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A metaheuristic based on the relationship between teachers and learners has recently been proposed to solve continuous nonlinear optimization problems. It is of particular interest because it requires no parameter fine-tuning other than determining the population size and convergence criteria. In this paper, we enhance the performance of the TLBO method by introducing "a local neighborhood search on the best solution" before the teaching phase of TLBO. We use it to solve the problems from the literature for multiple-choice multidimensional knapsack problem (MMKP), and demonstrate that TLBO outperforms the best published solution approaches for the MMKP. (Received September 22, 2015)