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**ONLINE ASSESSMENT OF CREATIVE SUB-SKILLS
IN VISUAL COMMUNICATION
IN GRADES 5-8.**

Summary of the PhD dissertation

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Online Assessment of Creative Sub-skills in Visual Communication in Grades 5-8.

My research aimed to explore the competence structure of visual communication, undoubtedly the most important visual skill cluster of our time. I also aimed to develop an innovative and authentic digital assessment tool to measure the four sub-skills of the creative domain of visual communication among students in grades 5-8.

The first part of the dissertation presents the theoretical background of the research: it describes the concept of visual communication and its constituents, which supported the definition of the skill structure. It discusses the sensory basis of visual communication and, perceptual theory, and their role in the process of visual communication. A literature review summarises research on subskills and knowledge elements of the creative domain of visual communication. This review is followed by an introduction to the practice of assessing visual skills in international and national contexts and a review of some classic and contemporary models of visual skills. Based on previous research, I define the system of creative sub-skills to be investigated. On the basis of the testing study, I have developed a model of the creative subskills of visual communication that includes four skill clusters. Then the curricular framework of visual communication in Hungarian art education is explained. The third part of the thesis deals with the development of the assessment tool. After describing the research questions and hypotheses, I present the testing study that involved three phases of the development of an online test to verify the model. For each phase, the assessment tool, the research sample, the procedures, and the results are presented. Finally, research results are summarised and conclusions are drawn.

For the first pilot study, a paper-based test was developed with a task structure designed to reveal the four sub-skills of the creative domain of visual communication. Task items were mapped to a sub-skill of visual communication ability. Two test variants of different levels of difficulty were designed. In this pilot study, a total of 117 students participated the assessment that took place in classrooms. For the second assessment, revised tasks were developed and posted in the GeoGebra Notes application. In this study, 73 pupils participated. The tasks were the same for all grades and the assessment was carried out in a school setting for all student groups. 311 pupils took part in the large-scale assessment, some of them solved the tasks at school and others at home (due to Covid restrictions).

One of the main findings of these studies is, that valid assessment of visual skills can be performed using digital tests that simulate authentic use of visual language for 11-14-year-olds. A valid and reliable online test system and task bank were developed that is suitable for assessing important subskills of the creative domain of visual communication of upper secondary school students. The results confirmed that my hypothetical four-dimensional model of the subskills of the creative domain of visual communication is valid and may be used in art education for development and assessment. My results also contribute to the further development of the models of the Common European Framework of Reference for Visual Literacy and the Hungarian Visual Framework. In this way, they support the integration of visual learning and the knowledge equalizing potential of images into educational programmes in an increasingly image-dominated world.