Evaluation of a Workshop as a Form of Continuing Professional Development for Primary Education Teachers in the Context of Developing Students' Manual Skills

Viera Tomková[1]

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Abstract

The development of students' manual skills in primary education is a key competency, important not only for their personal growth but also for their future career development. Despite this, a noticeable deficiency in these skills exists, contributing to declining interest in traditional craft and technical fields. This situation underscores the need for continuous professional development to enable teachers to effectively foster students' practical skills. The aim of this article is to evaluate a workshop focused on promoting manual skills as a form of lifelong professional learning for primary school teachers. The research focused on analyzing the opinions of participants who completed the workshop, which were gathered through a questionnaire survey. The survey results revealed that this form of professional development was perceived as highly effective and relevant. Teachers expressed satisfaction with the connection between theory and practice and confirmed that they plan to implement the knowledge and skills gained in their teaching practice. The data suggest that practical workshops constitute a valuable and necessary component of continuing professional development for teachers, potentially contributing to the enhancement of students' manual skills in Slovakia.

Keywords: Workshop, Manual Skill, Teacher

1 Introduction

[1] Constantine the Philosopher University in Nitra, Tr. A. Hlinku 1, 949 01 Nitra, Slovakia.
E-Mail: vtomkova@ukf.sk

In 2023, a new school reform was adopted in the Slovak Republic, representing a significant step towards the modernization of the educational system (Vzdelávanie 21. storočia, 2025a). Starting from the 2026/2027 school year, the new national curriculum will be implemented in all primary schools, beginning with the first grade. The main goal of the reform is to shift from a transmissive model of education, based on the transfer of knowledge, to a competence-based model focused on developing complex skills, creative thinking, and the holistic potential of each student. The reform also emphasizes the student's active approach to learning and their participation in the process of discovering knowledge.

One of the identified issues is the low level of student engagement in science subjects, which are often perceived by learners as unattractive and insufficiently connected to real life (Franco, 2025; Oujezdecký & Nagyová, 2016; Lagria & Pañares, 2023). Students frequently fail to recognize the practical value of theoretical knowledge, which leads to a loss of motivation and reduced interest in learning. As Asykin and Agustin (2023) state, learning through direct experience, observation, and practical activity significantly contributes to a deeper understanding of the concepts taught and increases the joy of learning. The reform also reflects the need for digitalization in education and the integration of modern technologies into the teaching process (Vzdelávanie 21. storočia, 2025b).

Within current educational trends, which are often focused on developing cognitive abilities and digital competencies, it is essential to emphasize the importance of manual activities as a fundamental part of the educational process. Wójciková (2021) highlights that motor activity represents a key developmental stimulus. The development of fine and gross motor skills in primary school students should not be seen merely as a supplementary activity but as a fundamental element that supports cognitive, emotional, and social development. This process is closely related to neurobiological maturation and significantly influences the overall learning potential of the child.

2 The Importance of Manual Activities in Education from the Perspective of Student Personality Development

Research in the field of neuroscience highlights a strong connection between motor skills and cognitive functions (Grissmer et al., 2010; Diamond, 2000; van der Fels et al., 2015). Diamond (2000) demonstrated a causal relationship between motor activity and the development of cognitive abilities, emphasizing that both processes are inseparably linked. Activities such as manipulating objects, cutting, drawing, gluing, or modeling stimulate brain areas responsible for spatial perception, problem-solving, and memory processes.

The development of fine motor skills, such as proper pencil grip or precise cutting, directly affects the level of graphomotor abilities, which are essential for developing writing skills. Insufficiently developed manual skills may manifest as poor coordination, slower writing speed, and reduced legibility, which can lead to student frustration. Van der Fels et al. (2015)

state that fine motor skills, bilateral coordination, and timed motor performance show the strongest relationship to cognitive abilities.

Manual activities such as working with clay, wood, or textiles contribute to the comprehensive development of a student's personality. They allow learners to express themselves creatively, implement their own ideas, and strengthen their sense of competence through the completion of a tangible product. This process fosters self-confidence, increases intrinsic motivation, and contributes to the development of a positive attitude toward learning.

At the same time, these activities have a significant social and emotional dimension. Collaborative creative projects develop teamwork, communication, empathy, and conflict-resolution skills. They teach students to accept mistakes as a natural part of the learning process, thereby fostering psychological resilience and perseverance.

The integration of manual activities into teaching should therefore be seen as an essential component of a modern educational system. This is not a return to traditional forms of instruction, but rather an innovative approach that acknowledges the connection between body and mind as a key aspect of the holistic development of every learner.

3 Workshop for Primary Education Teachers Focused on Developing Manual Skills

International experience from successful school reforms shows that a key prerequisite for the successful implementation of changes in the educational system is the systematic support of teachers and their continuous professional development (Zimmerman, 2006; Kim, 2024; Brundrett & Dunca, 2011; Vzdelávanie 21. storočia, 2025b). The effective implementation of reform measures requires the development of methods for teachers' professional growth and the adjustment of their university-level teacher preparation programs (MŠ SR, n.d.).

Primary education teachers face the challenge of responding to the changing needs of students, who, because of digitalization and changes in daily lifestyles, have fewer opportunities to develop manual skills through natural activities, such as play or creative tasks at home. Therefore, ongoing professional development through workshops, seminars, and practical courses is crucial for maintaining and expanding teachers' professional competencies.

In a questionnaire survey conducted among 216 primary education teachers, 70% of respondents (152 teachers) expressed interest in a workshop focused on developing students' manual skills, as they consider these skills insufficient. Among the interested teachers, 136 (63%) indicated their willingness to participate in the workshop, and 28% preferred in-person learning.Based on the survey results, the workshop was designed to include five activities focused on working with technical materials: paper, cardboard, natural materials, wood,

textiles, and modeling compounds. Interest in working with plastics was the lowest (24%). The 10-hour workshop was held on a Saturday to accommodate employed teachers.
The aim of the workshop was to expand teachers' methodological repertoire with new material-handling techniques that can be directly applied in teaching, thereby contributing to the effective implementation of the goals of the school reform. At the end of the session, participants evaluated the content, organization, and practical applicability of the workshop.

4 Evaluation of the Workshop Questionnaire

The opinions of the participants of the workshop focused on developing manual skills of primary education pupils were collected through a questionnaire distributed immediately after the educational activity via the Google Forms platform. The questionnaire contained six closed-ended and one open-ended item. The closed-ended questions were evaluated on a five-point Likert scale, where 1 represented the highest possible score (maximum satisfaction) and 5 represented the lowest score.

The open-ended question allowed respondents to express their comments, suggestions, and recommendations regarding the content and implementation of the workshop. Respondents were asked the following questions:

Q1. Did the workshop meet your expectations?
Q2. Was the content focus of the workshop beneficial for your personal development?
Q3. Were the activities suitable for application in your teaching practice?
Q4. Was the time allocated to each activity appropriate?
Q5. Do you consider the workshop beneficial in terms of acquiring new knowledge and skills?
Q6. Would you participate in a similar workshop in the future?
Q7. Please write your comments and opinions about the workshop you attended.

The results of the responses to the first question (Q1) showed that 89% of participants stated that the workshop met their expectations (see Figure 1). The highest level of satisfaction was expressed by in-person participants (97%), while among the online participants, satisfaction reached 86%. Average satisfaction (rating 3) was reported by 11% of respondents, with 14% of online participants and 3% of in-person participants selecting this option. No respondent indicated that the workshop did not meet their expectations. The identified differences between the groups exceeded 10%, suggesting statistically significant differences between the evaluations of the in-person and online forms of the workshop.

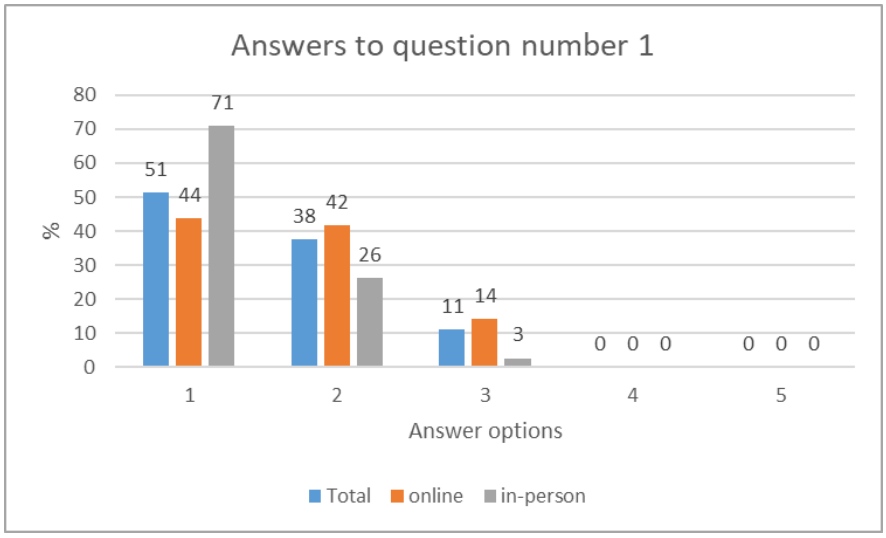

Figure 1: Fulfilment of Participants' Expectations.

In the second question (Q2), we examined the extent to which the content focus of the workshop was beneficial for the participants' personal development (see Figure 2). The highest rating (1) was chosen by 56% of respondents, with a 21% higher proportion recorded among in-person participants. A rating of "2" was selected by 37% of respondents, indicating an overall high level of satisfaction. The results also show that online participants (41%) more frequently chose a slightly lower rating compared to in-person participants (26%), which may be related to the limitations of the distance-learning environment and a lower opportunity for interactive engagement in the activities.

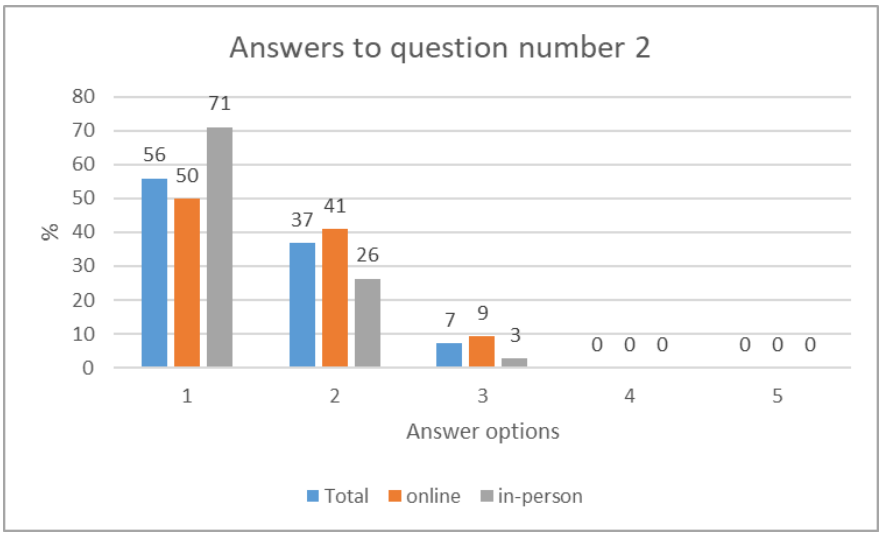

Figure 2: Contribution to Personal Development.

Question Q3 focused on assessing the suitability of the activities for application in pedagogical practice – Figure 3. The results showed that 97% of respondents considered the implemented activities suitable for classroom application (54% chose rating 1 and 43% rating 2). Only 3% of

participants rated the suitability of the activities as average (rating 3). None of the in-person participants gave a rating lower than 2. These results suggest that participants perceived the workshop as a methodologically and practically useful tool for professional development.

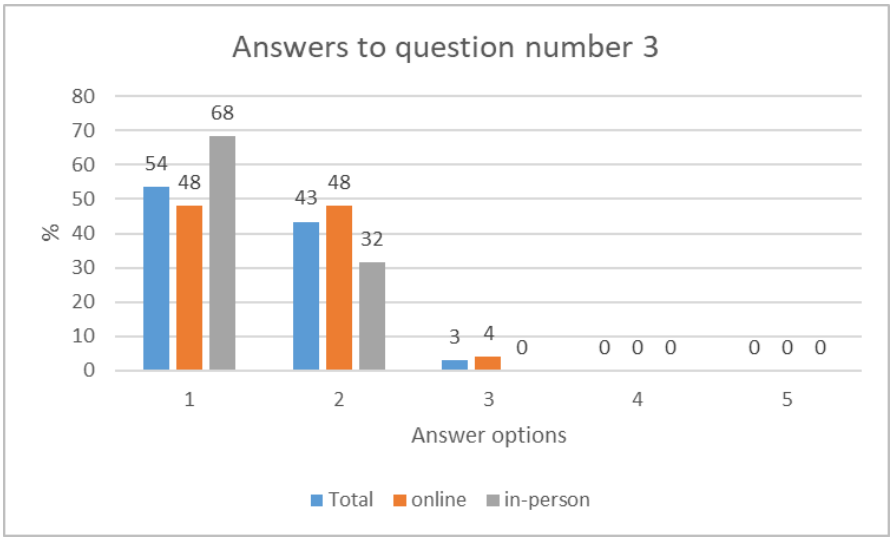

Figure 3: Suitability of Activities for Pedagogical Practice.

For Question Q4, which focused on the adequacy of time allocated to individual activities, significant differences were observed between the groups. Option 1 (full satisfaction with time) was selected by 84% of in-person participants, but only by 20% of online participants (Figure 4), representing a 64% difference. Respondents from the online group most frequently chose ratings 2 (44%) or 3 (36%). These findings indicate that the online format was perceived as less time-efficient, likely due to technical limitations, lower interaction dynamics, and reduced opportunities for direct observation of activity details.

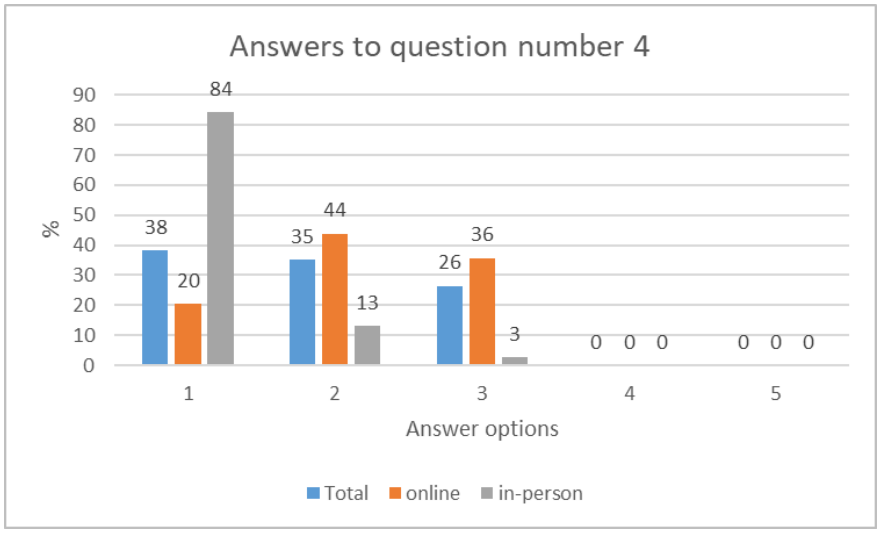

Figure 4: Adequacy of Time Allocated to Activities.

In Question Q5, respondents evaluated the benefit of the workshop in terms of acquiring new knowledge and skills (Figure 5). Most participants (65%) stated that the workshop was highly beneficial in this regard. The highest rating (1) was selected by 79% of in-person participants, while 59% of online participants chose the same rating. Option 2 was selected by 35% of online participants and 18% of in-person participants. Only 5% of respondents rated the workshop's contribution as average. These results suggest that face-to-face learning allows for more effective acquisition of practical skills, which require direct observation and hands-on manipulation of materials.

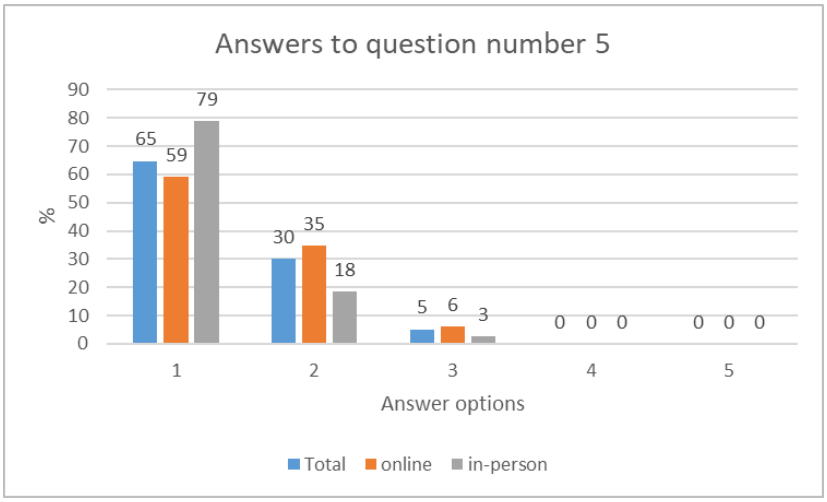

Figure 5: Acquiring New Knowledge and Skills.

In Question Q6, which focused on participants' willingness to attend a similar workshop in the future, 79% of respondents answered positively (Figure 6). Among them, 55% of in-person participants and 41% of online participants selected rating 1, while 26% of in-person and 37% of online participants chose rating 2. Option 3 was selected by 21% of respondents, mostly from the online group.

These results indicate a high level of teacher motivation to continue their professional development through similar workshop formats.

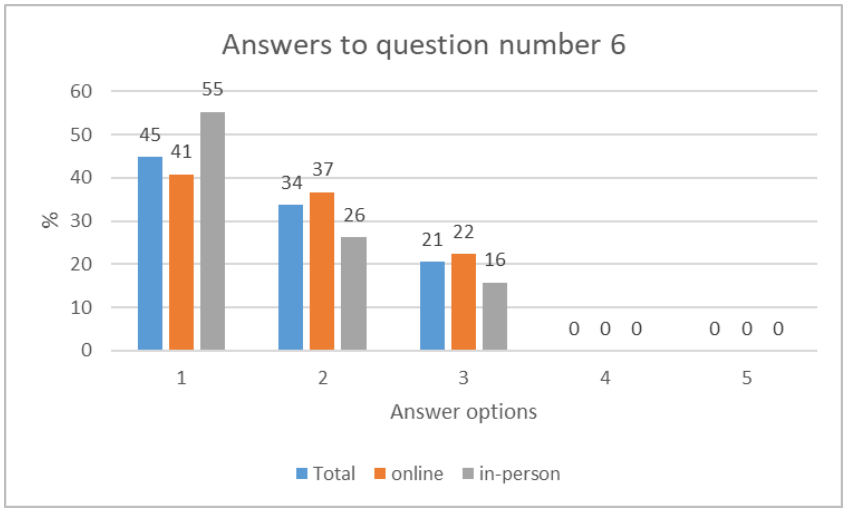

Figure 6: Willingness to Participate in a Similar Workshop.

The final, open-ended item of the questionnaire (Q7) provided additional qualitative data regarding participants' experiences. In-person participants particularly appreciated the connection between theory and practice, methodological guidance for creating didactic materials, the trainer's approach, and the opportunity to exchange experiences with colleagues. Reported disadvantages included time demands and the absence of activities involving recycled materials.

Online participants valued the opportunity to engage in professional development without the need for travel, the methodological insights, and the relevance of the workshop content to practice. However, they identified several technical limitations of the online format — in particular, poor visibility of details, lack of personal consultation, and communication noise. According to their feedback, these factors reduced work quality and affected overall satisfaction.

The comments suggest that, despite the technological accessibility of online education, face-to-face formats remain preferred for manually oriented activities. Participants emphasized the importance of personal interaction, immediate feedback, and shared experience, which are essential for the effective development of practical competencies among primary education teachers.

5 Discussion and Interpretation of Research Findings

The results of the conducted research demonstrated a high level of participant satisfaction with the content, organization, and overall benefits of the workshop. The collected data indicate that most respondents evaluated the workshop as fully meeting their expectations, confirming its effectiveness and relevance in relation to the stated objectives. As many as 89% of participants reported that the workshop met their expectations, while the differences

between in-person participants (IP) and online participants (OP) suggest that the mode of delivery significantly influenced the perceived quality. The higher ratings given by IPs can be interpreted because of more intensive interaction, immediate feedback, and authentic engagement in practical activities, which are more difficult to achieve in an online environment.

In evaluating the content focus of the workshop (Q2), its high relevance for the personal and professional development of participants was confirmed. Respondents most frequently selected the highest possible rating, with a 21% difference in favor of in-person participants (IP), suggesting that personal contact and direct engagement in the creative process contribute to more effective acquisition of knowledge and skills. This finding aligns with the insights of several authors (e.g., Kolb, 2015; Turek, 2008), who emphasize the importance of experiential learning and active participation in the development of teachers' professional competencies.

From the perspective of applicability, most respondents (97%) considered the activities implemented during the workshop suitable for use in their teaching practice (Q3). The near absence of negative evaluations confirms that the workshop met the criteria for integrating new knowledge into the educational environment and provided participants with specific methodological approaches applicable to the development of pupils' manual skills. This result supports the effectiveness of practice-oriented forms of teacher professional development, which enable the immediate connection between theory and practice.

The most significant differences between IP and OP were observed in the evaluation of the adequacy of time allocation for individual activities (Q4). While 84% of IP considered the allotted time sufficient, only 20% of OP shared this opinion. This difference can be explained by the specific characteristics of the online environment, where the fluidity of interaction is reduced, visual perception of details is limited, and communication between participants and the instructor is hindered. These factors ultimately affect the work pace and participants' subjective perception of time adequacy. These factors ultimately influence the pace of work and subjective perception of time adequacy, which points to the limitations of distance learning in activities requiring spatial coordination and direct manipulation of materials.

When assessing the workshop's contribution to acquiring new knowledge and skills (Q5), positive evaluations prevailed and 65% of respondents reported a clear benefit. The recorded difference between IP and OP (20% in favor of IP) once again points to the greater effectiveness of in-person learning for practical and experience-based activities. The results support the theoretical foundations of the constructivist approach to learning, which emphasizes that active participation and social interaction are key prerequisites for the effective acquisition of new knowledge (Vygotsky, 1976; Petlák, 2004).

The responses to Question Q6 revealed that as many as 79% of participants would be willing to attend a similar type of educational activity in the future. This figure indicates a high level

of participant satisfaction and confirms the need for continuous professional development focused on the enhancement of practical competencies.

The open-ended responses (Q7) provided a qualitative context for evaluating the workshop. IP particularly appreciated the connection between theoretical knowledge and practical demonstrations, the opportunity to exchange experiences, and the methodological support provided by the instructor. In contrast, OP pointed out technical limitations, the lack of visual access to details, and the absence of direct consultation. These findings underscore the need for careful design of online educational activities and suggest that for manually oriented topics, an in-person or hybrid format is more suitable.

From an overall evaluation perspective, it can be concluded that the workshop fulfilled its primary goal—to support the professional development of primary education teachers through the enhancement of their methodological and manual skills. At the same time, the results highlight the importance of differentiating educational formats based on the content and nature of activities. For practically oriented topics, the in-person format appears to be more effective, while the online environment can serve as a valuable supplement for theoretical preparation and experience sharing.

6 Conclusion

The research provided valuable insights into the effectiveness of a workshop focused on developing primary school pupils' manual skills and supporting teachers' professional growth. The data confirmed a high level of participant satisfaction with the content, organization, and practical applicability of the activities. Participants regarded the workshop as a meaningful form of professional learning that connects theoretical knowledge with direct experience and fosters creativity and reflection in pedagogical practice.

The comparison between in-person and online formats highlighted the importance of personal interaction and experiential learning for acquiring manual and methodological competencies. In-person participants consistently evaluated the workshop more positively across all indicators, indicating that physical presence is crucial for effective learning in activities involving material handling, detailed observation, and immediate feedback. However, the online format proved a suitable alternative for theoretical components and methodological inspiration, supporting the development of hybrid learning models.

From a pedagogical perspective, such educational formats significantly contribute to teachers' professional development by enabling them to enhance practical skills, reflect on their teaching practice, and share experiences with peers. Given the positive feedback from participants, it is recommended to continue organizing similar workshops, ideally enriched with elements of collaborative learning, work with recyclable materials, and reflective sharing of outcomes.

For the future, it would be beneficial to conduct research on the long-term impact of such workshops on teachers' pedagogical practice, as well as to compare the effectiveness of different forms of professional education. Such analyses could provide deeper insights into how to most effectively support teachers' competence development in the context of an evolving educational environment.

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