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Educational Theories in Practice:
A Case Study of Observing the Prep Program in Australia

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ABSTRACT

Educational theories have been widely applied in real-world teaching practices, and especially play prominent roles in teaching young children. In order to optimise the education quality, the educators are responsible to understand learners' learning behaviours, opportunities and the learning gaps between the learning targets and the learner's current capacities. Because each student might have different learning styles, teachers should use adaptive teaching and classroom management strategies to best suit individual students' needs. The present study proposed to utilise several educational theories including zone of proximal theory (ZPD), scaffolding, role-model teaching and positive reinforcement and classroom management strategy like classroom response systems (CRS) to provide improved education programs to prep program students. By closely observing a prep student's learning process, these theoretical frameworks can be adapted in various ways to achieve the best outcomes. By implementing the theories, young students can better learn about their unique identities and minimise the learning gaps. Meanwhile, the study provides valuable insights for teachers to design an effective learning plan for individual learners to improve their writing competence.

Keywords: educational theories, teaching practice, prep program, effective teaching

1. INTRODUCTION

Early childhood education is widely accepted as one of the most important stages impacting people's lifetime achievements. The prep program is unique in the Australian education system for children who just complete kindergarten or preschool. As the name suggests, the overall goal of the prep program is to prepare children to adjust their learning styles from a free play mode to a more structured learning style including additional basic skill training such as writing alphabets, numbers, and starts to read simple sentences systematically.

This case study examines the Australian prep unit by first introducing the educational practices and theoretical perspectives of the prep teachers, including the current common curriculum and teaching strategies applied during the placement period. Then, the study follows observing a child's learning behaviours and outcomes. Qualitative analysis of the student's learning process, learning gaps was performed, and an effective learning plan which incorporated education theories was proposed to improve the writing competence.

2. THE VICTORIAN CURRICULUM

The Victorian Curriculum F-10, developed by the Victorian State government, outlines the standard practice for Victoria school teachers to plan, supervise, assess and report on the learning achievements of all students. This curriculum has been widely followed by public schools, Catholic schools, and some private schools. It sets out the recommended students' learning goals from their first year of schooling to year eleven, which covers students approximately from age five to fifteen.

This curriculum incorporates the national Australian Curriculum and adapts into a Victorian students' continuum of learning and the structural design. The curriculum follows a coherent standard that includes 12 major perspectives to assist students' various and comprehensive learning requirements. These 12 perspectives include Arts; Critical and Creative Thinking; English; English Capacity; Health and Physical Education; The Humanities; Intercultural Capability; Languages; Mathematics; Personal and Social Capability; Science; and Technology.

The present study specifically examines the foundation level of the Victorian Curriculum for classes and activities planning. The school chosen for the case study is a multicultural school that includes mainly children of migrant family backgrounds. Therefore, the chosen program is the English as an additional language (EAL) Pathway A: Early Immersion from English section in the Victorian Curriculum for the children. Figure 1 outlines the detailed description and achievement standards of the EAL pathway A1 level.

Level A1

Level A1 Description

The Level A1 curriculum supports students as they develop basic knowledge, understanding and skills in English. Through immersion in English, students build their capacity to participate in routine and familiar exchanges in English with their peers. As a result, they begin to recognise the ways that pronunciation, stress and intonation impact clarity of expression. Through reciprocal exchanges they also develop an early awareness of the conventions of spoken English.

Through the study of a wide range of short print texts and picture books, students are introduced to the alphabet, and learn to recognise common letters and letter patterns. They develop fundamental reading skills and practise strategies that provide opportunities to decode simple texts, such as using vocabulary charts that include images, English words and home language words.

Students learn about the writing process, and begin to sequence some of their ideas and to extend short sentences into paragraphs. They develop a basic understanding of the role of punctuation and how to apply it in their own work.

Figure 1. The Victorian Curriculum F-10 English Section EAL Pathway A: Early Immersion [1]

3. EDUCATIONAL PRACTICES

There are three experienced teachers co-working together in the prep classroom (with one class per grade). They often meet regularly together during the education planning time and discuss the students' current learning progress, their readiness, the previous week's achievements and the upcoming learning goals in the following week. The curriculum provides a structured guideline, and the teachers can adjust it according to children's interests and their current learning abilities. For example, the analogue clock is the learning goal for third grade students. According to the prep C students' readiness, the teachers would teach them about the elements of an analogue clock and the concept of the O'clock.

In order to acquire this information from the students, one prep C group teacher implemented multiple teaching strategies and skills. The teacher presented the steps implemented to identify the appropriate opportunities for students' learning and the learnt performances based on combined empirical research and her experience [2]. Especially, the classroom response systems (CRS) [3] is commonly used in the prep C group. For example, if a student is interrupting others in the class, or when students are interacting with the teacher's questions, or contributing to class activities, the teacher will act accordingly to ensure the best teaching outcomes.

After observing and teaching in the prep unit over the three-week duration, the author noticed a few learning gaps between the expected learning objective and the actual learning outcomes. Based on Vygotsky's zone of proximal development (ZPD) theory, there almost always exists learning gaps for teachers to find learners' ZPD and then scaffolding them [4]. To scaffold different learners' ZPD, teachers should grasp an updated understanding of their students' current learning capacities, connect them with the standard learning goals, such as curriculum learning goals, then try different strategies to scaffold their learning.

Besides ZPD, the learning gaps often occur because students' learning may be influenced by other factors, such as learning disabilities, family issues, or behaviour problems. Defining the learning gaps is a challenging task because there are numerous factors that may impact students' learning. Therefore, teachers need to understand the baseline of students' learning abilities, basic family situations, learning styles, etc. in order to draw reasonable inferences.

Reinforcements, especially positive reinforcements, can be used as an effective method to help teachers to foster students' proper behaviours [5]. Not only positive reinforcement, a comprehensive effective reward and punishment reinforcement system is often implemented to help young children follow the school daily routines and contribute to their better learning. For instance, a sticker reward system for endorsing positive behaviours such as no calling out and waiting for having turns. As students grow over time, verbal praise can be increasingly more effective for the older children to cultivate their positive behaviours.

At the most foundation level, reading and writing are increasingly important skills for children to achieve their future academic learning objectives. Both reading and writing skills are based on children's literacy abilities or, more specifically, knowledge about alphabets [6]. In the prep unit, most of the literacy workshops focus on teaching how to use letters. Teachers segment words and use corresponding gestures (cued articulation) to presents the syllabus to cater for the visual learners and speak at the same time to cater for the oral learners [7].

Moreover, the role-model teaching method which aligns with the social-cultural theory [5] was commonly used in teaching prep students. Every time when the teacher introduced a new activity in class, the teacher often explained and demonstrated it first. For example, the teacher would first show students the cued articulation gesture for them to mimic when learning a new letter. Also, the teacher provided a clear start by writing the reflective sentence first and then instructed students to copy the first part of it such as "On the weekend, I……". By providing clear instruction to initiate, students could easily and inclusively understand what they need to do next and knew the instruction for

the new activities.

4. REFLECTING ON THE CURRENT LEARNING FOR ERHAS

The child being observed in the study was referred to as Erhas in the paper. Erhas was a prep student just starting her learning in the program. She has a calm personality and was highly appraised by her teachers. Often as soon as classes started, she voluntarily sat down on the floor with her legs crossed. When the teacher was speaking, she could easily focus on the teacher and pay attention to the learning materials.

During class, Erhas was highly engaging and learning, and rarely looked around or stared at somewhere else. For example, when the teacher was talking about vocabularies involving the "sh" sound by using the cued articulation gestures to present, Erhas was often either bowing her head or looking at the front and moving her eyeballs from right to left, a behaviour that demonstrates the process of active thinking. When she recalled a word that contains the "sh" sound, she put her hands up immediately with a slight waving motion and waited for the teacher to call her name.

At the beginning of every class, before students were divided into small groups, all students gathered together and were explained about what they were about to do during this class, and the learning will be further developed and assessed in the subsequent activities. Erhas was one of the best performing students, although she was an English as an additional language (EAL) learner. Most of the time, she was able to understand the teacher's instructions and applied her knowledge in the upcoming activities. As discussed earlier, when the students finished learning the "sh" and other sounds, the teacher divided the prep C children into three groups and gave the pre-service teachers (PST) a chance to join the activities and observe. When students categorised words into different baskets, Erhas successfully matched most of the words with learnt sounds and put them into the correct baskets with a satisfying smile. If her answer was wrong, she would nod her head and look down with a disappointing smile. In the afternoon or the following day, if the teacher or a child mentioned, for instance, the "sh" sound, Erhas would be able to connect with former learning and used gestures to present it promptly.

During the author's observation on Erhas, most of the prep children had a difficult time the letter "S" and "W" properly. A common mistake was that most of the students wrote the letters reversely as same as numbers "2" and "5". In addition, Erhas struggled to write letters and words in an orderly and organised manner. The letters that she wrote were exaggeratedly big and round with several curves. Her upper-case letters were better than lower-case letters. Especially when writing lower-case letters with both tails and circles such as "g" and "d", she often wrote a straight line instead of a curve line under or next to the circle part. However, she was better at writing simple letters or lower-case letters with only a tail such as "j", "f" and "l", a circle or semi-circle, such as "o" and "x".

Erhas was excellent at recognising and matching all upper- and lower-case pairs, but her handwriting skills required further improvements. Writing training is a complex process where it requires hand-brain coordination and excellent fine motor skills in order to have advanced control of the pencil. The reasons that Erhas struggled to write proper letters were due to insufficient practice and her limited fine motor distal control skills, which were controlled dominantly by the right hemisphere of the brain [8]. When she was writing, her thumb, index finger and middle finger were holding the pencil hard together. Also, because of the difficulty in motor control skills, her fingers were shaking spontaneously during the writing, which resulted in difficulty to write or trace straight lines. Writing training is often under practice in students' early literacy abilities. Practices such as combining writing with drawing and tracing activities may help Erhas to enhance her motor skills, which will improve her writing lines, circles then write proper letters [9].

5. LEARNING GOALS FOR ERHAS

According to the assessment guidelines in the Victorian curriculum, the foundation level of handwriting learning requires children to "understand that sounds in English are represented by upper- and lower-case letters that can be written using learned letter formation patterns for each case" [10]. To achieve this goal, there are four milestones for Erhas, which include two short-term goals and two long-term goals. While the major challenges of ZPD Erhas faces are the lateralisation of hand-eye coordination, fine motor skills and left-right writing practice. Based on her competence level, in order to overcome these challenges, the scaffolding, role-model and positive reinforcement theories are the proper concepts to be incorporated in teaching approaches.

In the short term, the first goal is to minimise the size of handwritten letters, and the second goal is to write words in an orderly manner. Firstly, Erhas needs to enhance her visual-motor integration skills by drawing smaller symbols such as "|", "+", "△", "□" and "◯" [11]. After she can independently draw these shapes in smaller sizes, she can write smaller letters. In this activity, the teacher can prepare a paper with normal-size writing lines and encourages her to draw as close to teachers. The teacher then circles out the smaller shapes to demonstrate good examples as a positive reinforcement. Secondly, Terry [11] also

reckons that the matching words activity is effective for Erhas to correct her disorganised writing. For example, the teacher can draw a straight line on a whiteboard and prepare a sentence and cut the words for Erhas to order them. If Erhas has trouble to complete these tasks, teacher can pronounce the words to scaffold her to find out and build the correct ordered sentence.

In the long term, the first major goal is to write letters correctly without mirror-writing in alphanumeric symbols "S", "W", "y" and "2". To achieve this goal, Mather [8] suggests printing two separate sides of inked lines with two different directions models of her names. Different orientations can be the left side from left to right, or the right side from right to left. Such as "Erhas" and "sahrE". Then she is instructed to copy them then write both sides of her names in both directions. The teacher should first demonstrates how to write the first line for her to copy and reinforce her memory. If she feels confused or becomes during the writing, the teacher needs to scaffold her such as holding her hand while pronouncing each letter one by one. The worksheet is also used to help her with her writing.

The second long-term goal is to develop her hand-eye coordination and fine motor skills via perceptual motor program (PMP). PMP is a program that includes several creative sports activities, and this program has been shown to effectively improve young students' handwriting skills by developing their motor skills [12]. For Erhas, the effective PMP activities can be jumping beam side to side, catching bouncing ball from the net and zig-zag toy matching and throwing. These training activities are designed to improve the control competence of hands and fingers via holding the beam, catching the moving ball and grabbing and throwing the toys. The teacher will first demonstrate how to perform each activity and then observe Erhas' performance while correcting her postures if not done correctly.

6. CONCLUSION

Through observing Erhas as a case study, a range of classroom management strategies such as CRS have the potential to improve her learning through enhanced prep classroom protocols and routines. With these adjustments, prep students can develop better skills to adjust to the learning environment when progress to later learning stages. The educational theories including ZPD, scaffolding, role-model teaching and positive reinforcement are effective methods to be incorporated into the prep unit. However, because prep students are still young and early in their developmental stages, it requires teachers to be more patient to guide the students to better transition into more advanced learning.

The present study focuses on reading and writing competences, which are significant and fundamental in primary students' literacy development, as an example. Educational concepts can be applied in other stages in similar ways. Improving prep students' general writing problems and improving their cognitive developments, during tasks such as letter-reversal and disordered writing, require proper educational activities and practices to help them decrease their current ZPD and attend to a higher ZDP. These practices provide valuable insights for the developments and improvements of the current education curriculum.

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