

A Large Variety of Writing Instruments: Studying the Evolution of Technologies in Familiar Items

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Abstract

This paper reports the activities in Nakagawa's Seminar Class for the 2nd year students (with 10 members) in the 1st semester, i.e., from April to July, 2010. The students selected (or were assigned to) this Seminar class just after reading my syllabus with the title shown above. Without any knowledge about technology development, systems engineering, creativity techniques, nor, of course, TRIZ, the students started this class.

At first, for recognizing a variety of writing instruments, the students were requested to show their own items which they are carrying around at school and to describe the good points of their favorite items. Then a home work was assigned to visit stationery stores and home-centers and to report about as wide variety of writing instruments as possible. Then they are advised to observe various writing instruments, to consider their mechanisms/principles of writing and their merits, and further to classify them in a hierarchical manner. Then the wide range of intended use were considered to specify 'what, on which, and how (during the process and as the results)' to write/draw, and were built up into a hierarchical system. It was gradually understood by the students that with the requests of different use a variety of writing instruments have been developed, such as different in their mechanisms/principles, in shapes, in the characteristics of materials (e.g. inks), etc. This class is designed to make gradual understanding of the ways of evolution of technologies through familiar items, and understanding of important TRIZ concepts without using TRIZ terms. -- Ms Nakatani will talk about her experiences in the Poster Session.