Teaching programming with flipped classroom method: a study from two programming courses

LUT Lappeenranta University of Technology

Antti Herala, Erno Vanhala, Antti Knutas and Jouni Ikonen Lappeenranta University of Technology Department of Innovation and Software Lappeenranta, Finland firstname.lastname@lut.fi

Flipped classroom teaching method, where theory is studied at home and exercises are done in the classroom, is

> Watch weekly videos

Read weekly

material

Answer quizzes to control theory studying

tasks

Repeat N times Design and program exercise

gaining foothold in teaching. The method has been used with diverse approaches and guidelines.

Guidelines

- Create or curate videos in addition to text-based material
- Evaluate the material with

room class **Dutside**

other experts in the field

- Use weekly quizzes to evaluate the level of understanding and satisfaction of the students
- Strictly integrate the theory and material to the course
- Encourage students to engage peers both in-class and by



The process flow utilized in flipped classroom learning in programming (adapted from Maher et al., 2015)

reviewing each other's work

Require students to start the weekly tasks before the exercises as preparatory work

Based on the literature (Bishop & Verleger 2013, Lage et al. 2000) and our observations.

References

Bishop, J.L. and Verleger, M.A. 2013. The flipped classroom: A survey of the research. ASEE National Conference Proceedings, Atlanta, GA (2013).

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