PEER FEEDBACK: A CASE STUDY OF ASSESSMENT FOR LEARNING IN A SINGAPOREAN CLASSROOM

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ABSTRACT

Using peer feedback activity in a Singaporean classroom is an underexplored area. This study describes a peer feedback intervention and how its use as part of classroom instructions affected students’ learning. The paper also analyses the teachers’ and students’ perceptions of incorporating peer feedback to enhance effective teaching and learning. This exploratory case study draws upon the researcher’s experiences from the fieldwork, students’ reflection booklet and the reflections of teachers and students from interviews and focus group discussions. Finally, the research considered approaches that might be effective in sustaining and overcoming the challenges in implementing peer feedback in Singapore.

Field of Research:  Peer feedback, assessment for learning, self-regulated learning, group dynamism.

1. Introduction

Peer feedback is an interactive process through which learners engage in dialogues associated with performance and standards (Liu & Carless, 2006). Cartney (2010) claims that peer feedback on drafts of student assessment tasks is part of a ‘new assessment culture’ which focuses on assessment for learning. Juwah (2004) argues that peer feedback can potentially improve students’ learning. Peer feedback could also assist students to support each other in mapping out their learning; recognising strengths and weaknesses; targeting areas for remediation; sharing knowledge and developing metacognitive skills such as collaboration (Topping, 2009). Regrettably, teachers rarely use peer feedback to raise their students’ learning capabilities and engage them in deep learning, even though there is evidence that with competent and active feedback networks and engagement, effective learning can take place.

This study examines part of a PhD project conducted in the Humanities Department of Fairmont Secondary School. Within the project, an investigation was made on how students’ learning has been affected with the use of peer feedback activity as part of classroom instructions. Teachers’ and students’ perceptions of incorporating peer feedback to enhance effective teaching and learning was also analysed. This exploratory case study draws upon the researcher’s experiences from the fieldwork, students’ reflection booklet and the reflections of teachers and students from interviews and focus group discussions. There were encouraging outcomes such as students were more engaged, active in their learning and have positive learning attitudes towards peer feedback. Teachers’ perception of using peer feedback in everyday classroom teaching was also more positive as they gained procedural knowledge. There were also challenges faced such as accuracy of peer feedback, group dynamism and the lack of time to cover an already overcrowded curriculum.
Finally, the research considered approaches that might be effective in sustaining and overcoming the challenges in implementing peer feedback in Singapore.

2. Concepts of peer feedback and assessment for learning

Feedback is a powerful constructivist tool to enrich deep learning and a critical component of assessment for learning (Marzano, 2007). The term formative assessment (also known as assessment for learning) was coined by Scriven in 1967 to describe how evaluation could contribute to “the on-going improvement of the curriculum” (Scriven, 1967, p. 41). Black and Wiliam (1998a), define formative assessment “as encompassing all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged” (p. 7). According to Hattie and Timperley (2007), feedback refers to information concerning one’s performance with instructions to help close incompetency gap between current and targeted competency level. In order for feedback to be more effective, it must be used as a feed forward. So, this feedback process is actually similar in peer feedback with the exception that students take on the central role in giving feedback to their peers to improve the quality of learning instead of their teacher. Through interactions and discussions in a safe environment, students receive and give feedback to each other in relation to performance and standards (Hattie & Jaeger, 1998; Liu & Carless, 2006; Lundstrom & Baker, 2009).

3. Benefits of peer feedback towards teaching and learning

3.1 Facilitate self-regulated learning

Research has shown that peer feedback can be an effective hands-on learning experience. Since the peer feedback process builds on students’ ability and responsibility to facilitate and regulate their own and their peers’ learning (Topping, 2009). As the ownership of learning is placed in the hands of the students, they need to draw and reformulate their knowledge to add meaning to their learning (Black, Harrison, Lee, Marshall, & Wiliam, 2004; Tsang, 2004). “Learning, according to Vygotsky, is best understood in light of others within an individual’s world” (as cited in Jones & Brader-Araje, 2000). So, giving peer feedback enhances the learning of both the student that explains, and the student that receives the explanation (Smith, 2009). The students’ active involvement in giving feedback provides them a voice in scaffolding and constructing their own knowledge and eventually sharing what they think (Jones & Brader-Araje, 2000; Reynolds, 2009). This leads to the enhancement in their efficacy to perform (Harlen, 2006; Rubin, 2006) as students do the self-repair first, instead of waiting for the teacher to correct their mistakes (Tsang, 2004). Students also make vital decision to accept or reject the feedback given, as they assess and validate the multiple feedbacks given to achieve their assessment goals. They also experienced a “complex repair” (Gielen, Peeters, Dochy, Onghena, & Struyven, 2010, p. 306) process that improves their understanding on what they are learning (Kaufman & Schunn, 2011).
3.2 Active learning

Peer feedback is believed to be beneficial to students as it is timely and more informative which are essential elements for active learning to take place (Lu & Law, 2012). As students receive a number of feedbacks with different perspectives, the teacher is no longer seen as the “knowledge authority” (Gielen, et al., 2010, p. 305) that dominates classroom instructions. Eventually, the roles of teacher and students in teaching and learning become blurred as students progressively become autonomous learners depending less on their teachers (Nuthall, 1999; Roskams, 1999). In order to accommodate to this change in roles, students need to become active learners by putting in effort to acquire deeper understanding of the topic, so that they could give quality feedback to their peers (Bransford, Brown, & Cocking, 1999; Kaufman & Schunn, 2011; Sadler, 1989). Additionally, students need to evaluate the feedbacks received in terms of its accuracy. This important additional layer of the learning process reaffirms the students’ understanding of the knowledge as they reasoned out the validity of the given feedbacks. Through interactions, discussions and negotiations, learning is modified and improved as alternative perspectives allow better thinking to develop (Glaserfeld, 1989; Juwah, 2004; Topping, 2009). Besides, the process of discussion permits revision of ideas and the construction of new knowledge in a low anxiety context as students find it easier to accept criticism from their peers (Black, et al., 2004; Juwah, 2004; Lu & Law, 2012; Rae & Cochrane, 2008). So, the different feedbacks that students’ received could enrich the quality of their learning as they actively review and evaluate information just like their teachers, their work and that of their peers (Nicol, 2010; Roskams, 1999; Sadler, 1989).

3.3 Social skills

Peer feedback is a social practice that affects student’s behaviour and motivation (Koka & Hein, 2006; Martin & Jacobs, 1980; Mutch, 2003). This means peer feedback is helpful in equipping students with people management skills as they learn to self-manage criticism of their work (Tsang, 2004). As they gained valuable real world experience dealing with their peers, students also learn on how to cope when faced with the many ‘spectrum of possibilities’ (Black, et al., 2004; Nicol, 2010, p. 510; Smith, 2009). Through peer feedback, students’ learn people’s skill through the language practice of giving and receiving feedback (Boud & Falchikov, 2006). On top of this, students learn how to manage the different types of behaviour and conflict that might lead to social tension (Roskams, 1999; Rubin, 2006). Meanwhile, the teachers could assist by guiding the students on the ethics of giving feedback and counselling students who might be disrespectful or disruptive during the feedback process (Reynolds, 2009).

3.4 Peer feedback as feedback on teachers’ teaching

Research has shown that feedback is useful in improving students’ learning and teachers’ teaching. Teachers who strive to give their best in teaching and learning must know what is effective teaching method and what is not (Pratt, 2000). Monitoring peer feedback activity is a good avenue for teachers to assess students’ learning and simultaneously evaluate how effective their teaching has been. Through dialogical communications between teacher and students, the teacher could adapt their teaching to meet the learning needs of the students. Therefore, peer feedback activity becomes an opportunity for teachers to learn about how effective their own teaching
by observing students’ understanding of content and skills during the students’
dialogical interactions with their peers (Black & Wiliam, 1998b). These interactions
are the key indicators that informed the teachers on how effective their teaching has
been (Paladino, 2008; Sadler, 1998). Such indicators are also valuable feedbacks for
teachers to take action and modify their classroom instructions to help their students
learn more effectively (Fisher & Frey, 2009; Huebner, 2009; Pratt, 2000). So, the feed
forward process is not exclusively for students to maximise their learning, also for
teachers to improve in their teaching.

4. Concerns about peer feedback

4.1 Suitability of peer feedback in Asian classrooms

Many teachers assume that peer feedback activity is not a suitable teaching pedagogy
for Asian students. According to Kim, Lim and Habib (2010), Asian teachers deem
using peer feedback would lead to negative repercussions on their students’ learning.
Such sturdy belief is often attributed to the deep-seated culture of non-confrontation
among Asian students as they do not wish to embarrass their peers with negative
comments (Nelson & Carson, 2006). This type of culture, upholds social and public
harmony and public disagreement should be avoided at any cost to avoid ‘losing face’
(Wang & Wu, 2008). This concept of ‘losing face’ or losing the respect of others
could be socially detrimental as it affects one’s dignity and credibility (Wang & Wu,
2008). Hence, with such a strong agenda to preserve harmony, teachers often question
the rationality of using peer feedback (Mei & Yuan, 2010; Roskams, 1999). Consequently,
this lack lustre attitude generates the lack in active peer feedback participation among students (Nelson & Carson, 2006; Roskams, 1999).

Other than the issue of preserving the harmony, peer feedback is unsuitable in an
environment where students are highly competitive. In a culture where ranking is a
norm and students are pitted against each other, collaboration work that assists
another student in his learning is seen to deprive the student who provides assistance
of his future in terms of educational and employment opportunities (Mei & Yuan,
2010; Roskams, 1999). Sometimes, students refused to say anything fearing that
helping their peers would place them in a disadvantaged position especially in a high
stake competitive environment (Nicol, 2010). Such situation could also lead to social
loafing, unfair distribution of work and low interactions between students during peer
feedback activity. For the teachers, the fear of disrupting the class social harmony will
lead to half bake enthusiasm in using peer feedback thus, deeming it as an ineffective
pedagogy (Roskams, 1999; Topping, 2009).

4.2 Preference towards teachers’ feedback

In Asian culture, students have a strong preference to seek teachers’ feedback instead
of peers (Hedgcock & Lefkowitz, 1994). As a result, teachers assumed that students
would resist and abhor the daunting process of giving peer feedback (Rubin, 2006).
This is because teachers are the traditional authority in class and the only source of
learning which the students heavily depend on (Ku & Lohr, 2003; Roskams, 1999).
Moreover, learning through collaboration is not a popular alternative in such
classroom context (Bransford, et al., 1999; Roskams, 1999) since, students are to be
“seen but not heard” (Thompson, 2009, p. 672). Students feel that using peer feedback
illustrates the teachers abdicating their teaching responsibility and handing them over
to the students (Allwright, 1979). As a result, students are worried of the negative repercussions that might affect their learning and grades when the teacher is no longer taking the centre stage in their learning. Teachers are also concerned on the students’ capability to provide accurate, appropriate and meaningful feedback (Davies, 2000; Ho & Savignon, 2007; Kaufman & Schunn, 2011; Liu & Carless, 2006; Roskams, 1999). Consequently, for peer feedback to be fruitful, both teachers and students must be convinced of its value and potential towards learning success (Topping, 2009). Likewise, there is a need to redefine the students’ learning and social responsibility where greater ownership in learning is given to them (Gielen, et al., 2010; Roskams, 1999). As many students will feel uneasy to take full responsibility of their learning, there is a need to constantly assure the students that peer feedback is not a replacement of teachers’ feedback but to complement it (Brinko, 1993; Rubin, 2006; Topping, 2009).

5. Methodology

5.1 Ontology and epistemology

In this research, the ontological assumptions were grounded on my pragmatist position and experience as a teacher and now a researcher exploring a “local knowledge case” (Thomas, 2011, p. 76). The participants—in particular the teachers and I were actively involved in a practice based research. Throughout the research, we acquired and improved on concepts of teaching and learning by “systematically practicing and critically reflecting” (Hiim, 2011, p. 20) on our educational work. We also documented our experiences and new knowledge that we encountered during our learning journey (Hiim, 2011). As explained by Guba and Lincoln (1994), ontology always influences epistemology which is concerned with the nature, structure, attainment, communication and transfer of knowledge (Cohen & Manion, 2007). My values, along with knowledge of the politics, historical and cultural foundation such as work ethics and what constitutes ‘good teaching and learning’ at Fairmont Secondary School defined who I am, how I acted and what I think was noteworthy to research (Hiim, 2011; Morgan, 2007; Packer & Goicoechea, 2000; Tashakkori & Teddlie, 1998). As a teacher-cum-researcher, I take pride in conducting research in my own professional practice because this is necessary to “develop relevant concepts rooted in occupational experience… [to] support the authority of the teaching profession” (Hiim, 2011, p. 22). With this in mind, it is only appropriate to state that this research was conceived based on my “own personal and critical reflection” (Badley, 2003, p. 301) of my teaching experience.

6. Research Design

6.1 Sample

A total of 157 student participants from four Year 9 Social Studies classes from Fairmont Secondary School were selected to participate in two peer feedback activities. Three Social Studies teachers were involved in reviewing the peer feedback activity lesson plans and later administering the peer feedback activities in their respective Social Studies classes.
6.2 Data Collection

6.2.1 Students

A pre and post intervention students’ focus group discussions were conducted in Week Three of Term One and Week Eight of Term Three. A total of forty students were purposively selected for the focus group discussions which were conducted before and after the peer feedback activity. The purpose of the focus group discussion was to capture the students’ sentiments, learning experiences and the impacts the peer feedback activities might contribute towards their learning. General questions such as — ‘what is your perception about doing peer feedback activity?’ for the pre intervention focus group discussions and ‘has peer feedback activity contributed to your learning?’ for the post intervention focus group discussions were asked. Generally, these questions helped to generate discussions and to analyse any change peer feedback activities might have on the students’ perception towards giving and receiving feedback. The focus group discussions also aimed at capturing the students’ feelings about the processes and outcomes of peer feedback in particular on whether students have learnt the content and skills targeted by their teachers.

6.2.2 Self-directed learning booklet (SDLB)

Two entries on peer feedback lessons from the self-directed learning booklet (SDLB) were collected from 157 students. The SDLBs were a collection of students’ learning reflections which were kept by the students throughout Term Three. During the peer feedback lessons, students were instructed to set their learning goals for the peer feedback activity guided by their teachers. At the end of the peer feedback activity, the students were instructed to evaluate their learning based on the learning goals they set at the beginning of the lesson. They were also encouraged to pen and share their experiences about the peer feedback activity. These SDLBs were then collected and read by the teachers and the researcher.

6.2.3 Teachers

The three Social Studies teachers also went through a pre and post intervention interviews. During the pre and post intervention interviews, teachers were asked about their perceptions on peer feedback activity in enhancing teaching and learning, factors that influences and impedes the use of peer feedback. The teachers also observed the peer feedback lessons when one of their colleagues administered these lessons. These observations made by the teachers were shared during meetings with the researcher that aims to improve students’ peer feedback experience especially for the subsequent classes which has yet to use peer feedback activity.

6.3 Context and Procedures

As peer feedback activity was not used as part of classroom instructions in Year 9 Social Studies lessons, it was pertinent to inform both teachers and students about the processes of peer feedback activity, such as the aims, structure and benefits of peer feedback. This was done in a series of workshops and sharing sessions which were conducted for both teachers and students before the implementation of peer feedback activity.
6.3.1 Students’ workshops

The “Developing Effective Learners” workshops were conducted by the researcher at the beginning of Term Two for all the students. The total duration for these workshops was about four hours. In these workshops, students were taught — how to be a self-regulated learner through the setting of learning goals and how to evaluate learning through reflection writing. Students were informed on how the peer feedback activity will be conducted so that they will be familiar with the aims and structures of the peer feedback activity. This was important to ensure a smooth implementation of the activity and to maximise students’ learning. The Social Studies teachers also took another two hours in Term Three for hands-on activity on setting learning goals, reflection writing and a practice on giving peer feedback before the implementation of peer feedback activity. These sessions were crucial as it reinforced skills that were taught in Term Two.

6.3.2 Teachers’ professional learning

For the teachers, a series of workshops cum sharing sessions under the Professional Learning Community umbrella were conducted. A lesson study approach was used during these professional learning sessions. Lesson study is a collaborative effort where teachers work in group to (1) define a problem to guide their work, (2) plan the lesson, (3) teach and observe the lesson, (4) evaluate and reflect on the lesson, (5) revise the lesson, (6) teach and observe the revised lesson, (7) evaluate and reflect a second time, and (8) share the results (Cheng & Yee, 2012). These lesson study steps were strictly adhered to, with the exception that the lessons were reviewed, evaluated and reflected three times instead of twice.

During the professional learning sharing, the teachers targeted three teaching objectives to be fulfilled for the peer feedback lessons. These objectives were — students should be able to identify their peers’ mistakes especially differentiating the concepts of description and explanation; give feedback based on the performance criteria; and tap their peers as resource knowledge. Based on these teaching objectives, two lesson plans were prepared, one on Sri Lanka conflict and another on Northern Ireland conflict. These two topics were selected since the level of difficulty in terms of content and skills was comparable and manageable for the teachers to analyse the data and present the findings during Fairmont’s annual seminar. These lesson plans and the teaching materials were then reviewed by the three Social Studies teachers with the assistance of the researcher. Any improvement made on these lesson plans and teaching materials must be agreed upon by all the three teachers before the lessons were implemented.

6.3.3 Teachers’ role in lesson study approach

The teacher participants took on an active role during the implementations of the peer feedback lessons. The three teachers observed and took notes when one of their colleagues implemented the peer feedback lesson on Sri Lanka conflict in Class 1 (refer to Figure 1).

After each peer feedback lesson, all the three teachers met with the researcher to discuss the implemented lesson. The discussions were focused on the strengths and areas for improvement of the implemented peer feedback lesson. The strengths of the
peer feedback lesson were identified so that these best practices were continued in the next peer feedback lesson for the other three classes.

**Figure 1 ‘Plan-review-implementation-checking and corrective action’ cycle.**

It was also pertinent to review issues that the teachers felt could improve the peer feedback lesson plan so that a better peer feedback lesson could be implemented in Class 2. This ‘plan-review-implementation-checking and corrective action’ cycle was repeated for Class 3. By the end of the Sri Lanka conflict topic, the original peer feedback lesson was reviewed three times and the outcome was an improved peer feedback lesson plan which proven to be feasible since it was tested in all Year 9 Social Studies classes. This same procedure was repeated for the Northern Ireland conflict lesson plan and teaching materials.

**6.3.4 Students’ role in peer feedback**

For the students, they were assigned an essay on the Sri Lanka conflict prior to the first peer feedback activity conducted in Week Three and Northern Ireland conflict for the second peer feedback activity in Week Five. These essays were collected by the teacher before the peer feedback lessons were conducted. The students were then divided into groups by the teachers based on the ‘same ability groupings’. All the teachers went through the performance criteria with the students so that the students were familiar with the performance standards before they began their peer feedback exercise. Only one class took an hour to go through the performance criteria the day before peer feedback activity was conducted while the rest of the classes, the teachers explained the performance criteria prior to the peer feedback activity for about fifteen minutes. The process of going through the performance criteria was an important task to ensure that the students understood the performance standards before attempting to give their feedback. This session was also an opportunity for the students to clarify their doubts with the teacher about the performance criteria so that accuracy of feedback could be guaranteed. Through this exercise, students’ confidence level was...
built as their credibility in giving feedback on their peers’ work increased.

6.3.5 Implementation of peer feedback lesson

The following procedures were followed during the implementation of Sri Lanka and Northern Ireland conflicts’ peer feedback lessons:

1. The teacher informed the students of the teaching objectives for the peer feedback lesson;
2. Students tailored these teaching objectives to their learning goals which they wrote in their SDLBs;
3. The teacher went through the performance criteria with the students;
4. Students were instructed to sit in their groups of threes and given three of their peers’ essays (from the group) to be discussed and assessed. Worksheets were given to guide them during the peer feedback process. These worksheets consisted of the performance criteria rubrics, the performance criteria checklist and the Strengths, Weaknesses and Areas for Improvement (SWA) worksheets. The written SWA worksheets were completed by the marker which were later attached to the essays and given to the owners of the essays to be used as a feed forward;
5. Students were given approximately 20-30 minutes to discuss, write their feedback on the SWA worksheets and share their comments with their group members;
6. After the stipulated time, the teacher collected these essays which were returned in the next lesson for the students’ to review and improvise in order to complete the process of feedback;
7. Students were given 5-7 minutes to evaluate their learning by writing their reflections in the SDLBs; and
8. The SDLBs were collected by the teacher at the end of the class.

6.4 Analysis

6.4.1 Coding

The interviews and focus group discussions were transcribed and three levels of coding — open, axial and selective coding were conducted using Nvivo 8. The process of open coding entailed breaking down the data and categorising them in different themes. The next step involved comparing the different categories and describing the different relationships. The final step was to use selective coding, where no new information emerged or the saturation of categories was examined (Jones & McEwen, 2000).

6.4.2 Multiple response

Multiple response method was used to analyse the change in students’ response towards peer feedback activity. Multiple responses set was seen as appropriate when students were allowed to respond ‘freely’ when answering the stipulated open ended question, ‘has peer feedback helped in your learning?’ Hence, in order to consolidate the multiple dichotomous responses, analysing the frequencies of the variables was seen as suitable to manage and make sense of the enormous data (De Vaus, 2002). Codes were created as the SDLB entries were read for the first time. For example,
when a student wrote in their SDLB that they have ‘learnt’, this was counted as one entry to show that the student has learnt. One entry of ‘learnt’ was recorded despite the student writing several times that they have learnt different skills or content. These codes were further refined when the SDLB entries were read the second time. A total of four cycles of coding and recoding were done to ensure accuracy of the coding (refer to Appendix 1 for the coding scheme).

7. Findings

7.1 Overview

There were mixed views from students and teachers on the peer feedback activity. Generally, the students and teachers agreed that peer feedback activities were beneficial in helping students differentiate between the concepts of ‘describing and explaining factors’ which the students were having problem before. Students were more aware of the performance criteria rubrics as it was no longer a guild knowledge reserved only for teachers. Teachers and students also shared their concerns over the reliability of the feedback given by the students. All students in the focus groups and teachers felt that the peer feedback activity was a hassle and failed to make a significant contribution towards students’ learning. Majority of students still do not tap on their peers as resource knowledge in seeking suggestions to improve their essay. However, these claims contradicted the data from the multiple response outcomes which were gathered from the students’ SDLB which generally showed a favourable reception towards peer feedback activity.

In the next section, the finding from the multiple response data is presented followed by the finding from the students’ and teachers’ focus group discussions and interviews.

7.2 Multiple response

The data from the multiple response frequency (Figure 2) coded from the two SDLB entries showed mixed views from the students about how peer feedback was helpful in their learning.
Generally, more than half (PF1-90/ PF2-84) of the 157 students felt that they have ‘learnt’ how to give a good explanation which was one of the learning objectives targeted by the teachers. Students also indicated that they used the performance rubrics more in the second feedback activity as they assessed their peers’ work. As the students understood the performance criteria, they were able to ‘identify their peers’ mistakes or good points’ from the essays (PF1-34/ PF2-61).

In the first session of the peer feedback activity, only a handful of students (5 students) felt that they had an ‘effective discussion’ where their peers did well in guiding them to improve on their essays. However, during the second peer feedback activity, the students now knew that in order for effective learning to take place, they must tap on their peers’ knowledge to seek help in improving their essay. Hence, this accounted for the increase in the number of students (26 students) who found the group discussions effective. There was also an increase in students mentioning that their peers were helpful in ‘clarifying their doubts’ (from 14 students to 27 students). More students (from 23 to 44 students) ‘enjoyed’ the second peer feedback activity, as they were now more familiar with the process and structure of it. From the SDLB entries, only one student mentioned that the ‘teacher should mark’ their work. This came as a surprise since, all the students during the focus group discussions shared their apprehensions of doing peer feedback since its accuracy could be questionable.

Unfortunately, not many students saw peer feedback activity as an ‘opportunity to evaluate their own learning’ (PF1-21/ PF2-5). This could explain the low number of students (PF1-33/ PF2-27) using peer feedback activity as a feed forward (‘action taken after peer feedback activity’) to further improve their essay. There was also a decrease in the number of students that mentioned that they ‘learnt how to be a marker’ in the second peer feedback (PF1-30/ PF2-16).

Figure 2 Multiple response data consolidated from SDLB entries.
This multiple response result provided direction for further investigation during focus group discussions where more information was shared in particular on the issues of accuracy, self-regulated learning and group dynamism.

7.3 Positives

7.3.1 Engaged learning

There was a positive change in students’ attitude towards peer feedback activities. The teachers observed that the students were enjoying the peer interactions during the peer feedback activity. Additionally, the teachers noticed that the students were more engaged as they articulated and tested their knowledge during peer discussions. For students who took learning seriously, namely in the high performance classes, they saw their peers as important source of knowledge where they seek clarification and refined their understanding on content and skills. It was also observed that classes which enjoyed student centred learning, the students valued collaborative learning as they became active learners able to interact with their peers as compared to a teacher centred lesson.

All students in the focus group discussions agreed that the peer feedback activities were useful in giving them the opportunity to experience the process of assessment before giving feedback to their peers.

“I think peer feedback is a good way because when we mark, we can see it via the teachers’ way. So that we can know what, how the teachers’ are marking to (pause) improve our essay. Then, we can also like read other students’ essays, so we can see what is wrong with them like no descriptions, no explanation…” (Sara, from class 3B)

Students learnt the performance criteria and used them as a reference when they assessed their peers’ work to ensure accuracy and validity of their feedback. The students felt that they understood the performance criteria better during the peer feedback activity as they needed to identify the competency gaps in their peers’ work. Students also saw the mistakes their peers made and learnt to avoid them in their current assignment.

Half of the students in the focus group discussions agreed that during the peer feedback activities, their doubts were clarified by their peers.

“Because the way we [students] think is alike. Sometimes, the teacher may go like too ‘chimm’ [colloquial word which means too complicated], then you don’t understand. But, if your friends understood the way you think, and [the way] he or she thinks are the same [as you], so, when they explain to you, you get to understand it better.” (Shahruddin, from class 3B)

These students felt that the clarifications provided by their peers were easily understood as compared to clarifications given by their teacher which the students thought was too complicated to comprehend at times. The students mentioned that they felt at ease debating with their group members about the essay based on the performance criteria as they were not being judged by their teacher.
7.3.2 Self-regulated learning

Through peer feedback activity, students became more self-regulated in their learning as they began to understand what they know and do not know. Teachers noticed that their students were more confident, motivated and responsible towards their learning, as they took interest to reduce their current incompetency gap in order to meet the expected performance standards. So, there was evidence that students were more responsible towards their learning as they took more ownership towards ensuring that they learnt.

“I think they are motivated now because they are beginning to ask questions themselves. I think they realised that during the lessons they are asking, oh so is this an explanation? … they know what they don’t know and now they want to know what they should know.” (Ms. Tina, 3A Social Studies teacher)

As a result of being self-regulated learners, there was an improvement in the quality of essays. According to Ms. Jane Yap, she noticed a positive change in learning attitude in Amy, a student who she said was so demotivated because she was not doing well in her tests and assignments.

“I think Amy has shown really great improvement. Last time, she was like failing the paper and stuff like that, but she got 12 upon 13 for the latest assignment when she read the feedback, and then made revisions to her paper. Yeah, so certain students actually see that it is actually good for them … I mean it is also an improvement in marks if they do their revision.” (Ms. Jane Yap, 3C Social Studies teacher)

This positive outcome was possible as Amy became a self-regulated learner. She made attempts to understand the performance criteria, discussed her thoughts, defended them and accepted her peers’ suggestions in the process of feed forward in order to improve her essay. Another major change was that now, students were given the opportunity to revise their work before the final submission to be marked by the teachers. Such opportunity gave students a second chance to do well in their assignments.

7.3.3 Enriching procedural and content knowledge

There was a noticeable change among the teachers in their pedagogical content knowledge. Teachers began to develop procedural and conceptual knowledge not only for peer feedback lessons, likewise in all their other lessons. This was a significant change because in the past, the teachers just started their lessons without informing the students their teaching objectives. As a result, the students failed to understand the learning outcomes they needed to achieve after each lesson. This made evaluating their learning problematic because there was no learning goals set. Ms. Aileen Tin, a Social Studies teacher from 3B class, commented that informing students the teaching objectives helped the students set their learning goals and evaluate their learning.

“…it daunts on the kids that, [they] set this goal but somehow [they] don’t quite get this part (pause), they can do something about it.”

The reflection writings in the students’ SDLB were important evidences that indicated
to the teachers what exactly the students were learning and how much they could comprehend. This was a key element to inform the teachers the students’ current performance standard. Any competency gaps would give the teachers opportunity to address them before embarking on the next topic.

7.4 Challenges

7.4.1 Accuracy

There were a number of issues raised on the effectiveness of the peer feedback activity. One of the main issues, shared by all students was accuracy of the feedback given by their peers. All students felt that the feedbacks provided by the teachers were more accurate as compared to their peers.

“It’s like you want to believe them [peers] but you also like thinking, what if they also wrong ... So, it’s like I rather listen to Ma’am’s [teacher] feedback.” (Fatimah, from class 3D)

The students believed that the duty of the teacher was to teach, assess their work and to help them improve in their learning. These responsibilities should not be given to the students because they lack the experience to fulfil these teaching demands. Besides, students felt that the feedbacks given by their peers have no guarantee in terms of its accuracy thus, their preference towards teacher’s feedback. They mentioned that teacher’s feedbacks were more accurate and reliable in particular, when assessing grey areas in Social Studies essay. The students believed that their Social Studies teacher was more experienced in giving constructive, accurate and specific suggestions to guide them on how to improve their work. Additionally, the teacher was trained to assess students’ learning and knew what to look out for when assessing the students’ work. For the students, their uncertainty in matching the performance criteria to their peers’ work caused doubts on the accuracy of the given feedback.

Focus groups from 3D were also uncertain on the accuracy of the feedback that they gave to their peers.

“Jarine and Yasmin, they were very good at marking so I benefitted, but when Ms. Ling actually [went] through the LORMS [performance criteria] I have no idea what she is talking about. So hard to understand then, I just mark and if it looks like Level 3, I just put Level 3, it might get Level 4 or Level 2 ...” (Meiling, from class 3D)

Students highlighted their failure to comprehend the performance criteria and their inability to use them as a reference during the feedback process. These were the reasons that contributed to the inaccuracy of the students’ feedback. Besides, peer feedback activity was a new learning pedagogy which the students felt that they needed more time to familiarise especially on the procedures on doing peer feedback and how to offer suggestions for improvement.
7.4.2 Group dynamics

All the students shared their concern about the peer feedback groupings when they were grouped based on the same ability. The teachers decided to have the same ability groupings to give the group members equal opportunity to contribute to their learning thus, avoiding the feeling of being intimidated by the higher ability students who often dominated peer feedback discussions. However, students found that working with peers that they were not particularly closed was challenging.

“They are just very reserved ... so maybe, the grouping is like someone we are going to work with, as in with your good friends, and maybe it will be more productive.” (Nina, from class 3D)

The students also expressed their concern on how peer feedback could affect their friendship with their peers. They were worried that when they criticised their peers’ work, it might not be taken positively.

There were a handful of group members from each class who were apprehensive about the effectiveness of peer feedback activity. They felt that teacher centred teaching style was effective in helping them learn and perform during tests and examinations and questioned the need to change the way teaching and learning were practiced.

“Because all this time (pause) not only like (pause) we are unable to adapt to this new system [peer feedback] pretty well, but since the system is fine [teacher talk] some people won’t find it [peer feedback] very useful.” (Paul, from class 3B)

The students felt that peer feedback was a failure since it was not able to contribute much to their learning and a waste of curriculum time. Students felt that teacher talk lessons were useful in helping them learn and that they were contented with teacher talk lessons. Students felt uncomfortable to use peer feedback as part of classroom instructions which they believed was a new learning style that could jeopardise their learning and ability to do well in high stake examinations. Both teachers and students were not willing to take the risk to use peer feedback as a method of teaching and learning since, this method has yet to be proven to produce results. Besides, according to Ms. Ling, a Social Studies teacher from class 3D, it was not easy to change the mindset of teachers,

“... who has been in this system for so long, and have seen the benefits of rote learning, you want them to take risk, I think that is difficult because the risk is very big. You may not produce the results.”

7.4.3 Lack of time

A major concern that students and teachers have was the lack of time to do peer feedback activity during curriculum time, even though the teachers in particular acknowledged that students have reaped substantial benefit from doing peer feedback. Students were concerned on whether the teachers were able to complete the syllabus in time to prepare them for the examination. Teachers too shared the similar concern and the need to fulfil the summative test quotas as stipulated by the Head of
Department. According to Ms. Ling, if she had not used peer feedback in her class and just delivered the content, she would have finished the syllabus much earlier.

“I am too busy catching up with syllabus…. Like this year we overrun, therefore as a result, now there is total shortage of time which is terrible because we have to set exam papers, because honestly, if we have not done this and just delivered, we should have finished Chapter 6 by now.” (Ms. Ling, teacher from class 3D)

So, there is a contention that the teachers must resolve — to complete the syllabus using teacher talk or to use student centred peer feedback activity in teaching. This decision was not easy as both types of teaching pedagogies have its merits and challenges.

8. Discussion and Suggestions

The use of peer feedback as part of classroom instructions at Fairmont Secondary School was clearly a new teaching and learning pedagogy for the teachers and students. Even though, both teachers and students were receptive towards the use of peer feedback, they must still be convinced that peer feedback can improve teaching and learning. Teachers’ main concern in particular the lack of curriculum time must be addressed before the use of peer feedback can be sustained. There is a need for teachers to review the Scheme of Work and where possible, to integrate the teaching of content and skills instead of teaching those as a separate component so that, curriculum time can be saved. In fact, integrating the teaching of content and skills through peer feedback activity was seen as a solution to overcome the lack of curriculum time. The Head of Department, Ms. Jane Yap and Ms. Aileen Tin even commented that through peer feedback activity they managed to complete the topics on Sri Lanka and Northern Ireland conflicts two weeks ahead of schedule. This contradicted the claim made by Ms. Ling which stated that she would have finished the topics if not for the peer feedback activities that she used as part of her classroom instructions. It was observed that the reason why Ms. Ling claimed that she failed to complete the chapter was because she felt insecure on whether the students had learnt during the peer feedback activities and so, decided to deliver the content of the chapter again. However, instead of ‘re-teaching’ the content through teacher talk, an assignment could be given to inform both teacher and students on whether the students have indeed learnt.

Students must also be assured that peer feedback is not a replacement of the teacher’s feedback. There is a need to redefine the roles of teacher and students during peer feedback activity. Students must understand that peer feedback is a student centred learning where they take the centre stage in determining how much they are going to contribute to their own learning. Even though, during the peer feedback activity the teacher seemed to be taking a back seat, in fact, the teacher played a more active role as she monitored learning and guided the students on how to manage multiple feedbacks. The teacher was still the gatekeeper of knowledge but now she became an external reference point or resource where students could go to seek assistance and evaluate their learning progress. The teacher now no longer dominated the teaching and learning space but shared her teaching roles with her students.

Teachers and students felt that group dynamism was crucial in determining the
success of the peer feedback activity. If students in the groups are unable to work together, the peer feedback session will not be productive as the quality of feedback will add little value to the students’ work. Students were worried that their feedback might invoke emotional distress or hurt their peers thus, affecting their friendship. As a result, only positive feedbacks were given, as the students abstained from being critical on their peers’ work. Students also questioned their rights to criticise their peers’ work and this resulted in a lack lustre effort during peer feedback activity.

Even though, ground rules were set, it was not strictly reinforced by the teachers nor adhered by the students. So, students must understand that for learning to take place, they must put in effort and be actively involved in giving constructive criticism. There is a need to place the students on the driver’s seat which means, the students must take personal ownership and responsibility towards their learning and that of their peers during peer feedback activity. Students must exercise their role as responsible learners, on task to complete their work instead of chatting away or griping on the need to take charge of teaching and learning during peer feedback activity.

All these should not be an issue if the students are adequately coached on how to accept, justify and reject criticism and suggestions in a respectful manner. Additionally, they must feel competent when giving feedback and teachers could help build these competencies by training students gradually on various skills — such as collaboration and interpersonal skills, listening and communication skills and cognitive skills such as explanations, making justifications and defending their judgments.

Similarly, teachers and students voiced their concern over the accuracy of the given feedback. The students were uncertain on whether to use the given feedback during feed forward because it might be a wrong feedback. For the teachers, they were worried that the incorrect feedback might be internalised by the students and by the time it is discovered, it might be too late and difficult to undo and correct the misconception in their learning. However, this concern could be overcome if the teachers clearly delineate the purpose of peer feedback to the students. This could be done in small steps where teachers focus on one or two aspects of learning during the peer feedback activity. For example, teachers would want to concentrate on either identifying strengths of the essay or improving the description of a factor, which is within the capacity of the students.

Other than that, teachers can use peer feedback activity to provide hands on lesson on what performance standards the teachers are expecting from the students. In fact, the key to giving accurate feedback is for students to understand the performance standards and to apply these understandings when they give feedback to their peers. Therefore, the students must pay absolute attention when the teacher goes through the performance criteria. During this time, students must take advantage of the time provided by the teachers to clarify their doubts in a dialogical process, so that they will be certain that the feedbacks they give to their peers are reliable and accurate. During peer feedback activity, students must be engaged in active dialogues so that the feedback loop can be completed. Dialogues which are thoughtful, reflective and focused is a powerful tool as it not only transmits information but assist the teacher in assessing students’ expectations and standards (Newton, 2007). This means a two-way opened communication must be established between teacher and students and their peers. So in effective learning, the promotion of communication or having dialogue
between teacher and students (or between students) is important so that active engagement would stimulate learning.

9. Conclusion and future directions

From this research, it can be concluded that peer feedback has its own merits and challenges. It is therefore, critical to resolve these challenges before any inroads can be made to sustain the use of feedback in teaching and learning.

The first challenge that needs to be resolved is the willingness of teachers and students to question how effective are their current conventional teaching and learning practice. It was a surprise that so far, no teacher has questioned whether their current set of conventional practices are the best way to maximise learning and bring out the full potential of students. So, the willingness of teachers and students to open their hearts and minds on the possibilities of using peer feedback as a valid alternative strategy to improve teaching and learning is a very important initial step.

Another challenge that must be addressed is to redefine the teachers’ and students’ roles in teaching and learning. Firstly, students need to be transformed from passive to active learners who are responsible for their own learning. Meanwhile, teachers must be willing to share teaching responsibilities with their students and get them to be actively involved in seeking knowledge, which means reducing teacher talk lessons and increasing student centred lessons where students get the opportunity to self-assess their learning. Other than that, teachers and students must understand the rationale of using peer feedback in teaching and learning. Adopting blindly or superficially, peer feedback without knowing and understanding why they are using it can lead to disillusionment because results in terms of enhancing students learning, do not come immediately.

Hence, it is not enough to have conviction from the teachers and students that peer feedback is effective in enhancing learning. Teachers and students must have the commitment to use peer feedback consistently, over a substantial period of time and make it the teaching and learning culture. Teachers should not just use peer feedback for a short period of time and expect students to be miraculously transformed into geniuses. There must be hundred per cent effort when using peer feedback, not just using them once and conclude that peer feedback has failed to contribute to students’ learning.

Finally, the most important challenge is time. Time must be given to the teachers so that they could use it to collaborate with other teachers to plan peer feedback lessons, prepare teaching and learning materials, do their markings and even observe each other lessons as part of professional development. Time must also be given before positive results could be seen.

It was encouraging that teachers and students did see the benefits of peer feedback activity. However, further research where a longitudinal study on the impact of peer feedback on students’ learning need to be done for an overall understanding of the effects of peer feedback in educational instructions. Another area to be investigated is on how teachers will fare in the long run with the absence of an expert to support
them in preparing lesson materials and solving procedural and content issues. There is also a possibility to track the benefits of peer feedback activity among the high, moderate and low ability students. These different ability students might benefit from peer feedback differently as students’ composition in terms of their cognitive level, personality and aims of each lesson differs from one class to another.

Overall, peer feedback has definitely benefitted teachers and students in their teaching and learning. There is definitely room for improvements to tailor, adapt and customise peer feedback activity to suit the individual classroom context, so that peer feedback can contribute more effectively towards students’ learning.

Acknowledgement
I would like to thank Emeritus Professor Alan Russell and Mohamed Danial for their suggestions and support.
References


### Appendix 1

<table>
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<tr>
<th>Coding</th>
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<tbody>
<tr>
<td><strong>Action taken after peer feedback activity</strong> Students have indicated that they will take action to address learning gaps (Evidence of feed forward/What I am going to do?). For example, students will review the mistakes that they have made so as to do better in next assignment; will heed the feedback/comments given; will improve on their work e.g. write better explanation instead of description; read more assessment books/essays to pick up writing skills; acknowledge/ment by students that they will be able to make changes based on the given feedback; assurance by students that they have taken steps to avoid committing the same mistake; commitment by students to work harder on their explanation skill; to grade own essay to be familiar with LORMS for improvement.</td>
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<tr>
<td><strong>Learned and avoided mistake</strong> Students have indicated that they have learnt during peer feedback activity. For example, students have learnt about writing skills and are aware on what to avoid when writing essay. For example, do not dump content; learnt to avoid peers’ mistakes when writing their essays; to be careful in their work; how to give good explanation/elaboration/conclusion; to link explanation to the question; to answer the essay question and not mere description; write better; able to spot own mistakes such as factors that have been missed out; to write appropriate length of essay; learnt to mark accurately and to identify LORMS and criteria for success.</td>
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<tr>
<td><strong>Rubrics guided students when marking</strong> Students have indicated that the rubrics/LORMS/SWA worksheets have guided them how to mark. For example, students understood the criteria for success; rationalised the scores that they have. Given based on the LORMS/rubrics; the rubrics/LORMS has been useful in providing clear indicators during peer feedback activity; rubrics/LORMS/SWA given students an idea of their current competency and what they needed to do to reach the highest competency level; SWA worksheet has helped students to give specific and clear feedback.</td>
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<td><strong>Identified peers’ mistake/good points</strong> Students have indicated that they are able to identify their peers' mistakes/strengths of the essay during the peer feedback activity. For example, essays without explanation or clear elaboration; lacking in sufficient evidence as part of an explanation; unable to link explanation to the question; no comparison made between factors in the conclusion; essay lacking in content; unable to differentiate between explanation and description; descriptive essay that does not answer question.</td>
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<tr>
<td><strong>Assisted by teacher during peer feedback activity</strong> Students have indicated that their teacher assisted them during peer feedback activity.</td>
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<td><strong>Students knew how to give feedback or mark</strong> Students have indicated that they are able to give feedback/comments to their peers; able to award marks/grade correctly.</td>
</tr>
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<td><strong>Opportunity to evaluate own learning</strong> Students have indicated that peer feedback activity has given them opportunity to evaluate their own learning/strengths and weaknesses. For example, students were able to rationalise why they received certain level/marks because able to identify their mistakes/strengths; able to evaluate their competency level.</td>
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<tr>
<td><strong>Peer feedback has benefitted students in learning</strong> Students have indicated that they have benefitted from the peer feedback activity. For example, students have gained in learning how to write a good essay; the peer feedback activity has been productive as they have sharpened their writing skills; students have received feedback to help them improve their essay as they know where and how to improve; peer feedback activity has been useful, fruitful, meaningful; peer feedback activity has built students’ confidence and motivation; students have gained good experience in marking and giving feedback.</td>
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<tr>
<td><strong>Group members did well</strong> Students have indicated that their group members have done well during peer feedback activity. For example, during peer feedback activity students were satisfied with group members in terms of their contributions during the discussion; enjoyed working with their peers; easy to work with their peers; their peers have been great partners and were cooperative, hardworking, enthusiastic, and helpful in guiding them during the discussion.</td>
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<tr>
<td><strong>Group has effective discussion</strong> Students have indicated that the discussion during the peer feedback activity has been effective in helping them learn. For example, determining the LORMS of the essay.</td>
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<tr>
<td>Peer feedback good method to learn as could see variety of essays</td>
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<td>Peers could improve from feedback given</td>
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<td>Students believed they gave or receive feedback</td>
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<tr>
<td>Students have taken time to give feedback</td>
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<tr>
<td>Learnt how to be a marker</td>
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<tr>
<td>Peer feedback helped students to score</td>
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<tr>
<td>Peers helped to clarify doubts</td>
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<td>Peer feedback was enjoyable</td>
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<td>Students marked better in terms of accuracy</td>
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<tr>
<td>Students marked with honesty</td>
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<tr>
<td>Wanted to do peer feedback again</td>
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<tr>
<td>Teacher to mark because more accurate</td>
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