Teacher's Reflection on the transition to Online Teaching during Covid Times

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Abstract: A new coronavirus, COVID-19, was proclaimed to be a global pandemic by the World Health Organization a year ago. As a result of this crisis, universities all across the globe had to scramble to respond. Without any forethought or preparation, schools, colleges, and universities shifted their pedagogical focus from traditional lecture hall presentations and in-person tutorials to the online learning environment. This was a significant obstacle for educators and students alike. Despite some early reluctance, many educators have shifted to using an online platform for instruction. This is because, first and foremost, the change occurred suddenly. Second, instructors lacked the flexibility to switch gears from one teaching method to another, and third, they lacked faith in their ability to confidently use digital classroom tools. Some instructors may have had no trouble with these variables, but opinions on the best approach to provide course material varied widely. This was the perfect reflection-in-action scenario for most of the teaching community. Educators had the chance to consider new ways of approaching their profession and their students.

Keywords: Reflection, Covid-19, Reflection in action, Reflection on action

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1. Introduction

A new coronavirus, COVID-19, was proclaimed to be a global pandemic by the World Health Organization a year ago. As a result of this crisis, universities all across the globe had to scramble to respond. Without any forethought or preparation, schools, colleges, and universities shifted their pedagogical focus from traditional lecture hall presentations and in-person tutorials to the online learning environment. This was a significant obstacle for educators and students alike. Despite some early reluctance, many educators have shifted to using an online platform for instruction. This is because, first and foremost, the change occurred suddenly. Second, instructors lacked the flexibility to switch gears from one teaching method to another, and third, they lacked faith in their ability to confidently use digital classroom tools. Some instructors may have had no trouble with these variables, but opinions on the best approach to provide course material varied widely. This was the perfect reflection-in-action scenario for most of the teaching community.

All change begins with the notion of self, i.e.,

- ✓ Think: what is a good lesson/ teacher;
- ✓ Share: thoughts about teaching;
- ✓ Understand the need to "think about our teaching and reflect ";
- ✓ Expand our understanding of the teaching/learning process;
- ✓ Enlarge our repertoire of options as effective teachers;
- ✓ Enhance learning opportunities for our students.
- ✓ KEEP LEARNING!

Reflection is an elementary and essential part of teaching and learning process. Reflective teaching is a process of self-observation and self-evaluation. It may be regarded as a systematic reviewing process for teachers which allow them to make links between different experiences, ensuring the maximum possible benefit to their students' learning. It is also considered as a means to institute meaningful changes and improvements in our teaching.
The process of reflection is a cycle which needs to be repeated with the following stages, as shown in Figure-1:
• Teach
• Self-assess the effect your teaching has had on learning
• Consider new ways of teaching which can improve the quality of learning
• Try these ideas in practice
• Repeat the process

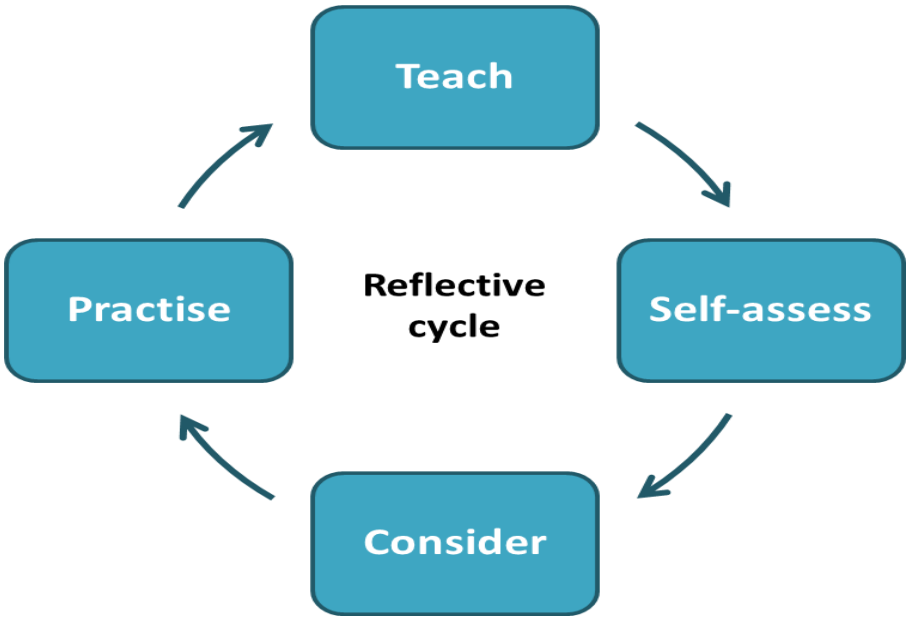

Figure-1: Reflective Cycle

2. Literature Survey

Reflective practice is 'learning through and from experience towards gaining new insights of self and practice' (Finlay, 2008). It aims to improve one's awareness about your own professional knowledge and action by 'challenging assumptions of everyday practice and critically evaluating practitioners' own responses to practice situations' (Finlay, 2008). Three attitudes are necessary for us to become reflective teachers (Dewey, 1933):

- Open-mindedness
- Responsibility
- Wholeheartedness

As per literature, following conceptions of teaching have been reported:

- **Dewey (1910):** "the active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends"
- **Schön (1983):** *reflective practice* is "a continual interweaving of thinking and doing"
- **Cooper (1999):** "to write our own stories, simultaneously incorporating our own future as we reconstruct our past"
- **Moon (1999):** "a set of abilities and skills, to indicate the taking of a critical stance, an orientation to problem solving or state of mind"
- **Claxton (1999):** When situations are complex and ambiguous the ability to "simply contemplate a situation without, for the moment trying to come to a conclusion about it, is an essential learning aid"
- **Ash and Clayton (2009):** "an evidence-based examination of the sources of and gaps in knowledge and practice, with the intent to improve both"

The significance of reflecting on practice to support student learning and staff development has been stressed upon by various researchers in the literature. There are various models of reflective practice, reported in literature. However, they all share the same basic aim, i.e., to get the best results from the whole teaching-learning process, for both the teacher and students. Some of these models have been presented below:

Kolb's Learning Cycle

David Kolb developed a four-stage reflective model known as Kolb's Learning Cycle (1984), shown in Figure-2, as presented below:

1. Practitioners have a concrete experience. This means having something new and active experience that can be used to test out new ideas and teaching methods.
2. Observation of the concrete experience, then reflecting on the experience. Here, practitioners should consider the strengths of the experience and areas of development.
3. The formation of abstract concepts. The practitioner needs to make sense of what has happened. They should do this through making links between what they have done, what they already know and what they need to learn. The practitioner should draw on ideas to help support development and understanding. Practitioners should modify their ideas or devise new approaches, based on what they have learnt from their observations and wider research.
4. The practitioner considers how they are going to put what they have learnt into practice. The ideas from the observations and conceptualisations are made into active experimentation as they are implemented into future teaching. The cycle is then repeated on this new method.

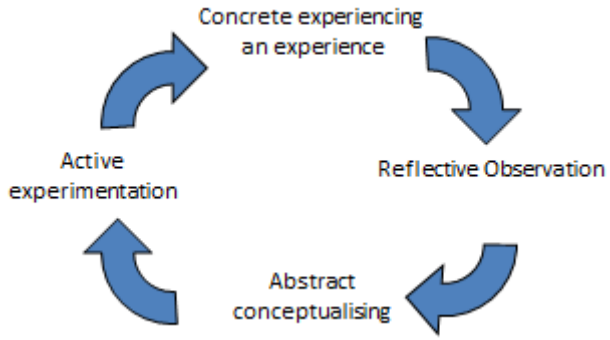

Figure-2: Kolb's Learning Cycle

Boud, Keogh and Walker Reflection Model

This model has three aspects, which start from the experience taking place, is shown in Figure-3. During the experience, the practitioner will experience behaviours, ideas, and feelings. Once the experience has happened, they will reflect on it by returning to the experience within their minds. The feelings are attended in the sense that the negative feelings are removed, and the positive feelings should be utilized within the reflection for future experiences. The practitioner can then re-evaluate their experience and draw more from it. After the iterative process of first two aspects, practitioner is focused towards new perspectives on experience, change in behaviour, readiness for application and commitment to action.

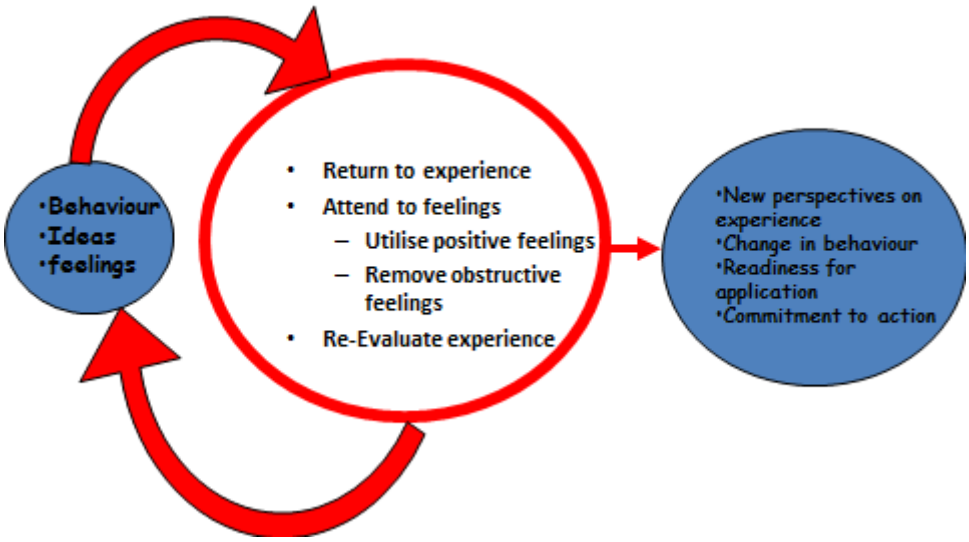

Figure-3: Boud, Keogh and Walker Reflection Model

Gibb's Reflective Cycle

Most of the core principles of Gibb's reflective cycle (1988) are similar to Kolb's learning cycle, which is broken down further to encourage the teacher to reflect on their own thoughts and feelings. This is a six-stage cyclic model, as shown in Figure-4, is described below:

1. Description
   In this section, the practitioner should clearly outline the experience. It should not be analytical at this stage.
2. Feelings
   This section encourages the practitioner to explore any thoughts or feelings they had at the time of the event. Only once the feelings have been identified can the practitioner implement strategies to overcome these barriers.

3. Evaluation
   The evaluation section gives the opportunity for the practitioner to discuss what went well and analyse practice. It is also important to consider areas needed for development and things that did not work out as initially planned. This evaluation should consider both the practitioner's learning and the students' learning.
4. Analysis
   This section is where the practitioner makes sense of the experience. They consider what might have helped the learning or hindered it.
5. Conclusion
   At this stage, the practitioner draws all the ideas together. They should now understand what they need to improve on and have some ideas on how to do this based on their wider research.
6. Action plan
   During this final stage, the practitioner sums up all previous elements of this cycle. They create a step-by-step plan for the new learning experience. The practitioner identifies what they will keep, what they will develop and what they will do differently.

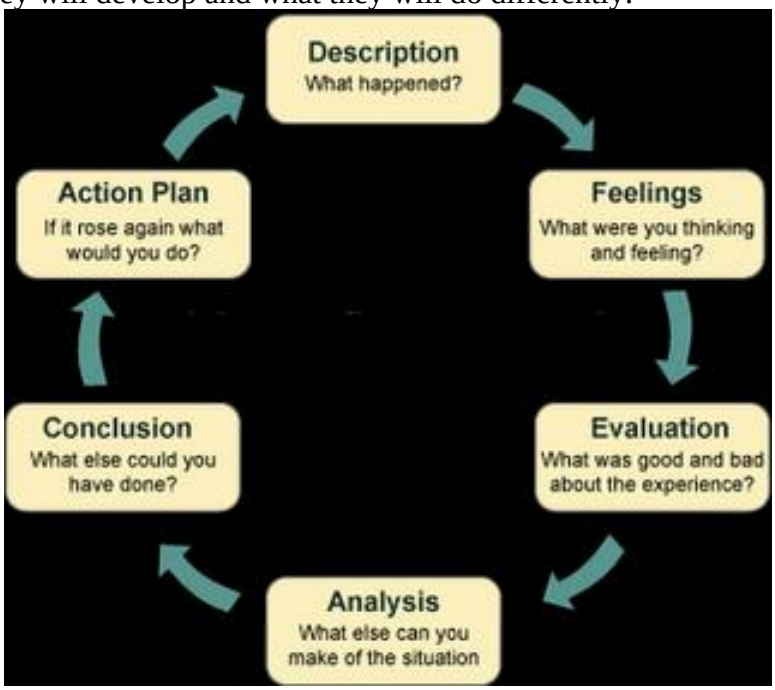

Figure-4: Gibb's Reflective Cycle

Atkin's and Murphy's Reflective Model

Gibb's model doesn't refer to critical thinking or analysis. It doesn't take into consideration assumptions that you may hold about the experience, the need to look objectively at different perspectives, and there doesn't seem to be an explicit suggestion that the learning will result in a change of assumptions, perspectives or practice. You could legitimately respond to the question 'what would you do or decide next time?' by answering that you would do the same, but does that constitute deep level reflection? Atkins and Murphy (1993) address many of these criticisms with their own cyclical model (Figure-5). Their model can be seen to support a deeper level of reflection, which is not to say that the other models are not useful, but that it is important to remain alert to the need to avoid superficial responses, by explicitly identifying challenges and assumptions, imagining and exploring alternatives,

and evaluating the relevance and impact, as well as identifying learning that has occurred as a result of the process.

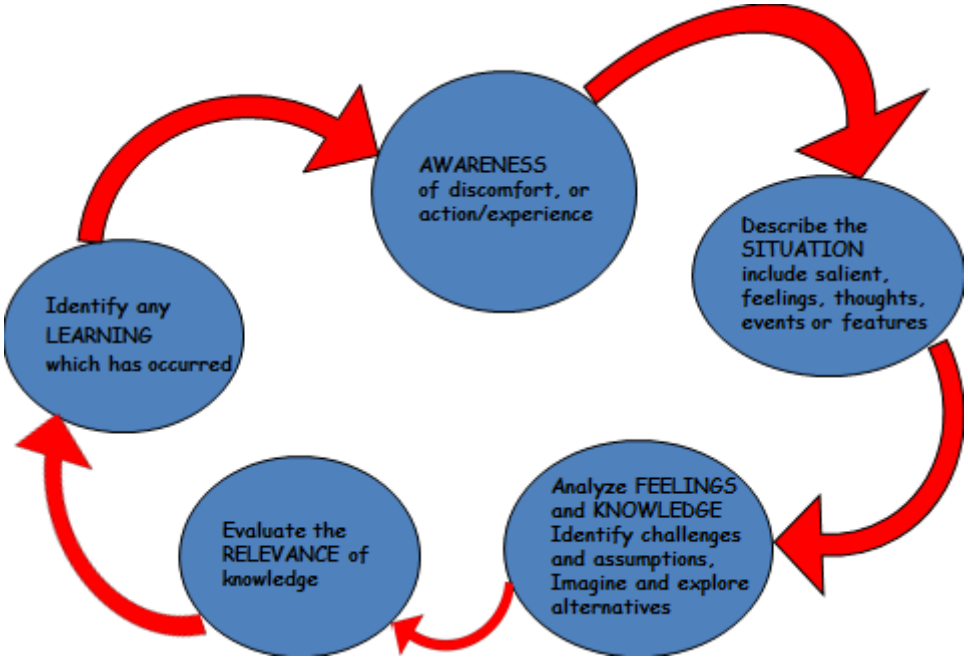

Figure-5: Atkin's and Murphy's Reflective Model

John's Reflection Model

John's model of reflection (1996) is based on five cue questions which enable you to break down your experience and reflect. John's model is based on five cue questions, as shown in Figure-2.6, which enable you to break down your experience and reflect on the process and outcomes.

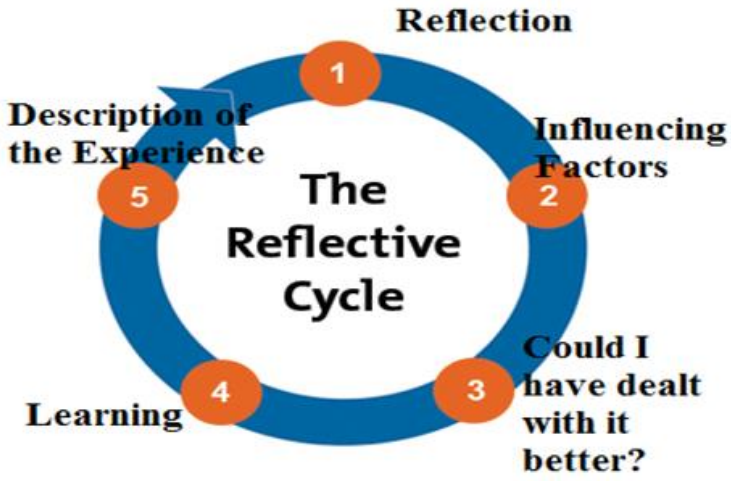

Figure-6: John's Reflection Model

Bass Holistic Reflection Model

It is the latest reflective model reported in literature in 2017. This is also a six stage cyclic model, as shown in Figure-7, that takes into account the self-awareness, internal and external description,

reflection, external influencing factors, evaluation through analysis and learning that leads to forward and constructive actions that improves the whole teaching learning process.

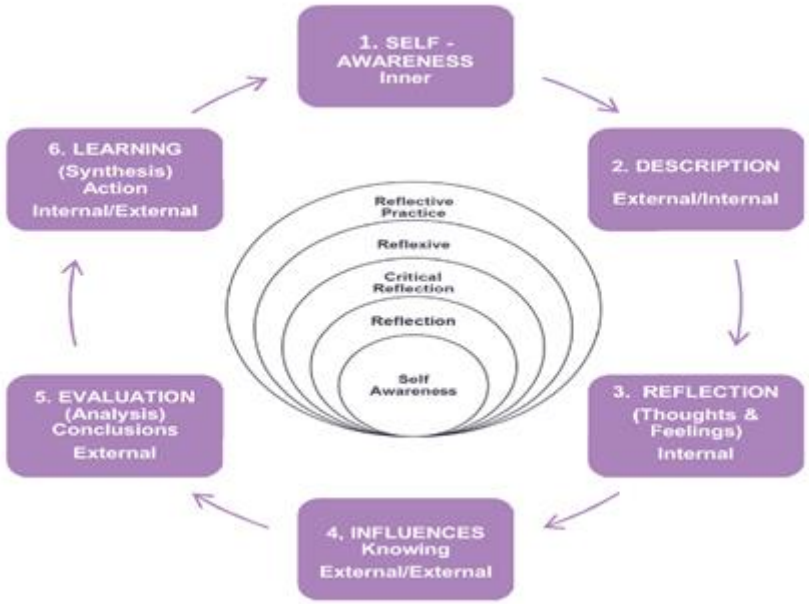

Figure-7: Bass Holistic Reflection Model

'Reflection-in-action' and 'reflection-on-action'

Another approach to reflection is the work by Schön. Schön (1991) distinguishes between reflection-in-action and reflection-on-action, as shown in Fifure-2.8.

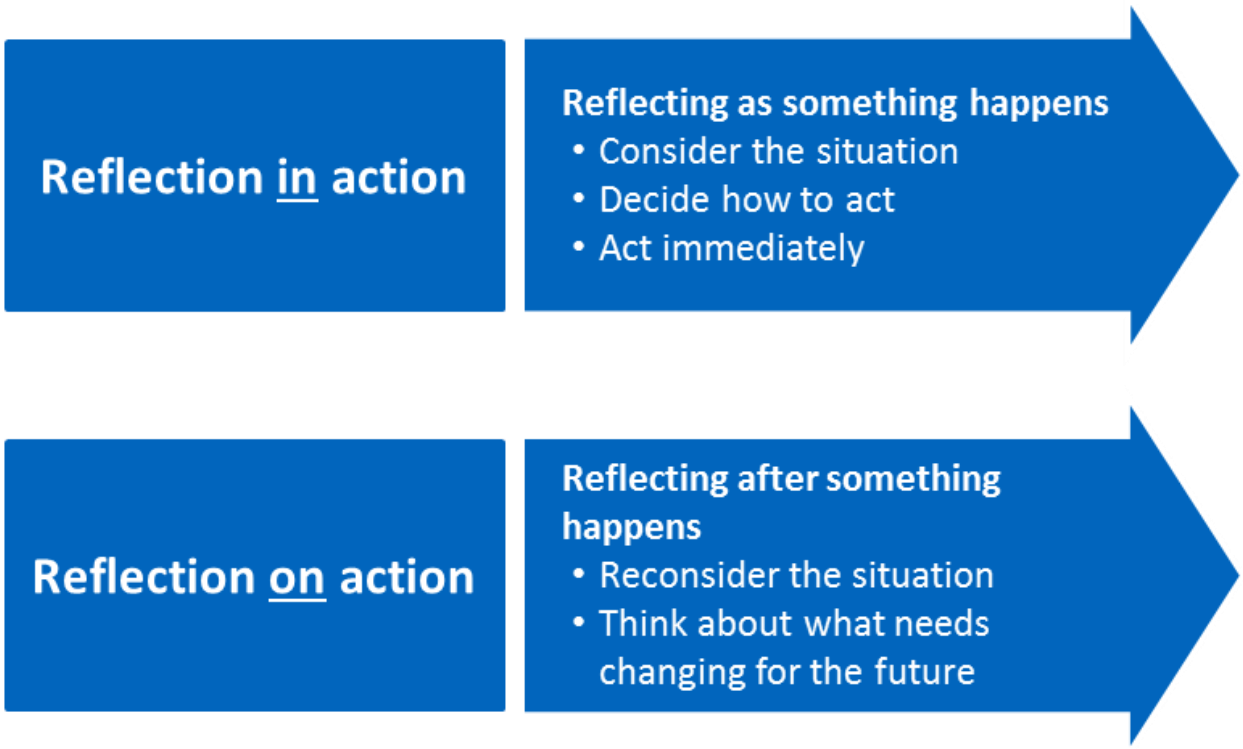

Figure-8: Reflection in Action and Reflection on Action

Reflection-in-action (refer Figure-8) is reflection during the 'doing' stage (that is, reflecting on the incident while it can still benefit the learning).

Reflection-on-action (refer Figure-8), on the other hand, involves reflecting on how practice can be developed after the lesson has been taught. Schön recognizes the importance of reflecting back 'in order to discover how our knowing-in-action may have contributed to an unexpected outcome' (Schön, 1983).

In general, reflection practices generally acts as catalysts for the whole teaching and learning process. There are numerous advantages of reflection some of which are listed below:

- ✓ Reflective practice helps create confident teachers
- ✓ Reflective practices ensure that the practitioner is responsible for himself/herself and his/her students
- ✓ Reflective practice encourages innovation
- ✓ Reflective practices encourage engagement
- ✓ Reflective practices benefit all in the sense that it creates overall constructive and progressive environment not only for students but also for teachers which will definitely bring fame for students, teachers, their institute or university, their employers and associates, and the whole society.

3. The Intervention

There are six main principles that will make sure you get the most out of your reflections − reacting, recording, reviewing, revising, reworking and reassessing. These are sometimes referred to as the six R's, as shown in Figure-9.

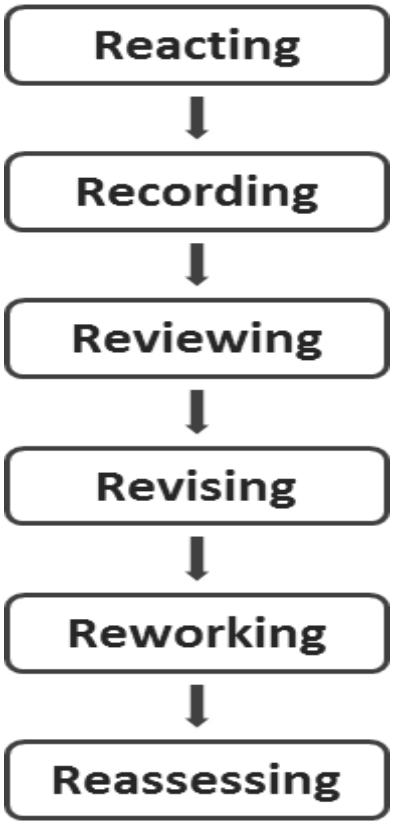

Figure-9: Six R's Principle

If you are new to reflective practice, it will help to ask yourself the following questions.

Reacting
How will I decide what area of my practice I need to focus on?
Will this be decided by looking at data, each learner's performance or an aspect of the curriculum?

Recording (logging your reflections)
How will I assess my performance?
Will this take the form of an observation, discussion or shared planning?

How will I record this?
Will this be recorded by yourself, a peer or a student?

How will I log this?

What documents will you use to record your reflections? For example, a journal, notebook or form provided by your university or institution.

When will I log this?
Will your reflections be logged straight after the lesson, during or before the lesson?
How often will you record these reflections?

Reviewing (understanding your current teaching methods)

What worked well and how do I know this?

Consider what the students really understood and enjoyed about the lesson, and why. How do you know improvements have been made?

What did not work as planned?
Consider what the students did not get involved with or find challenging, and why.

What could I try next time? How could you adapt the activity?

Some practical ideas include introducing a different task, clearer instructions, time-based activities and activities which appeal to different learning styles.

Revising (adapting your teaching by trying new strategies)

What will I change or adapt?

This could be a whole task or something specific about a task. Some practical ideas include changing the task from independent work to paired work, adding a scaffold to a challenging task, providing instructions step by step, and making activities time based.

Reworking (action plan of how you can put these ideas in place in a practical way)
How will I put this in place?

Consider what will you need to do before and during the lesson to make sure your changes happen. What will the students be doing differently to make sure they make progress?

What materials do I need?
What things will you need to put your revised ideas into practice?
Some practical examples include coloured pens, larger paper, handouts, cut-up activities, specialized equipment.

Reassessing (understanding how these new strategies affected learning)
How successful were the new strategies?

Once you have redelivered the lesson, consider how engaged the students were. How well did they understand this time?

What changed?
Consider the following areas of potential change: delivery, planning and assessment.

During Covid times, educators had the chance to consider new ways of approaching their profession and their students. The online live lectures along with the recorded ones were a reflective pedagogy that was thought of during those tough times. The growth of curiosity, sincerity, and accountability may

be attributed to the practice of reflective thinking. These three qualities contributed to a constructive attitude towards learning that relied on projects and real-world experiences. During the course of online teaching, effective engagement of students during laboratory hours was also an additional challenge. These limitations were taken care of by allocating small project work and simulation studies for the better understanding of the students. The students feedback suggest that their overall experience was joyful, interesting and quite informative. The students' results also suggest that they were able to understand and implement the fundamental concepts of the course which definitely led to their active engagement in the course. I also decided to take this intervention in a second year course entitled 'Network Theory'. A laboratory component was engaged with the help of simulation software 'MULTISIM', and the students were involved in the mini projects to keep their interest alive in the course. A combination of live classes along with the recorded lectures with some assessment strategies were adopted during the online classes. This was not possible without open-mindedness, responsibility and whole heartedness (Dewey, 1933). One needs to understand that 'Uncertainty is an Opportunity for Growth', and 'it is ALL in the Mind that matters'. So, one should have the courage to stand and deliver even in adverse circumstances, i.e., one's attitude to take on things with a positive mindset is very important. This is also based on my 'Teaching Philosophy', as shown in Figure-10.

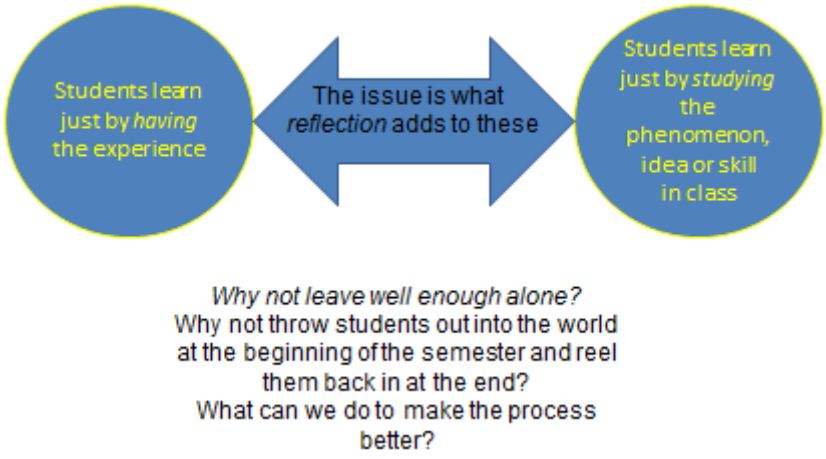

Figure-10: Reflections from Teaching based on my Teaching Philosoph

The following methodology was thought of, keeping in mind the before-mentioned reflective cycle models, to make the students' learning experience memorable and enjoyable:

- A Project and Experiential Based Learning (PEBL) method was thought of, to keep the students engaged
- Guided students to take ownership of the course, and consider themselves to be partners in the whole teaching and learning process
- This idea of learning by doing is what is now called "experiential learning," and though it's demanding, it is also very effective
- In class, the method of learning means replacing chalk-and-talk pedagogy of the past with inquiry, problem-based and project-based learning was replaced upto certain extent
- The kits lying in the 'Switchgear and Protection Lab' were modified to conduct the Laboratory experiments which were theoretically verified and simulated in MultiSIM by the students

The students enjoyed this whole journey of teaching and learning through PEBL approach in the online environment. The weighted average course learning outcome (CLO) score for the course was 4.26 and overall student response survey (SRS) of 93.1% which is suggestive of students' appreciation for the way in which it was covered.

5. Summary and Conclusions

This paper has examined the impact of reflection in making the students' learning experience memorable and enjoyable. This approach is not only beneficial for the students but also for teachers to design compassionate and serious engagement and assessment strategies in an online environment that will involve the students as partners in the whole teaching learning process. From the 'Course Instructor Feedback' conducted for the 'Network Theory' course, it is clear that the students were pretty happy and satisfied with the overall engagement in the class during covid times. In the end, I can safely compile the following concluding remarks on this intervention:

- ✓ Better learning and satisfying experience for
  - ➢ Teacher
  - ➢ Students
  - ➢ Laboratory Staff
- ✓ A paradigm shift towards 'Outcome Based Learning'
- ✓ A better connect between the Teacher, Laboratory staff and students

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