Assessment of the Relationship Between Learning Preferences, Innovative Teaching Tools, and Academic Performance in a Medical Pharmacology Course in Colombia

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Introduction

There is paucity of information regarding the relationship between grades in Pharmacology and learning preferences. We hypothesized we could find a relationship between their self-reported preferences in learning according to Perry, and their final grade in the Pharmacology course.

Learning Tools

Picture 1. Sample Question of one CrossWord Puzzle used by the Students. (created on TheTeachersCorner.com crossword maker)

Picture 2. Students and Learning Catalytics

Grades and Learning Preferences

Gainen Questionnaire was administered at the beginning and at the end of the Pharmacology course. Crossword puzzles were used to reinforce knowledge before exams. We used Learning Catalytics® in some (but not all) sessions. The DREEM instrument was used at the end to assess Student’s perception of the learning environment. We also included qualitative and quantitative questions in the exams regarding their perception of the effectiveness of these instruments.

Methods

Gainen Questionnaire was administered at the beginning and at the end of the Pharmacology course.

Crossword puzzles were used to reinforce knowledge before exams.
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Results

Relationship between Initial and final Gainen scores. The final score was plotted against the initial Gainen score. A non-statistically significant positive correlation was found between scores R²=0.0656

Conclusions

● There appears to be a difference in the Learning Preference Score between the beginning and the end of the course.
● We found only weak interaction between grades in the course and learning preferences. There was a difference when homework was included in the analyses.
● We found little, if any, correlation between Satisfaction with the Learning Environment and their Learning Preference.
● There is still doubt about the effect of these novel teaching methods.