Learning in online environments to teach face-to-face in schools: Exploring preservice teachers' learning and teaching effectiveness while on school placement

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Introduction and framework

Online teaching and learning (OTL) has rapidly become more central or even the only form of teacher-student interaction[1]. Studies exploring OTL experiences in teacher education report on lessons learned for OTL during and post-pandemic[2], but also describe the impact of online pedagogies both on students' achievements[3], and teachers' digital competences. Despite this, studies reporting on the relationships between learning to teach in online-only environments and translating this into the classroom is rare[4].

Aims

To explore preservice teachers' (PSTs) (1) perception of learning (subject content knowledge (SCK) and pedagogical content knowledge (PCK)), and (2) effectiveness of online and face-to-face (F2F) school placement teaching after a whole semester of online teaching and learning.

Methodology

The participants of this study were PSTs doing a PME. In the programme, they were engaged in fully online education for the first semester. In the second semester they did their placement, where they taught students five weeks online and three face-to-face. Data was collected via an online adaptation of the TALIS survey (OECD, 2021), 60 reflections, 60 portfolio entries, 20 lesson plans, 20 units of learning, and 20 observation reports of 20 randomly selected PSTs. The t-Test, Paired Samples Correlations, and Reflexive Thematic Analysis were used to analyse and report data.

Findings

80% of the PSTs had positive perceptions of SCK learning, and PCK (M = 7.47, SD = 1.96) (scale 1-10) after a whole semester of online education. They highlighted that online education was cost and time efficient. The lack of interaction and engagement, and the level of adaptation of modules to online teaching were criticised. Online learning and then the experience of teaching online contributed to the PSTs' readiness and teaching effectiveness in subsequent face-to-face teaching.

Table 1. *Descriptive scores of PSTs' perceptions of instruction and managing learning environment (MLE)*

	Instruction	MLE
Online	🙂 (72 %, SD = .44)	😐 (65 %, SD = .55)
Face to face	🙂 (79 %, SD = .46)	🙂 (77 %, SD = .49)

70-100% : Highly satisfied, 50-69% : Satisfied to some extent

Table 2. *Descriptive scores of PSTs' perceptions of overall experience (OE), SCK, and PCK*

OE 😐	SCK 🙂	PCK 🙂
69 %, SD = 1.95	74 %, SD = 2.0	74 % , SD = 1.83

70-100% : Highly satisfied, 50-69% : Satisfied to some extent

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