

# Improving Student Learning and Engagement by Integrating Mobile Technology and Rebuttal Writing in Teacher's Feedback

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The feedback from the teacher is significant for forming a conducive learning experience, though it is of trivial importance in the absence of student engagement. Precisely, few researchers have empirically investigated the impact of the direct intervention on the enhancement of student engagement following the teacher's feedback. The study intends to find out the impact and use of rebuttal writing tasks and mobile technology as a learning tool and its promotion of students' engagement with teachers' feedback. A mixed research methodology was adopted where experimental design and meta-analysis was performed. For rebuttal writing, the experimental research design, a total of 118 undergraduate students were recruited using multiple sources (structured questionnaire, students' first drafts, as well as their revised essays. The meta-analysis explored the influence of integrated mobile technology. For this, 110 articles published from 1993 to 2013 (experimental as well as quasi-experiment) were assessed. The experimental findings provide that rebuttal writing was enjoyed by the students considering the value it adds. Whereas, the findings of the meta-analysis showed the mean size effect of 0.523 for the use of mobile devices for learning. The study concluded that rebuttal writing facilitated the teachers' feedback effect, while the integration of mobile technology improves students' engagement towards learning.

**Key words:** *Mobile Technology, Rebuttal Writing, Student Learning, Student Engagement, Teacher's Feedback*



## Introduction

Mobile technology use in educational contexts has persisted for about the past 20 years. With the continuous evolution of mobile technology, most people carry their small device for different reasons, which include personal digital assistants (PDAs), personal computers, smartphones, etc. to carry out various tasks. This technology use has facilitated classroom learning and developed a learning tool for both outdoor informal learning and traditional classroom learning. Not only this, but innovation in the classroom also elevates classroom learning environments, because teachers are able to present better feedback both in graphical and written forms.

Considering the importance of learning outcomes, most studies carried out focus on the importance from students' perspective (Dawson et al., 2019). Engagement is also considered an important parameter for student learning, because most of the time students carry the option of responding to feedback given by the teachers, or sometimes they completely ignore feedback. Engaging with students and feedback provision is a major concern for students because if the feedback provided to them is ignored, the learning and development would be limited. With the evolution of technology, students and parents can be provided with online feedback and rebuttal writing, so that feedback is seen by parents also. In addition, O'Donovan et al. (2016) highlighted that students' engagement using feedback is a major issue across various schools.

When data related to access to computers is observed, a high number of computing programs were presented and are being used globally (Fleischer, 2012). In these computers, provision to both the students and teachers' use is presented. These computers and smart devices aim to promote innovation in education and delivering quality lectures in the classroom. The learning of the students with the assistance of these smart computers significantly elevates, and also promotes innovative teaching methods through a collaborative based learning environment, and exploratory learning when at home (Liu, Lin, Tsai & Paas, 2012). Therefore, mobile technologies positively influence innovative teaching and engagement platform development, and provision of quality feedback. Simultaneously, these methods of innovation-based learning, provision of both online and rebuttal feedback facilitates the provision of communication, creativity, and problem solving skills development in students hence should be used.

Nonetheless, despite the advantages presented concerning mobile computing technology use in order to elevate diverse teaching methods, academic achievements, feedback provision, and computer accessibility, researchers reported mixed results with respect to the influence of mobile devices (Warschauer et al., 2014). Only limited researches assessed the best usage of technological platforms and presenting the best usage of mobile technology as well as rebuttal writing feedback provision. By utilisation of a mixed methods approach this investigation

considers how student learning as well as improved engagement through the provision of both the mobile technology and rebuttal writing feedback. This investigation seeks to assess the perception of students and teachers related to mobile technology and rebuttal writing experience.

When searched on the internet, a total of 5 studies was found which reviewed integrating mobile devices to improve teaching as well as learning, which can be segmented into 2 types.

1. Some of them focused on laptop integration
2. Some focused on mobile device integration

With respect to laptop-based programs, laptop integration assists in producing a positive impact on the learning and engagement of students. However, they also stated that the use of laptops did not help to enhance higher-level thinking or transformation of teaching methods. By presenting a review of 30 studies Penuel (2006) presented the use of laptops with wireless computer programs. Most of those studies reported that students use the assistance of a laptop to take notes, complete assignments, and use general purpose software. Whereas, laptop use assists design lectures, uploading assignments, and providing feedback to students.

The earlier study of Bebell and O'Dwyer (2010) investigated four laptop programs in the context of schools. They concluded that participation in one-to-one programs significantly elevated grades, and student achievement. Furthermore, they presented a high number of students use laptops to search on the internet, do homework, write, etc. While teachers are able to make deeper engagement with students, and personal learning to promote quality learning in the classroom.

A database search was carried out with respect to research done on using mobile technology in the classroom and two studies were found. Hwang and Tsai's (2011) extensive review in the context of mobile technologies, and ubiquitous learning put forward in six journals. In a review related to 154 articles, mobile technology use elevated in the year 2008, where most of the work was conducted in higher education institutes. 102 categories of using mobile technology in the classroom were presented and it was found that mobile learning activities significantly elevate classroom environment, student learning, and feedback provision. With respect to what pedagogical roles mobile technology carries out in classroom, it was found to act as a reinforcing tool which facilitates and strengthens learning, engagement, is an effective content delivery tool, and stimulates motivation. However, few projects were observed utilising mobile technology in the classroom for feedback purposes. Hence, the literature on involving participants in the investigation is limited. Most of the studies presented work on the lower-level of skills and knowledge while neglecting the aspect of ignored tasks, which included feedback and evaluation.

The feedback presented by teachers is of high importance, however, it depends on a variety of feedback methods needed to be considered (Shintani & Ellis, 2013). Some of them include explaining students' learning efficiency and individual differences in the classroom. The direct corrective feedback was regarded as the primary and effective aspect of teachers, as compared to indirect corrective feedback. This is because learners feel they would benefit more. Nash and Winstone's (2017) investigation showed that feedback types effected by observing corrective feedback and reported that feedback providing error in students work is considered more effective, as compared to other feedback methods. With evolution of technological tools, teachers can now give rebuttal feedback as well as online feedback by highlighting them.

Among different variables influencing teacher feedback, student engagement is regarded as the most important (Nash & Winstone, 2017). This research indicated that students perceive feedback substantially affected the academic performance. Hence, if student learning and feedback is presented by using rebuttal writing and technological platform, the challenges of increasing technology would certainly elevate. It is common that teachers put forward their concerns that students do not take their feedback positively. For example, it is observed that some students do not act on received feedback and make the same mistakes repeatedly.

Student feedback, learning and development is comprehensively studied in the educational psychology field. . However, little investigation with respect to utilisation of mobile technology is presented. Student engagement is explained by observing multinational constructs, which include cognitive dimensions, affective dimensions, behavioural perspectives of engagement, which interdependently influence each other (Philp & Duchesne, 2016).

Elevation in student learning cannot be done without focusing on student engagement because it has a central place in mobile technology use and effectivity of feedback of the teacher. Feedback motivates the student for learning and engagement to learn their subject comprehensively. Han and Hyland (2015) investigated methods of teacher feedback presented to six students of a university proficiency course of 14-week English and argued that students recieved assistance from teacher feedback; however the engagement level varied among some students. The investigation did not studyeffectiveness of a mobile technology feedback method hence it lacks in providing clear results. Therefore, it can be summarised that most of the students do not take feedback positively; hence integration of mobile technology might be beneficial.

Some studies undertook a qualitative method of investigation to study methods of increasing students' learning and engagement through teacher feedback. Han and Hyland (2015) demonstrated student's behaviour stating that it leads to an increase in student cognitive skill and affectively led to engagement and learning, following teacher feedback.



This research considers the methods which students use to establish engagement with teacher feedback. Zheng and Yu (2018) showed that often students take teachers' feedback positively, however, revisions are not always successful and it becomes a challenge for them to work on feedback. Due to this reason, feedback can be made more effective and beneficial by the induction of the latest technological tools to illustrate feedback in an enhanced and creative manner.

By analysing the above literature, this investigation considers whether feedback is needed for correcting student learning and development or not, with induction of mobile technology. This investigation is based on the questions as:

- To explore the degree of use for the mobile technology and rebuttal writing in the promotion of students' learning and engagement with feedback of the teacher?
- How rebuttal writing use increases learning and development of students keeping teacher feedback and mobile technology in consideration?
- How the students perceive rebuttal writing tasks and mobile technology in the classroom?

## **Methodology**

### ***Study Design***

The design used a mixed methods study, where experiments was initially performed followed by a meta-analysis, where literature related to the rebuttal writing and mobile technology was explored.

### ***Experimental Study***

#### **Study context**

The investigation was carried out in Pakistan, and information related to the investigation was presented to the respondents while informed consent was also obtained. Participants were 120 undergraduate students, enrolled in English courses, since rebuttal writing was under consideration. The students were selected from two universities (60 each) from four classrooms (two from each university).

#### **Experiment design**

This investigation made use of intact classes in the form of groups, taking mobile technology, student preferences and classroom realities into considerations. During the investigation, the respondents were given two writing tasks (included in appendix 1). The respondents received

written feedback and technology based feedback on the submitted writing tasks. The focus of feedback was on five comments only for each student, which were based on:

1. Language structures
2. Expressions clarity

The students were given feedback to explain more, suggestions, and question marks. This aimed to develop a sense of learning, and comparing feedback given by both the technology and rebuttal writing.

The students were designed and segmented into the following forms:

Group	N			Age		Treatment
	Total	Male	Female	M	SD	
Group 1	37	22	15	18.3	0.70	Completed the rebuttal task for two essays
Group 2	34	24	10	18.2	0.61	Completed no rebuttal task for two essays
Group 3	47	36	11	18.1	0.69	Completed the rebuttal task for Essay 2 only

Figure 1 segmentation of students and tasks (self-created)

### Data collection

The data gathered from various sources ranged from student essays, feedback from the teacher, revised essays, as well as questionnaires. Philp and Duchesne's (2016) approach was adopted where operationalising the term student engagement was used following a multidimensional cognitive construct (for feedback response of the students), behavioural construct (external resource consultation) as well as an affective engagement construct (students attitude as well as perceived usefulness towards teacher feedback). The questionnaire was used for the analysis of student's engagement which provided feedback from the teacher. Cognitive engagement was assessed by drawing items based on engagement with students' general perspectives and was precisely related to teachers' feedback (Philp & Duchesne, 2016). Items for affective engagement with the teacher feedback were derived from Bonilla Lopez et al. (2017) study, while items for student's attitude towards it were derived from Papi et al. (2019). Composite reliability (CR), Cronbach's alpha ( $\alpha$ ), as well as average variance extracted (AVE) measured items reliability as well as validity (Figure 2). The developed questionnaire was in English only. Also, the rebuttal task was analysed by the student's time on it, and their behaviour for seeking help. Informal interviews were also held, which were used in discussion for backing the findings.

Construct	Item	$\alpha$	CR	AVE
Perceived usefulness	1. I found the feedback useful.	0.922	0.926	0.757
	2. The feedback helped me to understand what was wrong.			
	3. The feedback motivated me to revise my essay.			
	4. The feedback helped me to correct my errors.			
Attitude	5. I like reading teacher feedback.	0.793	0.849	0.603
	6. Reading teacher feedback is fun.			
	7. Teacher feedback made me more interested in learning.			
	8. Teacher feedback made me feel frustrated.			
Cognitive engagement	9. I tried to understand the teacher comments.	0.591	0.674	0.354
	10. I tried to figure out the reasons for the errors in my essay.			
	11. I took note of teacher comments for future purpose.			
	12. I ignored teacher comments that I did not understand.			
Behavioural engagement	13. When I did not understand teacher feedback, I used reference materials (e.g. dictionary and Internet).	0.655	0.675	0.346
	14. When I did not understand teacher feedback, I discussed the feedback with my classmates.			
	15. When I did not understand teacher feedback, I discussed the feedback with my teacher.			
	16. I did nothing about teacher comments that I could not understand.			

Note:  $\alpha$ : Cronbach's Alpha; CR: composite reliability; AVE: average variance extracted.

Figure 2: Scale reliability and validity

### *Meta-Analysis*

#### **Data sources and strategy for search**

Research articles published and distributed from 1993 to 2013 were assessed. Different data sources with authentic journal articles were selected through a combined research strategy including electronic, manual and as a reference list. The electronic databases studied included the Education Resources Information Center (ERIC), Google Scholar, and Social Sciences Citation Index database of the ISI (Institute of Science Index). Different sets of keywords were used for the findings of the relevant and authentic article. Some of the student's related learning based on mobile technology include student's engagement and mobile devices, personal digital assistant, wireless devices, cell phone, tablet PC, laptop, tablet computer, and classroom response system. While the keywords related to learning include learning, teaching and training. The titles of the journals studied are presented in the table below.

**Table 1:** Journal Name

S.no	
1	Australian Journal of Educational Technology
2	Computer Assisted Language Learning
3	Educational Technology Research and Development
4	Language Learning & Technology
5	Computers & Education
6	British Journal of Educational Technology
7	Journal of Computer Assisted Learning
8	ReCall

### **Inclusion and Exclusion of the Articles**

The inclusion criteria required that the researches had an AT framework subject, following the learning stage coding and comprising a mixture of kindergarten, middle school, elementary school, university, graduate school, high school, adults, teachers, and their combination. The studies which used components such as “rules or control” (for instance the teaching methods as well as domains), and the “context” (for instance, intervention settings as well as duration) were included.

### **Results**

#### ***Experimental Design***

The findings for student engagement following the Mann Whitney U Test analysed the group learning differences along with calculation of the Cohen’s d as well as partial eta-squared ( $g^2$ ) as an effect size estimate. In Cohen d, the small effect has a value below 0.20, medium effect as value more than the 0.20 and 0.50, and large effect with 0.80 values. Whereas for the value of partial eta-squared, the small effect has a value below 0.01, medium effect as value above 0.06 and 0.14, and large effect with the value above than 0.14 (Ellis, 2010). The summary of the responses is presented in figure 3, concerning the responses of the students in Group 1 and Group 2 (Christ & Chiu, 2018). Negative effect is found to be related with the engagement indexes (Figure 4), while the frustration level was found high in Group 1 (i.e., ( $U \frac{1}{4} 377.5$ ,  $p \frac{1}{4} .015$ , 95% CI), with Cohen’s value of  $d \frac{1}{4} 0.58$ ,  $g^2 \frac{1}{4} 0.08$ ), with low inclination for considering teachers feedback in contrast to the group 2 findings. The values in group 2 were ( $U \frac{1}{4} 362.0$ ,  $p \frac{1}{4} .015$ , 95% CI, Cohen’s  $d \frac{1}{4} 0.60$ ,  $g^2 \frac{1}{4} 0.08$ ). The interaction level for group 1 was also low ( $U \frac{1}{4} 363.5$ ,  $p \frac{1}{4} .012$ , 95% CI [4, 2], Cohen’s  $d \frac{1}{4} 0.63$ ,  $g^2 \frac{1}{4} 0.09$ ) in contrast to Group 2. The findings showed that help seeking, sought and thinking acts were majorly

performed by group 1 ( $M = 4.50$ ,  $SD = 1.13$ ,  $M = 4.42$ ,  $SD = 1.25$  as well as  $M = 5.2$ ,  $SD = .67$ , respectively).

Group 3 responses summary is presented in table 5 with regard to the use of rebuttal and no rebuttal. The Wilcoxon Signed Ranks Test was performed, which depicted a negative impact on the rebuttal tasks for student's engagement. The findings showed lower tendency of the group 3 students for noting the feedback use concerning their rebuttal writing ( $z = 2.272$ ,  $p = .023$ , 95% CI [0.5, 1], Cohen's  $d = 0.71$ ,  $g^2 = 0.11$ ). The discussion prospects for teachers were  $z = 2.714$ ,  $p = .007$ , 95% CI [0.5, 1], Cohen's  $d = 0.88$ ,  $g^2 = 0.16$ ).

	1	2	3	4	5	6
Group 1						
Item 8	22.2%	55.6%	19.4%	2.8%	0%	0%
Item 11	0%	2.9%	25.7%	45.7%	22.9%	2.9%
Item 14	5.6%	25.0%	22.2%	33.3%	13.9%	0%
Group 2						
Item 8	58.1%	25.8%	12.9%	3.2%	0%	0%
Item 11	0%	6.5%	6.5%	38.7%	16.1%	32.3%
Item 14	6.5%	12.9%	6.5%	35.5%	16.1%	22.6%

Figure 3: Score response percentage (Group 1 and 2)

	Group 1		Group 2		<i>U</i>	<i>p</i>	95% CI		Cohen's <i>d</i>	$\eta^2$
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>		
Item 8	2.03	.74	1.61	.84	377.5	.015	-1	2	0.58	0.08
Item 11	3.97	.86	4.61	1.20	362.0	.015	-3	2	0.60	0.08
Item 14	3.25	1.16	4.10	1.51	363.5	.012	-4	2	0.63	0.09

Note: CI: confidence interval; LL: lower limit; UL: upper limit; Item 8: 'Teacher feedback made me feel frustrated.'; Item 11: 'I took note of teacher comments for future purpose.'; Item 14: 'When I did not understand teacher feedback, I discussed the feedback with my classmates.'

Figure 4: Teacher engagement feedback between Group 1 and 2.

	1	2	3	4	5	6
Condition 1						
Item 11	0%	6.5%	21.7%	28.3%	28.3%	15.2%
Item 15	2.2%		17.4%	37.0%	10.9%	8.7%
Condition 2						
Item 11	2.2%	13.0%	26.1%	23.9%	26.1%	8.7%
Item 15	4.3%	28.3%	32.6%	21.7%	6.5%	6.5%

Figure 5: Response percentage of score (Group 3)

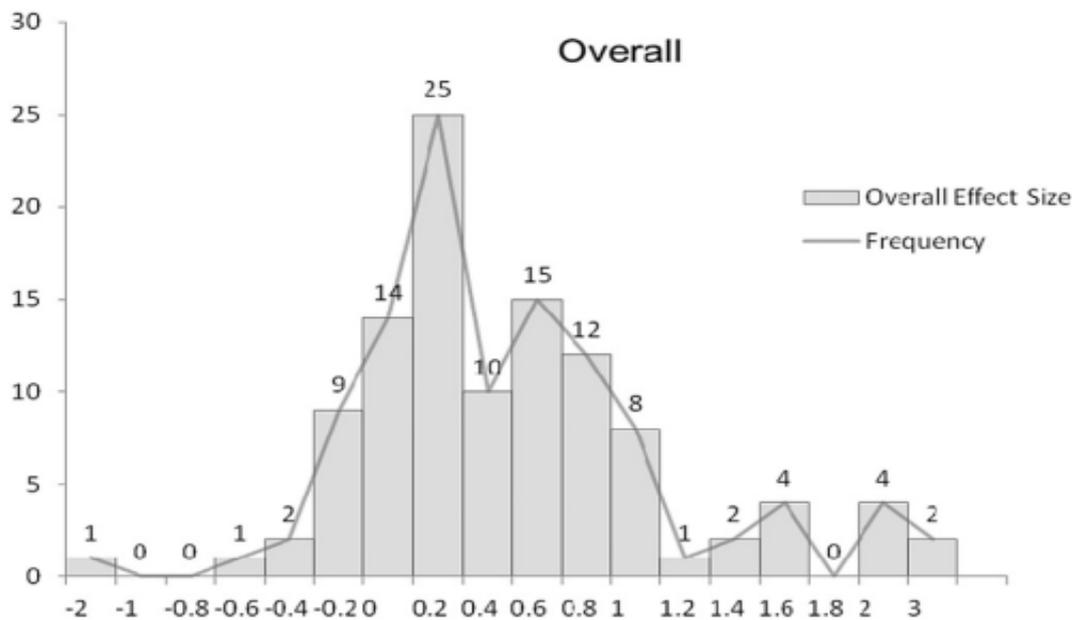
	Condition 1		Condition 2		z	p	95% CI		Cohen's d	$\eta^2$
	M	SD	M	SD			LL	UL		
Item 11	4.24	1.16	3.85	1.26	-2.272	.023	-0.5	1	0.71	0.11
Item 15	3.63	1.22	3.17	1.23	2.714	.007	-0.5	1	0.88	0.16

Notes: CI: confidence interval; LL: lower limit; UL: upper limit; Item 11: 'I took note of teacher comments for future purpose.'; Item 15: 'When I did not understand teacher feedback, I discussed the feedback with my teacher.'

**Figure 6:** Group 3 engagement with teacher feedback

### Meta-Analysis

The figure below presents the effect size for 100 articles distribution.



**Figure 7:** Effect Sizes Histogram

Findings depict the large effect size such as  $g \frac{1}{4} 4.045$  and  $g \frac{1}{4} 3.050$  (Hsu & Lee, 2011), which are greater as compared to the average effect size ( $g \frac{1}{4} 0.628$ ) for a total of 110 articles, thus it is not consistent in the analyses. The practice was used following a random-effects model to providing a mean effect size of 0.523, with 0.432e0.613 as 95% confidence interval. Since criterion of Hattie is deemed appropriate by various researches (such as in McMillan, Venable, & Varier, 2013 as well as Van der Kleij, Feskens, & Eggen, 2015), thereby, it is used to assess the effect sizes. The Hattie's criterion findings show the differences among the effect sizes as a consequence of the factors apart from the sampling error concerning the subject, including learning diversity, and teaching methods. The affective variables were also analysed (including student's satisfaction, engagement, motivation, attitude, and preferences). The mean effect and 95% confidence interval of the overall 22 articles was found to be 0.433 ( $z \frac{1}{4} 6.148$ ,  $p \frac{1}{4} .001$ ) and 0.295e0.570, respectively. The learning achievement meta-analysis showed a mean effect

of 0.523 stating that the use of mobile technology aided the learning leading to improved learning achievement in contrast to the traditional teaching methods (Jabbar & Felicia, 2015). The findings depict that mobile learning is effective for improving the affective learning outcomes of the students.

Categories and learning achievement effect sizes for 110 articles.

Variable	Category	Number of studies (k)	Number of effect sizes	Proportion of studies	Proportion of effect size	Effect size (g)
Learning stage	1. Kindergarten	1	2	0.009	0.005	0.103
	2. Elementary school	38	97	0.339	0.232	0.654
	3. Middle school	10	47	0.089	0.112	0.512
	4. High school	10	47	0.089	0.112	0.390
	5. College	43	128	0.384	0.305	0.599
	6. Adults	2	4	0.018	0.010	2.474
	7. Mixed	8	94	0.071	0.224	0.084
Intervention duration	1. Not mentioned	7	23	0.064	0.055	0.782
	2. ≤4 h	23	86	0.209	0.205	0.521
	3. > 4, ≤24 h	2	18	0.018	0.043	0.385
	4. >1, ≤7 days	5	9	0.045	0.021	0.369
	5. >1 week, ≤4 weeks	28	95	0.255	0.227	0.643
	6. >1 month, ≤6 months	36	100	0.327	0.239	0.630
	7. >6 months	9	88	0.082	0.210	0.290
Implementation setting	0. Not mentioned	2	3	0.018	0.007	0.700
	1. Classroom	55	242	0.500	0.578	0.487
	2. Museum	4	13	0.036	0.031	0.833
	3. Laboratory	3	12	0.027	0.029	0.329
	4. Outdoors	17	27	0.155	0.064	0.760
	5. Unrestricted	18	94	0.164	0.224	0.480
	6. Workplaces	3	14	0.027	0.033	0.247
7. Mixed	8	14	0.073	0.033	1.032	
Teaching method	1. Not mentioned	9	84	0.082	0.200	0.186
	2. Lectures	13	45	0.118	0.107	0.556
	3. Discovery and exploration	13	25	0.118	0.060	0.920
	4. Cooperative learning	9	60	0.082	0.143	0.261
	5. Problem-solving	10	32	0.091	0.076	0.572
	6. Game-based learning	4	7	0.036	0.017	0.404
	7. Self-directed study	34	122	0.309	0.291	0.521
	8. Podcasting	1	6	0.009	0.014	0.153
	9. Computer-assisted testing	6	8	0.055	0.019	0.660
	10. Project-based learning	1	7	0.009	0.017	2.551
	11. Mixed	10	23	0.091	0.055	0.847
Domain subject	1. Language arts	41	169	0.347	0.403	0.593
	2. Social studies	5	10	0.042	0.024	0.776
	3. Science	27	78	0.229	0.186	0.578
	4. Mathematics	12	41	0.102	0.098	0.338
	5. Multidisciplinary	1	6	0.008	0.014	0.333
	6. Specific abilities	5	24	0.042	0.057	0.103
	7. Health-care programs	7	18	0.059	0.043	0.535
	8. Education	3	6	0.025	0.014	0.381
	9. Psychology	3	7	0.025	0.017	0.467
	10. Computer and information	14	60	0.119	0.143	0.716

Figure 7: Size effect of included studies for meta-analysis

## Discussion

This research emphasised the usage of a task for the rebuttal-writing to encourage students' involvement with the responses of the teacher. Usually, it has been observed that this task provides a chance for students to communicate the instructor response, which are needed to explain their decision as feedback to the response is received. To justify the decision, notice the response with the students to make the use of response of the instructor (Nicol, 2010) to finish their altered and changed assignments. The research also recommends single variations

in student communication with the instructors' response. This helps the outcomes of former studies on student communication with response (e.g. Zheng & Yu, 2018).

The findings show that students concerning the rebuttal writing as an educational involvement (such as. Group 1) described to have frustration of high level, less peer debates and much less possibility to make notes of teacher lectures to use in future than the ones who were not needed to finish the assignment of rebuttal writing. The same outcomes were described by Group 3 who finished the task of rebuttal writing concerning the second assignment, in contrast to the first one. When rebuttal involvement was initiated, the latter team of students had less likelihood to makes notes from the lecture given by the teacher than whenever they were not needed to finish the rebuttal writing. Furthermore, the students defined that they had less debates with instructors regarding the response. Such outcomes are found to be contradictory to former researches performed to enhance student involvement with teacher response (e.g. Harland et al., 2017).

One likely cause can be that to write a rebuttal is a new experience and the students who participated can acknowledge that they have much time to become familiar with the assignment (Phung, 2017). When more attention is given by the students to write the rebuttal, they were having lesser time to debate with the instructor. This is partly observed by the feedback of the students experiencing hardship in order to explain themselves.

Other likely explanations for the lesser possibility of taking notes for the feedback of teacher and to argue or elaborate with the teachers and the peers is that to write a rebuttal may encourage more independent learning (see, e.g. Harland et al., 2017). Therefore, students can highlight and gather responses from outside resources, for example the comments of the former instructor (such as Yan & Brown, 2017) and represent it in their own assignments (e.g. Nicol, 2010), was not observed or being focused in the recent research. Furthermore, a lesser possibility of taking notes from teacher's responses can be defined as the received response has been understood by the students, as defined in the feedback below:

Initially, I did not get the meaning of a few teacher responses. When I get the meaning of the response, I cannot forget some changes and then applied those in my essay. (G-1-07)

A lesser possibility to talk about the issues or the matters with the instructor can moreover be defined for students' to take more charge of their learning (Nash & Winstone, 2017), as defined in the feedback below:

"I changed my writing firstly which was depending on the response of the instructor. If there was any aspect of which I had no knowledge, I search it online or ask it to my friends. After that I read the assignment's sentences one by one to find anything there, which I can make better". (G-3-45). Accurately, much study is guaranteed to learn the level of reasonable

interpretations of them. From the point of view of the students regarding the rebuttal involvement, this research shows that, the students did not actually enjoy devoting much effort and time to write rebuttals and make the changes (see also Winstone et al., 2019); while on the other hand, the students appreciated when the instructor introduced a writing assignment with a rebuttal essential, particularly when they properly understood the assignment.

Various restrictions of the recent research can be observed. One is linked with the interview questions to measure the involvement of students with the response of the teacher, specifically in the aspects of cognitive involvement and behavioral involvement. Item dependency along with the accuracy development were evaluated by the use of the AVE and CR. Both of them have values more than 0.50 and show higher dependency of the concerned items (Hair et al., 2010). Whereas the CRs for the sub-ranges are found to be sufficient as they are more than 0.50, for cognitive involvement and behavioural intervention, the AVEs were less than 0.50, which shows relative bad discriminating reliability. The inside persistency of both of them makes it relatively less, which recommends that four of the items within the two ranges cannot work altogether in a same way. This partially defines why there wasn't any variance at the factor-level between team 1 and team 2 or between the two situations of team 3, yet there was a remarkable variance found in a number of indexes of involvement (such as Items 8, 11, 14, and 15). Similarly, the inclusion of the studies from 1993 to 2013 also served as another restriction.

Representing these item to 'seek help', we observed that in reality, to seek help from an instructor, might be very distinct from receiving help from a fellow student or to consult a dictionary (Price et al., 2011). The instructor cannot be accessed always or a few students might have hesitation in asking the instructor for any kind of help due to the unequal power bond (see, for example Carless & Boud, 2018). There are also differences when seeking help from a fellow student and when a student consults reference literature. Strong student bonds need special sorts of social competencies (Man et al., 2018), while usage of electronic sources includes digital learning. While all of each four aspects are helpful to discover behavioral involvement of the students, we suggest that future studies must focus on finer differences between the various sources for the consultation. In a similar manner, calculations for the cognitive involvement needs the creation and the usage of more sources. A more accurate scale can also be created in the coming times for the assessment of various features regarding the student involvement by the formulation of more and refined techniques.

## **Conclusion**

It has been focused in this literature to introduce a rebuttal writing while making changes in order to encourage involvement with the response of the instructor. Also, a meta-analysis assessed the effectiveness of mobile technology on student's achievement. The outcomes of the research have defined how to shape the rebuttal writing in a manner the students are



involved with the feedback of the instructor, therefore, by the contribution to the body of study on student involvement (see, e.g. Carless & Boud, 2018). This research recommends that student involvement with instructor response can be encouraged by the help of rebuttal writing, particularly when students are more familiar with the assignments. The assignment seems to be a purposeful tool for learning which increases the involvement of the student, and adds to the little yet progressive list of evidence-based educational ways defined in the recent document (Winstone et al., 2017, 2019).

While this research recommends that it is worth having a task of rebuttal-writing, a logical problem for the instructor needs focus. The application of an assignment might be time consuming. In this research, a number of hours were given to provide remarks to the first submitted assignments by the students and a number of additional hours to read the changes and the rebuttals of the students. Another problem is that when students submit the changed assignments along with the rebuttals, they have a likelihood to hope for more response on their changed assignments, as recommended in the recent research. This can add to the challenges which are being noted formerly for a number of language teachers (see also Carless & Boud, 2018).

In the discussion of the worth to introduce a rebuttal assignment, the literature has also recommended the significant role along with the students' responsibility in the process of learning. It has been considered sometimes that the response of an instructor is needed by students to grown in learning. However the response of an instructor is only one way for students to scaffold. This scaffolding will not essentially lead to learning; students have the responsibility to solve their issues personally (Nash & Winstone, 2017). To have an opportunity of writing rebuttals, we debate, gives a way where this sharing responsibility can be encouraged. Particularly, teaching students regarding expectations from instructors and how to use the response of the instructor on their own and participation is a significant part of language learning (see also Carless & Boud, 2018).

### **Abbreviations**

AVE: Average Variance Extracted; CR: Composite Reliability; ERIC: Education Resources Information Center (ERIC); ISI: Institute of Science Index); PDA Personal Digital Assistant.

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