



Impact of Peer Feedback on Learning: A Case of EFL Teacher Trainees

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The present study investigated the learners' perceived impact of peer feedback on their learning after one semester's practicing it in a content course classroom, with additional interests in the influence of personal characteristics in the shaping of their perception and factors underlying their approaches to peer-feedback activities. Participants were 52 Korean college students majoring in TEFL. A survey was administered at the beginning and the end of the semester in search of any possible change in their perception attributable to the actual practicing of peer feedback activities. An interview was also conducted to see how their perception was shaped. Results indicated that, at the end of the semester, the participants significantly more positively perceived the beneficial impact of peer feedback on various aspects of learning. Students with more exposure to peer feedback activities tended to more favorably appreciate its beneficial impact, especially on learning achievement. The significant difference between the extroverted and the introverted about the impact of peer feedback on learning motivation disappeared at the end of the semester, suggesting peer feedback could benefit learners of any personality type. The desire to keep face emerged as the most salient feature underlying the process where peer feedback benefitted the learners.

Keywords: peer feedback, motivation, participation, achievement, face keeping, teacher trainees

Introduction

For the past few decades, learner-centeredness has become one of the most central notions in various aspects of learning and teaching. Peer feedback, in a sense, could be considered a very active form of learner-centeredness implemented in a classroom in that giving feedback, as a way of informal or formative assessment, has traditionally been conceived as an essential part of teaching job, thus rather strictly confined to teachers.

Peer feedback could also be regarded as a quite sophisticated type of interactions between learners, for certain degree of command of learning materials at hand would be required to be able to give feedback to peers. Well-known is that interaction between peer learners comprises a core construct in recent theories of learning (e.g., Lantolf, 2005; Long, 1996), and the usefulness and effectiveness of interaction between learners in learning process and achievement has steadily been reported in the literature (e.g., McDonough, 2004; Ohta, 1996; Smyth, 2011).

Given the significance of learner-centeredness and interactions among learners in educational contexts, it seems natural that a huge number of studies about peer feedback have been conducted for the past few decades, investigating how it works in overall learning process or learning outcomes. Research topics covered so far include more general ones such as the effect of peer feedback activities on learning (e.g., Berggren, 2015; Birjandi & Tamjid, 2012; Paulus, 1999; Ruegg, 2015), or more specific ones such as

interaction patterns in giving/receiving feedback (e.g., Zheng, 2012; Zhu, 2001), motivational issues associated with peer feedback (e.g., Yu & Lee, 2015; Zhu & Mitchell, 2012), or culture-related phenomena in peer feedback practices (e.g., Hu & Lam, 2010; Nelson & Carson, 2006).

Meanwhile, several recent studies seem to attend to more finely tuned aspects of peer feedback, e.g., the possible influence of individual characteristics or socio-cultural contexts on practicing peer feedback. Allen and Katayama (2016), for example, maintained that peer feedback practices could vary as a function of many different factors, e.g., socio-cultural contexts where they occur, or personal matters such as learners' perception of their peers' ability. Yu and Hu (2017) also reported that learners' approach to peer feedback was influenced by their own beliefs and previous experience. These studies suggest highly complicated nature of peer feedback, which could be affected by both interior and exterior factors surrounding learners.

In the following chapter, previous studies will be briefly reviewed for their major findings and what remains to be further explained, followed by the research questions posed for the current study.

Background

Review of Previous Studies

A great number of studies have been conducted about peer feedback and assessment¹ for the past few decades, especially in the context of L2 writing classrooms. Paulus (1999) supported the positive effect of peer feedback on writing improvement among ESL learners by finding out that peer feedback led to semantic-level revisions while surface-level revisions dominated otherwise. Tahir (2012) also reported that the students were satisfied with the review comments from their peers both in affective aspect and quality of feedback. Ganji (2009) further maintained that peer feedback was the best method in EFL writing improvement beyond self-, or teacher feedback. Zhang (1995), however, reported different results, observing that the acclaimed positive affective advantage on peer feedback in L1 writing was not found among his ESL learning participants, with their strong preference for teacher feedback.

Similar skepticism was expressed in Sengupta's (1998) study that involved secondary school ESL learners in Hong Kong. This study deserves attention in that the researcher points to the role of educational context in shaping learners' concept of, or attitudes towards, peer feedback or assessment. Related to this, Roskams (1999) also mentioned 'Asian culture' in explaining his finding about attitudes towards peer feedback and evaluation among Chinese learners of English in a Hong Kong university. These studies seem to imply a context-specific difference in the effect or perception of peer feedback, calling for more rigorous investigation before reaching a comprehensive understanding of this issue.

Meanwhile, Lee (2015) reveals considerably different results from Zhang (1995), although conducted in a similar social context with quite equivalent level learners. In Lee (2015), Chinese junior secondary students perceived peer feedback very positively in various aspects while they, similarly to Zhang's (1995) participants, rated teacher feedback more highly than peer feedback. Ruegg (2015) also compared teacher feedback with peer feedback in an EFL writing classroom, focusing on the relative effect of each. The result indicated that the only difference between the two groups in the post-test writing scores was found in grammar, i.e., the teacher-feedback group showed significantly better performance in grammar

¹ The terms 'peer feedback', 'peer evaluation', or 'peer assessment' seem to have often been used without clear-cut boundaries in the previous studies. According to Brown and Abeywickrama (2010), feedback is a form of assessment, which is largely informal and formative, when assessment includes *tests* under its scope as a more formal and administrative procedure. Admitting that different definitions exist, the current study narrowly defines, for convenience' sake, peer evaluation as something that includes the action of rating or grading of the peers' product, performance, or ability, whereas peer feedback is defined as more of giving comments about the peers' performance or ability either in oral or in written. Within this framework, peer feedback could concur with peer evaluation in classroom settings, as implemented in the current study, which could still be considered 'peer assessment', as a whole, in a certain framework.

than the peer-feedback group. Ruegg (2015) also found that there was difference between the teacher and the students in the area of giving feedback. In a more recent study that compared teacher and peer feedback in a college EFL writing classroom, Park (2018) reported that teacher feedback was more favored and incorporated than peer feedback by the students while they still appreciated peer feedback for its own strength. Babaii and Akeh (2019) also compared teacher feedback and two types of peer feedback in an EFL writing class, finding out the greatest performance in the paired peer feedback group.

Taking a little different approach, Berggren (2015) describes in detail how Swedish secondary school EFL learners' writing ability developed throughout peer feedback experience. According to Berggren, the learners' writing improved at the macro-level with their enhanced awareness of audience and genre. This study suggests peer feedback could be successfully implemented even among the lower level language learners as long as training is provided in advance.

Unlike the majority of the peer feedback studies that focused on writing, Sippel and Jackson (2015) were specifically interested in the effect of corrective oral feedback on the acquisition of grammatical forms. According to them, their intermediate level German language learners showed greatest improvement when receiving peer feedback although both the teacher's and the peers' corrective oral feedback turned to be effective in acquiring the two target grammatical features. In addition to its uniqueness in the target of feedback, this study seems meaningful in that it paid attention to the mutual benefit of peer feedback both for the givers and receivers.

Kissau and King's (2015) study also deserves attention in that it is one of the few studies on peer feedback ('*peer mentoring*' in their terms) that involved L2 teacher-trainees, given that, as already mentioned, studies on peer feedback have largely been situated in writing classrooms. After one semester of one-to-one matched mentoring project where a mentor observed the classes the mentees taught and had conferences with questions and answers about those classes, the researchers found that both parties benefitted from such experience especially when they greatly shared commonalities in areas such as age, previous experience, and content domain expertise, and when the manner of co-work was supportive rather than judgmental. Their study seems to remind us the unique value of 'being peers' in feedback procedure. Commonalities in age and experience could bind them with strong solidarity, which is distinctive of peer feedback most teacher feedback may lack.

While a number of studies mainly searched for the effect of peer feedback on learning gains or attitudinal change, another group of studies, though not many, more narrowly focused on figuring out the possible factors in peer feedback, i.e., what affects learners' behaviors when giving or receiving feedback from peers. In a relatively early study on this issue, Roskams (1999) discussed the impact of cultural context on Hong Kong university students' perception of peer feedback and assessment. According to him, attitude towards collaborative learning arrangement such as group work or pair work affected the quantity of peer interaction, and the students were reluctant to accept peer assessment beyond learning experience. Sengupta (1998) had reported a similar result to this. These authors suggest that such findings could be attributed to Asian cultural norms.

In a similar vein, Yu and Hu (2017) paid attention to the personal and contextual factors that might shape one's approach to peer feedback. After examining two university students' practices in giving peer feedback to EFL writing compositions, they concluded that the socio-educational context where the learners were situated, and personal beliefs and experiences as well, influenced their feedback giving behaviors.

Meanwhile, Allen and Katayama (2016) investigated the role of proficiency, more specifically learners' perceptions of their peers as well as of themselves, in peer feedback. They found that Japanese college EFL learners' peer feedback practices were influenced by their own English proficiency and also by how they perceived their peers' proficiency. Similarly, Chong (2017) reported that secondary school EFL writers' feedback relevance and accuracy was positively correlated with their own writing ability.

Slightly different from these studies, Villamil (1996) attempted to figure out cognitive processes, strategies, and social behaviors underlying peer feedback practices by analyzing paired revision sessions of Spanish speaking college ESL learners enrolled in a writing course. Villamil reported 7 cognitive

activity types (e.g., dealing with trouble sources), 5 strategies (e.g., resorting to interlanguage knowledge), and 4 social behavior aspects (e.g., collaboration). This study seems unique in that it investigated in depth those cognitive and social aspects involved in peer feedback.

Summary and Research Questions

As can be seen in the previous section, existing studies on peer feedback could largely be characterized as follows. First, the majority of studies were conducted in relation to L2 writing, with an exception of small number of studies (e.g., Kissau & King, 2015; Sippel & Jackson, 2015), thus seriously limited in the scope of research. Given the diverse benefits for learners from peer feedback activities reported in the previous studies, research need to be expanded into different contexts or other areas of learning, beyond L2 writing classrooms.

Second, much remains to be further investigated about the factors that intervene in the complex process of giving and receiving peer feedback, i.e., what factors influence the learners when they are engaged in peer feedback, or the way learners perceive and practice feedback giving to their peers. Although several studies figured out some personal or socio-cultural factors that seem to work in peer feedback practices, it is not clear yet precisely how such elements function in specific contexts of learning.

The current study was motivated by the need for further study to fill in the gaps in the previous studies. What makes the current study distinguished from the majority of previous studies is the characteristics of the participants and the context where peer feedback occurred. All the participants were the undergraduate students majoring in secondary education at the teachers' college in a university, i.e., pre-service teachers or teachers-to-be. They were enrolled in courses where peer feedback was a crucial component. Giving feedback to students and sharing ideas among colleagues would comprise a critical part of a teacher's job. In that sense, it would be very significant for these participants to train themselves to give feedback to others' performance. In addition, the current study attempted to explore whether individual differences in personality or previous learning experience could influence the learners' perception of peer feedback and the way they approach the activity. Given the recent research orientation and the researchers' endeavors to elucidate the precise mechanism underlying peer feedback activities, findings from the current study are expected to contribute to our understanding of exactly how peer feedback works among the learners of different characteristics and backgrounds.

The following research questions were posed for the current study:

1. Does the learners' perception of peer feedback change after one semester's experiencing of peer feedback activities?
2. Does individual characteristics influence the learners' perception of peer feedback?
3. What influences the learners' approach to peer feedback activities?

Method

Participants

The participants were 52 Korean college students who were single-, or double-majoring in English education (TEFL) at a university located in Seoul, Korea. Twenty-four of them were sophomores and 28 were juniors, and 35 were female and 17, male. Their average age was 21.8.

The Context and Procedure

This study was conducted in two different intact classrooms where the participants took the courses offered as part of requirement for the secondary school English teacher certificate: i.e., *TEFL methods* (a

course for sophomores) and *Teaching reading and writing skills in English* (a course for juniors). Both courses employed a micro-teaching session and peer feedback as core classroom procedures, in addition to lectures and workshops provided by the instructor. The two courses were taught by the same instructor. For each course, participants completed a pre-survey at the first class meeting. During the coursework, they engaged in one or more group project(s), presented the output in group, gave and received peer feedback, and completed a peer evaluation form.²

At the peer feedback stage, the participants had a Q & A session where the observing students (i.e., all the other students but those who presented their product in that class) gave comments in spoken about the presenters' performance, or asked the presenters questions about the aspects of the micro-teaching session performed. This phase often worked as a platform for clearly understanding the presenters' rationale in implementing the micro-teaching session, and also for sharing ideas about teaching and learning activities among the peers, not to speak of forming the basis of evaluating the peers' performance. The instructor encouraged all the participants to actively engage in the questioning and commenting before filling out the peer evaluation form. When all the peer feedback and evaluation activities were over, the instructor gave her own feedback comments, both on the micro-teaching practice and on the peer feedback comments from the students, as a consolidation procedure.

At the last class meeting, a post-survey was administered in order to see if there was any difference in the participants' perception of peer feedback compared to that at the pre-survey. The point of interest was whether the experience of peer feedback as implemented in the current study influenced the participants' perception, in whatever way.

When all the semester was over, individual interview schedules were arranged for the participants selected as interviewees. The criteria for selecting interviewees were to invite the participants who could represent adequately the sample in light of personal characteristics and the response patterns (e.g., big or no change in perception between pre-, and post-survey, introverted or extroverted in personality, with-, or without prior experience of peer feedback, etc.). Twelve interviewees were finalized and each interviewee met with the researcher at the time of their choice, and the interview was audio-recorded for later transcription.

In what follows is described the overall composition of the two courses, explicating how peer feedback activities were incorporated into the classroom procedures. For both courses, the first week of the semester was spent on an overview of the course and the administration of the pre-survey designed for the current study. The following 11 weeks (except the 8th week of the mid-term exam period) were devoted to coursework. For the sophomore course (i.e., *TEFL Methods*), lectures on the well-known methods for teaching L2 to non-native speakers of the language (e.g., *Task-based Language Teaching*, *Total Physical Response*, *Content-Language-Integrated-Learning*, etc.) were given by the instructor. Additionally, video clips demonstrating specific methods were viewed where available, and the instructor demonstrated how the methods could be implemented in a classroom, otherwise. One week was allotted for the participants to practice designing a lesson plan in the classroom before the micro-teaching session began.

For the junior course (*Teaching reading and writing skills in English*), the second and third week were devoted to the lectures on the theoretical aspects of reading comprehension such as theoretical models of reading comprehension, factors involved in reading process, difference between L1 and L2 reading, and so on. During the following 8 weeks (except the week for the mid-term exam), the participants prepared themselves to teach reading and writing skills in English. They got familiarized with various activities for teaching relevant skills by engaging in small in-class workshops which followed the instructor's lectures on the related topics. Then, 3 weeks of micro-teaching session were in order, before the final exam period.

In the micro-teaching session, a group of 3 to 5 students (depending on the class size and other circumstances in each course) worked together to create a lesson plan based on the materials covered in the course, and implemented it in the classroom, taking peer learners for their students. The participants were instructed to design a 40-minutes' length lesson plan for teaching secondary school EFL learners.

² Refer to the section titled *Materials* for the pre-survey and peer evaluation form.

For the sophomores, it was required to incorporate into their lesson plan the features of at least two different teaching methods of their choice. Before performing the prepared micro-teaching session, each group briefly reported to the class about their product, e.g., what their teaching objectives were, which methods they employed, etc. The junior participants were allowed to use materials of their own choice to teach reading and writing skills for secondary school EFL learners. They, too, briefly explained to the class about the characteristics of their target learners, teaching objectives, activities to be used and so on, before starting their micro-teaching session.

In both classes, the presenters provided the rest of the class members with a full package of teaching materials they created, including a hard copy of lesson plan and worksheets, if applicable. About 25 minutes' peer feedback session followed, where the observing participants (i.e., those students who observed the presenters' micro-teaching session, simultaneously acting as learners taught by the presenters) asked questions, or gave comments to, the presenters about overall or specific features of the micro-teaching session, and the presenters responded (or explained their rationales in many cases) to those questions or comments from the peers. Finally, the peer evaluation form was filled out. As there were a total of 6 micro-teaching groups, each of the participants was supposed to give feedback to, and evaluate, their peers' performance 5 times, while receiving peer feedback and evaluation once about the performance of the group each belonged to, from all the other students outside his/her group.

Materials

Pre-survey questionnaire

The pre-survey consisted of two parts: (1) personal information such as grade year, personality type (i.e., introverted vs. extroverted), learning style (i.e., field dependent vs. independent; reflective vs. impulsive), and prior experience of peer feedback; (2) 4 questionnaire items about how the students perceive peer feedback, for each of which the participants were to choose one out of 5 scales, from "Strongly agree," to "Not agree at all." The 4 items include the following: (1) "Peer feedback activities (will) help better understand the learning materials."; (2) "Peer feedback activities (will) help enhance motivation to learn."; (3) "Peer feedback activities (will) help prepare for, and actively participate in, the class."; (4) "Peer feedback activities (will) help improve learning achievement."

Peer feedback and evaluation form

Five criteria of evaluation were constructed by the researcher for this form covering such issues as teaching objectives, quality of the teaching materials, correspondence between teaching/learning activities and the learner characteristics, creativity and usefulness of structure and contents. These criteria were stated in the question form—e.g., "Were the teaching objectives clearly stated?", "Were the objectives adequately accomplished?", "Do the employed activities/materials well match the target learners' characteristics such as proficiency level or age—and the participants were instructed to mark on one of the 5 scales (from '5' for 'Excellent', to '1' for 'Poor' on the given criterion). Below the criteria for evaluation, empty space was provided for the participants to take notes of feedback comments or questions to ask the presenters.

Post-survey questionnaire

In order to examine whether the participants' perception of peer feedback has changed after experiencing the relevant activities in an intact content course, a post-questionnaire was employed with the same questionnaire as in the pre-survey. As the post-survey would be administered at the end of semester, and the participants were supposed to respond to the questionnaire retrospectively, the items

were re-phrased in the past tense, e.g., “Peer feedback activities *helped* (me) better understand the course materials.”

Interview questions

In addition to the surveys, interview protocols were also collected for triangulation of data source as well as for fortifying the qualitative aspects of the current study. Interview questions slightly varied across the interviewees, as the interviewees were selected to represent different groups of participants in light of personality types, grade year, or responses to the surveys. The researcher first examined their pre-, and post-survey responses closely, and elicited questions to ask each interviewee based on their responses and personal characteristics. Questions often centered on the reasons for the interviewee’s reaching specific response. Some of the interview questions included the following: “Your response changed in more positive direction in the post-survey than in the pre-survey, about the benefits of peer feedback in better understanding of learning materials. What made you change your perception?”; “You consistently thought peer feedback greatly helps enhance motivation to learn. What makes you so sure of it?”

Data Analysis

Descriptive statistics were calculated for the participants’ responses to each questionnaire item and for the sum of all the items in the pre-, and post-survey. Then a series of one-way ANOVA were conducted in search of the possible pre-existing differences in the participants’ perception associated with individual differences. To this end, the participants’ responses to each questionnaire item in the pre-survey were compared to see if there was difference as a function of each personal variable examined in this study (e.g., gender, prior experience, personality type, or cognitive style). The same procedure was repeated with the post-survey.

Next, a series of paired-samples t-tests were run to compare the responses to the same questionnaire item at the two different times, i.e., at the beginning and the end of the semester, as a means to verify if one semester’s peer feedback experience as practiced in the current study has brought about any change in the participants’ perception of its impact on their learning. Also, the audio-recorded interview protocols were transcribed and meticulously examined to elucidate what underlay the participants’ perception and approach to peer feedback activities.

Results and Discussion

Pre-existing Difference in Perception

In order to find out if there was any pre-existing difference in the participants’ perception of peer feedback according to their prior experience or personal characteristics, one-way ANOVAs were run first for the average of responses to all items in the pre-survey and then for each of them, respectively.

Results showed that there was a significant difference in the participants’ perception of the impact of peer feedback on overall learning, depending on prior experience. This means that those students who had practiced peer feedback in previous courses more positively rated (or had more positive expectation of) the impact of peer feedback on their learning in general. Prior experience of peer feedback seems to have positively affected their perceived learning achievement in particular. That is, those students with previous experience of peer feedback more highly rated on the item “Peer feedback activities (will) help improve learning achievement.” than those without such experience. No other significant difference was found in other items (e.g., grasp of learning materials, learning motivation, or class preparation/participation) ascribable to prior experience of peer feedback. Tables 1 to 3 show the results.

TABLE 1
Means by Prior Experience and Other Personal Variables

		<i>N</i>	<i>Mean</i>	<i>SD</i>
Pre-Average	Prior Exp (Yes)	31	3.60	.66
	Prior Exp (No)	21	3.46	.53
Learning Achievement	Prior Exp (Yes)	31	3.60	.85
	Prior Exp (No)	21	3.33	.57
Learning Motivation	Introverted	24	3.29	.91
	Extroverted	28	3.79	.69

TABLE 2
Pre-survey Average by Prior Experience

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between Groups	3.472	1	3.472	2.902	.044
Within Groups	19.148	50	.399		
Total	22.620	51			

TABLE 3
Learning Achievement by Prior Experience

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between Groups	7.369	1	7.369	4.631	.006
Within Groups	25.458	50	.530		
Total	32.827	51			

Another significant difference in the students' perception of peer feedback was associated with a personality factor, i.e., extroversion vs. introversion (cf. Table 1, bottom). Namely, those students who perceived themselves rather extroverted tended to more positively expect or appraise the impact of peer feedback on boosting their learning motivation. Table 4 illustrates this result. However, this variable did not bring a significant difference in other aspects of learning examined in the current study, i.e., understanding of learning materials, class participation, or learning achievement.

TABLE 4
Learning Motivation by Introversion/Extroversion

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between Groups	3.154	1	3.154	3.975	.048
Within Groups	39.673	50	.793		
Total	42.827	51			

These results imply that learners' experience of peer feedback in the courses they took previously, or their personal characteristics such as being introverted or extroverted could affect how they shape their perception of the impact of peer feedback on their learning process or product.

Meanwhile, variables such as cognitive style (e.g., field dependent or independent, reflective or impulsive), gender, or school grade (i.e., whether they are sophomores or juniors) were not found to significantly influence the participants' perception of peer feedback impact on any aspect of learning being examined in the current study. This result suggests that these variables may not have played a central role in forming learners' perception about the impact of peer feedback on learning, at least in the specific context of current study.³

³ Interactions among the variables were not examined in this study because the sample size was not big enough to calculate double or triple interaction effects. However, we cannot exclude the possibility that interactions could occur among those variables, which needs further inquiry.

Change in Perception over Time

Now, it is in order to check whether the learners' perception changed at the end of the semester, after they had participated in the activities of giving and receiving peer feedback as designed and implemented in the context of current study. The results of paired-samples *t*-tests revealed that there was a significant difference in the participants' responses to every questionnaire item between the pre-, and the post-survey, not to mention the average of all the items. Namely, the participants significantly more positively perceived the impact of peer feedback on their learning at the end of the semester, compared to at the beginning. Table 5 is a summary of the result.

TABLE 5
Difference between Pre-survey and Post-survey

Questionnaire Item	Pre-survey	Post-survey	<i>t</i>	<i>Sig.</i>
Average of all items	3.51	4.17	-6.652	.000
Grasp of Materials	3.48	4.29	-6.412	.000
Motivation	3.56	4.02	-3.150	.003
Preparedness/Participation	3.56	4.25	-4.989	.000
Learning Achievement	3.44	4.10	-4.977	.000

This result implies that peer feedback practices could considerably help learners better understand the learning materials, enhance their motivation to learn, encourage them to more actively participate in the class, and make them feel a sense of achievement. Judging from *t*-values, the participants seem to have thought that peer feedback activities were especially beneficial for their better understanding of the learning materials, followed by active participation in the class.

Further analyses were conducted to see if there was any difference in the post-survey responses according to pre-existing individual differences among the participants. Significant difference was not detected in almost all comparison pairs. These findings indicate that all the participants came to perceive peer feedback more positively after they experienced it as implemented in the current study, regardless of personality type or cognitive styles. This result deserves attention recalling the result that there was a significant difference, at the beginning of the semester, in the participants' perception about the impact of peer feedback on learning motivation depending on the personality type (i.e., introversion vs. extroversion). Table 6 illustrates how the gap between the extroverted and the introverted narrowed down at the end of the semester.

TABLE 6
Motivation by Extroversion/Introversion over Time

Personality	Pre-Survey	Post-Survey	<i>N</i>
Introverted	3.29	3.96	24
Extroverted	3.79	4.07	28
Total	3.56	4.02	52

It seems encouraging for both the teachers and the learners that repeated exposure to peer feedback activities might help learners actively engage in the classroom procedures, better understand the course materials, be more motivated to learn, and feel a stronger sense of achievement, even if they are rather introverted and thus somewhat likely to be reluctant at first to openly give and receive feedback among the peers.

Meanwhile, the only significant difference in the post-survey associated with individual differences was found with the item of 'learning achievement': i.e., those participants with prior experience of practicing peer feedback more strongly agreed that peer feedback activities helped their learning achievement. The tables below show the results.

TABLE 7
Means for Learning Achievement by Prior Experience

Prior Experience	<i>N</i>	<i>Mean</i>	<i>SD</i>
Yes	31	4.26 (cf. 3.60 at pre-survey)	.44
No	21	3.86 (cf. 3.33 at pre-survey)	.91
Total	52	4.10	.69

TABLE 8
Learning Achievement by Prior Experience

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between Subjects	2.012	1	2.012	4.470	.039
Within Subjects	22.507	50	.450		
Total	24.519	51			

Although the participants in general came to have significantly more positive perception about peer feedback in light of its impact on learning achievement at the end of the semester, the results in Tables 7 and 8 indicate such belief became stronger among those who had experienced peer feedback activities prior to the current study. This finding supports the observation by Yu and Hu (2017) that learners' approach to peer feedback could be influenced by their previous experience. It also implies that the more accumulated experience of practicing peer feedback the learners have, the stronger impact it may have on their perceived learning achievement. Such reasoning is based on the fact that the number of previous courses implementing peer feedback the participants took was in proportion to their rating on the item of 'learning achievement.' The following table reports the relevant descriptive statistics.

TABLE 9
Learning Achievement by Degree of Prior Experience

# of Previous Courses of Peer Feedback	Pre-Survey Mean	Post-Survey Mean
0	3.33	3.86
1	3.54	4.25
2	3.83	4.33

Table 9 clearly demonstrates how peer feedback experience positively influenced the participants' perception of its impact on their learning achievement for all participants, from those who had never experienced peer feedback activities before the current study, to those who had already practiced peer feedback in two other previous courses. Although just in terms of descriptive statistics, it is remarkable that those students who first experienced peer feedback procedure in the current study rated a little bit higher on the item of learning achievement at the end of the semester (cf. 3.86) than those who had already experienced such procedure at the time of the pre-survey (cf. 3.83). From all these results, it was reasoned that peer feedback activities could possibly have an amplifying impact on the learners' perceived learning achievement. Given the generally agreed importance of learners' belief or self-confidence in overall learning process, this finding seems to add an empirical evidence for the usefulness of practicing peer feedback in a classroom.

Learners' Approach to Peer Feedback: Evidence from Interview Protocols

Analysis of the interview protocols revealed some clues about how the participants' perception changed into positive direction over a semester. From their retrospection, a certain mechanism emerged by which peer feedback activities benefitted learners in various aspects of learning. More specifically, most interviewees said that the idea of being evaluated by peers was a little anxiety-provoking at first, whereas teacher's evaluation was rather taken for granted. This anxiety was transformed into desire to

keep face among the peers, just like the two faces of a coin. Further combined with competitiveness, it eventually functioned as motivational impetus for them to work harder, rendering them to exert more efforts in preparing for the class task (i.e., micro-teaching).

Such investment and endeavor naturally helped them achieve better command of the course materials, and their self-esteem grew if rewarded by complementing feedback comments from the peers, and this in turn further strengthened their motivation to study harder, feeling a sense of achievement. The current study posited 4 items in the survey questionnaire as a means to represent possible aspects of learning process and product (i.e., grasp of the learning materials, motivation to learn, participation in the class, learning achievement)⁴, and the participants' retrospection protocols often illustrated how these aspects were often complicatedly interwoven. The following excerpts illustrate this pattern.

When involved in a group project, I thought that my group members would dislike me if I do not fully understand the course materials. Such thought helped me keep motivated and have better comprehension of the course materials by working hard." [JS: female sophomore, introverted]

Because I didn't want to receive negative feedback comments from my peers, I exerted all my efforts to be well-prepared for the class so that they could never find fault with my work. Face-keeping and competitiveness invoked my motivation. [DY, female junior, extroverted]

Personally, I tend to be more motivated when working in the presence of others than working alone. In this class, having to be evaluated by others (i.e., peers) made me work harder and prepare for the group task more meticulously. [JY, male junior, introverted]

I worked harder not to receive negative feedback comments from my peers. It helped me as a result learn a lot from this class, and I felt sense of achievement. [SY, junior, extroverted]

At first, face keeping was my concern of priority, i.e., I worked hard not to lose face among the group members and other classmates. But when completing the group project after such hard work, I felt interested [in doing this] and motivated to work harder and to give my peers feedback that would benefit them. [SJ, female junior, introverted]

As it was first time for me to be involved in this activity, I was feared at first of receiving feedback from my classmates. It somehow decreased my interest, but such fear made me work harder both in preparing for and participating in the class. Ironically, fear fired up my motivation to study harder. [SH, female sophomore, extroverted]

These excerpts illustrate how peer feedback activity contributed not only to the participants' preparation for, and participation in, the class, but also to better understanding of the course materials and to subsequent sense of learning achievement. That is, the above protocols show that the participants worked hard before coming to the class meetings to prove (both to the other members in his/her own group and to all the other classmates) that they were well prepared for the class with considerable knowledge of the class topic, and at class, they paid close attention to other groups' performance in order to give them reasonable and useful feedback comments. Such efforts naturally led to better understanding of the course materials, and most participants felt a sense of achievement, thinking that they made a considerable progress in their knowledge of the relevant topics and in their ability and skills to implement teaching. This feeling strengthened when they received positive feedback from peers or when they could give instructive feedback to peers.

As exemplified in the excerpts, "face keeping among the peers" seems to have played a key role in the

⁴ This may be neither a complete list of aspects of the whole process of learning, nor is it from strictly theoretical constructs or terms, but rather adopted for convenience' sake. Many other classifications could exist.

participants' approach to the given learning task where peer feedback was a crucial component. Their strong desire to keep face became a fuel to study harder, and ultimately it contributed to their increased appreciation of the impact of peer feedback on learning. Actually, *face keeping* was mentioned by almost all interviewees, and it was often mingled with competitiveness.

Emergence of face-keeping desire as a main source of learning motivation and engagement in learning seems closely associated with the participants' perception of peers as feedback-givers. That is, teacher feedback is, according to them, relatively easy to accept as they approve the teacher's authority and superiority in the field of their study, but they think their peers are comparable with themselves in knowledge and ability. Such attitude might have provoked their anxiety and competitiveness simultaneously about being evaluated by peers, which turned into the motivation to work hard (not to lose face among the peers), and ended up with higher degree grasp of learning materials, and what is better, it brought them a good sense of achievement in many cases. A junior student's interview protocol is a good example of this.

I gladly accept the teacher's feedback, but I sometimes feel like confronting peers' feedback. Such desire helps me study harder for the next time. Certain peer feedback comments made that person look different, I mean, smarter than I thought, and I say to myself, 'Oh, s(h)e worked very hard. I myself must try harder,' feeling competitiveness inside me. [DS, female junior, extroverted]

Another aspect of peer feedback that contributed to the participants' increased appreciation of its impact on their learning was the feeling of commonness among the peers. Even though they cannot avoid competing for GPA⁵, they share a lot in age, learning experience, culture, and so on. Such shared experience and sense of social solidarity could make feedback from peers more easily comprehended or acceptable than teacher feedback, probably because peer feedback would be given in the learners' language, not the teacher's. According to Kissau and King (2015), peer feedback could sometimes be more useful and effective than teacher feedback both in affective aspect and even in content itself, as they can share what they commonly understood and commonly didn't understand about course materials. Tahir (2012) also reported that her participants felt less pressure and more relaxed with peers' review comments while those comments were useful as well as easy to use. Recently, Park (2018) observed that Korean college EFL learners thought their peers gave feedback from new perspectives. The findings from the current study are in line with these earlier studies. The following excerpts support this.

I think one of the strengths of peer feedback is that it can function positively in affective aspects. It was easier for me to accept peer feedback as I thought that feedback givers and the receivers are similar (in knowledge and ability). [HJ, junior female, introverted]

My peers are at the level similar to mine, but they often give me feedback from different viewpoints from my own. I think that's a good point about peer feedback. [SH, sophomore female, extroverted]

Feedback from peers gives me relieved feeling that other students may think the same way as I do. [YE, sophomore female, extroverted]

Conclusion

The current study investigated whether and how learners' perception of peer feedback could change after experiencing it as part of core activities in a regular content course, with an additional interest in

⁵ The school where the participants were enrolled adopts relative evaluation system for majority of the courses instead of absolute one.

whether their personal characteristics might influence their perception of its impact, and also what would intervene in the shaping of their perception. Major findings from the current study are as follows.

After practicing over a semester, the participants significantly more highly appraised the positive impact of peer feedback than at the beginning, on every aspect of learning included in the survey (i.e., grasp of learning materials, motivation to learn, active involvement in the class, and learning achievement). The difference between the extroverted and the introverted about the peer feedback impact on learning motivation, which existed at the pre-survey, disappeared at the post-survey, implying that one semester's practice of peer feedback helped the participants enhance learning motivation regardless their personality type. Interestingly, the only significant difference at the post-survey ascribable to personal characteristics was found in learning achievement between those with and without previous experience of practicing peer feedback, similar to the pre-survey result. Although all the participants significantly more positively perceived the impact of peer feedback on learning achievement at the end of the semester compared to at the beginning, those students who had prior experience of peer feedback much more strongly agreed on the beneficial impact of peer feedback on their learning achievement. This implies an incrementally positive impact of peer feedback, i.e., the more peer feedback experience, the higher probability of feeling sense of learning achievement associated with peer feedback activity.

Interview protocols provided some valuable clues on how the peer feedback procedure helped the participants actively engage in learning process and often feel a sense of achievement after completing it. Most students reported they felt a little nervous or anxious at first about being evaluated by peers in public. Such anxiety provoked, they said, strong desire to keep face, which turned into motivation to study harder. More time and efforts put forth in studying naturally resulted in better grasp of the learning materials in most cases, and with increased knowledge of the topic, they actively and very attentively participated in class procedures. In addition to doing their best to receive complementing, satisfying feedback comments from peers, they also, as feedback givers, closely examined others' performance in order to give reasonable and beneficial feedback comments to peers. They hoped to be highly evaluated by peers, as well as by the instructor, about their ability to provide valuable feedback comments or to ask a sharp question about others' performance.

Throughout these active commitments to the class procedures, they probably could get better comprehension of learning materials, and higher chance of feeling a sense of achievement with positive feedback from peers. Even without positive feedback comments received, it motivated them, according to the interviewees, to study harder to recover face in the coming performance in class. It is interesting that face-keeping desire functioned as an initial, and also crucial, trigger for peer feedback to ultimately benefit the participants, which is considered a unique finding from the current study. Such phenomenon might be related with the specific context where peer feedback occurred, i.e., feedback giving and receiving was done in public in the classroom, right after performing the given task, different from in many other previous studies.

Some limitations of this study should be admitted. First, the sample was not large enough to calculate interaction effects, which might have masked interactions between variables that could have existed. The participants may not represent average Korean college students, either. There was no control group or experimental treatment, which renders any discussion about the impact of peer feedback on learning solely based on the participants' self-reports. For this reason, it is not clear at this moment if peer feedback as implemented in the current study would substantially improve learning achievement beyond 'a sense of achievement' as the participants perceived, e.g., in terms of letter grades on official transcripts.

However, it seems reasonable to expect at least that peer feedback activity can lead learners to work harder, whether their motive is keeping face or competitiveness against peers, and working harder will naturally result in better understanding of the learning materials and higher achievement in the long term, anyway benefitting learners. This seems to offer an important implication for education, in that it supports the advantage of implementing peer feedback as a core component in a classroom over simply providing teacher feedback or mere group discussion among peers in the class. Above all, the participants perceived they became more strongly motivated to learn and more convinced about their growth as they went

through the peer feedback activity.

The finding that accumulated experience of peer feedback activity contributed to the learners' stronger approval of its positive impact on learning achievement provides another significant implication both for educators and learners. As the participants in the current study reported, repeated practice of giving and receiving feedback among peers seems to have helped them be better prepared for the class meetings, more skilled in giving feedback to peers, and feel more motivated and achieved, although they had to confront a little anxiety at the beginning. This finding seems to deserve attention especially among the teachers who are reluctant to implement peer feedback procedures in their classrooms and the learners who are afraid of being, or unwilling to be, evaluated by peers.

The current study also contributes to expanding the scope of peer feedback research, by involving TEFL majoring college students as participants in the context of content courses in the regular curriculum, with the object of feedback being micro-teaching sessions, a kind of simulated teaching practice. Given the absolute multitude of previous studies on peer feedback were conducted in the context of L2 writing classes, mostly in the pair-work frame, the current study exemplifies how peer feedback can effectively function in other educational settings, still providing valuable insights on the inner mechanism of peer feedback, as well as supporting its usefulness as an instructional device. Kissau and King (2015) observed mutually beneficial effect of peer-mentoring among pre-service teachers, and Berggren (2015) and Sippel and Jackson (2015) proved that even younger or intermediate level L2 learners could benefit from peer feedback activity. As future secondary school English teachers, the participants in the current study would, in near future, have to organize peer activities in their classrooms, or they themselves may occasionally have to be involved in peer feedback sessions with their colleagues. If pre-service teachers are well-trained in peer feedback procedure with conviction of its positive impact on learning, their students will probably gain considerably from such activity.

Although not free from limitations, the present study provides an empirical support for the usefulness of employing peer feedback in classrooms, especially in a content course beyond ESL writing classrooms, along with several important implications both for research and for practice about how peer feedback could benefit learners. Further studies need to follow to elucidate the delicate and complicated nature of mechanism of peer feedback by inviting more diverse groups of learners in various learning contexts.

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