

Teachers Who Reflect, Teach Better: Reflective Practice at The Heart of Teachers' Professional Development Programs

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Published: 28 September 2020

ABSTRACT

While there is a significant amount of research and literature to explain the role of reflective practice in teaching, there is little research that reported the extent of such practice on classroom instructions and its spill effects on student learning outcomes. For this reason, this paper looks at the magnitude of reflective practice in shaping classroom instructions and how it facilitates for better student performance within the context of teachers' professional development (PD) programs. Hence, the focus of the paper is two-fold: examining teachers' PD programs that promoted reflective practice; and the relationship between reflective practice and student performance. The discussion on teachers' reflective practice is timely. In particular, with the growing educational research and increasing body of evidence that pointed towards PD as having a significant influence on student achievement (Achinstein & Athanases, 2006; Fullan, 1990; Little, 2001). In addition, most PD efforts focused on teacher collaboration as a strategy for teaching improvement and eventually better academic performance of the students (Achinstein & Athanases, 2006). Many educators (Fendler, 2003; Loughran, 2002; Schon, 1983; Walkington, 2005) viewed reflective practice as situated at the heart of PD programs that sought teachers to examine their practice for improvement. This paper assists policy makers and education reformists in re-examining their PD efforts in targeting for variables that matter.

Keywords: *reflective practice, teacher reflection, professional development, teacher professionalism*

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1. INTRODUCTION

The idea of providing professional assistance for teachers' growth is not new; in fact, the very nature of teachers' professional development (PD) has evolved over the past fifty years. Hyde and Pink (1992) stated that professional development initiatives in the 70s and 80s served as remedial measures in fulfilling the 'inadequacies' teachers had. Towards the late 1980s and early 1990s, the terms *teacher empowerment* and *teacher renewal* were highly preferred (Hyde & Pink, 1992). Whilst most in-school trainings and PD efforts in the 21st century consisted the element of *professionalism* or *professional growth* (Greene, 2001). The content and focus of PD programs have also changed tremendously over the years. While a fundamental theme arising from the literature of recent development programs in schools is the collaborative effort of teachers aimed at improving instruction and student performance (Helman, 2006; Lee, 2006; Little, 2001); earlier program emphasis was on providing teachers with information on teaching approaches and techniques (Cochran-Smith & Lytle, 2001), improving teachers' skills in teaching if they were perceived as lacking (Hyde & Pink, 1992), and most were based on conventional training models (Little, 2001). Fullan (1990) used the term PD and innovation effort interchangeably, seeing the two as interrelated. He argued that any PD programs must include the element of innovation, its implementation ongoing, with a module that combined formal and informal components. Unfortunately, most programs failed to integrate these elements (Fullan, 1990). Another point of entry into the debate was made by Eaker, Noblit and Rogers (1992), saying that the basic fallacy

of PD program was the use of traditional deficit model and the assumption that educational innovations were meaningful in the process of PD when, in reality, they were rarely put into actual practice.

A number of educational research and increasing body of evidence pointed towards PD as having a significant influence on student achievement (Achinstein & Athanases, 2006; Fullan, 1990; Little, 2001; Joyce, Murphy, Showers & Murphy, 1989; Stallings, 1989). Studies also found significant relationships between teachers' involvement in PD programs and teaching improvement (Lawrence, Anthony & Ding, 2009; Neuman & Cunningham, 2009; Pow & Yeung, 2007; Rogers, 2007). Many educators viewed reflective practice as situated at the heart of PD programs that sought teachers to examine their practice for improvement (Fendler, 2003; Walkington, 2005). Loughran (2002) stated that 'It is through the development of knowledge and understanding of the practice setting and the ability to recognize and respond to such knowledge that the reflective practitioner becomes truly responsive to the needs, issues and concerns that are so important in shaping practice' (p.9). Schon (1987) regarded reflective practice as one of the defining characteristics of professional practice. This was due to its capacity which enabled teachers to reflect on action as an engagement in a process of continuous learning (Schon, 1987).

This article seeks to further explore the relationships between teachers' reflective practice and its subsequent effect on student learning improvement. Specific focus is given to reflective practice within the context of PD for teachers. Hence, drawing from related literature, this article looks at the significance of teachers as reflective practitioners, PDs that promote reflective practice, and linking this to the improvement of learning and student performance.

2. PROFESSIONAL DEVELOPMENT AND REFLECTIVE PRACTICE

Reflecting on teaching practice assists teachers to make connection between what were taught and how were they taught, hence examining the strengths and weaknesses of their teaching. Merriam and Caffarella (1991) defined the reflective practice as 'thinking about and monitoring one's practice as it is happening' (p.225-226). Reflective practice was also viewed as a tool that assisted teachers to 'personalize and individualize' (Carrington, Deppeler & Moss, 2010, p.2) their teaching practice and linked teacher knowledge and understanding with their pedagogy (Carrington et al., 2010). Schon (1996) defined the practice as insightful considerations of a person's own experience and being able to apply the outcome of this process to real-life practice. He (Schon, 1987) regarded reflective practice as one of the key defining characteristics of professional practice due to its capacity to promote the process continuous learning. It is through Schon's (1987, 1996) concept of reflection-on-action, drawing upon Dewey's (1933) functional ideas on reflection, which brought reflective practice to its popularity, having ripple effects on the design of many PD programs. Schon (1996) placed coaching as a crucial method to propel reflective practice, emphasizing the significance of knowledgeable others in assisting teachers to reflect.

PDs integrated and promoted reflective techniques in a number of ways. Many authors associated reflective practice with action research (Grundy, 1982; Leitch & Day, 2000; McIntosh, 2010; McMahan, 1999). Kemmis and McTaggart (1988) viewed action research as involving inquiries into one's own practice through a cyclical process which included planning, acting, observing and reflecting. McIntosh (2010) argued that reflection is a form of research in itself. This resonated with Grundy's (1982) view who identified similarities in action research and reflective practice particularly in the manner both were framed and interpreted. McMahan (1999) noted a similarity on how the two aspects were often linked to experiential learning. He extended that reflective practice could be seen as specific application of experiential learning with the focus on improving practice and this was commonly done through reflecting on experience.

Some PDs focused on action-learning, a concept initially introduced as a business management model (Plummer, 2005). Revan (1980) believed that individual learning needed to be sustained through a mean beyond mere acquisition of knowledge. He posited exploration of possibilities and reflection of

past experience as keys to changing practice. Serafini (2002), on the other hand, proposed four aspects to professional reflection: time, distance, dialogue and vision. Serafini argued that these four aspects were intertwined and its combination would likely promote effective reflection. Sufficient time is important for teachers to ponder and critically evaluate what has happened and what should happen. Distance refers to teachers' capacity to transfer events into the cognitive and the ability to employ critical perspective and judgement. Dialogue refers to teachers' active involvement with the externals – colleagues, community, etc. to apply and promote reflective learning. Vision provides focus and definition to the directions and aims (Serafini, 2002).

Enormous amounts of PDs incorporated self-reflective learning as one of the essential components. Marsick and Watkins (1990) defined self-reflective learning as the process of rethinking of one's experiences in dealing with surrounding issues. Self-reflected learning was one of the three main dimensions proposed by the two authors, in addition to instrumental learning and dialogic learning. Instrumental learning has a focus of isolating the skills from social context with the emphasis on skill development and improvement of individual productivity. Dialogic learning refers to learning about the organisation and how one relates to the organisation. This aspect of learning employs collaboration and team work such as coaching, mentoring, and role modelling as a basis for learning.

Grossman, Wineburg and Woolworth (2001) presented an argument that teachers needed a community to nourish their growth as much as students were expected to form a community of learners. Agreeing to Grossmann et al.'s (2001), Borko (2004) added that teachers were almost always willing to share, discuss and reflect ideas related to their work, and welcomed conversations related to PD and career growth. However, she questioned the availability of platforms that encouraged teachers to critically examine their teaching practice. Nevertheless, studies on professional learning communities supported that these networks provided teachers with the opportunities to reflect and learn from their instructional practice and to work on improvement. Hence, there was an increase in the number of studies looking at the effect of professional learning communities in fostering teacher learning, bringing about the indirect impact of instructional improvements (Cho, 2005; Padwat & Dixit, 2008).

There were various other techniques or strategies of reflective practice that were assimilated into PD designs. Some that are worth mentioning were journal keeping, critical incident analysis, mind mapping, teaching portfolios and mentoring (Hall, 1997; Serrat, 2009; Tripp, 1987).

2.1. Professional Development, Reflective Practice and Teacher Learning

Various authors and researchers associated reflective practice with teacher learning (Bonner, 2006; Borko, 2004; Lytle & Cochran-Smith, 1992; Merriam & Caffarella, 1991; Schon, 1996). In fact, reflective practice was one of the most widely discussed topics of teacher learning. The efforts behind teacher learning stemmed by the basic idea that teachers who know more teach better (Cochran-Smith & Lytle, 1999). In addition, rich and deep understanding of content knowledge of the teachers is essential in fostering students' conceptual understanding of the subject learnt (Anderson, 1985; Borko, 2004; Borko & Putnam, 1996).

One of the powerful contexts of teacher learning is the activities inside teachers' classrooms. Borko (2004), in reviewing the literature related to teacher learning (such as Ball & Cohen, 1999; Greeno, Collins & Resnick, 1996; Putnam & Borko, 2000), identified that the materials and sample of work that teachers indulged in their classrooms (such as instructional plans and assignments, videotapes of lessons, samples of students' work) assisted teachers to reflect on their own practice and work for improvement. Borko's view on reflective practicum - reflecting on one's own teaching for strength and weaknesses and then working on improvement - was shared and agreed by many (Bonner, 2006; Calderhead, 1987; Eraut, 1995; Leahy, Lyon, Thompson & Wiliam, 2005; Lytle & Cochran-Smith, 1992; Merriam & Caffarella, 1991; Schon, 1995).

McKenzie and Turbill (1992) stressed that teachers needed, during the reflection process, to make conscious the strategies and processes that they themselves had used in their learning. Terming this as '*inside-out learning*' (McKenzie & Turbill, 1999, p.19), McKenzie and Turbill described that it allowed teachers to view learning from their students' perspectives. Teachers would also be metacognitively aware 'of their own learning strategies and are therefore consciously able to monitor their own learning experience' (p.19). Hence, the authors suggested that PD program should promote opportunity for teachers to focus and reflect on their beliefs and practices, particularly recognizing what teachers have already known.

Associating *knowledge* with *teacher learning* and the transference of these onto teaching practice, Cochran-Smith and Lytle (1999) provided a framework which categorized knowledge into three different perspectives. They are *knowledge-for-practice*, *knowledge-in-practice* and *knowledge-of-practice*. Knowledge-for-practice is the most traditional form of knowledge in which teachers are expected to utilize in their professional field. Cochran-Smith and Lytle (1999) explained that *knowledge-for-practice*, or what was also termed as *practical knowledge* (Elbaz, 1983; Grossman & Richert, 1988; Leinhardt & Smith, 1985; Shulman, 1987), underpinned the assumption that the more teachers know about aspects related to their profession the better these teachers are in their teaching. McLeskey and Waldron (2004) pointed out that this perspective held the view that teachers were not generators of knowledge rather knowledge was seen as external to teachers. Anderson (1985) stressed the vitality of this knowledge in teaching and learning processes, including knowledge of subject matter, curriculum, materials, teaching methods and students. There were several schools of thoughts with regard to knowledge-for-practice. First, that teachers approached their practice based on their derivation of formal knowledge which provided teachers with procedural information (Anderson, 1985). Second, that knowledge-for-practice was largely influenced by teachers' pedagogical content knowledge that dictated the way teachers carried out their instructions (Grossman & Richert, 1988; Leinhardt & Smith, 1985; Shulman, 1987). And third, that teachers approached their classroom from accumulated experience being on-the-job that shaped their ongoing practice (Calderhead, 1987; Carter, 1992; Foss & Kleinsasser, 1996).

Knowledge in *knowledge-in-practice* was described by Cochran-Smith and Lytle (1999) as being in action. Teaching with the application of this knowledge is similar to a craft. The authors explained further that teachers needed to be engaged in knowledge, reflected upon it, questioned and sought more information about that particular knowledge and the experiencing of it would bear fruit to a more meaningful form of knowledge. Clearly knowledge-for-practice involves more formal form of knowledge as compared to knowledge-in-practice that is more practical and associated with craft knowledge. The final conception of knowledge is *knowledge-of-practice*. This type of teacher learning was viewed as embedded within a particular context or construct and took the view of teachers as generators of knowledge. The authors further clarified it is situated within knower, but its usage goes beyond immediate situation. This knowledge assisted teachers in conceptualizing teaching and in making decisions.

McLeskey and Waldron (2004) expanded these three conceptions of teacher learning into PD context and framework. They argued that PD built around knowledge-for-practice yielded very little effectiveness, unfortunately this type of knowledge had been the basis for PD initiatives for so many years. McLeskey and Waldron cited teacher training program that employed the use of outside expertise and expected teachers to apply the knowledge within their classroom context after a brief intervention as an example. Cochran-Smith and Lytle (1999) wrote that one-shot workshops would not normally bring about desired results. However, the two authors (1999) suggested that moulding PD around knowledge-for-practice would be effective, in particular, if the program developers considered integrating it with constructivist approach where teachers were viewed as the agent of change. On the other hand, PD developed based on knowledge-in-practice should encourage teachers to examine and reflect upon their practice and the practice of others. Knowledge-in-practice works best with PD that takes the form of collaboration, for example, teaming up a less experienced teacher with a more experienced teacher, or involving groups of teachers or communities. They (1999) added that

exchanges of views and ideas within group settings assisted the teachers to analyse their beliefs, knowledge and practices, and examination of how their teaching practices could be improved yet consistent with their knowledge and beliefs.

2.2. Reflective Practice and Teaching Improvement

For years, studies on teaching and pedagogical strategies that teachers employed in the classrooms have focused on what teachers do. The focus on teachers' action, however, shifted to teachers' thought processes in the earlier 1970s (Calderhead, 1996; Clark & Peterson, 1986; Dann, 1990), following an increase in evidence that demonstrated strong relationship between what teachers believed in and how they approached their classroom practices (Anders & Richardson, 1996; Archer, 1999; Haney, Czerniak & Lumpe, 1996; Little, 2001; Richardson, 1994; 2003; Tobin, Tippin & Gillard, 1994). As a consequence, many PD efforts which encouraged reflective practice also acknowledge the role of teacher beliefs. Studies conducted to measure PD effectiveness generally found that reflective practice have led to teaching improvement.

Carrington et al. (2010) discussed three different projects carried out in Australia that inculcated critical reflections and change in schools through the cultivation of teachers' beliefs, knowledge and practice. The first project, the Service-learning Program, involved pre-service teachers in the University of Queensland. The program encouraged students to be involved in voluntary community work, allowing them to apply their knowledge within real context, challenged their assumptions and built better connection with the community. This, in turns, provided learning experience and opportunity for critical reflection. The Learning Improves in Networking Communities (LINC), the second project, was a form of a university-school partnership which explored the role of collaborative inquiry in assisting teachers to reflect and develop better understanding of their practice and literacy learning. In doing so resulting in the change in practice. The authors reported that the PD program nurtured professional knowledge and pedagogical development which leads to overall improvement. The third project, a collaboration between the University of Melbourne and the Department of Education, Victoria, is known as the Principles of Learning and Teaching (PoLT) program. PoLT drew from broad ranging principles in assisting teachers to transform their classrooms into learning communities, through collaborative critical reflection between the teachers and their pedagogy. The authors believed that these three undertakings had urged the participants involved to critically reflect on and interpret their beliefs, knowledge and classroom skills necessary to target teaching to promote the best interests of all students.

A study looking at the effectiveness of a PD program that focused on reflective-participative approach found the approach is practical and effective in bringing about improvement in the teaching of Liberal Studies in schools. Pow and Yeung (2007) stated that the approach encouraged teachers to learn from their experience and the focus group sessions allowed teachers to uncover their attitudes towards several issues that surrounded their practice. The authors noted that some participants experienced change in how they viewed their practice in the course of the discussion. The participants were reported to be in the initial stage of developing the necessary attitudes and skills to become a Liberal Studies teacher.

Lawrence et al. (2009) presented a case study which emphasized on the learning experience of one of the teachers participated in a PD program known as the Secondary Numeracy Project (SNP). Data was collected a year after the teacher's involvement in SNP. The authors found that the teacher had made these specific changes in her practice: establishing norm that understanding was a desired learning outcome, selecting tasks that built on students' existing knowledge and ways of thinking, using concrete materials and a range of representations; and focusing on collective discourse related to students' thinking. The teacher noted that she had shifted her focus from basing on what to do to basing it on students' understanding, accompanied by a strong belief that a focus on understanding was crucial.

Rogers (2007) examined the impact of the Australian Government Quality Teacher Programme (AGQTP) on the changes in beliefs and attitudes about mathematics teaching. Data was collected based

on teacher's written observations, written comments and reflections, as well as video recordings and teaching transcripts, and responses obtained through face-to-face interviews. Critical to teacher change was the practice of reflecting upon instructions. Rogers concluded that changes in beliefs and attitudes were only accomplished after student learning appeared to be positive. Teachers were more likely to accommodate change in their beliefs when the attempted changes facilitated favourable outcomes.

A study investigating the effectiveness of practice-based PD program and coursework-based PD program revealed that program emphasizing a link between theory and practice was more likely to bring about desired changes in teachers. Neuman and Cunningham (2009) analysed the quasi-experimental impact of coursework and coaching-based PD program on early childhood educators' language and literacy practices. They reported that participants who received coursework and coaching design with reflective component demonstrated higher quality practices, with the incorporation of newly learnt strategies into their practices. In contrast, the PD course attended by a comparative group did not bring about significant differences. Neuman and Cunningham maintained the quality of the intervention and attributed the lack of changes of the comparative group to the poor link between theory and practice in the PD program. The authors suggested that PD programs that included coaching and reflection in addition to coursework may be a beneficial investment for early childhood language and literacy educators.

Levine and Marcus (2010) investigated different collaborative efforts undertaken by one teacher team to determine what kind of teacher collaboration activities were most likely to promote teacher learning, and consequentially, improve student learning. Opportunities for learning seemed to be affected by the structure and the focus of collaborative activities. The authors found that all the teachers in the team share similar aim for collaborative work - instructional improvement. Evidently, the analysis revealed higher quantity of participant discussion when the focus of the meeting was on classroom practice. They believed that teachers needed to have directions when they embarked in collaborative activities and to be given the room to develop, consider and reflect on various factors during the progression of such activities. The authors suggested that schools should provide 'multiple forms of collaborative activity' (p.396). Engagement in various collaborative activities enabled the teachers to address and reflect on various aspects of instructions and issues that worth addressing.

The selected studies (Carrington et al., 2010; Lawrence et al., 2009; Levine & Marcus, 2010; Neuman & Cunningham, 2009; Pow & Yeung, 2007; Rogers, 2007) cited and discussed in this sub-chapter demonstrated the significance of teacher reflection in improving instructional practice. Bonner (2006) recommended that teacher change was usually achieved at individual level. And although teacher change was mandated by authorities and governing bodies through reforms, requirement alone would not be sufficient. Teacher change, according to Bonner, was similar to other aspects of change in human being, they must emanate from within. Thus, she suggested that PD aiming for change should also provide enough opportunity and room for teachers to reflect on their practices.

2.3. Reflective Practice and Learning Improvement

Various studies have been carried out to investigate the relationships between teacher quality and student achievements in the last three decades. Most of these studies found that these two variables correlated highly. For example, studies on teacher effectiveness by Brophy (1988) and Good and Brophy (1997) revealed that effective teachers displayed specific behaviours during instructions that aligned with students of different backgrounds. Among the specific behaviours identified were the ability to engage students in classroom discussions, higher level questioning and critical reflection of their own learning. In some studies, teacher qualities were found to have a more significant impact on student achievement as compared to other variables such as teaching materials and intervention programs designed at local and national levels. Hence, most PD initiatives were designed with the focus of improving teacher quality so that the ripple effect of improved learning outcomes would eventually take place. The hypothesis behind such program was that the change in teaching quality would result

in the betterment of student performance. Central to many PD programs addressed in the studies that follow is its reflective component.

One such study was carried out by Johnson and Fargo (2010) who examined the impact of PD on teacher change and student learning of science. The authors used quasi-experimental design in which four schools were assigned to either a treatment group or a control group (two schools for each group). The teachers in the treatment group received PD training and data was gathered at pre and post interventions longitudinally over a period of two years. Teacher change was measured through surveys and classroom observations, and students were assessed at three points: prior to intervention, after the first year and after the second year of intervention. No significant difference was reported in student achievement between the two groups one year after intervention. Students of teachers in treatment group, however, experienced significantly larger gain in scores than students of teachers in the control group at the end of second year. Johnson and Fargo concluded that time was crucial for significant gain to be visible in student performance, and that collaborative PD provided teachers with the platform to sufficiently and critically reflect on their practice.

In a study by Medlin, Leask and Feast (1999), it is reported that a multi-faceted, team-based reflective practice PD program was successful in addressing the problem of the falling rate of a first-year core accounting subject in the University of South Australia. The passing rates had dropped consistently and this has called for the formation of a multi-disciplinary team represented by a number of staff of different areas and expertise in the university. The team worked together in reflecting and identifying the problem, devising appropriate strategies and carrying out evaluation on the effectiveness of the proposed solution. Recommendations included adherence to a proposed student-centred learning model, engagement in 'reflective conversations' with students', new student assessments for the course including 26 ways of changes that lecturers should adopt in their practice. The lecturers involved were reported to modify their teaching practice which led to an improvement in student learning outcomes.

McKenzie and Turbill (1999) investigated the process of teacher learning and the effectiveness of a PD program, the Broken Bay Teacher Learning Project, on teacher learning and student learning outcomes. Data was collected longitudinally at three points of time via survey to determine teacher change, and via classroom literacy learning activities administered by the teachers to determine student learning outcomes. Teachers' reflective journals were also analysed for teacher change. Teachers were reported to have experienced shift in their beliefs and this was mirrored in the organisational structure and the physical layout of their classrooms and the use of literacy-related instructional strategies. The authors added that students also demonstrated positive behavioural changes including taking more responsibility for their own learning, increased student-student and student-teacher interactions, and an increased level of student reflection.

Bonner (2006) investigated the impact of collaborative action research on teacher attitudes and its spill over effect on student achievement. She volunteered to assist any teachers in her daughter's school to venture into collaborative action research to improve instructional practice, and found only five teachers were willing to participate. Out of five, the experience and transformation of two teachers were discussed as these two, reported by Bonner, had experienced the most dramatic impact. They started with analysing and reflecting their classroom practices and student learning, and identifying areas of student learning that needed to be emphasized. Bonner then provided the teachers with several related literature, and discussed how they could be used to improve practice. She believed that in changing student learning, teachers first needed to change. Teachers were reported to have enjoyed the teaching of maths, and this influenced the shifts in the teachers' attitudes towards maths teaching. Bonner admitted that she was surprised over the change in student attitudes towards maths learning and had not expected the changes to be transparent in the data of student achievement. Both teachers noted the increase of student engagement in maths learning, an increase in maths self-efficacy, an increase of student enjoyment in maths activities, and a decrease in apprehension regarding maths; in contrast to the negative attitudes towards maths demonstrated by the students at the early stage of Bonner's study.

A study by Saunders, Goldenberg and Gallimore (2009) examined the impact on student achievement of grade-level teams that have specific focus on improving learning. The study was based on the hypothesis that if teachers were involved in school matters (such as departmental meetings, faculty meetings, and other administrative tasks) that provided more focus on instructional issues and reflection, it would lead to significant gains in student achievement. Student performance scores were reported to show significant improvement after the introduction of summer and winter institutes. Saunders and his colleagues explained that the results were consistent with other studies which pointed towards the fact that any PD programs were found to function more effectively if effective external assistance was provided and this assistance was well specified. Based on the findings of the study, the authors concluded that it was imperative for schools to provide structural opportunities and skills for teachers to focus on classroom learning as it led to a significant gain of student achievement.

The impacts of teacher reflective practice on student learning were profound. Various studies discussed looking at the relationships between teaching reflection and improved student learning have revealed that reflecting on practice did not only enhance teaching effectiveness but improve student learning in relation to their engagement of learning and academic performance.

3. IMPLICATION FOR MALAYSIAN TEACHERS AND SCHOOL ADMINISTRATORS

Effandi and Md. Yusoff (2009) wrote that the improvement of teacher quality was perceived by Malaysians as one of the most important precursors for school improvement and quality of education. The two authors also noted the importance of professional development for teachers as a means of keeping abreast with enhancement of content and pedagogical knowledge. Siti Khadijah (2006) believed that reflective practice enhanced professional development of teachers, particularly teachers teaching English, in a number of ways. Citing the work of Pollard (1997), she stressed that teachers would be increasingly aware of their own practice especially in addressing issues that surrounded their teaching; leading to the culture of collaboration where ideas were shared; developed more competent and autonomous practitioners; and developed collaborative work.

It is vital for PD organizers that target for instructional improvement to recognize the significance of reflective practice and its crucial influence in shaping teaching practices. Many of the PD emphasis in Malaysia are still content, discipline and pedagogically-focused (citing few examples of such PD programs included discussions by Effandi & Md. Yusoff, 2009; Noraini, Loh, Norjoharuddeen, Ahmad Zabidi & Rahimi, 2007; Thang, Hall, Hazita & Joyes, 2010). It is important that PD organizers take a step back and identify whether these PDs have effectively facilitated for change in content knowledge. Countless authors (to name a few, Lloyd & Anders, 1994; Richardson, 2003; Schulman & Armitage, 2005; Tabachnick & Zeichner, 1984; Zakaria & Care, 2010) have pointed out that for PD to take effect, an important aspect that needs to be concurrently targeted is teacher beliefs. Studies discussed in the earlier section of this paper have also demonstrated that for new practice to be embraced, reflective practice is essential as a mean of linking teaching practice to the cognitive. In addition, McLeskey and Waldron (2004) stated that PD built around knowledge-for-practice yielded very little effectiveness even though such design has been the basis for most PDs for so many years.

Many authors and researchers have consistently testified the discrepancies between the frequency of teacher involvement in PD and change in practice (Archer, 1999; Cochran-Smith & Lytle, 1999; Fairbanks, Duffy, Faircloth, He, Levin, Rohr et al., 2010; Little, 2001; McLeskey & Waldron, 2004; Prime & Miranda, 2006; Richards, Gallo & Renandya, 2001; Richardson, 2003; Tobin et al., 1994). School experience was also found to have stronger influence on teaching practice than their teaching preparatory programs, and despite the fact that these pre-service teachers spent hundreds of hours learning about how effective teaching should be and looked like, they commenced their teaching practices the way they were taught by their school teachers (Pajares, 1992; 1993; Penn-Edwards, 2010; Taylor, 2003; Schulman & Armitage, 2005; Vacilotto & Cummings, 2007; Zakaria & Care, 2010). A number of authors have attributed this to heavy concentration on content and pedagogical knowledge

and without appropriate intervention on beliefs (Bonner, 2006; Gore & Ladwig, 2006; Richards & Lockhart, 1994; Richardson, 2003; Rogers, 2007; Thomas, Kun & Kun, 2007; Zohar, Degani & Vaakin, 2001). Central to addressing beliefs, reflection on practice is essential (Bonner, 2006; Rogers, 2007).

The lack of reflective practice as a component in PD programs does not mean that teachers do not reflect on their practice. Teachers reflect all the time, particularly when lessons do not go as planned. However, the emphasis of reflective practice in PD programs would allow for more structured and continuous reflective practice. Change can only be embraced if teachers are able to make connection of their past experience to what should happen and continuously strive for improvement in teaching. In ensuring sustainability and continuous use of the concepts and pedagogical approaches introduced in PD programs, it is important for PD organizers to incorporate reflective practice as a PD component. PD that builds around knowledge-for-practice should concurrently address teacher beliefs and emphasizes on reflective practice as a means of linking teaching practice and teacher cognition.

4. CONCLUSION

The discussion in this paper links reflective practice to several aspects: teacher learning, teaching improvement and improvement in student learning. Each of these is approached with teacher professional development in mind. Selected studies are also looked at within which the research findings highlight and support several points of the discussion: that reflective practice is an essential component of PD that aims to facilitate change (Bonner, 2006; Rogers, 2007; Schon, 1987; 1995; 1996); that the culture of reflecting on practice assists teachers to strive for improvement (Carrington et al., 2010; Lawrence et al., 2009; Neuman & Cunningham, 2009; Pow & Yeung, 2007; Rogers, 2007); and that this improvement in teaching also has direct and indirect impact on student learning (Bonner, 2006; Johnson & Fargo, 2010; McKenzie & Turbill, 1999; Medlin, Leask & Feast, 1999; Saunders et al., 2009). It is timely that PD opportunities in Malaysia tap into reflective practice in addition to the required focus on content and pedagogical knowledge. PD programs should expose teachers with the right skills of reflecting on practice and encourage such practice to be employed on daily basis and be embraced as a culture in teaching profession.

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