

On-line Problem-Solving Assignment  
Susan Bartocci

Questions:

1. Which problems did you work through?  
I worked through The Three Jug Problem, Tower of Hanoi, and Wolf, Sheep, & Cabbage.
2. Which problem was the easiest to solve?  
The Wolf, Sheep, & Cabbage was the easiest to solve.
3. Why was it easy to solve?  
There was only one solution and was predictable with the information that was given.
4. What type of problem was it (see Kirkley, 2003 article pg. 8)? Explain  
The puzzle is a well structure problem. There was one solution to the puzzle. (Kirkly,2003) I felt that all information was given to me to solve the problem.
5. What strategy did you use to solve the problem? I first wrote out the problem with the information given to me. I the preceded to mentally solve the problem with moving the items across. It took me a few seconds to realize I need to bring the sheep back with me. After that the problem was solved.
6. How did you develop this strategy? I have come across similar problems. I believe that the information is store and associated with this type of problem-solving puzzle.
7. What declarative knowledge was needed to solve this problem?  
The declarative knowledge needed knowledge of what animal would eat what if left alone on the same side of the river.
8. What procedural knowledge was to solve this problem?  
The procedural knowledge was that there was a sequence/order that the items much be moved or you would fail to solve the puzzle.
9. Which problem was the most challenging for you to solve?  
The hardest was The Tree Jug Problem.
10. Why was it difficult to solve?  
I wanted to solve the problem outside the parameters. I could not see the solution to the problem at first.
11. What type of problem was it (see Kirkley, 2003 article pg. 8)? Explain.  
The puzzle is a moderately structure problem. There was one solution to the puzzle or a least I think so. (Kirkly,2003) I felt that all information was given to me to solve the problem but more mental modeling and drawing out the problem was needed.
12. What strategy did you use to solve the problem?  
Again, I drew the problem out. I started out with pouring 3 quarts into the 3-quart jug. I pour the three quarts into the five and was stuck for a time. I tried think use some mental math problem-solving skills but went back to using a combination of strategies.
13. How did you develop this strategy?  
The strategy was through trial and error. Each time I tried a solution and failed, I learned something new. In a thought, it is much liked paying bills. Moving money around until everything is balanced, on a smaller scale.
14. What declarative knowledge was needed to solve this problem?  
I knew I had three jugs and there were an 8,5, and 3-quart measurement. I knew I needed to divide the water equally. I needed an understanding of measurement and numbers.

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15. What procedural knowledge was needed to solve this problem?

The procedural knowledge used was demonstration/representation of solutions to the problems. My first was through drawing; the second was through number movement. I found that I needed a combination of the two to solve the problem.