

# The role of online peer feedback features in uptake of peer feedback in argumentative essay writing

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**Abstract:** In this study, a pre-test and post-test research design was employed to explore the role of online peer feedback features in uptake of peer feedback in the context of argumentative essay writing. To do this, 101 students were asked to individually write an argumentative essay, get involved in online peer feedback activity, and revise the original essay based on received peer feedback. The findings showed that online peer feedback features mainly justification of the problem in feedback can predict uptake of peer feedback in argumentative essay writing.

**Keywords:** argumentative essay writing, online learning environment, peer feedback features

## 1. Introduction

In higher education, online peer feedback is a popular instructional strategy as its effectiveness in improving learning has been confirmed particularly in the context of argumentative essay writing (Latifi et al., 2019; Noroozi et al., 2022). However, some studies have shown that online peer feedback does not always lead to the desired learning outcomes (Li et al., 2019; van Popta et al., 2017). This is usually due to the nature and quality of peer feedback whether it is solely affective feedback or it contains cognitive and constructive features feedback (Nelson & Schunn, 2009). Prior studies confirm that peer feedback uptake can be affected by the nature and quality of feedback (Nelson & Schunn, 2009; Patchan et al., 2016), however, it is not known to what extent online peer feedback features can predict peer feedback uptake in the context of argumentative essay writing. Therefore, this study was conducted to further explore this by answering the following research question.

To what extent do online peer feedback features can predict uptake of peer feedback in the context of argumentative essay writing?

## 1. Method

### 2.1 Study design

This exploratory study is a part of a bigger project that was carried out at Wageningen University and Research center during the 2020-2021 academic year. An undergraduate course in the field of environmental science was selected for this study, and a module called “Argumentative Essay Writing” was developed and integrated into the course at the Brightspace platform. The module was followed by students for three weeks, and each week they were asked to complete a specific task. In the first week, students were asked to write an argumentative essay on one of the three provided controversial topics presented. In the second week, students were asked to give feedback on the argumentative essays of two of their peers based on specific given criteria. In the third week, students were asked to revise their original argumentative essay based on the two received feedback sets provided by their peers.

### 2.2 Participants

In this study, 135 undergraduate students participated, however, only 101 students have completed the module. Almost 69% of the participants were female ( $N = 70$ ) and only 31% of the participants were male ( $N = 31$ ). For ethical reasons, participants were informed about the research setting of the course. This study also has received ethical approval from the Social Sciences Ethics Committee at Wageningen University and Research.

### 2.3 Measurements

To measure the quality of students’ argumentative essay performance, a coding scheme adjusted based on Noroozi et al. (2016) instrument was used. To measure the quality of students’ online peer feedback, authors developed a coding scheme based on literature reviews (e.g., Nelson & Schunn, 2009; Patchan et al., 2016).

### 2.4 Analysis

A multiple linear regression test was used to answer the research question.

## 3. Results

The results showed that the features of online peer feedback can predict uptake of peer feedback in argumentative essay writing ( $F(5, 93) = 4.87, p < 0.01, R^2 = 0.20$ ). The coefficient of determination ( $R^2$ ) indicated that 20% uptake in argumentative essay writing is influenced by peer feedback features. In addition, the results

showed that the justification feature of feedback is a significant predictor of peer feedback uptake in argumentative essay writing (Table 1).

**Table 1**

*Peer feedback features for argumentative essay writing performance improvements from pre-test to post-test*

Variables		Peer feedback received quality		Standardized Coefficients Beta	T	sig
		Mean	SD			
Affective		1.64	0.17	-0.20	-1.63	0.10
Cognitive	Description	1.35	0.33	-0.20	-1.75	0.08
	Identification	0.69	0.32	0.07	0.62	0.53
	Justification	0.04	0.06	0.20	2.03*	0.04
Constructive		0.79	0.36	-0.06	-0.61	0.54

( $P < 0.01$ )\*\*, ( $P < 0.05$ )\*

#### 4. Conclusion

The results have led us to realize that the nature of peer feedback, in particular, the justification feature can predict peer feedback uptake in argumentative essay writing. This indicates that when the provided feedback is justified and supported by various arguments, evidence and examples, the peers can better understand the purpose of the feedback and then use it in their work (Strijbos et al., 2010). Another reason for the significant role of justification is probably due to the strong role of problem justification in feedback, which may clarify why this particular task needs improvement. In conclusion, this study showed that the nature of peer feedback plays an important role in student success in writing an argumentative essay.

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