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ENHANCING SCIENTIFIC COMMUNICATION BY COORDINATING SPOKEN EXPLANATIONS WITH VISUAL PPT PRESENTATIONS

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ABSTRACT

Language usually refers to the system of spoken words and written symbols used in human communication. In the field of science and engineering, the communication process contains other elements, including formulae, figures, and graphs. These elements convey specific meanings to people in the same discipline; just as in ordinary language, there exist established conventions as to how they should be used. Viewed from this perspective, formulae, figures, and graphs can be regarded as “the language of science and engineering.” Nowadays, PowerPoint (PPT) has become the most common tool for communication, education, and research presentations in science and engineering. PPT allows information to be presented visually, in an unprecedentedly colorful and dynamic way with abundant detail. Consequently, the language of scientific communication has evolved from an oral to a visual level. It is assumed that this “visual language” can compensate for inadequate speaking ability. This study addresses the question of how to make full use of the “visual language” of PPT in research presentations. Questionnaires were designed to evaluate the PPT presentations of students in water environment laboratories. Data were collected and analyzed using statistical and quantification methods. The results show that presenters with little speaking ability can improve their success rate by focusing on communicating one main point and the logical progression of ideas when planning PPT slides for a presentation. In addition, for all presenters, it is crucial to coordinate PPT slides with an accompanying spoken explanation.

KEYWORDS: Scientific Communication; Language of Science; Visualization; Quantification Analysis