

## *The Role of Reflective Practice in Teacher Development during COVID-19 Era: a Case Study of Birzeit University Teachers*

### **Abstract:**

This paper attempts to examine the role and effect of Reflective Practices in developing teachers professionally during COVID-19 era. It focuses on the Palestinian context, shedding light at Birzeit University. Influenced by COVID-19 pandemic, the form and medium of education has gone through an exceptional and immediate shift from traditional face-to-face classrooms to online spaces. Both students and teachers needed to adapt to this new practice, including the provision and reception of feedback. Not only does such feedback detect students' progress and achievements, but it also helps them to manage, observe and enhance their learning. Teachers' feedbacks also provide insights on how to approach teaching. This process is known as Reflective Practice (RP), which invites teachers to reflect upon their practices, methodologies and experiences in any teaching mode, including the case of recent circumstances, due to COVID-19, during online classes. Additionally, the paper presents an overview of reflective practice in term of definitions, models and levels. Finally, the paper scrutinizes teachers' perceptions of RP pre, during and post- COVID-19 pandemic, and how it influenced their teaching practices and experiences after getting back to face-to-face instruction. Researchers distributed a questionnaire among full-time instructors at Birzeit University and analyzed the data using SPSS. Findings show that the majority of participants agree that reflection contributed, and still contributes to shaping their teaching experiences and philosophy of teaching. Moreover, results show that participants not only reflected on their experiences during the pandemic, but they also benefited from such reflections after returning to face-to-face instruction.

**Keywords:** COVID-19, feedback, online classes, reflective practice, teaching experiences, teaching practices.

### **الخلاصة:**

تحاول هذه الدراسة فحص دور وتأثير الممارسات الانعكاسية في تطوير المعلمين مهنيًا خلال عصر كورونا. مركزًا على السياق الفلسطيني، ومسألة الضوء على جامعة بيرزيت. متأثرًا بجائحة كورونا، مر شكل ووسيط التعليم بتحول استثنائي وفوري من الحصص الدراسية التقليدية وجهًا لوجه إلى التدريس عبر الإنترنت. احتاج كل من الطلاب والمعلمين إلى التكيف مع هذا الأسلوب الجديد، بما في ذلك توفير التغذية الراجعة واستقبالها. وتكمن أهمية التغذية الراجعة بأنها لا تكشف تقدم الطلاب وإنجازاتهم فحسب، بل تساعدهم أيضًا على إدارة تعلمهم ومراقبته وتعزيزه. توفر ملاحظات المعلمين أيضًا رؤى حول كيفية التعامل مع التدريس. تُعرف هذه العملية بالممارسة الانعكاسية (RP)، والتي تدعو المعلمين إلى التفكير في ممارساتهم ومنهجياتهم وخبراتهم في أي وضع تعليمي، بما في ذلك حالة الظروف الأخيرة، بسبب جائحة كورونا، خلال الفصول الدراسية عبر الإنترنت. بالإضافة إلى ذلك، تقدم الدراسة لمحة عامة عن الممارسات الانعكاسية من حيث التعاريف والنماذج والمستويات. أخيرًا، تسعى الدراسة لفهم تصورات المعلمين عن الممارسات الانعكاسية قبل وأثناء وبعد جائحة كورونا، وكيف أثرت على ممارساتهم وخبراتهم التعليمية بعد العودة إلى التعليم وجهًا لوجه. قام الباحثون بتوزيع استبيان على المدرسين المتفرغين في جامعة بيرزيت وتحليل البيانات باستخدام برنامج SPSS. تظهر النتائج أن غالبية المشاركين يتفقون على أن الممارسات الانعكاسية ساهمت، ولا تزال تساهم في

تشكيل خبراتهم التعليمية وطرائق التدريس. تُظهر النتائج أيضًا أن المشاركين لم يلجأوا للممارسات الانعكاسية أثناء الوباء فحسب، بل استفادوا منها بعد العودة إلى العليم الوجيه.

الكلمات المفتاحية: COVID-19، التغذية الراجعة، الفصول الدراسية عبر الإنترنت، الممارسات الانعكاسية، الخبرات التدريسية، ممارسات التدريس.

## 1. Introduction

*“Reflection is an important human activity in which people recapture their experience, think about it, mull it over and evaluate it. It is this working with experience that is important in learning.”*

*(Boud et al., 1985, p. 19)*

Teaching, among many other professions, is a very demanding job; it requires a lot of energy, patience, and a critical thinking mindset. Teachers need to critically and analytically reflect on what they deliver in the classroom and how they do so. This process- reflective practice- is a procedure that has been widely discussed. Many scholars and educationalists believe that it is essential, as it allows teachers to develop and improve themselves and their teaching methodologies. This paper tries to provide an analysis of RP as a theory and a process, starting with various definitions of reflective practice, illustrating the different models and levels of reflection provided by many thinkers and philosophers. The paper then discusses the importance of reflective practice and how it contributes to teachers’ professional development through a study that was conducted to investigate the effects of reflective practice before, during and after the COVID-19 pandemic and how it helped in shaping or even reshaping teachers’ experiences and practices.

## 2. Reflective Practice: Definitions, Models and Levels of Reflection

Literature is full of many definitions of reflective practice (RP). Historically, John Dewey (1933), who drew on the ideas of earlier educators and philosophers such as Plato and Aristotle, is known as the key originator of the concept of reflection in the twentieth century. He considers it a particular form of problems-solving. He defines it as 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” (p. 6) Dewey’s theory of reflective practice mainly emphasizes on the point that reflection takes place after the event has occurred. Schön (1983) later builds on Dewey’s notion of reflective practice, identifying the ways in which professionals, not only teachers, could be aware of their implicit knowledge

and learn from their own experience. In his definition, he introduces two new concepts: reflection-in-action and reflection-on-action. The former is ‘action-present’; therefore, it is reflecting on the situation while it can still be beneficial rather than reflecting on how teachers would do things differently in the future. He states, “when someone reflects-in-action, he becomes a researcher in the practice context. He is not dependent on the categories or established theory and technique, but constructs a new theory of the unique case” (p. 68). The second concept, reflection-on-action, involves reflecting on how teachers’ practice can be improved or changed after the incident takes place. Throughout his analysis, Schön (1983) indicates that understanding other perspectives alone is not enough, stressing on the idea that reflection-in-action requires teaching and/or class experience.

In addition to the above-mentioned, Max Van Manen (1977) sets three levels of the process of reflective practice. The first level is ‘technical reflection’, where teachers refer to the technical application of the educational knowledge, and of basic curriculum principles for the purpose of reaching a predetermined goal. The second level is ‘practical reflection’. At this level, the processes and the means by which the predetermined goals are to be achieved, their underlying rationale, results as well as the goals themselves are analyzed, examined and assessed, focusing on interpreting the understanding of both the nature and the quality of the educational experience along with an understanding of the possible practical choices. The final level is the ‘critical reflection’, at which the main aim is to inform the practical reflection by incorporating the moral and ethical considerations that are related to the problem into discussion, to support equality, justice and freedom. This involves aiming to question the value of knowledge, besides addressing the nature of the social conditions that contribute to “raising the question of worthwhileness in the first place” (p. 227), involving a constant criticism of the dominance of institutions and other repressive forms of authority.

Kolb (1984) then presents a different notion of reflective practice through his theory of experiential learning which he defines as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (p. 41). He refers to his theory as ‘experiential’ to emphasize on the major role that experience plays in the learning process, and to connect the theory to its ‘intellectual origins’ in the works of Lewin, Dewey and Piaget. As a result, he states that his notion of experiential learning is different from the rationalist, cognitive and behavioral theories of learning, as it suggests an “integrative perspective that combines experience, perception, cognition and behavior” (p. 21). Throughout his analysis of experiential learning, Kolb suggests a learning cycle that comes in four stages of “the concrete

experience, reflective observation, abstract conceptualization and active experimentation” (p. 40). Kolb’s Learning Cycle is based on the previous works of the above-mentioned philosophers. He builds on Dewey’s claim that learning should be based on experience, and Lewin’s ideas of the importance of the integration of theory and practice, in addition to Piaget’s emphasis on the effect of interaction between the person and environment on intelligence. The first stage of his learning cycle is the concrete experience itself, meaning to actually do the activity. This stage is followed by the second which involves reflecting on the activity itself in order to think of points of successes and failures. Kolb’s abstract conceptualization is the third stage where teachers set a hypothesis about the meaning and the objective of their activity. The fourth stage is the active experimentation where teachers test the hypotheses that they adopted, and the resulting experience will either support or challenge their hypotheses.

Later, Gibbs (1988) developed a reflective cycle to encourage systematic thinking about one’s experiences or activities. His six-stage cycle starts with describing the incident, followed by expressing the person’s thoughts and feelings in time of the situation, after that comes evaluating the pros and cons of it. The fourth step is to analyze the situation critically and to think of other experiences compared to the current one. Next comes the conclusion, where teachers sensibly think of what they could have done instead, and what they learnt from the experience. Finally, the action plan step is for teachers to set what they want to do next time in similar situations, and what are the next steps they want to undertake based on what they have learnt. It’s also worth mentioning that Gibbs’ framework emerges from Kolb’s, yet it is more elaborate. It mainly aims to focus on how reflection helps teachers learn from their own experiences. It can also be readjusted based on the objectives.

Valli (1992) developed an additional model for the levels of reflection, where she incorporated many of Schön’s and Manen’s models of reflection. She states that reflection comes into five levels: technical reflection, reflection-in-and-on-action, deliberative reflection, personalistic reflection, and critical reflection. Technical reflection is when teachers think about the general instruction, that is, techniques or skills of how they teach. The second level is reflection-in-and-on-action, where teachers think about their own performance and circumstances. This process includes using their own values, beliefs, classroom context, as well as students as sources of knowledge for reflection and action. Then comes the level of deliberative reflection that involves thinking about teaching concerns, such as students, the curriculum, strategies and the organization of the classroom. This level of reflection emphasizes on decision-making which is based on teachers’ own values,

experience and the advice of other teachers or peers. The fourth level is personalistic reflection where teachers reflect on their personal improvement and their relationship with students. The final level is critical reflection which involves thinking about the social, moral, political and ethical dimensions of schooling (Minott, 2008).

Both Manen's (1977) and Valli's (1992) levels of reflection have been criticized of being hierarchical (Hatton & Smith, 1995). But they are useful as they offer various aspects of reflective practice which are important for teachers to take into account.

There are many other definitions, models and levels of reflective practice, but they all emphasize on the importance of experience for teachers. And because every teacher experiences different circumstances in their lives differently, their reflections are personal interpretations of the events which are based on previous experiences, personal beliefs and values.

### **3. Teachers' Professional Development and Reflective Practice**

Since reflective practice mainly aims to get teachers thinking back and through their performance and methodologies, it helps them improve and develop their knowledge, skills, teaching methods and performance in order to create better future experiences in classroom contexts and practical life.

When teachers reflect, they really examine their own definitions of knowledge, seeking to develop broader and multifaceted types of knowledge and ,then, recognize that their knowledge is never complete. They are concerned about the contexts of their practices and the implications for the actions they take. They reflect on their assumptions and theories of practice, to later take action that is grounded in self-awareness. Additionally, teacher identities develop as a result of their own feelings and the way they identify with being a teacher (Kinsella, 2001).

Another advantage of reflective practice is that it serves as a "corrective to overlearning" for teachers (Schön, 1983 p. 61). Because when teachers reflect, they go through and criticize their implicit understandings that are a result of the repetitive experiences in their teaching career. Thus, reflective practice allows them to look at the situations of uncertainty or uniqueness from a different perspective. Moreover, becoming a reflective practitioner improves what the person can add to their profession and contributes to the development of their future career plans (Schön, 1983).

Schön (1983) also suggests that reflective practice is a continuous process that involves the person's own experience in applying theories and knowledge into practice. Additionally, Gibbs' (1988) reflective cycle suggests that through reflection, the individuals develop an analysis of their own feelings and evaluations of their own experience. Reflective practice is also

associated with lifelong learning which leads to the development of teachers' autonomy, qualification, critical sense and practical experience. When teachers engage in reflective practice, they stimulate and enhance their personal and professional growth and therefore lessen the gap between theory and practice. Moreover, becoming a reflective teacher means to move beyond focusing only on instructions and the 'how to, what and why' questions into broader educational purposes where asking such questions results in developing teachers' autonomy and responsibility in their professional careers (Bartlett, 1990). Additionally, when teachers do reflective teaching, reflective inquiry and reflection-on-action, they gain personal, professional and practical knowledge that is essential for them (Lieberman & Miller, 2000).

Reflective practice also improves the quality of teachers' work and, therefore, adds to the benefit of learners and other colleagues. It enables teachers to control their own professional development, as when they reflect, they practically apply what they have learnt in theory. Larrivee (2000) utters, "unless teachers develop the practice of reflection, they stay trapped in unexamined judgments, interpretations, assumptions, and expectations" (p. 293).

Because teaching is a process of constant learning, engaging reflective practice brings new knowledge and skills to teachers' practical experiences, and it increases their self-awareness and critical thinking, as through reflection they discover new ways to look at their own actions. According to the General Teaching Council for Northern Ireland (GTCNI), teachers' competences are "developed through reflection on practice and through dialogue with colleagues" (GTCNI, 2007, p.12). It also urges teachers to make reflective practice part of their professional identity and attitude. Reflection is not only beneficial on the individual level, but it also supports institutional change. Many critics argue that reflective practice is vital to achieving whole-school improvements (Day, 1999; Griffiths, 2000 as cited in Llwodraeth Cymru Welsh Government, 2015). School self-evaluation reports includes systematic reflections at team and school levels. A literature review which was done on behalf of the Scottish Government cited research that shows that developing staff ability to reflect is the most important aspect of successful self-evaluation (Mentor et al., 2010). The challenge here is to move from the individual level of reflection to the collective reflective practice. Meaning that teachers' thoughts and feelings about their school priorities and responsibilities should be discussed among colleagues, to agree on whether they are right, and how can such priorities be achieved most effectively. Reflective practice is therefore considered to be an effective tool of professional development of other skills for teachers, such as mentoring and coaching and observation; as the most successful observations are those which

are used as a development tool that creates a “reflective and self-directed teacher learners as opposed to a high stakes evaluation or appraisal” (Coe et al., 2014, p.4).

Roffey-Barentsen and Malthouse (2009) discuss ten benefits of reflective practice. First, improving one’s teaching practice, as reflection helps teachers to think of their performance and detect weaknesses to improve their future experiences. Learning from reflective practice is another advantage, as it engages deep learning and analysis where teachers apply theory into practice. Also, reflection enhances problem solving skills, as it gives teachers the opportunity to critically and carefully analyze the problems they face, which in turn develops their ability to find solutions. The fourth advantage of reflective practice is that it helps teachers to become critical thinkers. And therefore, they make well-planned decisions which are based on deeper, thoughtful and objective considerations of the circumstances, as “decision-making goes hand in hand with problem solving and critical thinking” (p. 19). In addition to this, reflection improves teachers’ organizational skills. Reflective practice helps teachers to think, identify, analyze and look for potential solutions and to set up everything gradually, helping them to organize their time and targets to create better experiences. The seventh benefit of reflective practice is that it helps in managing personal change. Meaning that reflection helps teachers to adapt with the ongoing changes in their profession with less-emotional and more logical reactions. As reflective practice mainly focuses on reaching positive improvements and solutions, and managing changes more effectively.

Furthermore, reflection leads to acknowledging one’s personal values. Throughout teachers’ practical experience, they will face situations where they begin to realize certain values in their own personality, and there will be circumstances where their own values clash with the values of their students, peers, institution and society. Reflective practice plays a major role here, as it helps teachers acknowledge and recognize that such values exist and therefore have an influence, and it helps them to choose approaches and actions that they would take to solve such clashes without affecting their professional experience. Taking one’s own advice is the ninth advantage that Roffey-Barentsen and Malthouse discuss. When teachers engage in reflective practice, they act upon their own “uniquely informed criticism” (p. 23) which improves their capabilities. This is mainly because the person him/herself is the most honest and true critic of their own work, because they know why and what they did. Finally, reflective practice grants teachers with a sense of emancipation. As Hillier (2005) puts it:

*By reflecting critically, instead of continuing with our feelings of self-doubt, that we are imposters in our classrooms, or that we are failing as teachers and racked with guilt, we can become positive in our search for new understandings of our practice and more ways to deal with the challenges that confront us continually. We take control over our professional practice, acknowledging that we cannot transform everything, but aware that we can identify the spheres in which we can. It is a truly emancipatory process.*

(p.20)

Reflective practice is a process that teaches us to accept the fact that there are things we can change, and other things that we cannot, but instead we can adjust with some incidents. Knowing this and applying it therefore liberates people, and leads them to achieving better performance.

#### **4. COVID-19 and Reflective Practice**

COVID-19 pandemic has greatly influenced all aspects of life, and education has not been spared. It has had to quickly respond to all the challenges posed by the pandemic that threatened existing practices and changed the methods of teaching in unpredictable ways (Bryson et al., 2020; Horton, 2020). Universities and schools were forced to close as a result of the spread of the virus rapidly substituted classroom-based teaching by online teaching. As the duration of the COVID-19 pandemic was unknown, the ways of teaching and engaging with students throughout that academic year, or even upcoming years, were impacted. New approaches to teaching emerged; all academics had to change the ways in which they facilitate learning outcomes. For some, it was an exciting opportunity to alter ongoing practices, but for many it was very challenging and stimulating.

The shift to online teaching required rapid and immediate adaptation in teaching practices and in the ways in which modules are designed and compiled (Boling et al., 2012; Desai et al., 2008; Koehler & Mishra, 2009). Thus, the primary challenge was with modifying long-and-well-established routines, practices and expectations that have developed among teachers as well as students. This immediate change required teachers to do reflections on their teaching practices as well as their teaching experiences. This sudden change must have affected how academics teach and what they would teach as well. For example, instructors and professors at Birzeit University-Palestine, who mostly used ZOOM application or GOOGLE meeting rooms, were limited to what they can view on the computer screen; visuals or audios, especially if one takes into account the technical problems that occur due to internet connection issues, upload or download speeds, etc. Not only teachers



were limited to how and what they could teach online, but they were also challenged by the evaluation process.

The shift to online teaching, alongside complete lockdowns and closures, meant that teachers had to shift from hard copy exams and manual grading to online evaluation, except for essays, long answers and open-ended questions. The change in the evaluation process also required academics to reflect on their practices, to come up with an evaluation that guaranteed that the students did not cheat and answered the questions themselves, and most importantly, the evaluation must reflect the intended learning outcomes and the goals set by the teacher.

This emphasizes the fact that the role of teachers is vital in creating a qualified online learning process. When creating a meaningful learning process, the teacher is obligated to carry out three learning cycles, planning, teaching and evaluation, that must be implemented continuously (Green, 2011). Throughout the learning cycle; reflection is very important to reflect on what they have done in their virtual classrooms, which will be taken into account for future learning; especially when planning the material to be given during the online class, finding the most efficient strategy to adopt, and evaluating the learning process. Furthermore, Reflection gives teachers the opportunity to intensify, improve and strengthen their competence and professionalism when implementing their tasks.

Teachers must develop and later master four competencies to become professionals: individual competence, pedagogic competence, professional competence, and social competence. If teachers master these skills, they will be able to achieve the goal of education. Reflection is not a new practice in the educational world (Choy et al., 2012). With this in mind, it has been pointed out that the importance of reflective practice lies in the fact that it stimulates academics' thinking skill (Song et al., (2005) as cited in Porntaweekul et al., 2016). Furthermore, teachers' critical thinking is the first and major step for them to examine their own reflective practices, as they need to be critical throughout and after the process (Erdoğan, 2020). Moreover, reflecting on teaching outcomes and evaluating what can be changed or improved is a fundamental part of teachers' professionalism in order to promote the learning process as well as teachers' competence (Sellars, 2012). While implementing reflective practice, Loughran (2002) explained that an academic, as a reflective practitioner, must understand how reflection is performed to eventually achieve an effective learning outcome. Hence, it is important to do self-reflection.

Reflective practice fundamentally means that teachers take upon themselves the responsibility of looking at their professional practices in the classroom, whether face-to-face or virtually online, as well as looking at the

philosophies, beliefs, and theories that compose their educational practices, both inside or outside the classroom, so that their professional practices is personally meaningful to them (Farrell, 2015). As Freeman (2016) states, reflective practice offers means to the less “accessible aspects of teacher’s work.” (p.208). While reflective practice currently enjoys prominence and high significance in the field of teaching English to speakers of other languages (TESOL), as well as the field of teaching English as a Foreign Language (TEFL). However, just as in the field of general education, academics have struggled to come to an agreement on how to implement reflective practice for second language teachers (Mann and Walsh, 2013). For example, within TESOL, Farrell’s (2015) scope for reflective practice offers teachers with the opportunity to gain awareness of their own practices in relation to their thoughts and the world around them by reflecting on their methodologies, principles, theories, practices, and further implications beyond the teaching practice.

There are various indicators used to decide whether a teacher is classified as a reflective teacher or not. As stated by Hamilton (2005), there are four indicators: the ability to self-assess, the awareness of how a person learns, the effect of self- efficiency and belief, and the development of lifelong learning skills. Reflective thinking leads teachers to be aware of their responsibilities for their teaching and learning practices and helps them find and later implement new perspectives of learning process (Demir, 2015). Additionally, Demir (2015) emphasized that teachers need to scan their teaching activities from different perspectives. For instance, teachers are required to reflect upon their students’ thinking, comprehension and interests. Therefore, when getting to the evaluation phase, it will provide teachers with the opportunity to raise better understanding of the development of self-awareness (Flavian, 2016).

According to Playsted (2019), reflection helps teachers to log insights on the means of implementing their knowledge and beliefs and how they interact with the curriculum that they teach. In teacher education, reflective practice is a widely-used concept. Certainly, reflection becomes a vital instrument for teachers to deeply explore how well they perceive themselves as reflective practitioners in teaching and learning processes. Especially with the challenges that the COVID-19 pandemic has brought along as an extra burden that teachers had to endure to make sure that they preserve the essence of the teaching process. Hence, exploration in reflective sessions will show academics who they are as English language teachers, what they teach, and what remains that should be completed in order to develop their teaching practices to be better (Djoub, 2018). Furthermore, numerous studies have been conducted in analyzing reflective thinking practice. For example,

Shanmugavelu et al. (2020) believe that implementing reflective practice can be a foundation for creating effective teachers who would be able to face ambiguities, misunderstandings and disorientations.

### **5. Statement of the Research Questions**

This paper attempts to answer the following questions:

1. Has reflection influenced the teachers' teaching methodologies, practices and experiences before the COVID-19 pandemic?
2. Has reflection got any influence on teachers' teaching methodologies, practices and experiences when moving from face-to-face to online instruction during the pandemic?
3. Has reflection got any influence on teachers' teaching methodologies, practices and experiences when returning to face-to-face instruction after the COVID-19 pandemic?
4. When was reflective practice the most influential?
5. Is there a significant difference between both genders regarding the effect of reflection pre, during and after COVID?
6. Is there a significant difference between educational level (PhD vs MA holders) regarding the effect of reflection pre, during and after COVID?

### **6. Methodology**

#### **6.1 Population, Sample, and Research Instrument**

The study targeted instructors at Birzeit University- Palestine, whose teaching experience is four years or more in three faculties: Arts, Business and Economics, and Science. From all the full-time instructors; around 200 have been eligible.

The researchers designed a questionnaire which was distributed online using GOOGLE FORMS to one hundred randomly-selected instructors, who have taught at Birzeit University before, during and after the COVID-19 pandemic. The questionnaire was sent to the participants through their university email.

Sixty-one participants submitted their contributions to the questionnaire; thirty-three males and twenty-eight females. Their ages range between twenties and sixties; thus, the years of experience varied as well. All participants have at least four years of teaching experience, which means that they have taught face-to-face before the COVID-19 pandemic, they have gone through online teaching experience during the pandemic and have also gone through the shift from online instruction back to the face-to-face teaching. It is worth mentioning that twenty-one participants have PhD, and forty participants have Master's degree.

#### **6.1.1 Validity and Reliability of the Questionnaire**

The questionnaire was sent to three experts in the field of education for validation. Before distributing the questionnaire, they requested changing some words and deleting two questions that were indirectly related to the research questions. Then, the questionnaire was first distributed to four colleagues as a sample and then resent to the experts to reexamine, finalize and validate. They met again and made some changes and approved the final version that was distributed. In addition to that, regarding the consistency of the scale, Cronbach Alpha was calculated for questions 8-14, and it was 0.73, which indicates an accepted level of consistency.

## 6.2 Research hypotheses

In order to answer the above-mentioned research questions, the researchers have put forward hypotheses to test, analyze and measure the effects of reflective practice on teachers' experiences and practices before, during and after the pandemic. To begin with, to answer the first question, the following hypothesis was developed:

- The average of the effect of reflection before COVID -19 ( $M_b$ ) = 3<sup>1</sup>, against the alternative hypothesis which suggests that the average  $\neq 3$ . In other words:

$$M_b = 3$$

$$M_b \neq 3$$

- Regarding the second question, a similar hypothesis was applied: The average of the effect of reflection during COVID ( $M_d$ ) = 3, against the alternative hypothesis which suggests that the average  $\neq 3$ . In other words:

$$M_d = 3$$

$$M_d \neq 3$$

- Regarding the third question, the same hypothesis was used as well:

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<sup>1</sup> The average of the effect of reflection is referred to as M: MU ( $\mu$ )  
 3 is the neutral meeting point of the Likert scale used in the questionnaire.  
 $M_b$  is the average of the effect of reflection before the COVID-19 pandemic.  
 $M_d$  is the average of the effect of reflection during the COVID-19 pandemic.  
 $M_a$  is the average of the effect of reflection after the COVID-19 pandemic.  
 $M_b$  indicates the average of the answers for questions 6 and 7 in the questionnaire.  
 $M_d$  indicates the average of the questions from 8-14.  
 $M_a$  indicates the average of questions 15-18.

The average of the effect of reflection after COVID-19 ( $M_a$ ) = 3, against the alternative hypothesis which suggests that the average  $\neq 3$ . In other words:

$$M_a = 3$$

$$M_a \neq 3$$

- Regarding the fifth question, the following hypothesis was formulated to measure the effects of reflective practice in relation to gender. In other words, did male and female participants perceive reflective practice differently during the concerned time periods:

$$M_b (\text{male}) = M_b (\text{female})$$

$$M_b (\text{male}) \neq M_b (\text{female})$$

$$M_d (\text{male}) = M_d (\text{female})$$

$$M_d (\text{male}) \neq M_d (\text{female})$$

$$M_a (\text{male}) = M_a (\text{female})$$

$$M_a (\text{male}) \neq M_a (\text{female})$$

- Finally, for the sixth question, the following hypothesis was formulated to measure the effects of reflective practice in relation to academic degree. In other words, did PhD and MA holders perceive reflective practice differently during the concerned time periods:

$$M_b (\text{PhD}) = M_b (\text{MA})$$

$$M_b (\text{PhD}) \neq M_b (\text{MA})$$

$$M_d (\text{PhD}) = M_d (\text{MA})$$

$$M_d (\text{PhD}) \neq M_d (\text{MA})$$

$$M_a (\text{PhD}) = M_a (\text{MA})$$

$$M_a (\text{PhD}) \neq M_a (\text{MA})$$

## 7. Results and Discussion

Findings from the questionnaire suggest that reflection has, to an extent, affected participants' teaching experiences and practices; especially with the challenges that the COVID-19 pandemic has brought. To test the first three hypotheses, One Sample t-test was conducted and the results for the 1<sup>st</sup> hypothesis ( $M_b$ ) was  $t = 17.6$  and the significant level was 0.000, indicating that the null hypothesis that reflective practice has no effect is rejected. The same applies when conducting the t-test for  $M_d$  and  $M_a$  and similar results were given:  $t$  value for  $M_d = 16.2$ , and the significant level was 0.000.

Additionally, t value for Ma = 9.2 and the significant level was 0.000. This means that the null hypotheses are rejected for all Mb, Md and Ma. In other words, reflective practice is proven to have an effect on teachers' experiences, practices and methodologies. Additionally, data in table 1 indicates that reflective practice is of high significance, as the averages for Mb, Md and Ma are all higher than 3, which means that alternative hypotheses are all accepted; indicating that reflective practice was and still is of positive significance.

Table 1: One Sample t-test for Mb, Md and Ma

	t- value	Sign (2-tailed)	Mean
mb	17.697	.000	4.336
md	16.271	.000	3.953
ma	9.272	.000	3.897

To tackle the fourth question, it is worth mentioning that the difference among the means listed above is another indicator that, even though reflective practice is significant during the concerned-time periods (Mb, Md, Ma), it is the most significant, and yet the most influential, before the pandemic. Although when comparing the averages, one can clearly see that the difference is insignificant. Consequently, it can be concluded that reflective practice is highly effective before, during as well as after the pandemic.

Table 2 shows the results of testing the averages of reflective practice before, during and after the pandemic in relation to gender. In other words, did male and female participants view reflective practice differently before, during and after the pandemic? Results indicate that there is no significant difference in how both genders view reflective practice in any of the above-concerned time periods, except during the pandemic, where females showed higher significance of reflection than males. The averages of Mb, Md and Ma for male participants are all relatively close, and are all higher than 3. Moreover, the averages of Mb, Md and Ma for female participants are also all relatively close, and are all higher than 3, too. This proves that, from both male and female participants' point of view, reflective practice played and still plays a vital role in shaping their teaching experiences and practices.

Table 2: One Sample T-test of Mb, Md and Ma for both genders

	Degree	N	Mean	t-value	Sign level
mb	Males	33	4.258	1.131	0.263
	Females	28	4.429		
md	Males	33	3.831	-2.344	0.022
	Females	28	4.097		

ma	Males	33	3.8409	-0.632	0.530
	Females	28	3.9643		

Table 3 below shows the results of testing the perceptions of reflective practice in relation to academic degree. One can see that those who have PhD along with MA degree holders perceived and still perceive reflective practice positively before, during and after the pandemic. The data below rejects the alternative hypotheses regarding the effects of reflective practice from the points of view of PhD holders against how MA holders perceive it during the concerned time periods. It is clear that there is no significant difference between PhD and MA holders in how they view reflective practice. Additionally, the fact that the means are all above 3 for both academic degrees in the three time periods is another proof that reflective practice proved and still proves effective and beneficial for enhancing teaching experiences and practices.

*Table 3: Means of Mb, Md and Ma in relation to Academic Degree.*

	Degree	N	Mean	t-value	Sign level
mb	MA	40	4.400	1.172	0.246
	PhD	21	4.214		
md	MA	40	4.018	1.542	0.129
	PhD	21	3.830		
ma	MA	40	3.8813	-0.230	0.819
	PhD	21	3.9286		

## 8. Conclusion

The paper presented an overview of reflective practice in the literature, and investigated Birzeit University teachers' perceptions of reflective practice before, during and after the COVID-19 pandemic. It also investigated how reflection had affected their teaching practices and experiences after getting back to face-to-face teaching after almost two years of online instruction. Findings show that the majority of participants agreed that reflection played and still plays a major role that shapes their teaching experiences and their philosophy of teaching. In addition, the results show that participants not only reflected on their experiences during the pandemic, but they also made use of the reflections they made at that time and benefited from them after returning

to face-to-face instruction. It can, then, be argued that reflective practice gives practitioners the opportunity to enhance their sense of self-awareness and to improve their future experiences. This study suggests that when teachers engage in this process, they technically reduce the gap between theory and practice, as they apply what they have learnt into practice throughout their teaching career.

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### **Appendix:**

Research questionnaire:

Questionnaire

Dear colleagues,

This questionnaire is designed as part of a research paper that we are conducting. It aims at investigating the role of reflective practice on you as teachers and on your teaching practices; before, during and after the COVID-19 pandemic.

The questionnaire does not require any private or personal information, and your answers will be confidential and only used in the academic context it is set for.

Your contribution is highly appreciated.

**\* Indicates required question**

Part One: Personal Information:

1. Gender: \*

Male

Female

2. Age: \*

20- 29

30- 39

40- 49

50- 59

60 or above

3. Academic background: \*

Master's Degree.

PhD

Other:

4. Teaching experience: \*

4- 5 years

5- 10 years

11- 15 years

Other:

Part Two: Reflection:

5. Before the COVID-19 pandemic, you prepared lesson plans for your classes: \*

Always

Usually

Sometimes

Rarely

Never

6. Before the COVID-19 pandemic, you reflected upon your experience as a teacher at the end of the day (identifying the successes and failures). \*

Always

Usually

Sometimes

Rarely

Never

7. Before the COVID-19 pandemic, you changed some of your practices in the classrooms because of previous reflections on these practices. \*

Always

Usually

Sometimes

Rarely

Never

8. During the COVID-19 pandemic and as a result of the complete shift to online instruction, you had to rethink your teaching practices and methodologies. \*

Yes

No

9. During the COVID-19 pandemic and as a result of the complete shift to online instruction, you reflected upon your online classes and thought about your new teaching experience. \*

Always  
Usually  
Sometimes  
Rarely  
Never

10. During the COVID-19 pandemic and as a result of the complete shift to online instruction, you changed some of your teaching methodologies based on your previous reflections on your own experience. \*

Always  
Usually  
Sometimes  
Rarely  
Never

11. Upon reflection, you re-evaluated the conditions of your online class and adopted other/new teaching methods that fit better. \*

Always  
Usually  
Sometimes  
Rarely  
Never

12. Reflection on your teaching practices helped you change your teaching practices and evaluations. \*

Strongly agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

13. Reflection helped you adopt new teaching methodologies to keep up with the immediate change to online instruction. \*

Strongly agree  
Agree  
Neutral  
Disagree  
Strongly disagree

14. Reflection helped you locate your strengths and your weaknesses as a teacher. \*

Strongly agree  
Agree  
Neutral  
Disagree  
Strongly disagree

15. After getting back to face-to-face instruction, you still use some of the teaching techniques you adopted during COVID-19 lockdowns. \*

Always  
Usually  
Sometimes  
Rarely  
Never

16. After getting back to face-to-face instruction, you reflect upon your teaching experiences and compare them to those you went through pre- and during COVID-19 lockdowns. \*

Always  
Usually  
Sometimes  
Rarely  
Never

17. Upon reflection on your current teaching practices, you think that they got affected by your teaching experience during COVID-19 lockdowns. \*

Strongly agree  
Agree  
Neutral  
Disagree  
Strongly disagree

18. Upon reflection on your current evaluation strategy/strategies, you think that they got effected by your experience during COVID-19 lockdowns. \*

Strongly agree  
Agree  
Neutral  
Disagree  
Strongly disagree

Thank you.