What factors influence teachers' professional use of ICT outside the classroom? Evidence from Spain

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Background

▪Much of the research has focused on the role of computers in the process of teaching and learning within the classroom.

▪Studies have highlighted how ICT create new varieties of learning practices and improve students' engagement and educational outcomes.

▪Considerable attention has also been given to the factors that influence teachers' use of ICT (Tondeur et al., 2008).

❑Factors at the teacher level: age, gender, experience with the use of computers, educational beliefs.

❑Factors at the school level: ICT infrastructure and connectivity, ICT support, ICT policy, or school culture.

▪Teachers' attitudes towards ICT have been considered to be either a facilitator or barrier to the introduction of ICT to schools (Afshari et al. 2009).

Problem

▪Research has primarily focused on the factors affecting the use of ICT in teaching and learning practices in the classroom. There is a gap in the literature regarding the factors that influence ICT use as a professional tool outside the classroom.

Aim

▪To develop and empirically test a model of the factors that affect teachers' professional use of ICT, particularly the internet, outside the classroom in primary and secondary schools.

Method

▪ Cross-sectional survey with a representative and stratified sample of 809 educational centres offering primary (536) and secondary (273) education in Spain.

▪ The final sample of the study was composed of 1405 teachers.

▪ Measures used included:

❑ Socio-demographics and school-level information.

❑ Frequency of internet access within and outside the school premises.

❑ Educational ICT training.

❑ Digital literacy.

❑ Organisational development.

❑ Attitudes towards the professional use of ICT: Positive and negative.

❑ Use of the internet in professional practice: Supportive and management.

Conclusion

▪Technological factors and organisational development are associated with higher positive attitudes towards the professional use of ICT as well as with an increasing adoption of the internet in teachers' professional practice outside the classroom.

Findings

▪Being a daily user of the internet within and outside the school, and having attended useful educational ICT courses over the last 3 years are significantly associated with higher positive attitudes towards the professional use of ICT.

▪Sampling variables such as stage of education, funding and location of the school are not actually associated with professional use.

▪More frequent access to the internet at school is associated with a consistent increase in supportive and management uses, especially for daily users.

▪Higher digital literacy levels make a positive and significant contribution to effective appropriation of the internet in professional practice.

▪Increases in organisational development account for a slightly more frequent management use of the internet.

MULTIPLE REGRESSION MODELS OF TEACHERS' ATTITUDES TOWARDS, AND PROFESSIONAL USES OF, THE INTERNET

		Positive attitude	Negative attitude	Supportive ICT use	Management ICT use
		Beta	Beta	Beta	Beta
Stage of education	Compulsory primary	-	-	-	-
	Compulsory secondary	0.004	0.000	0.038	0.026
Funding	Public	-	-	-	-
	Private	0.065*	-0.045	0.035	-0.020
Location of school	Less than 10,000	-	-	-	-
	10,001 – 50,000	0.071*	0.012	0.036	0.044
	50,001– 100.000	0.055	0.013	-0.028	0.012
	100,001 – 500.000	0.042	0.011	-0.010	0.073*
	500.001 or more	0.051	-0.023	-0.012	0.006
Age		-0.004	-0.039	0.020	0.031
Gender	Female	-	-	-	-
	Male	0.071*	0.046	-0.029	0.021
School internet access	Never or hardly ever	-	-	-	-
	Monthly	-0.032	-0.054	0.061	0.030
	Weekly	-0.010	-0.063	**0.150***	0.051
	Daily	**0.122***	-0.139*	**0.280***	**0.235***
Outside school internet access	Never or hardly ever	-	-	-	-
	Monthly	0.011	0.005	0.006	-0.005
	Weekly	0.072	-0.014	0.008	0.050
	Daily	**0.121***	-0.087	0.149*	0.073
Educational ICT training	Did not receive any	-	-	-	-
	Rec. a hardly useful one	-0.017	0.012	0.041	0.028
	Rec. a very useful one	**0.120***	-0.109*	0.135*	0.085*
Digital Literacy		0.147*	-0.129*	**0.295***	**0.158***
Organizational Development		0.101*	0.052	0.102*	**0.175***

Model summary	Positive attitude	Negative attitude	Supportive ICT use	Management ICT use
R[2] (Adjusted R[2])	**0.150 (0.138)**	**0.076 (0.063)**	**0.304 (0.295)**	**0.164 (0.153)**
F for the model	12.840*	5.955*	33.217*	14.956*
Sample size	1405	1405	1405	1405

References:
Tondeur, J., Valcke, M., & van Braak, J. (2008). A multidimensional approach to determinants of computer use in primary education: teacher and school characteristics. Journal of Computer Assisted Learning, 24(6), 494–506.
Afshari, M., Bakar, K. A., SuLuan, W., Samah, B. A., & Say, F. (2009). Factors affecting teachers' use of information and communication technology. International Journal of Instruction, 2(1), 77–104.

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