

## **English Language E05 / E10**

**Area: Curriculum Leadership, Professional Development, Self-directed Learning, e-Learning**

**Title: Thinking in Action: Using Cognitive Tools to Help Students Learn Better**

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### **Introduction**

‘What a child can do in cooperation today, he can do alone tomorrow. Therefore the only good kind of instruction is that which marches ahead of development and leads it ... Instruction must be oriented toward the future, not the past.’

Lev Vygotsky (1962)

Through the adoption of a learner-centred approach, we have to nurture students to be more proactive, with greater learning agility and stronger transferrable skills. Teachers have put in great efforts in achieving a paradigm shift from teacher-centred classroom practices to learner-centred learning.

However, a number of students are still facing lots of difficulties in learning English. Many factors can contribute to our young second-language learners' struggle with reading and writing. Some common problems are decoding difficulties, low reading fluency, word retrieval difficulty, weak working memory and loose organisation. Some of them are unable to go beyond their zone of proximal development (ZPD)<sup>1</sup>.

Learners are active participants in the learning process by relating new, incoming information to old, previously acquired knowledge and by interacting with individuals within the society (Vygotsky, 1978). Learning, therefore, is the result of the internalization of social interaction. Vygotsky believes that cognitive process is best learnt when learners are situated in specific and meaningful contexts.

### **Purpose and significance of the study**

Three schools with different backgrounds and student intake have participated in the study. This study has pedagogical significance in English language learning in primary schools. It seeks to reveal

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<sup>1</sup> Zone of proximal development is a concept posited by Vygotsky. It is the difference between what a learner can do without help and what he or she can do with help.

the interactive and communicative potential of using cognitive tools to help students learn better. Cognitive tools engage students in the creation of knowledge that reflects their comprehension and conception of the information. They are the ways that shape the acquisition of new knowledge and the execution to facilitate learning. For example, the use of information technology has extended the functionality of cognitive tools.

Vygotsky studied the impact of school instruction on children and noted that children grasp language concepts quite naturally. But Piaget (1964) believed that there was a clear distinction between development and instruction. He argued that development is a spontaneous process that was initiated and completed by the children, stemming from their own efforts. He further pointed out that teacher-led instruction to develop independent and critical thinking of students should be a common practice in schools.

Diocesan Boys' School Primary Division is demonstrating 'To Flip or Not to Flip'. The teachers are turning their classroom upside down to find more time for teaching. This new approach allows teachers to reinforce and delve more deeply into subject content in person, while sending students home with new materials. In the presentation, the teacher is going to show how and why flipped classrooms work to help students' cognitive processing and address the possible drawbacks. She will also provide tips for implementing a flipped classroom in schools. The benefits of flipped classroom are as follows:

- Save class time to allow for more classroom discussion
- Help students to become independent learners and take responsibility of their learning
- Give flexibility to students to review the content of videos, whenever necessary

S.K.H. Mung Yan Primary School is working on a study on students' writing skills at KS2. Development of writing skills is explicitly taught to students, ranging from sentence writing to paragraphing. Students are taught how to expand and use correct words in enhancing sentence fluency. They are provided with graphic organisers, serving as cognitive tools, to help them write complex sentences and organise ideas. A number of students are picked from different classes. After each test and examination, students' writing pieces are collected and analysed to see their strengths and weaknesses as well as improvement. Teachers would discuss with students, the weaker ones in particular, about their writing problems. The mistakes made by students are identified to help them learn better. Remediation measures would be drawn up in the subsequent writing lessons to solve the writing problems of students.

Lok Wah Catholic Primary School is working on how to help students prepare for a reading text. Students' learning needs are identified through internal and external assessment. The learning outcomes as reflected in the TSA help to focus on students' strengths and weaknesses in different reading texts. Teachers understand that students' schemata (cognitive structures that contain pre-existing ideas of the world), one of the most important concepts put forward by Piaget, have to pay heed to when decoding information text. This is also a learning difficulty that most students have when identifying the underlying meaning of reading texts.

When working on a new text, the greatest support learners can have is a clear, structured scaffold established in advance. This can take the form of a guided brainstorming session, followed by vocabulary building strategies afterwards. Different scaffolding techniques will allow students to

add new information. Using graphic organisers to decode different text types allows students to choose what works best for them. These preparatory phases provide wonderful opportunities for collaborative activities like ‘think-pair-share’. This is where cooperative learning takes place when students study an issue or problem individually then explain their ideas to a partner. After which they may share their ideas with another pair or the whole class.







### **Impact on learning**

As reviewed in the Flip-Flop Classroom, collaborative learning was evident when students asked peers and teachers for feedback and clarification in the ‘flipping grammar’. With the active learning techniques, students have become independent learners and have taken responsibility for their learning. Learner diversity was catered for when students could review content of the video they could not grasp.

Being different from the traditional classroom where teachers prepare instructional materials to be delivered in class, the flipped classroom allows students to watch or read the materials before coming to class. Class time is devoted to applied learning activities, such as group work and discussion, and higher-order thinking tasks.

When analyzing the P.6 students’ writing at Mung Yan Primary School, teachers found that they had made good improvements in the organisation of their writing as compared to last year. In story writing, most students could follow the steps as set out below.

#### **Steps for Story-writing**

-  *Use simple sentences*
-  *Add adjectives and adverbs*
-  *Add cohesive devices to link the sentences/ paragraphs*
-  *Edit what you have written*
-  *Check spelling, tenses and paragraphing*
-  *Pay attention to punctuation- this gives you clues on how to read the story properly and helps you understand the story*

With regard to the development of reading strategies in Lok Wah Catholic Primary School, it is found that the use of graphic organisers and cooperative learning techniques help students attempt to assimilate the information to be fitted into their prior schemata. The gap between the present and potential level of language development can be greatly enhanced with teachers’ pedagogical instruction. It is hoped that students can gradually proceed to higher level of thought and learning.

**References:**

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2. Vygotsky, L. (1962). *Thought and Language*. Cambridge: The MIT Press. (Original work published in 1934)
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