

عنوان مقاله:

Design of a Knowledge Flow Network for the Personnel of an Organization under Various Scenarios and its Solution using Lagrangian Relaxation

محل انتشار:

ماهنامه بین المللی مهندسی، دوره 35، شماره 6 (سال: 1401)

تعداد صفحات اصل مقاله: 16

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خلاصه مقاله:

Knowledge transfer can occur on two levels: intra-organizational and inter-organizational. Acquiring knowledge from outside an organization usually requires significant budget and considerable time. However, through awareness and reliance on knowledge already acquired by the personnel, and creating a knowledge flow network, knowledge level of the organization can be increased in the shortest possible time. The present paper addresses the design of a knowledge flow network between the personnel of an organization according to the professional and personal trust levels, teaching and learning capabilities, knowledge level of the personnel, organizational commitment level, type and importance of each knowledge, and the stochastic nature of the knowledge transfer duration. This problem was formulated as a stochastic multi-objective mixed-integer programming. The objectives of the proposed model were maximizing the knowledge level and minimizing the knowledge transfer time. The model was solved using the Lagrangian relaxation algorithm and the CPLEX solver. Results indicate the high efficiency of the Lagrangian relaxation algorithm specially in computational time of large-sized problems. Moreover, the results show that the organizational commitment parameter has more significant influence on the knowledge transfer duration, followed by teaching and learning capabilities.

کلمات کلیدی:

Knowledge Flow Network, Knowledge transfer, Stochastic programming, Lagrangian Relaxation

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