

# Analysis of Transforming Pedagogy and Learning Outcomes

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**Abstract:** This paper aims on research how does transforming pedagogy improve student's learning outcomes to face contemporary educational issues. And it applied the method of comparison analysis to figure out the difference between innovation transforming pedagogies and traditional educational approaches.

**Keywords:** Pedagogy, Education, Learning outcomes.

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## 1. Introduction

Numerous analyses stated that Australian secondary students perform negatively in numeracy and literacy tests than other countries' performance (OECD, 2002; NAPLAN, 2018)[1]. This result raises the educational system as a whole, the educational institutions, Australian politicians, the educators, and carers' concerns on motivating students to reach the best potential and achieve life-long success in future schooling. Thus, an innovational transforming pedagogy is proposed to actively motivate students' interests in learning that involve all students developing and learning in a safe and conformation learning environment. Indeed, the transforming pedagogy is an inquiry-based approach that is innovational, visual, and interactional (Rittle-Johnson, Siegler & Alibali, 2001)[2]. It consists of 4 primary components as "Construction, Collaboration, Critical Reflection and Communication", which empowers students to manipulate their learning experience and working skills to communicate and collaborate with peers and then critically reflect upon their beliefs, values and knowledge from multiple perspectives. This student-centred transformative pedagogy allows students to intake conceptual knowledge and procedural skills through a series of hands-on activities that motivate students interests in learning and maximum the learning outcomes in an interactive pathway. Thus, it becomes popular and common access Australian educational system in the 21-first century (Roiha, 2014)[3]. The traditional educational approach is a teacher-centred and content-centred learning experience widely used globally for most countries. Students under traditional academic schooling are somehow passive and extrinsically motivated in the classroom. Whereas society must admit that the traditional educational approaches bring up plenty of talents in the past few centuries.

## 2. State of Art

The 21-century society is rapidly changing, and the students are more diverse, so educational pedagogy needs to adjust to meet students' specific needs (Al-Subaiei, 2017)[4]. Thus, the innovational transforming pedagogies are more indispensable to promote students' academic performance, physical, mental, and moral development in-school experiences by comparing to the traditional learning approach. The following paragraphs evaluate the advancement of implementing transforming pedagogy into class from

learning outcomes, learning environments and students' diversity aspects.

In the view of traditional teaching, the majority learning outcomes are content-centred that require students to have a higher academic performance in a competition system, and the role of the teacher is to pass the information to the next generations. However, Anderson (2020) stated that "the nature and deep meaning of education is to develop the adolescent's sense of empathy and meta-cognition toward the external environments, foster positive and meaningful interrelationships, develop self-regulation ability, and construct a proper morality" (Anderson, 2020)[5]. Thus, the transforming pedagogy is suitable for the 21-century classroom since it offers the development of construction, Collaborative, Critical Reflection and Communication for all levels students (Roiha, 2014)[6]. The transforming pedagogy allows students to become more intrinsically motivated toward learning. Since the new learning approach construct a class context that allows student learn in a safe and comfortable learning environment. According to the Self Determination Theory (SDT), the transformative learning satisfies their basic psychological needs for "relatedness, autonomy, and competence" (Niemic & Ryan, 2009)[7]. Specifically, students will "performance 31% better when they feel incision and safe" within a student-centred learning environment that contains positive student-student relationships, student-teacher relationships, and teacher-parent relationships (Kilpatrick, 2001, p.29)[8]. For example, the traditional HSC educational system created a competitive learning atmosphere, which made most of the student focus on the results only and students are afraid to make mistakes or ask "silly questions". Therefore, it is crucial for students to development physically and mentally, where the basic psychological needs are valued. On the other hand, students are more actively and intricately motivated to investigate the content, more confident to communicate and exchange ideas with peer and collaborate to solve problems in the future schooling.

## 3. Advantages of Transforming Pedagogy

By comparing to traditional learning, the transforming pedagogy shows an advantage on focusing developing a higher level of conceptual understanding and procedural fluency rather than academic results. It empowers the nature

of learning and understanding that process requires multiple skills to work successfully, which indicated that students could engage more in this transforming approach. Moreover, it creates an appropriate learning context for students to desire learning, value knowledge and enjoy learning intrinsically and actively rather than rote memorisation. Furthermore, many studies stated that the intrinsically motivation, active involvements and interests are the basis of successful learning and life-long achievement beyond schooling, which drive the students toward best potential. Alternately, the conceptual understanding is the foundational competence of constructing procedural knowledge, so the transformative learning approach support students to develop the ability to working mathematically or scientifically (Rittle-Johnson, Siegler & Alibali, 2001)[9]. Thus, the transforming pedagogy enhance the importance of processes over the results, which motivates every student to transform from passive spectators to active participants by creating an innovative and inclusive environment to feel confident and enjoy work itself. For example, students who are actively seeking for the meaning of contents and enjoying learning will master to apply knowledge which shows the importance of developing conceptual understanding. As a result, a high-level understanding supports students to describe, organise and manipulate their existing knowledge with other concepts. It helps students build a more profound understanding as a coherent system, promoting students' academic performances (Danley, 2008; Kilpatrick, 2001).[10] Furthermore, I believe that students can produce the procedures accurately, efficiently and flexibly to solve real-life problems and reach their life-long goals in mathematics (Kilpatrick, 2001).

#### 4. Transformation from the Traditional Learning to Personalised Pedagogy

It is imperative to transform the traditional learning approach into "differentiated and personalised pedagogy" that meet individual's different abilities and interest since learning is socially constructed (VanSciver, 2005)[11]. Especially, Australia as a multicultural country, students become more diverse from multi-perspectives, so the mixed-ability class requires differentiated tasks rather than traditional tasks due to students' diversity. Students have different learning and learning styles depending on their interests and ability (Ansari, 2013; Ireson & Hallam, 2001; Tomlinson, 2001)[12]. For example, in a traditional content-centred environment, the educator commonly adopts middle-level teaching that allows more students to engage in class. It raises the problem that some high-achieving students are frequently less motivated since the teacher neglects their needs and turns to employ average teaching methods to further explain to the lower-level students (Winebrenner, 2001). However, the lower-level learners are continually struggling with the concepts. Furthermore, some students who have less privilege may experience specific disadvantages and inequality in schooling. For example, a refugee student may be excluded due to he/she's language barrier, so they may experience difficulty communicating ideas with peers or reading academic readings. Thus, these two learning failure examples invoke the reflection on implementing the differentiated and personalised assignments into the classroom to promote all student's engagement and no child left behind effectively (Morgan, 2014; Penlington, 2011).[13-14]

The advantage of differentiation pedagogy is that it ensures all students "learn, apply, and master their conceptual knowledge and procedural fluency successfully regardless of their initial abilities" (The Australian Professional Standards for Teachers, 2011, p.2)[15]. Penlington pointed out that "the differentiation minimises the risk of being left behind" (275). As the assignments are critically designed as tailored tasks with various difficulty levels, the instructions provide additional directions based on students' needs, which support students to choose a suitable task based on their comprehension ability and interests of the curriculum contents. Thus, students have more chances to self-identify their strengths and weakness.

However, Dewhurst and Rocha disagree with this transforming pedagogy, as this differentiation learning approach is way too ideal that it is impossible to apply into realistic classroom practices (Dewhurst, 1996; Roiha, 2014)[16]. Dewhurst (1996) believed that there are two main problems to implement differentiation teaching. The first problem is that applying this transforming pedagogy will increase the performance gap due to the wrongly interpret differentiation teaching strategy. As a result, it fosters a more significant achievement gap between able and less-able students since students are easily left behind without enough training and challenges.

The second problem is that some less-able students or shy students are less chance to practice during a group/inquiry-based activity. For instance, shy students are refused to show in front of others due to the fear of making mistakes, so they are represented by other leader students all the time, which is problematic for a positive interrelationship.

#### 5. Conclusion

To conclude, the new transforming pedagogy is more suitable than the traditional learning approach to apply in the current curriculum (Morgan, 2014; Roiha, 2014)[17-18]. The transforming pedagogy as a responsive pedagogy indicates an active attitude towards diversity with considerable invocations to maximum students' learning potential (Morgan, 2014)[19]. It promotes students to physically, mentally and morally develop as a whole, rather than passive intakes information (Wiley & Sons, 2012)[20]. Students are trained to be more adaptable in facing social and academic issues that they are master in manipulating communication, collaboration, construction, and critical reflection skills to solve problems. However, as previously stated, there are several problems of implementing the transforming pedagogy into the whole Australian educational system and teaching most effectively. To overcome the obstacles, the local communities, the educational institutions, and the educators need to work collaboratively to enhance students' schooling experience and achieve their potential (Rittle-Johnson, Siegler & Alibali, 2001)[21].

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