

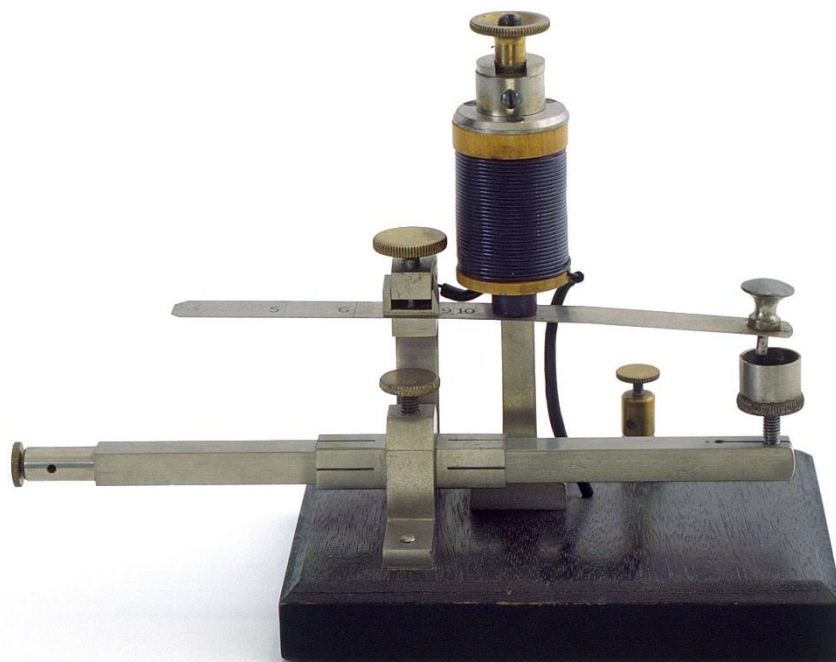
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# Students' Perception of Teaching Practices and Parents' Educational Status as predictors of Students' Self-Efficacy in Televised Instruction

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## Abstract

The outbreak of COVID-19 pandemic forced 1.6 billion students to switch to distance learning. More than 80 countries around the world, including Serbia, used televised instruction during the first wave of school closures (March-June, 2020). Given the indirect and asynchronous teaching and remote nature of learning in TV instruction, it brought concerns that students whose parents are less-educated can lag behind those from more educated parents. The main objective of this study is to examine the relative predictive effect of students' perception of teaching practices in TV classes (SPTP) and parents' educational status (PES) on one of the most important student outcomes - academic self-efficacy. The sample of 1202 compulsory education students evaluated the frequency of ten teaching practices in the science and humanities lessons they had just watched on TV (SPTP), as well as their self-efficacy about the lesson content. PES was measured as the sum of schooling years of parents. The results indicate that students' self-efficacy is more affected by their perception of teaching practices than by family educational status, although both predictors are significant.

**Keywords:** televised instruction; students' perception of teaching practices; students' self-efficacy; parent's educational status

## Introduction

The outbreak of the COVID-19 pandemic caused the need for distance education for more than one and a half billion of students worldwide (UNICEF, 2020). In the first wave of school closures (March-June 2020) most countries (68% of 127 for which data are available) used some combination of digital and non-digital distance learning to expand the reach of children (UNICEF, 2020). The most common non-digital form of distance learning was televised instruction, which was used by 75% of the surveyed countries (*ibid*). TV instruction (telecourses, televised instruction) implies teaching through video, in which the learning of a particular subject is aligned with established curriculum and academic standards (Luskin, 1983).

In such a context, students had to "move" their learning activities from the classroom to their homes. To do this, they needed certain material, social and psychological resources that schooling did not necessarily require until then. These resources include wide range of possessions, starting with a quiet place at home where they can study/attend the lessons, electronic devices they can use for that purpose, as well as family support and personal dispositions that will enable them to remain engaged in learning activities. The absence of regular teacher-student

interactions and the one-way nature of communication in televised instruction (from teacher to student) made it impossible for students to get teachers' feedback on their work and to get appropriate scaffolding. Also, the parents had to take over the role of support in learning and regulation of students' activities to a great extent. These facts brought concerns that students whose parents are less-educated can lag behind those from more educated parents. This concern is based on huge empirical evidence that parental education has strong and robust effect on student outcomes (Bos & Kuiper, 1999; Bradley & Corwyn, 2002; Campbell, Haveman, Wildhagen & Wolfe, 2008; Chiu & Xihua, 2008; Lamb & Fullarton, 2000; Marks, Cresswell & Ainley, 2006; Williams, 2006; according to Jakšić, Marušić Jablanović & Gutvajn, 2017). On the other side, numerous systematic reviews, meta-analyses, international studies of educational achievements (such as PISA and TIMSS) showed that the strongest factors of student outcomes beside those that come from the students themselves and their family are those that come from the teaching quality (Hattie, 2009, Ladd and Sorensen, 2015; Muijs & Reynolds, 2017; OECD, 2018). Given these two presumptions, the main objective of this study is to examine the relative predictive effect of students' perception of teaching practices in TV classes (SPTP) and parents' educational status (PES) on one of the most important students outcomes – academic self-efficacy.

Large-scale studies on representative samples of students in Serbia showed that self-efficacy is one of the best predictors of the test score in different subjects and age groups (Džinović & Vujačić, 2017; Jakšić et al., 2017; Jovanović, 2014; Pavlović –Babić, 2007). Self-efficacy is related not only to students' academic outcomes but also to socio-emotional outcomes (i.e. depression and anxiety) (Hattie, 2009), level of engagement, persistency and resistance when facing obstacles in given activity (Schunk, 2012). Therefore it is not surprising that, students who perceived themselves more self-efficient during COVID-19 emergency remote schooling perceived independent distance learning as less stressful, procrastinated less and had less need for support (Pelikan, et al, 2021).

## Method

**Procedure.** The survey was conducted during May 2020 when respondents filled out an online questionnaire. The students anonymously gave general information about their grade, type of settlement they live in and family background. They evaluated the frequency of ten teaching

practices in the science and humanities lessons they had just watched, as well as their self-efficacy about the content of the lesson.

**Sample.** The sample included 1202 students, from primary (23.84% of sample) and lower secondary education (76.15% of sample) who watched TV lessons of science and humanities ( $M = 5.64$ ,  $SD = 1,74$ ). Gender representation was balanced (56% of participants were female), and 62% of respondents were from cities, while the rest lived in rural areas.

**Measures.** *Subject self-efficacy* (SSE) refers to the perception of one's own success in a given subject. It was measured with five statements adapted from the PISA 2009 questionnaire for students (e.g. I understand even the most difficult tasks in this subject;  $\alpha = 0.83$ ). *Parental educational status* (PES) was measured as the sum schooling years of parents/guardians. *Students' Perception of Teaching Practices* (SPTP) was measured by a composite scale made of ten statements ( $\alpha = 0.82$ ). We utilized the *Students' Views on Engaging Teaching* scale from TIMSS 2015 for TV instruction that is characterized by one-way communication (items implying interaction were replaced with a new one) and half of the statements were formulated negatively (The images that teacher uses are incomprehensible).

## Results and Discussion

Descriptive statistics and bivariate correlations are shown in Table 1.

Table 1: Means, Standard deviations, and correlations of the measured constructs.

	<i>M</i>	<i>SD</i>	2.	3.
1. SSE	4,03	0,79	.371**	.182**
2. SPTP	4,09	0,65		.038
3. PES	25,84	6,89		

Note \*\* $p < .001$

Based on the theoretical range of the used scales (1-5) and value of the means we can conclude that students are on average moderately self-efficacious and they perceive teaching practices in TV lessons as high quality. As predicted, both parental educational status and perception of teaching practices were positively related to self-efficacy, and the intensity of the latter correlation is twice as high as the former.

In order to assess the relative power of selected predictors in explaining student self-efficacy, we conducted hierarchical multiple regression (blockwise), starting by adding PES as the first predictor, and in the next step, we added SPTP. The results of the analysis are presented in Table 2.

Table 2. Students' perceptions of teaching practices and parental educational status as the predictors of subject self-efficacy (N=1202).

Model	R <sup>2</sup>	$\Delta R^2$	$\beta$	<i>p</i>
Step I	.024			
PES			.155	.000**
Step II	.151	.127		
PES			.153	.000**
SPTP			.357	.000**

Note \*\* $p < .001$

The hierarchical multiple regression revealed that at Stage one, PES contributed significantly to the regression model  $F(1201, 1) = 29.51$ ,  $p < .001$  and accounted for 2.4% of the variation in Student self-efficacy. Introducing the SPTP variable explained an additional 15.1% of variation in Student self-efficacy and this change in  $R^2$  was significant  $F(1200,2) = 107,10$ ,  $p < .001$  The R-square change (increment) indicates that students' self-efficacy is about five times more affected by their perception of teaching practices than family educational level, although both predictors are significant.

Although the parent's support during the COVID-19 emergency remote learning is probably even more significant than in normal school conditions, our research has shown that the students' experience of how successfully they will cope with the requirements of a particular school subject depends to a much greater extent on how they evaluate the teacher's practices in TV classes. The results indicate that teachers can promote students' self-efficacy even in indirect and asynchronous televised instruction. It's encouraging that students on average perceive teaching practices in TV lessons relatively high in the context of public concerns that televised instruction will create a gap between students from disadvantaged and advantaged family background.

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