasons to succeed or fail
 - b. CD: Why does one NBA team make it to the Finals and another team doesn't? Which factors led to success or failure?
- 3. Multiple paths defined: System objectives can be reached in a variety of ways
 - a. More than one appropriate way to reach a particular objective
 - b. CD: What is the process of making a peanut-butter and jelly sandwich? Do we perform this task in all the same ways?
- ix. Synergy defined: A system's ability to take on an identity separate from its individual elements (also called nonsummativity)
 - 1. Not the sum of its parts
 - 2. Positive synergy – teams perform better than individual members abilities
 - 3. Negative synergy – teams perform worse than individual members abilities
 - 4. Groups often achieve an assembly effect, or a positive synergy, in which the output is superior to the averaging of the outputs of the individual members
 - 5. Groups can also achieve process loss, or negative synergy, when they perform worse than abilities would suggest
- x. CD: Use the “apply now” box on page 44 to tie together the characteristics of systems with a real world example.
- xi. Systems theory is not the only way to explain group dynamics and researchers have raised concerns about this theory's abilities to explain various phenomena
 - 1. Merely descriptive rather than useful explanations
 - 2. Assumes homeostasis rather than change
 - 3. In spite of concerns still a useful theory to understand how a system as parts link together to form a dynamic whole.

Learning Activities

1. Divide the class into groups of four to six and instruct each group to create a model of a small human group as an open system. This may be accomplished in a variety of ways. For example, students may be instructed to draw the model on paper, or they may be asked to act out the model using the members of the groups as components. Groups may then share their models with the rest of the class. The following discussion questions may be used to help the class synthesize the information they have learned:
 - a. What did you discover from creating a model of an open system of small groups?
 - b. What elements did all the various models have in common?
 - c. What elements did two or three of the models have in common?
 - d. What elements were unique?
 - e. What did you learn from the models created by the other groups?

2. Divide the class into groups of four to six and ask each group to identify a student group (a work group is also appropriate) with which they are familiar. Students should then identify all the ways in which this group interacts with its environment (for example, a service club may need to recruit new members, work with other groups to coordinate a large charity event). Students should include actions from the group to the environment as well as actions from the environment to the group. They should also focus on how these various interactions affect the internal operation (throughput) of the group. Have the students share their findings with the class.
3. Ask each student to select three groups to which she or he belongs, to identify the lifecycle stage each group is in, and to explain her or his decision. Students should share their information in small groups of three to six.
4. Play a song for the class and have them identify all of the things that go into the making of that song. As students respond write their answers on a whiteboard and after you have collected all responses have students identify inputs, throughputs and outputs.
5. Place students in groups of 5-7 and give them the same hypothetical task – painting a room, picking a class, etc. – and have each group map the steps to achieve the task. You must only give the task, no other instructions. At the end of the activity have each group present their method of achieving the task and use the findings to discuss the principle of multiple paths.

Media Learning Activity

1. Divide the class into groups of four to six. Show one of the segments of the video *Communicating Effectively in Small Groups* (any one of the four segments will work). Ask the groups to identify all the inputs, throughputs, and outputs they observe in the group. Also ask them to explain how the concepts of an open system, interdependence, feedback, and multiple causalities are shown in the video. Ask the groups to report their findings to the class. When Kathy uses this learning activity, she uses the *Ineffective Problem-Solving Discussion* that the students viewed during the first class session because the students are already familiar with it. She has the groups report in round-robin fashion so that each group has an opportunity to participate.
2. Show a clip of *The Office*, *30 Rock*, or *Parks and Recreation*, have students identify elements of the organizational system and discuss how the environment impacts the system.

Media Resources

1. *Communicating Effectively in Small Groups*, any part. Available at McGraw Hill Online http://highered.mcgraw-hill.com/sites/0073534277/student_view0/videos_communicating_effectively_in_small_groups.html
2. *We're On the Same Team, Remember?* Demonstrates the value of intergroup communication within an organization and illustrates the concept of the organization as a network of interlocking and interdependent teams. (DVD, CRM Learning, 2720 Loker Avenue West, Suite Q., Carlsbad, CA 93010-6606; 1-800-421-0833) <http://www.crmlearning.com/Were-on-the-Same-Team-Remember-P54309.aspx>

THE SMALL GROUP AS A SYSTEM

Inputs

Throughputs

Outputs

Environments

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CHARACTERISTICS OF SYSTEMS

Open versus Closed

Interdependence

Feedback

Multiple Causes/Multiple Paths

Synergy

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