GENERAL PROBLEM SOLVING USING "OSCAR"

J. C. Bennett - University of Connecticut

It is the thesis of the author that an effective problem solving procedure can and should be utilized on a regular basis to address ***ALL*** situations the user faces. Such situations would include personal issues for situations involving conflict, situations such as conventional homework or examinations for which the statement of the assignment has been designed to indeed have a correct solution, and/or situations such as open-ended assignments – made by instructors and/or arising in the context of career employment – for which an optimum solution [selected from many correct options] is appropriate. The purpose of this very short note is to provide some guidance as to how a problem solving approach might be utilized effectively for these three types of situations.

To do so of course, a problem solving procedure must be selected for use in this discussion. The author's personal problem solving procedure, with the acronym OSCAR, is used for this purpose. *Having written that*, it can and must be said that most problem solving procedures have many common features – regardless of what the feature or step is titled. Therefore in considering the TABLE found on the next page, the reader is encouraged to view the material within the table within the context of applicability to her/his own personal procedure, as should be very possible. If indeed the features of OSCAR [such as its "embracing of ambiguity" and its "emphasizing of regular self-assessment"] are not currently emphasized in the reader's personal procedure, the reader might wish to investigate other material on problem solving [and OSCAR] developed by the author.

An effective problem solving procedure is one that routinely provides useful outcomes for a variety of situations faced such that the user is motivated to indeed utilize it on a regular basis. The author would never suggest that OSCAR or any other procedure is automatically the best one for use by anyone; it is believed that such a choice must be a personal one that works for the individual user. Whether the reader has such a problem solving procedure, or if indeed OSCAR is found to be a procedure the reader wishes to adapt for her/his personal use, in either case, the author would be most pleased to work with the reader in any refinement that will increase the effectiveness of the procedure.

PROBLEM SOLVING STEP	***INTERPERSONAL SOLUTION*** **[for some situation that has come up]**	***"CORRECT" SOLUTION*** **[for an assignment for which such a solution is requested]**	***"OPTIMUM" SOLUTION*** **[for an assignment for which such a solution is requested]**
1. The *Objective*	Is there in fact a problem to be solved? From consideration of the specifics of the current situation, what is the true objective? What really is the problem?	From the assignment made or exam distributed, is correct solution requested? From the information in the assignment or exam, what is the requested outcome?	From the assignment made or exam distributed, is optimum solution requested? Same here: From the information given, what is the requested outcome?
2. The *Speed Bumps*	What is it *at this time* that prevents me/us from immediately moving toward a solution to this problem? What is it that I/we don't know that we believe is important.	Same Here.	Same Here.
3. The *Considerations*	Through discussions with the various people involved, what is the known information? What are the limitations on any solution [constraints] and how will solution be evaluated [criteria]? What is *your visualization* as to what the problem really involves? List various options that could be considered that will address the objective.	For assignment [using book, library, internet, etc.] or for exam [using given and learned information], what do I have available for use in obtaining a solution? How will the solution be graded [criteria]? What are the requirements [constraints]? List various approaches, if they are possible, to address the objective.	Same here. But for exam, don't forget to take time for a "list" of information. . This is especially critical for this type since there is no right and wrong. Noting that various approaches will be possible, again for the exam, don't forget to take the time for this step.
4. The *Answers*	Review the options in view of the constraints and criteria that have been identified in this case. Based upon any analysis, prototype development, experimental testing, economics evaluation, and/or fabrication considerations made in conjunction with the constraints and criteria, select the optimum solution. Develop a plan that provides the details of the approach selected, including the development of a timeline. Carry out your plan.	Review the brainstormed approaches with respect to constraints and criteria. Based upon the information developed related to the constraints and criteria, select optimum approach to a solution. Follow the approach selected, documenting each part of your solution.	Same here. These are important "sub-steps" that should not be short changed as you work to detail your solution.
5. The *Reflections*	First, review your plan, in light of the outcomes associated with its implementation, to determine that it indeed did meet the *objective* and satisfies the *constraints*. From this review, determine what might be done differently the next time. Communicate these thoughts to whoever is appropriate. Document for future reference.	.Review the solution as developed to determine if it indeed satisfies the *objective*, the *constraints*, and the *evaluation criteria* associated with the assignment. If satisfied, submit the solution as directed. Upon submission of the solution, consider how your approach might be improved for future use, documenting those considerations.	Same Here.

June 30, 2005