

It and collaborative
script writing. there is
no



**ASSIGN
BUSTER**

It is proposed to be a regular classroom activity for Year 1 to 6. Although with reservation, Piagetian developmental stages could be referential when looking at appropriate learning stages for children at different ages.

Recent experiment has also suggested brain maturation-dependent progression of cognitive limitations across childhood and early adolescence (Gogtay et al., 2004). Therefore, the activities involved in LTD should be sequentially more complicated as children age, proceeding from concrete to abstract learning. Concrete learning for younger children could be achieved by acting out the written materials in books. To make cognitive loads manageable, teachers could verbalize the materials (story-telling). For older children, the activities could be more sophisticated. Apart from drama-acting, children can be given more autonomy in fiction-reading and collaborative script writing.

There is no doubt that teachers should act as facilitators, but children are expected to take the initiatives to explore and manage own learning process. By KS2, pupils are expected to consolidate literacy skills in different aspects, including reading, writing, listening and speaking (Education Endowment Foundation, 2017). Although only performance in reading and writing is shown to be below average, LTD is an all-rounded intervention. Such integrative approach is important in a sense that different aspects of literacy skills are inter-related and supportive to each other's development. For instance, phonological sensitivity and oral language proficiency were shown to be influential to reading comprehension in school-age children (Gottardo et al., 1996; Mages, 2015). As commented by McMaster (1998), the multi-aspect effectiveness of drama was supported by extensive evidence.

In Cullum's 1967 experiment, about 90% of kindergarten children succeeded in recalling sophisticated words by the end of school year when words were dramatized (as cited in Mages, 2008). In a more recent study with 4th graders, drama-based teaching improved reading comprehension performance significantly more than text-based teaching (Rose et al., 2000). The effectiveness of LTD is steamed by intrinsic motivation and efficient cognitive processing. LTD can increase intrinsic motivation for children to read and write, and this is useful in enhancing long-term academic outcomes. When children are given opportunities to create their own scenes, they could direct own learning based on their interests. With high level of autonomy, children usually tend to find the " perfect" story to dramatize (McMaster, 1998). This does not only encourage children to read more, but also provides motivation for them to comprehend and master the materials.

Intrinsic motivation created by dramatized learning was demonstrated in real classroom setting. Teachers DeRita and Weaver (1991) observed drama-learning in 4th graders, and found that positive attitudes were driven by purposeful learning and appreciation from audience. The important role of intrinsic motivation in learning is clearly shown in literature. For instance, Broussard and Garrison (2004) reported positive correlation between intrinsic classroom motivation and academic performance in 1st and 3rd graders. When compared with extrinsically motivated counterparts, 5th graders with intrinsic motivational orientation obtained higher overall achievement scores (Boggiano et al.

, 1992). Nonetheless, Harter's seminal longitudinal study (1981) suggested a shift from intrinsic to extrinsic mastery motivation in elementary school

children. Therefore, it is important to start drama learning early for optimal benefits. LTD could also foster literacy development by facilitating cognitive processing. On an individual level, LTD aids consolidation and flexible manipulation of knowledge. According to Bloom's taxonomy hierarchy, creating is the educational goal which requires the greatest degree of cognitive processing, and in-depth understanding should be achieved before that (Adam, 2015). Consistent with this, 5th graders were more capable in understanding dramatized fictions from multiple perspectives and relating them to real-life situations (Medina, 2004). In-depth understanding implies necessity of deep processing.

As claimed by Craik and Lockhart, such deep processing would lead to more elaborate and stronger memory trace (Oded & Walters, 2001). Deep processing could lead to better learning outcomes since memory is the basis of learning. In the experiment by Barker and colleagues (2002), kindergarten and primary students shown better performance in free recall task for deeply processed words that semantically encoded.

Apart from deep processing, LTD also fosters encoding through multi-sensory representations. Theoretically, drama-acting secures newly learnt semantic knowledge through enactive and iconic representations, which are suggested by Bruner to be the basis for acquisition of later abstract knowledge. Multisensory encoding is useful since it enriches mental representation of information by generating additional cues, and facilitates retrieval and comprehension (Markant et al., 2016; Mages, 2006). In drama acting, children could embed verbal language into nonverbal acts, and it promotes understanding and processing of symbolic meanings in sentences.

Even when multisensory learning only involved simple audiovisual presentation, it still shown to enhance 6- to 8-years-old performance in category identification task than either auditory- or visual-only learning did (Broadbent et al., 2017). Neurologically, recent research acknowledged the positive effects of multisensory experiences on stronger information encoding and retrieval, as well as the development of multisensory neural network (Murray et al.

, 2004; Goswami & Bryant, 2010). With better understanding and memory, drama strengthens knowledge base, and enables further flexible use. On a social level, LTD involves social interaction and feedback in drama-acting and collaborative script-writing. Not only invoking reciprocal learning by sharing knowledge, interacting with peers also allows children to think aloud (Education Endowment Foundation, 2017). This facilitates contextual understanding since it allows overt coordination of information.

The effects of collaboration on children learning was shown by Markant and colleagues (2016), which children worked in pairs performed better in reproduction of object arrangements than passive observers. To assess the outcomes, teachers could monitor pupils' academic progress by regular assignments. For quantitative measures, GLD attainment rate could be assessed by the end of foundation year, and pupils' literacy performance could be compared with national average by the end of KS2. Despite the obvious advantages, teachers should carefully implement the intervention. For instance, girls may prefer active learning less, hence be less motivated in participating. Besides, teachers should also set clear learning goals

for pupils, since learning activities may distract them from initial learning tasks if they are not explicitly directed to learning goals.