I.E. Livieris, K. Drakopoulou, V. Tampakas, T.A. Mikropoulos and P. Pintelas. <u>Predicting</u> secondary school students' performance utilizing a semi-supervised approach

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Abstract - Educational data mining constitutes a recent research field which gained popularity over the last decade because of its ability to monitor students' academic performance and predict future progression. Numerous machine learning techniques and especially supervised learning algorithms have been applied to develop accurate models to predict student's characteristics which induce their behavior and performance. In this work, we examine and evaluate the effectiveness of two wrapper methods for semi-supervised learning algorithms for predicting the students' performance in the final examinations. Our preliminary numerical experiments indicate that the advantage of semi-supervised methods is that the classification accuracy can be significantly improved by utilizing a few labeled and many unlabeled data for developing reliable prediction models.