

Early Childhood Education Today

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Glen and Dotger's *Writing Like a Scientist: Exploring Elementary Teachers' Understandings and Practices of Writing in Science* examines how teachers utilize the experience of writing in the context of a Science classroom. The article synthesizes qualitative data from four teachers at various levels of Education. For the purpose of this response, only the data consistent with what was presented by the Kindergarten teacher will be examined. The researchers found in this specific study that there is a discrepancy in the mind of the teacher between the way scientists write versus the scientific writing done by students in the Science class (Glen, & Dotger, 2013). Specifically, the teacher believes that a scientist writes to express facts, data and conclusions to other scientists and the public. Moreover, the language used by science writers is precise, uses a wide variety of scientific vocabulary and is without creativity. In contrast, the teacher feels that the science writing done by students in class is creative, incorporates a narrative and actively utilizes methodology from Language Arts in order for the writing to be pleasurable to read. The authors point out in their discussion that scientists write to present scientific evidence, defend conclusions drawn from evidence, write editorials, books for the public as well as a myriad of other things which are part of their daily profession. As well, it is pointed out that scientists must be highly creative to invent solutions to problems based on evidence from studies and experiments. Further, the authors note that the teacher uses writing in science class as a tool to improve skills in Language Arts rather than to improve skills in Science. In particular, Glen and Dotger express that the teacher lacks a fundamental understanding of the Nature of Science (NOS) and, therefore, is not able to properly instruct students how to effectively write

in a scientific manner; this is because the teacher lacks the knowledge of basic NOS principles such as the link between observations and inferences.

While the teacher expresses that the scientific vocabulary is vast compared to what the students use, the sense is also that the teacher does not necessarily promote the use of scientific language in the classroom as it would be more in line with what a scientist does versus what Science students should be doing. Kostelnik explains that teachers must “Use a wide variety of accurate terms when talking with children.... Convey only accurate scientific terms....” (Kostelnik et al., 2014, p.32) Therefore, it is of the utmost importance that Kindergarten teachers make an active effort to incorporate scientific vocabulary in their teaching and not leave it by the way side.

I was surprised to learn that a Kindergarten teacher would be lacking in their conception on the Nature of Science. In fact, at McGill, all pre-service teachers in the K/Elementary program must complete two courses on Science Education; both of which deal explicitly with the Nature of Science. Indeed, without an appreciation for the NOS, it is impossible for Kindergarten teachers to facilitate Kostelnik et al.’s (2014) Curricular Goals of Science; specifically:

2. Learn and apply the scientific process

...

4. Develop and refine their skills to communicate findings

...

12. Develop and use accurate vocabulary related to scientific events, objects, and processes.

Hence, it is imperative to ensure that teachers who are currently in the field are teaching using the latest pedagogical frameworks. If not, while it is important to develop the skills of Language Arts, students will be deprived from the development of the Goals of Science.

Attributed from the reading of this article, I would like to learn more about how writing is used in other subject areas for Kindergarten students. I believe the issue of writing for Language Arts rather than the specific subject area may stem from the usual structure of a Kindergarten classroom. That is, it is the same teacher that is responsible for all subject areas; there is rarely specialization amongst Kindergarten teachers. As such, teachers with a stronger background in Language Arts will be more inclined to teach to their primary subject area rather than the subject they happen to be teaching at the time. This may in fact be true in reverse for Kindergarten teachers with a background inclined in the pure or social sciences. Nevertheless, teachers must not fall in the trap of exclusively developing the Goals of Language Arts and leaving behind the other areas of the curriculum.

References

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