



Modern Teaching Methods in Action in Statistical Classes

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Abstract:

In order to act as a responsible member of a democratic society, everybody needs statistical literacy and applicable knowledge on how to use statistical data, visualization, and methods. In the case of professions that use or produce statistical data the correct use of statistics and statistical thinking are also important. Practice and knowledge applicable in real life are also needed. To reach these requirements, using real-life problems, modern technologies (digital solutions, online tools) and up-to-date teaching methods tailored to the target audiences is crucial. Several papers show that the use of real problems, technology and modern teaching methods are more efficient than the traditional frontal teaching method. In this presentation, we describe some new teaching methods, for instance problembased learning, project-based learning, thinking-based learning, flipped classroom, gamification. We also discuss the combination of different methods and modern technology in action in the field of Statistics. The presentation shares our developments, experiences, and lessons we learnt from classes. One of our main results is the idea that the use of modern teaching approaches leads to more practical and applicable knowledge; however, their success also depends on both the educators' and the students' time expenditure and attitude.

Keywords:

active teaching and learning methods; problem-based learning; project-based learning; thinking-based learning; flipped classroom; gamification