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Teaching Tip

Building Camaraderie Through Information Processing: The Wuzzle Picture-Puzzle Exercise

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ABSTRACT

Information systems (IS) and other instructors sometimes express frustration with coordinating and developing cohesiveness among their student project teams. The 'wuzzle-picture puzzle' exercise requires individual students, under the direction of the IS professor, to solve a series of information coded anagrams on their own, and then solve a similar series within a diversified team. The improvement concomitant with a diverse group of individuals in the second, wuzzle-puzzle condition demonstrates that cohesive and cooperative groups may indeed improve decision-making. This demonstration may be of special interest to the IS instructors as they encourage collaborative work. Further, systems practitioners may find the exercise useful for encouraging diversity in the workplace while improving teamwork, communication and cooperation among team members.

Keywords: Group cohesion, Decision-making, Collaboration, Word anagrams, Team building.

1. INTRODUCTION

Information systems (IS) and other instructors are often encouraged to find ways to get their students to improve their team skills, increase productivity, resolve conflict, and enhance cohesion in order to "act as a group." Management textbooks describe "group cohesiveness" as one of the more important determinants of a group's structure (Greenberg and Baron, 2001). Without it, members do not desire to remain a part of the group. In fact, a number of deleterious consequences may result from students failing to work as a group. According to Kidwell and Mossholder (1997), deterioration in group cohesiveness may negatively impact "citizenship behavior" - among other things. This coupled with the fact that more and more group work involves "virtual teams" or the use of interactive technologies (Lurey and Raisinghani, 2001), then the question becomes how can the instructor encourage team unity or at least warm the group up?

Group cohesion shows up in the way members are attracted to each other and motivated to stay in the group. A number of factors such as face-to-face communication, time spent together, the severity of initiation, group size and external threats all affect cohesiveness.

Still, IS professionals explain that it remains difficult to coordinate the work of the staff with the demands of upper management, the requirements of the customers and the general public (McAdoo and Pynes, 1995; Mulroy, 2003). In a survey of mental health services employees, McAdoo and Pynes found statistically significant factors contributing to employee job dissatisfaction included that they "did not feel involved," believed "management was(n't) interested in the success of line staff," and that they had no "voice" (p. 367). Mulroy's study pointed out that stressors "constrained executives' ability to collaborate."

2. DEVELOPING GROUP COHESIVENESS THROUGH WUZZLE PICTURE-PUZZLES

Are there exercises to build group cohesiveness and teamwork which might enable information systems students to better collaborate, enhance their motivation and develop an energized, positive environment? A simple, informational paper and pencil exercise involving the process of understanding and deciphering "wuzzle picture-puzzles" is proposed for this very purpose.

The wuzzle picture-puzzle exercise may be used either as a stand alone activity or as a warm-up to some other event involving, for example, in depth team building or even a meeting about the team's mission and current objectives. The instructor need merely pass out "Wuzzle Picture-Puzzle A" to each student (see Appendix A) and have him or her solve the puzzles as quickly as possible. Sixteen boxes each contain an anagram representing a commonly used or known phrase, short set of words or concept that is depicted by the picture. Participants must identify the phrase. After completing the exercise, the instructor should have students switch then grade each other's papers. One point should be recorded for each correct answer. A perfect score would total 16 points.

The instructor may randomly assign students to teams, allow them to self assign, assign students according to some diversity measure (major, class, age, etc.) or assign those who do not seem to "get along" to the same team. Teams may consist of 2, 3 or even 4 members per group. Teams are given "Wuzzle Picture-Puzzle B" (see Appendix B) and told to solve the puzzles using the collective wisdom of the group. Again, after completing the exercise, papers should be switched and graded. Scores typically increase significantly when individual results are compared with group results. The answers for "Wuzzle Picture-Puzzle A" and "Wuzzle Picture-Puzzle B" and the instructor's scorecard are contained in Appendix C. The instructor's scorecard can be used to record and compare scores.

At this point, the professor can explain that in the team condition, group members were able to capitalize on the diversity of their teammates by playing to each other's strengths and minimizing each other's weaknesses. In working with others, participants are typically able to improve the quality of their decision-making, incorporate other points of view, overturn inaccurate beliefs, assumptions and misunderstandings, and improve their comprehension of others who are different. The result should be a synergistic decision process wherein interpersonal skills are combined with rational skills. By learning to more effectively and efficiently communicate with each other, team members should be able to engage in active listening and in responsive clarifying. The idea is that team members will pay attention and respond to each other's feelings and ideas because they have a clear incentive to solve the puzzle. Prizes or awards are not necessary. Team members will naturally wish to demonstrate their skills or avoid embarrassment by not exposing their lack thereof.

Successful groups typically have members who support and appreciate each other. These factors should combine to support the decision-making model and the result is typically a marked improvement in wuzzle picture-puzzle performance scores from test A to test B.

3. CLASS EXPERIENCE

This exercise has been used in several information systems classes, including Design and Development of User Systems and Database Systems. Each of these classes employs in-class exercises using small ad hoc teams of two or three students and term ending large-scale team projects with three to five members. It may be used successfully at both the undergraduate and graduate level. Based on our experiences, using a set time of five to seven minutes per exercise helps focus the students' efforts toward the task and sets a limit for the group decision process. Increasing team size above two helped to increase the team scores significantly. Puzzle selection has shown that some undergraduate students have trouble solving a few puzzles due to limited life experience, while older, non-traditional undergraduate and graduate students can easily solve them. In a survey of the participants afterward, the team puzzle experience was credited with improved decision making and communication.

4. DEBRIEFING AND CONCLUSION

This exercise should demonstrate that working in small, diverse teams may result in an improvement in overall performance. Research in this area seems to indicate that a mixed group of experts who are afforded the opportunity to freely contribute ideas to the decision-making process and whose skill set on a structured task is complementary, will typically outperform an individual decision maker (Hill, 1982; Wanous and Youtz, 1986; Yetton and Botzger, 1983).

Can the IS professor extrapolate these findings to the work within the classroom? Most project teams face a structured task. What types of structured tasks does the team face? How are students similar to a "mixed group of experts"? Can students think of new and improved ways to achieve the IS instructor's structured tasks through an invigorated process of decision-making? If they can, *the wuzzle picture-puzzle exercise* may prove to be a meaningful experience for networking, understanding, and improved decision-making first inside the classroom and then beyond.

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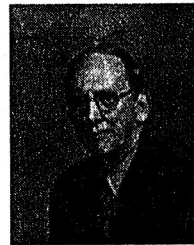
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AUTHORS BIOGRAPHIES

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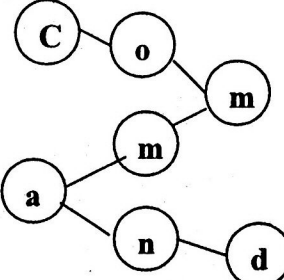
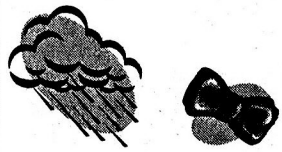

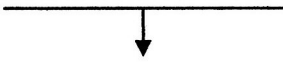




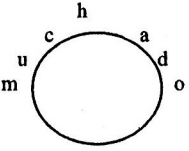

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APPENDIX A

Wuzzle Picture-Puzzles (to be solved individually)








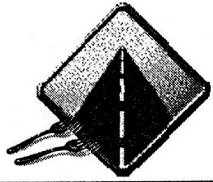



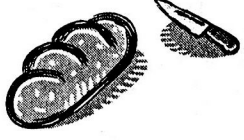

Here are some real puzzlers for you! Decipher the hidden meaning of each set of words.

<p>1</p> <p>Stuck</p>  <p>Hard Place</p>	<p>2</p> <p>mole mole mole mole mole mole mole mole</p>	<p>3</p> 	<p>4</p> <p>somewhere</p> 
<p>5</p> 	<p>6</p> <p>Love Hate</p>	<p>7</p> <p>LARGE</p> <p>life</p>	<p>8</p> <p>o m t t o</p> <p>B</p>
<p>9</p>  <p>Construction</p>	<p>10</p> <p>8 0</p>  <p>d s a y</p>	<p>11</p>  <p>PUDDING!</p>	<p>12</p> <p>wel l</p> 
<p>13</p> 	<p>14</p> <p>h</p>  <p>u c a d o m</p>	<p>15</p> 	<p>16</p> <p>Right -Wrong ?</p>

APPENDIX B

Wuzzle Picture-Puzzles (to be solved as a group)

Here are some real puzzlers for you! Decipher the hidden meaning of each set of words.

<p>1</p>  <p>BOARD</p>	<p>2</p> <p>N o s e</p>	<p>3</p> 	<p>4</p> <p>\$</p> 
<p>5</p> <p>↑ it it than</p> 	<p>6</p> 	<p>7</p> <p>When suecess try²</p>	<p>8</p> <p>sheet x 3</p> 
<p>9</p> 	<p>10</p> 	<p>11</p> <p>First home + <u>vacation home</u></p> 	<p>12</p> <p>Boo hoo</p> 
<p>13</p>  <p>My Amy</p>	<p>14</p> <p>S i m S t u p i d l e</p>	<p>15</p> <p>+ thing</p> 	<p>16</p> 

APPENDIX C

Answers to Wuzzle Picture-Puzzles in Appendix A

1. Stuck between a rock and a hard place
2. Make a mountain out of a mole hill.
3. Chain of command.
4. Somewhere over the rainbow.
5. Spring break.
6. The thin line between love and hate.
7. Larger than life.
8. Bottoms up!
9. Under construction.
10. Around the world in 80 days.
11. The *proof* is in the pudding.
12. Well balanced.
13. Over the hill.
14. Much ado about nothing (or much ado over nothing).
15. Kill two birds with one stone.
16. Knowing the difference between right and wrong (or the difference between right and wrong).

Answers to Wuzzle Picture-Puzzles in Appendix B

1. Man overboard.
2. Up your nose.
3. Running out of time (or running against time).
4. Cash cow.
5. More to it than meets the eye.
6. Duck soup.
7. If at first you don't succeed, try, try again.
8. Three sheets to the wind.
9. Dancing with the devil.
10. Two forks in the road or a fork in the road.
11. Home, home on the range.
12. Don't cry over spilt milk.
13. Moon over Miami.
14. Keep it simple, stupid.
15. Best thing since sliced bread.
16. The acorn doesn't fall far from the tree.

Instructor's Scorecard

Student's #	# of 'Wuzzle Puzzles' Solved Individually	Team #	# of 'Wuzzle Puzzles' Solved as a Team
1		1	
2		2	
3		3	
4		4	
5		5	
6			
7			
8			
9			
10			



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