


## Students' motivation, satisfaction, and perceived learning using online peer feedback in the context of argumentative essay writing

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**Abstract:** According to the literature, students' motivation and satisfaction can influence their perceived learning outcomes. However, little is known about what kind of a role do motivation and satisfaction play in the context of online peer feedback. This exploratory study aims to examine the relationship between students' motivation and satisfaction with their perceived learning outcomes in an online peer feedback environment. To do this, 51 graduate students from a Dutch university participated and they were involved in an online peer feedback module for argumentative essay writing. At the end of the module, students were asked to fill out surveys regarding their motivation, satisfaction, and perceived learning outcomes. The results showed that there is a positive correlation between students' motivation and satisfaction with their perceived learning outcomes in an online peer feedback environment in the context of argumentative essay writing. These results provide insight into how students' motivation and satisfaction can impact their perceived learning outcomes during an online peer feedback activity in the context of argumentative essay writing.

**Keywords:** argumentative essay writing, motivation, online peer feedback, perceived learning outcome, satisfaction

## Introduction

Peer feedback has been utilized to help students improve their argumentative essay writing. Prior research confirms its effectiveness in improving students' argumentation skills in essay writing (e.g., Latifi & Noroozi, 2021; Latifi et al., 2021) and learning, engagement, and motivation (e.g., Gielen et al., 2010; Pratama & Arriyani, 2021; Zhang et al., 2014). Student satisfaction is essential in understanding the effectiveness of online learning (Arbaugh & Benbunan-Fich, 2007; So, Brush, & education, 2008). Teachers are unable to offer effective one-on-one feedback on students' argumentative essay assignments because of a tremendous workload (Noroozi & Hatami, 2019; Latifi & Noroozi, 2021; Latifi et al., 2021b) so peer feedback has been recognized as an efficient teaching approach to assist students in enhancing their argumentative essay compositions in such situation. Argumentation is seen as an important skill for students (Prata et al., 2019). Peer feedback has been suggested to enhance students' argumentative essay writing, and previous research has shown that it is significant in improving students' argumentation skills and knowledge in essay writing (e.g., Latifi & Noroozi, 2021; Latifi et al., 2021). Although online peer feedback was an effective instructional technique for improving students' argumentative essay writing quality, only a few research investigated students' motivation, satisfaction, and perceived learning with such online learning activity in the context of argumentative essay writing. As a result, the purpose of this research was to investigate students' motivation, satisfaction, and perceived learning using online peer feedback activity in the context of argumentative essay writing. To address research, the following research questions are formulated and answered in this study.

- RQ1. To what extent does students' motivation predict their perceived learning outcomes in an online peer feedback environment?
- RQ2. To what extent does students' satisfaction predict their perceived learning outcomes in an online peer feedback environment?

## Method

In this research, 51 graduate students (female: N= 37, 72.5 %; male: N=14, 27.5 %) participated from Wageningen University and Research (WUR) in an online course in the social sciences domain. A questionnaire with 38 items developed by Mahdizadeh (2008) and adjusted by Noroozi et al. (2107) was used to measure students' motivation, satisfaction, and perceived learning with online peer feedback activity. Multiple Linear Regression and Pearson correlation coefficient were used to analyze data.

## Design of the Study

To run this study, a course module called "Argumentative Essay Writing" was designed and embedded in the course within the Brightspace platform. The module was followed by the students for three consecutive weeks and for each week they were asked to complete specified tasks. In the first week, students were provided with introductory instructions on how to write an argumentative essay, they were asked to fill out an online survey about their demographic data, and write an argumentative essay in English on one of the three provided topics including (a) the long-term impacts of Covid-19 on the environment, (b) the role of private actors in funding

local and global biodiversity, and (c) bans on the use of single-use plastics. The topics were selected by the course teacher based on the given criteria including that the topic had to be controversial and rather new in the field of environmental economics and environmental policy. We considered the first draft of the essay as the pre-test. In the second week, students were asked to review two of their peers' argumentative essays and provide comments on them (30 to 50 words for each argumentation element – see next section) on peers' essay performance based on the given criteria embedded in the FeedbackFruits app within the Brightspace platform. In the third week, students were asked to revise their essays according to the two review sets they received from their learning peers and submit the revised version of the essay on the platform.

## Results

Results showed a positive correlation between students' motivation and satisfaction with their perceived learning outcomes in an online peer feedback environment in the context of argumentative essay writing ( $r=0.690$ ,  $p<0.001$ ;  $r=0.762$ ,  $p>0.001$ ). Students with a high level of motivation showed a high level of perceived learning outcomes so students' motivation is a strong predictor of their perceived learning outcomes in argumentative essay writing. Students with a high level of satisfaction showed a high level of perceived learning outcomes. So students' satisfaction is a strong predictor of their perceived learning outcomes in argumentative essay writing.

## Conclusion

This study examines the role of motivation and satisfaction and perceived learning with online peer feedback in an online environment. Researchers, educators, and other professionals are interested to understand if e-learning may provide better results and academic accomplishments than traditional learning. Examining student satisfaction and motivation is the only way to find the solution. The outcomes of this study highlight the critical nature of motivation when it comes to online learning. We found that online peer feedback positively influenced students' motivation, satisfaction, and perceived learning. According to the findings of this study, students are very satisfied and motivated by online peer feedback and this satisfaction impacts their learning outcomes positively. Furthermore, it was discovered that students consider learning to be enjoyable while participating in online peer feedback activities. This shows that students find online peer feedback useful, that they are satisfied with their learning through online peer feedback activity, and they are motivated to keep using peer feedback in the context of argumentative essay writing. The findings indicate that online peer feedback can be a powerful instructional technique in the context of argumentative essay writing and the results of this study are in line with previous studies. (Latifi et al., 2019, Noroozi et al., 2016; Noroozi & Mulder, 2017).

## Recommendations

In this study, we explored the role of motivation and satisfaction of students using online peer feedback on perceived learning in the context of argumentative essay writing. Consideration of the role of teachers as a mediator variable can help in understanding important aspects of perceived learning outcomes. Additionally To explore the impacts of online peer feedback on perceived learning we exclusively employed quantitative data analysis and measures. However, we admit that qualitative analysis would add value to the study's conclusions.

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