

Unlocking the problem-solving process

December 9, 2008

The high-knowledge content worker of the 21st century needs a new kind of manager - the manager-educator.

Gone are the days when order-giving provided an effective way to get things done. For today's high-knowledge content worker, a new role has emerged for managers -- that of the manager-educator.

In her working paper, "An Approach to Facilitate Problem Solving: Individualizing the Problem Proposition," Prof. Beatriz Muñoz-Seca, professor of production, technology and operations management at IESE, argues that manager-educators must transform themselves into facilitators to improve their companies' operations, through introducing learning.

The key to achieving this goal, according to Muñoz-Seca, is to individualize the problem proposition by using the Educational Dimension (ED) Portfolio, a gallery of profiles that provides a gateway to an individual's own learning, as well as inspiring learning in others. It comprises four dimensions:

- *Delivery Experiences (DE)*. The degree to which an individual can perceive the possible immediate results of his or her problem-solving activity.
- *Analyzing Alternatives (AA)*. The degree to which an individual deepens the evaluation of the different, alternative paths to follow.
- *Guiding Through the Process (GP)*. The degree to which the individual can make use of a guiding tutor who shows him or her how to perform or act.
- *Providing Knowledge (PK)*. The degree to which an individual requires a conceptual abstract framework to relate the problem to.

Building on previous data from 191 executives in Europe and Ecuador, Muñoz-Seca introduced new data from 491 IESE business school executives from the European Union and Latin America, who took part in a 32-question online survey. This online questionnaire sought to prove or disprove five hypotheses that arose with ED implementation.

Heavy theoretical work not as effective

The first hypothesis was that the dimension Providing Knowledge would be the lowest dimension valued. This theory was confirmed, with 79 percent of the participants applying a value of 0 or 1 to this dimension.

"This suggests that business people have an aversion towards theoretical structures. Managers should be aware that company training programs that present a heavy load of theoretical work will not be effective," Muñoz-Seca warned.

The second hypothesis aimed to determine whether or not ED profiles should not be restricted to a single combination of values. The results found that the mixing of profiles should be more varied. With four dominant educational dimensions, a manager can guide a more fluid problem-solving process.

The questionnaire then looked at experience and age to see whether these factors influence the values in the four dimensions. While some EDs showed an increase in correlation with age, the findings did not confirm this third hypothesis.

"The most important finding is that experience becomes an important factor with respect to Providing Knowledge, suggesting that companies should designate the most experienced people to assist challenging individuals with theoretical inclinations," Muñoz-Seca commented.

The survey also showed that there were no differences based on geographic origin or between genders. The author stressed, however, that the educational similarities between Europeans and Latin Americans and the small percentage of female participants (20 percent) may have affected the findings from this fourth hypothesis.

Finally, the relationships between the dimensions were analyzed to see whether they are independent. This last hypothesis was partly validated: Providing Knowledge and Delivery Experiences were found to be independent. However, the rest of the ED were positively but weakly correlated.

Finding the right approach

After analyzing the results of the questionnaire, Muñoz-Seca offers managers approaches to guide others through problem solving and to improve business performance. Three Educational Delivery Approaches are described to guide the four dimensions listed above.

- *Socratic Educational Process*. Managers guide the problem-solving process through questions and provide knowledge in an interactive manner.
- *Apprenticeship Process*. Pupils learn from experience and are guided through the problem-solving process with a combination of on-the-job training and related classroom instruction.
- *Providing Alternatives*. The learning process is guided through the analysis of different alternatives that are sequentially clarified to develop an answer to the problem.

When implementing these approaches, a manager must take the culture of the company into consideration. For example, an open, flat-structured, flexible company may do better with the apprentice approach, while a rank-oriented company will probably be more apt to accept the Socratic approach.

Muñoz-Seca stressed that managers should remember "this is a bidirectional approach. The manager might feel comfortable with a specific Educational Delivery Approach, but the individual needs to be in tune with it, too."

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