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The Classroom Demands and Teacher Self-Efficacy in On-Site and Online Teaching

Diana-Sînziana DUCA[1], Maria-Doina SCHIPOR[2]

Abstract

We investigate in this work the relationship between the perceived demands of the teaching profession and the general sense of teachers' self-efficacy in on-site and online teaching contexts. We present the results of a study with N= 127 Romanian teachers, with ages ranged from 19 to 55, with a mean age of 39,26 years, SD = 9,20 (123 females, 4 males; 73 from urban area, 54 from rural area). Our results show that the self-efficacy of teachers is lower in online professional activities, compared to the self-efficacy of teachers perceived in the on-site professional activities. In the case of the online teaching environment the teachers with high scores on teachers' self-efficacy tends to consider as being more challenging when dealing with different levels of children's development, working with children with learning disabilities, who have a small number of attendances, who do not follow the received instructions and with children who need more time and energy compared to other children. We discuss implications of our results for policies and strategies to enhance the quality of teaching practices.

Keywords: *Demands of teaching profession, teachers' self-efficacy, online teaching.*

1. Introduction

The teaching profession is frequently characterised as one of the most stressful professional domains because of some several factors including school conditions, social support climates, policy directions and learners' particularities (Day et al., 2007; Gavish & Friedman, 2010; Harmsen et al. 2018; Johnson et al., 2005; Neves de Jesus & Lens, 2005; Stoeber & Rennert, 2008; Skaalvik & Skaalvik, 2015). Perceived heavy workload is related to low professional motivation, emotional exhaustion and is often invoked as the main cause for teacher attrition (Chaplain, 2008; Gonzales et al., 2020; Han et al., 2020; Skaalvik & Skaalvik, 2017). Teaching related stress and job satisfaction are related to student behavior and his/her learning and behavioural abilities, this explaining the significantly higher professional teachers' dissatisfaction and anxiety when working with students with learning difficulties (Klassen, 2010; Lobosco & Newman, 1992; Stempien & Loeb, 2002).

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Online teaching increases the perceived teaching workload and stress (Crews et al., 2008; MacIntyre et al. 2020), subsequently decreasing job satisfaction and motivation. Teachers' self-efficacy is viewed as a helpful factor able to lower teachers' stress attributed to student behaviour and learning specificity (Klassen, 2010).

Using the job demands-resources model (Demerouti et al., 2001; Schaufeli & Bakker, 2004), our research study investigates the relationship between the perceived demands of teaching profession and the general sense of teachers' self-efficacy in on-site and online teaching.

2. Problem Statement

Integrating children with learning difficulties represents a professional challenge related to teachers' job workload. As prior work has shown, the teachers' attitudes to the integration of students with learning disabilities and of atypical students reflect a high degree of lack of confidence in their instructional skills (Center & Ward, 1987). They showed positive attitude only toward the integration of students whose learning needs do not require extra instructional skills, which means no extra job demands.

The job demands-resources model (Demerouti et al., 2001; Schaufeli & Bakker, 2004) outlines the balance between job demands and self-perceived resources and considers this steadiness as the main condition for well-being. Job demands represents "those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001). To successfully manage this balance between job costs and job resources, achieving work goals must be attained in a functional manner, should reduce job demands and their associated costs, and should stimulate personal growth and development (Demerouti et al., 2001).

Managing classroom demands include sa large number of activities which increase the workload of teachers (Bubb & Earley, 2004; Gold & Windscheid, 2020; Timperley & Robinson, 2000). In addition, working with students with learning difficulties (Center & Ward, 1987; Lobosco & Newman, 1992; Klassen, 2010) and online teaching represents variables that multiply this intensity of teachers working (Crews et al., 2008; MacIntyre et al., 2020). In these contexts, coping strategies are activated (Schipor & Duca, 2021) and self-efficacy enhancing strategies are developed in order to maintain professional well-being (Admiraal et al., 2000; Lambert et al., 2009).

Self-efficacy is defined as the "belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1977). The importance of this concept has been analyzed in various contexts. For example, in dyadic relationships (mother-child or teacher-student) the perceived self-efficacy of one partner (e.g., mother or teacher) has been shown to be a significant predictor of the self-efficacy of the other partner (e.g., child or student) (Corkett et al., 2011; Curelaru et al. 2020). When this concept is applied to investigate teaching self-efficacy, teachers' role requests a contextualization of self-efficacy in the area of designing and managing education. Studies on teachers' self-

efficacy have focused on teacher training and development (Ignat & Clipa, 2010; Schipor & Schipor, 2014) or on teachers' perception of his own competence to determine students' knowledge (Ashton & Webb, 1986; Tschannen-Moran & Woolfolk-Hoy, 2001). Teaching tasks were considered an important component of teacher self-efficacy. In their integrated model, Tschannen-Moran et al. (1998) related two dimensions: teaching tasks and their context, and the teacher self-perception of didactic competencies. Teachers assess the task and relate the difficulty with their own competence. The teachers' intentions to allocate effort accordingly to the perceived tasks difficulty and to the self-perceived ability is mediated by self-efficacy (Morris et al., 2017). Ma and his collegues examine online teaching self-efficacy (TSE) during COVID-19. They find was that teachers felt a low online teaching self-efficacy at the beginning of the online teachin (Ma et al., 2021). This is a common phenomenon among practitioners where a lack of prior experience affect overall performance.

While wide literature focuses on teaching-related stress and teachers' self-efficacy, limited research has explored the relation between teaching demands and teachers' self-efficacy in the online teaching tasks. The primary purpose of this study is to investigate the perception of on-site and online teaching demands in relation with general self-efficacy.

3. Questions, aims and hypotheses of the research

The present study starts from the following research problems: (1) Is teachers' self-efficacy different in online and on-site teaching situations? (2) Are there associations between teachers' self-efficacy and the demands of the teaching?

The main purpose of our study is to investigate the relationship between demands of teaching profession and general self-efficacy of teachers in online and on-site situations.

The first objective of the study is to compare the differences between teachers 'self-efficacy for on-site activities and teachers' self-efficacy perceived for online situations. The second objective is to investigate the correlations between the demands perceived by teachers and teachers 'self-efficacy.

In order to achieve the stated objectives, but also taking into account the previous research, we set out to verify two research hypotheses:

H1: The self-efficacy of teachers is lower in online professional activity, compared to the self-efficacy of teachers perceived in the on-site professional activities.

H2: Teachers' self-efficacy correlate with the demands perceived by teachers both online and on-site.

4. Research Methods

4.1. Sample

Participants in this study were a convenience sample of 127 Romanian teachers (123 women and 4 men), with ages ranging from 19 to 55 (M = 39.26 years, SD = 9.20). 73 teachers were from urban area and 54 teachers were from rural area; The teachers' didactic experience ranged from less than a year to 37 years (M = 15.46,

SD= 10.04). Participating teachers worked in all school levels: preschool (11%), primary school (63%), middle school (18.1%), and high school (7.9%).

4.2. Procedure

The present study is an investigative research based on questionnaires. In the first half of May 2020, a set of online questionnaires was applied to pre-university teachers in the form of a snowball. A web-based questionnaire was used to collect data. Participants were informed about the goal of the study and their consent was obtained. This study was approved by the Institutional Review Board of University. Subjects participated voluntarily and they were not reimbursed for participation in this study.

4.3. Measures

Teachers completed demographic information regarding age, gender, education, work experience, and school level where they teach. They also completed a series of tools for assessing the demands of the teaching profession and teacher self-efficacy both online and on-site teaching.

In order to measure teachers' demands we used two sub-scales from the Classroom Appraisal of Resources and Demands (CARD) elaborated by Lambert and his colleagues (Lambert et al., 2001). The Children with Problem Behaviors Scale (4 items referring to demands associated with behavior management and interactions with children who disrupt the learning environment) and The Scale for Other Student Related Demands (11 items involving demands activated by children who present other needs, such as Romanian language acquisition and physical disabilities) were applied in order to investigate the teachers' perception towards the teaching demands. The teachers evaluated the severity of demands for both the on-site and the online situation. For the present study, Cronbach's alpha was α= .866 (for demands in on-site situation) and α =.864 (for demands in online situation).

The Teacher Sense of Self Efficacy – short version (Heneman et al., 2006) was used to measure the teacher efficacy judgments in three domains: instructional strategies (4 items), classroom management (4 items), and student engagement (4 items). The TSES short form incudes 12 items rated with a 9-point response Likert scale. Subjects filled the scale by referring to both on-site and online teaching. For the present study, Cronbach's alpha values were: α = 0.89 for total teacher self-efficacy in on-site, α = 0.91 for total teacher self-efficacy in online, α = 0.77 for on-site classroom management, α = 0.83 for online classroom management, α = 0.88 for on-site student engagement, α = 0.86 for online student engagement, α = 0.90 for on-site instructional strategies, α = 0.84 for online instructional strategies.

4.4. Analytic Strategy

We used IBM SPSS 22 for descriptive statistics, correlations, and t-tests for paired samples.

5. Findings

To verify the first hypothesis, *The self-efficacy of teachers is lower in online*

professional activity, compared to the self-efficacy of teachers perceived in the on-site professional activities, we used the T test for paired samples. The results show that the teacher's self-efficacy, in all its dimensions (total self-efficacy, t = 13.47, p>.001; classroom management, t=12.45, p>.001; student engagement, t = 11.43, p>.001; instructional strategies, t = 11.41, p>.001) is significantly lower in the online teaching situation, compared to the on-site situation (Table 1). The data obtained fully confirm the first hypothesis.

Table 1. Differences between teachers' self-efficacy in on-site teaching compared to online teaching (Paired Samples T-Test)

		Mean	t	df	Sig. (2-tailed)
Total teachers' self-efficacy	on-site	92.19	13.47	126	.000
	online	69.77			
Efficacy for Classroom Management	on-site	30.04	12.45	126	.000
	online	20.92			
Efficacy for Student Engagement	on-site	30.42	11.43	126	.000
	online	23.86			
Efficacy for Instructional Strategies	on-site	31.72	11.41	126	.000
	online	24.98			

To test the second hypothesis, *Teachers' self-efficacy correlate with the demands perceived by teachers both online and on-site*, we applied Pearson correlation analysis.

Thus, the data we obtained show us that teachers' self-efficacy perceived by teachers in on-site situation is positively correlated with some demands from on-site situation (Table 2a):

• Children who do not follow the instructions received (r = .198, p = .025)

• Children who need more time and energy compared too ther children (r = .206, p = .020)

At the same time, teachers' self-efficacy perceived by teachers in online situation is positively correlated with one demand from on-site situation (Table 2a):

• Talented children (r = .263, p = .003)

On the other hand, teachers' self-efficacy perceived by teachers in on-site situation is positively correlated with some demands from online situation (Table 2b):

• different levels of children's development (r = .220, p = .013)

• children with learning disabilities (r = .182, p = .040)

• children who have a small number of attendances (r = .184, p = .038)

• children who do not follow the instructions received (r = .175, p = .048)

• children who need more time and energy compared to other children (r = .195, p = .028)

The results confirm the second hypothesis.

Table 2a. Pearson correlation between teachers' self-efficacy and demands from on-site situation

	Children who do not follow the instructions	**Children who need more time and energy**	**Talented children**
teachers' self-efficacy in on-site	.198*	.206*	
teachers' self-efficacy in online			.263**

**. Correlation is significant at the 0.01 level
*. Correlation is significant at the 0.05 level

Table 2b. Pearson correlation between teachers' self-efficacy and demands from online situation

	Different levels of children's development	**Children with learning disabilities**	**Children who have a small number of attendances**	**Children who do not follow the instructions**	**Children who need more time and energy**
teachers' self-efficacy in on-site	.220*	.182*	.184*	.175*	.195*

*. Correlation is significant at the 0.05 level

6. Discussions

Our study results show the relationship between the demands of the teaching profession and teachers' general self-efficacy in online and on-site situations. In this section we use our results to draw a set of implications for the educational policy.

As we hypothesised, teacher self-efficacy turned out to be perceived as being higher in on-site situation than in online encounters. The online teaching environment is perceived as challenging (Schipor & Duca, 2021) and even threatening with respect to teachers' professional self-confidence. Therefore, almost all proved teaching strategies are questioned and showed as being uncertain in attaining educational goals (Ma et al., 2021). High-yield online instructional strategies, methods for effectively engage students and new classroom management design are requested to be included in teacher training programs to soar the online teacher self-efficacy.

Teachers' self-efficacy is also related with the perceived difficulty of the

teaching in both online and on-site situation. In the case of the online teaching environment the teachers with high scores on teachers' self-efficacy tends to consider as being more challenging when dealing with different levels of children's development, working with children with learning disabilities, who have a small number of attendances, who do not follow the instructions received and with children who need more time and energy compared to other children. These issues must be considered as the main topics to be discussed by educational policy authorities in order to determine measures aiming to train and sustain the contextual teacher competency.

7. Conclusions

The lower self-efficacy manifested both in online teaching encounters and in teaching situation involving students with learning or behavioral problems determined us to set upsome directions for educational policy. Pre-service and in-service teacher training should enhance teachers' competencies with strategies for online teaching. Additionally, enriching this formative experience with methodological tips aiming to manage atypical students represents an imperative must.

Our results indicated the teacher training domain as representing a key variable that could have the potential to increase teacher self-efficacy and well-being. Future research could expand knowledge in this area investigating this resourceful field.

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