



Tracking and Analyzing the Impact of Team-based Assignments on Individual Performance

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Abstract

The researchers have developed a process and set of online games to enable additional feedback to both students and instructors in classroom settings. The resulting process was named Tournament-based Teaching due to the extensive use of tournament-based feedback for groups and individuals throughout course delivery. Tournament-based Teaching enables individual and peer-based learning in a classroom setting and provides additional motivation for students to prepare for classroom sessions. It also provides additional feedback for instructors, which can be leveraged to better schedule future classroom sessions [1].

Most online tutoring systems focus on creating an individualized learning path for the users. While these systems are expected to improve and can be quite efficient, many learners are also likely to benefit greatly from improved peer-based learning environments where new material can be covered and assessed as a team [2]. Teaming allows students to be coached by their peers who have similar background knowledge, frames of reference, and are able to explain new concepts in language familiar to the learner. Groups of learners are able to quickly assess which concepts are understood by the team as a whole and focus on the specific concepts that may be proving more difficult for one or more team members to fully grasp.

One of the advantages of Tournament-based teaching has been in providing instructors with a rough approximation of individual's capabilities in a class. SingPath, the researcher's automated framework, provides instructors with a ranked list of how quickly students have correctly solved a collection of problems. At Singapore Management University, these rankings have been used as guides to divide students into quartiles prior to assigning teams for group projects [3]. By ensuring that students must pick a team member from each quartile, the risk of overly strong or overly weak teams can be reduced [4].

Additionally, as ad-hoc teams are formed to complete classroom assignments, data on how individuals are performing as part of a team and how these same individuals perform on individual assignments after having worked on team assignments can be tracked and analyzed. The system continually tracks the performance and improvements across all teams and assignments regardless of how they are assigned providing a benchmark and analysis of their learning curve throughout the duration of the class.

References

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