

AMPLIFYING THE IMPACT OF FEEDBACK ON TEACHING AND LEARNING THROUGH PEER OBSERVATION

McKimm, Judy

Department of Architecture and Interior Design, University of Bahrain, Kingdom of Bahrain

Abstract: Peer Observation of Teaching (POT) has become a popular tool for promoting effective and reflective teaching practice in higher education. This process involves colleagues observing each other's live teaching sessions, reflecting on strengths and areas for improvement, providing constructive feedback, setting targets, and offering support where needed. POT provides a cost and time-effective yet powerful tool for improving teaching and learning and enhancing collegial relationships. This document presents a literature review discussing the effectiveness of POT and highlights the benefits of constructive criticism and feedback for teaching improvement. The study aims to analyze the quality of teaching and learning outcomes through the implementation of POT in a university setting. The observation stage involves using observation instruments such as open-ended notes, a checklist, and random notes. The study found that the implementation of POT can help overcome the isolation faced by teachers and provides a platform for continuous professional development. The study recommends that POT becomes an integral part of reflective teaching practice to ensure and sustain high standards in education.

Keywords: Peer Observation of Teaching, reflective teaching practice, higher education, constructive feedback, teaching improvement.

INTRODUCTION

It is undeniable for several reasons, that teaching and studying in higher education have grown more difficult and complex in recent years. The role and the goal of higher education itself, as well as the growing commercialization of the production of knowledge in the global economy, are some of the major issues that academic staff and faculty members face often in the modern world. Individual academics undoubtedly take positions on all contentious matters and build conscious and unconscious philosophies that guide their professional conduct. Increasing discipline variety, rising student expectations for learning and teaching, new requirements for course design and implementation, and the rising emphasis on professional credentials all present challenges for the academics. Research has already addressed the broad subject of what "excellent teaching" is on a worldwide scale. But there's still a lack of knowledge here that's widening. First, it might be difficult to say whether good teaching of any kind supports or fosters good learning. Simultaneously, there isn't a universal definition of effective teaching that would apply to all situations and student populations (Donnelly, 2007).

To encourage teachers training through collaborative learning, Peer Observation of Teaching (POT) method is used as an effective practice. Peer observation is about teachers observing each other’s practices and learning from each other. It aims to support the sharing of best practices and building awareness about the impact of one’s own teaching. For better understanding of POT outcomes, Meeuwsen (2014) defines strength and weakness of POT to be considered before applying this process.

This paper shows the application of POT practiced with the second-year students of the College of Engineering, University of Bahrain. The collaborative and reflective activity of POT was conducted by Lecturer X1-Observed and X2-Observer. The lecturer X1 was observed for the mathematical course of EEDA280-Control System where the main objective was to teach *block diagram* and *the transfer function*. The lecturer X2 (myself) was observed for course of CENG160-Engineering Graphics and CAD with the learning focus of “*modification tools*” in the AutoCAD program.

The Peer Observation of Teaching was adopted in the above courses for effective teaching in order to achieve the following:

To Learn from the experiences and constructive criticism of peers.

- To document the teaching abilities.
- To apply with a focused intention (formative).
- To improve the learning outcomes for students.
- To create a better physical, social and learning environment in the classroom.
- To create a network of supportive peers and mentors.

Figure 1: Strengths and Weaknesses of POT. Adapted from Harry Meeuwsen Presentation, September 2014 Source-Author



LITERATURE REVIEW

There is much research on the development of teaching and learning practices. Among them, McKimm, (2009) point out that managing and ensuring good quality of education and academic expansion are the key aspects of continuing professional development. Teachers training in higher education include pedagogical activities such as interactive learning, curriculum alignment with learning outcomes, assessment development and reflective teaching practices. In order to support the competence on the appropriateness of teaching methodology, 'delivery of knowledge' is as valuable as the 'content knowledge' (Beatty, 1997, p33). Focused teaching practice through reflection on 'delivery of knowledge' help to incorporate informed teaching approaches and educational theories (Beatty, 1997). Ashwin et al (2015) defines the importance of observation in teaching practices which highlights what is vital and what is thought to be overlooked. Reflective practice maintains systematic procedure of constructing meaningful learning through observation and self-analysis. Nonetheless '*Being reflective is of vital importance to practice as teachers*'; and at the center of improving the quality of teaching and learning. On the other hand, Kolb (1983) emphasis on the effectiveness of learning through POT that includes concrete knowledge, reflective observation, abstract conceptualization and active experimentation.

POT works with peers for professional development and recognition through dialogic reflection. The process provides competency-based assessment and most important, the authentic learning of teaching at higher education level. It helps to focus on student engagement in teaching activities with the alignment of intended learning outcomes (Maxwell, 2001). POT training supports personal development with systematic means of taching process observation and collection of data with the help of checklist, observation form and rubrics for personal notes (Gosling, 2002). Recording and documentaion of POT process identifies strngth and weknesses of teacher (Keig and Waggoner, 1994).

Donnelly (2007) highlights the integration of theory and practice in peer learning which represent active engagement with critical reflection in learning about teaching in higher education. On a similar note, Robinson (2010) defines that peer review involves formative feedback to promote effective learning for developmental purposes. It offers a process of constructive assessment to certify and expand teaching standards. (Pagani, 2002). Gosling (2002) identifies three models for POT; evaluation/management model, development model and peer review model. He defines certain characteristics of POT review where teaching is a subject of 'collective responsibility' rather than an individual concern (Figure 2). Training and constructive feedback can maximize the benefits of the collective interest of the POT process (Cosh, 1998).

Figure 2: Comparative Analysis of different Models of POT by Gosling (2002). Source Author

CHARACTERIS TICS	EVALUATION MODEL	DEVELOPMENT MODEL	PEER REVIER MODEL
Progress	Identify under performance, probation, promotion, assurance, assessment	confirm appraisal, quality	Demonstrate competency/improve teaching competencies, assessment
Outcome	Report/ judgement	Report/ action plan	Engagement in discussions about teaching; self and mutual reflection

What is Observed?	Teaching Performance	Teaching performance, class, learning materials	Teaching performance, class, learning materials
Who Benefits?	Institution	The observed	Mutual between peers
Condition for Success	Embedded management processes	Effective central unit	Teaching is valued, discussed

POT is a mutual and respectful way to bring progression in teaching skills and reflective growth in pedagogy. It cultivates the culture of questioning, adaptation in teaching methodologies, immediate reflection and development (Peel, 2005, Biggs 2011). Peer review is a systematic and productive teacher training cycle to enhance educational activity (Fry, 2009). Ratifying teaching style by a colleague increases teaching confidence. Teachers to develop into better teachers, reflective process is a significant tool. Competency-based teachers training provide authentic learning at higher education (Beaty, 1997).

RESEARCH OBJECTIVES

1. To understand the process of Peer Observation in Teaching
2. To analyze the quality of teaching and learning outcome.
3. To ascertain the standard of teaching in institutions.
4. To enable colleagues to learn from each other experiences.

RESEARCH QUESTIONS

1. According to you, what are the qualities of a good teacher?
2. In your opinion, what are some negative qualities of the teacher?
3. What are your views about the student-teacher relationship?

RESEARCH METHODOLOGY

The standard methodology of Peer Observation of Teaching was adopted which involves (i) Pre-Observation Meeting (ii) Observation (iii) Post-Observation Feed Back (iv) Reflection. The author participated in both roles, being the observer and also being the observed. This process helped in reflecting on the theoretical understanding of areas of activities and significance of professional values with reference to the real practices and observation of core Knowledge. The POT learning context helped to evaluate the capacity of teaching validity (Maxwell,2011). The data was collected through peer’s interview, personal notes, observations and using standard forms of POT.

Pre- Observation Meeting

Pre-observation meeting is conducted to describe the duties and the role of the observers. It also describes the Faculty policy and any associated matter. The time, date and location are decided in this meeting. The paperwork, and the confidentiality issues are addressed. Furthermore, the session’s structure is discussed. It is conducted to indicate any specific tactics or strategies that the observee would like to receive criticism on and explain to pupils what they learn about the observation session. For this study, a preparatory meeting was held three days prior to each observation. It helped me and my colleague to confirm the agenda, areas of practices, and the relevant background and described the learning outcomes (Table-1). Overall, it set the scene for the observation and fixed the dates for the other sessions. A Pre-observation meeting form is duly filled by the observer. A sample of this can be seen in table below.

Table 1: Peer Observation of Teaching Pre-Observation Form (Filled by the Observer)

Observee’s Name:	X1	Observer’s Name:	X2 (Myself)
Course Name:	Control	Course Number:	EEDA-280
System			

How will the observer participate in the observer session?
 No direct participation, participated as a listener and

Relevant Background of the Course: The course is about to calculate values of “control system” in buildings. The course is mathematical based It requires supportive equations.

Intended Learning Outcomes (ILO) of block for a block diagram for a control system session and teaching approach: To be able to minimize number of blocks to a single block for a block diagram for a control system To be able to find an overall transfer function for a block diagram for a control system

Is there anything you would like the observer to give specific feedback on? Students attention and retention during the lecture the Handwriting clarity on the white board Speech quality, pitch and pace Any other issues need to be improved.

DATA ANALYSIS Observations

For the stage of observation, it is important to get to the location on time, and decide a seat for the process. Make sure that the students are informed beforehand. The observer should only watch and not participate. The observer should keep track of the nonverbal communication between the Faculty and the students. The observer should also balance out the good and bad findings.

For this study, the actual observation implementing stage was carried out within the previously agreed framework. The process was accomplished with the help of few observation instruments such as open-ended notes, a checklist and random notes. The observation session notes can be seen in Table-2.

Table 2: Peer Observation of Teaching Session Form (Filled by the Observer)

Observee’s Lecturer-X1 Control System Observer’s Lecturer-X2 Name: (Myself) Course Name: Course Number: EEDA-280

Things that Tutor done well (e.g. structure, clarity, pace, organization, interaction, body language, visual aids, enthusiasm etc.)

- The beginning of the session was well organized
- The lecture was started on time. Instructors confidence and subject knowledge was strongly satisfactory.
- Time management with reference to the content of the course, was well adjusted.
- Students’ teacher interaction was satisfactory.
- The lecture was well prepared and objectives were clearly mentioned in the beginning.
- Promoting students’ participation was ok

Areas for Reflection and Possible Improvement (e.g. structure, clarity, pace, organization, interaction, body language, visual aids, enthusiasm etc.) □ Students’ interest could be maintained throughout the lecture, their interaction could be improved by targeting with their names.

- The provision of using different teaching methodology should be integrated to enhance new teaching tools. Using multimedia can improve the quality of teaching.
- There should be a balance of teacher and students cantered approach.
- Mobility in the class to observe students closely can improve the learning environment.
- The learning environment could be friendlier.

- Use of English language should be encouraged to achieve the industry standard communication level.

Comments on specific areas of focus identified prior to observation

- The speech was clear and the speed was ok, however, the tonal variation could be added to emphasize the important area of learning.
- The writing on the board was understandable, thought, the increase in text height will improve the readability. Here it is worth to mention that the ink

of the board marker was not sufficient dark to read the text, it is advisable to check the quality of the marker prior to lecture.

- Students were attentive, direct attention can be gather more with the direct question to the students.

Post-observation Feedback

Within two weeks following the observation activity, formal feedback was prepared. At some points, private feedback was provided by both parties. The observer made sure the feedback is constructive and refrain against the information overload. The observer described the weaknesses and the talents in detail and make sure to be clear about the areas that need improvement. The observer requested that observe considers an action plan with deadlines.

In this study, the dialogic reflection session was accomplished within a couple of days after both sessions of observations. I and my colleague discussed the positive practices and the area of improvement followed by constructive feedback. The sample of feedback and reflection form can be seen in the **Table 3** below.

Table 3: Peer Observation of Teaching Reflection Stage Form I (Joint Reflection) Were there any differences or similarities between your points of view?

Similarities of opinion

In the POT process, we both participants agreed on the standard information required in the POT forms. We valued on the informed subject knowledge through research and scholarship. We agreed that the learning environment and constructive alignment are the main core of teaching at higher education.

We supported the need of communication skills, verbally and professionally.

We both agreed that the notes taking is the essential part of the learning process.

Differences of opinion

Lecturer-X1 suggested me to teach digital tools stepwise, like if I am teaching how to draw a room, I should draw one line and ask them to draw first, before I start the other line. I don't agree in this opinion. Drawing learning in AutoCAD is a subjective progress, as per my experience, it cannot be learned objectively step by step. X1 was agreed with all my comments, there was no difference in opinion.

Were there any surprises in the Feedback?

Lecturer-X1 was surprised to get the feedback on the movement in the class, she never considered this as an important teaching tool. X1 was amazed to learn that black board market ink was not black, it was grey, she never noticed. I was surprised that as an architect by profession, why I did not think to change the setting of the students' desk in the lab.

Can you identify together any areas of good practice from the teaching session?

- Good communication with students
- Encouragement to ask question

- Giving supportive hand outs
- Involve students participation in learning environment

What areas of development can you identify from the feedback and how do you intend to address these?

Areas of development	Intend of address
1. Teacher monitoring in	Movement in the class during lecture can the class help teacher to observe students closely.
2. Students interest in class	The students should be called by their names so they can be attentive
3. To meet the need of	Use of different teaching methodology diversified learners
4. Learning environment.	Encouragement to participate during the lecture
5. University Standard	Use of English language to improve English communication skills speaking power

Reflection

This stage gives an opportunity for the teachers to evaluate their instructions considering the observational feedback which is a crucial aspect of the peer observation. The participants are encouraged to consider what they saw and to send an email with their thoughts on the procedure. This informal strategy is thought to have a higher success rate than any structured or official strategy, such as employing a questionnaire.

Reflection on Feedback by X2 (Myself) to X1

The lecture was constructively aligned with the Intended Learning Outcomes (ILOs) with problem solving work. X1 confidence and the provided hand-outs showed that the teacher had sufficient subject knowledge. X1 tried to engage the students with the appropriate task for effective teaching. I was inspired from the setting of the stage for teaching at the beginning. However, it was quite static later. I assessed the students' engagement, which was not very active as the stage was planned only for the teacher. I appreciated how X1 set the problem at the beginning to create a challenging environment to promote the students' participation. However, I was surprised why X1 planned the lecture with only one teaching style throughout the class? Was it the appropriate teaching method to make the learning to happen? My feedback to use multimedia in teaching methodology will help X1 to enrich the teaching content, and students to get exposure with digital learning. Damodharan (2007) mentions in his paper that information and communication technology has made drastic changes from the old paradigm of teaching and learning. I acknowledged the focus on the learning outcome and utilizing the time. However, I decline the dominancy of X1 in the whole process. I remember, I had experienced the same style in my high school education where teacher-centered environment showed Level-2 learning with the focus more on what the teacher is doing, rather than what the students are learning (Biggs, 2011).

The learning environment was very quiet and serious. I suggested to develop a friendly environment, or add humor in teaching. I strongly agree with Damodharan (2007), 'using humor in teaching is a very effective tool for both the teacher and student I follow Biggs (2011) that the motivation is key to learn. My feedback was supported through meaning of motivation, where the teacher initiates learning at the beginning and then maintains engagement during the lecture. X1 particularly asked me to check hand-writing and speech quality (Ref-Table-1). The hand-writing should be more legible, the board marker ink was very dull which was illegible. It is advisable to check the perfection of teaching aid prior to the lecture to overcome this problem. The audibility of speech was monotone; no intonation was found to prioritize the learning elements. I

suggested to bring some variation in vocal tones to harmonize the delivering information with the emphasis on constructive alignment. I was very disappointed while listening the Arabic demonstration. It was hard to keep my concentration in the teaching, first because of the different subject, and second because of the foreign language.

Penning (2014) has proved by his research that a better relationship between the students and the teacher is important to achieve academic goals. Instructor's attention to the students was significant, though, X1 did not change her position. The teachers movement in the class gives an opportunity to monitor the students closely. I tried to make my feedback interesting, and at some points, straight (Race, 2010, p125).

I analyzed that though X1 had a good command in the subject matter, the mode of delivery was mostly in Arabic, instead of English as preferred by the University standards. Most probably, the aim was to convey the appropriate knowledge to the students in their vernacular language. The focus on the subject matter in the short-term class was the strongest element. Students' decent behavior is another valuable dimension worth mentioning.

This experience made me realize that we need to involve Level-3 learning where the students are centered in the learning environment. As a teacher, I should follow a cognitivist approach to understand how people learn. I learned the importance of perfect demonstrating aid, variety of tonal value to emphasise on the important points, and different teaching methodology which help me to improve active learning.

Reflection on Feedback given by X1 to X2 (Myself)

I got feedback from X1 on the computer lab, drawing course of 'Engineering Graphics and CAD'. The learning happened with continuous individual feedback on the given drawing problems by creating an effective learning environment to support the students on one to one bases. The reviewer provided positive feedback and strongly acknowledged my friendly behavior and smiling throughout the lecture. She used a sandwich approach to provide feedback following by the dialogistic reflection. I could see her contended face and appreciating voice during the post observation meeting; that really made me proud.

X1 highly appreciated my way of providing formative assessment in a responsive environment. However, it was a bit daunting and exciting to be observed by someone. I was nervous at the beginning. I was trying to impress my colleague and taking the whole process slightly false. I can relate my situation with the analysis of Smith (1999) on the behaviorist orientation, 'the environment shapes one's behavior' to reflect accordingly. I was feeling that the environment is very controlled and unnatural. Soon, I ignored the presence of the observer, and behaved naturally the way I teach. X1 highly appreciated my enthusiasm while teaching. She enjoyed my friendly behavior with the students. I could feel the excitement of X1 during my teaching, which made me delighted, my initial emotion of nervousness turned into confidence.

The comment that rang most true for me was the way students were learning the appropriate technology to understand the engineering concepts digitally, it boosted my satisfactory level of teaching. I totally agree with her suggestion in feedback that students should write notes even if they are learning digital tools. Note-taking is a useful tool for immediate review and reflection (Biggs, 2011). X1 appreciated my mobility in the class to reach all the learners for providing authentic assessment on their progress. I believe that the content should emphasise authenticity and complexity. Authentic assessment promotes much more active and student-led-approach to learning (Sambell et. al.2013, p6).

I welcomed the advice on the improvement of the physical environment, the orientation of some of the students desk was parallel to the wall, not directed towards the screen. I will try to convince the administrative staff to rearrange the setting in order to increase stronger visual accessibility.

I was highly appreciated in stating the objectives clearly by using different tools. While teaching, I considered to achieve Intended Learning Outcomes and integrating constructive alignment in teaching and learning process (Biggs, 2011). The way I was promoting students' participation in solving the drawing problem was increasing her interest in my lesson, and decreased my uneasiness.

The part of the feedback that puzzled me most was related with the step-wisedemonstration while teaching drawing digitally (Ref.Table-3), I demonstrated the small drawing problem in one go. X1 suggested me to use one computer command and let students work on it and then continue. I don't agree with it, I think that the stepwise command demonstration in learning digital drawing skills, limits students' creativity to apply and evaluate the process. I followed Blooms Theory of Education where learner should recall knowledge, comprehend, apply and evaluate to get the cognitive level of understanding. My handouts were inspired from 'learning-by-doing' particularly in practice. Handouts contained several task to be used, not just to store (Race, 2010, p147).

A well designed class activity gives you success in making teaching happen. I totally agree that its teachers task to set the learning environment to maintain active learning. (Biggs, 2011). The constructive feedback particularly on the subject matter was missing. I learnt that previewing involves looking ahead to a forthcoming class and trying to anticipate potential problem areas and explore how they might best be tackled (Fry, 2009). Reviewing by a person from a different discipline, gave me the exposure to reflect on my teaching from a different perspective.

FINDINGS

The Pre-observation meeting was very helpful to understand and explain the relevant context of the lecture. It assisted both of us to build the collegiality; we were relatively new to each other. It helped us to emphasize the important teaching area where we liked some specific feedback. Developmental activities to enhance educational quality often includes peer review (Fry, 2009, p190). However, the dissimilarities in the profession, left to explore the level of constructive alignment in my course, by some relevant viewer. The idea of 'discipline-specific pedagogical knowledge' in higher education is enormously arousing where understanding of the teaching and learning requirements of one's own discipline is significant (Berthiaume, 2007; Lenze, 1995, cited in Fry, 2009, p215).

As an observer, the session went well, the most useful element was the POT detailed and comprehensive forms, which really helped me to learn how to observe. I was excited to review a different discipline, though, was feeling a bit awkward for observing an unknown mathematics based subject. It was going over my head. I considered the theory of social learning where a person acts as passive receiver of behavior and values, maintained by the social environment. (Tennant, 1997 cited in Asworth 2004). My feedback focus was not on the content, I was perceiving how the teaching process was happening before me and the learning was taking place around me. Peer observation in our own subject area can easily involve us in the subject matter itself, rather than learning from the teaching process. I learnt how to teach in a different context.

As an observer, I had less expectation as peering with a dissimilar profession. My concern was to get the constructive feedback on my subject matter. However, X1 provided valuable comments to overcome the weak points in my current practice (Ref.Table-3), during the observation in my session, she was showing a keen interest. I was relating her situation with mine when I was at her place. I felt embarrassed, why I did not show interest in her lesson to give some relaxation, she might also had uneasiness. HOWEVER, immediately I justified myself that the drawing subjects are always attractive compared to mathematics. However, I considered this formative assessment from my colleague as a credit for what I have achieved in my practice

by following the university's standard (Race, 2010). I learnt that for teachers to develop into better teachers, processes which promote reflection are necessary. (Beaty, 1997, p11).

In the post observation meeting, we both agreed that the process was mutually beneficial by collaborative dialogic reflection on the teaching observation. It will mark positive impact on our students learning. I agree on some of the feedback given by the peer, though, at some point I disagree. Her appreciation ratified my teaching practice, which was the best feelings. I got practical ways where I could enhance more on my teaching. I tried to provide constructive feedback to my colleague. I considered most of the way forward feedback points mentioned by Race (2010), to make teaching and learning happen. I learned how to accept and positively reflect on my weak points criticized by the peer, and how to convince peer's misjudgment with academic justification.

While reflecting on the process, I realized that observation of the teaching process is important. However, the way you convey your subject knowledge is more important. After getting the idea of authentic learning by peer observation, I decided that I will reschedule my teaching observation with similar professional colleagues. Along with the teaching process, the course delivery is also indeed important to be observed. I will follow the first principle of 'Ethical Principles in University Teaching' where 'competence on the appropriateness of course content and subject delivery' is also required. (Beaty, 1997, p33).

DISCUSSION

Evidence shows that when done well, peer observation, including feedback and reflection, is a high-impact approach to improving professional practice and can be an important part of a teacher's professional development. The observing colleague provided the strengths and weaknesses in teaching which really helped to improve the teaching. The process provided competency-based assessment and most importantly, the authentic learning of teaching at the higher education level. As per the received comments, the teaching was improved which helped the students to engage more in the learning process. The students appreciated learning with some new teaching methodologies, mentioned by the peer. Integration of more real examples in the teaching helped the students to relate to the real issues and propose alternative solutions. The most important part of this process was to get feedback from the peer to know how one can improve the teaching practice. For oneself, POT was the authentic example of the reflective practice of teaching.

RECOMMENDATIONS

This study proposes creating a six-monthly cycle of Peer Observation involving \ colleagues from the same and other departments and at times expert reviewers, who could provide a better insight of the teaching process. It is recommended that Peer Observation process becomes an integral part of reflective teaching practice to ensure and sustain high standards in education.

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