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Design of scales to assess the Subjective Social Value of Education for students in primary and secondary school

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Abstract

The devaluation of education, related with multiple socio-economic and psycho-school factors may be influencing decisively on academic results. A target level is observed that the socio-economic and cultural level of families can decide the student performance, however, this international trend shows inconsistent results. In addition, in different studies, we can observe that students from disadvantaged backgrounds statistics exceed expectations in performance, surpassing the expected results depending on their socioeconomic and cultural level; and students should achieve optimal results for their family situation do not get the expected performance. An interpretative hypothesis may be that subjective social value given to education is a factor which explains these results. Such situations could be analyzed at the macro level assessment indicators that identify patterns of social and school projection given to education. Thus, from a framework of systemic research based on an evaluation model aimed at identifying the contributions of education as a means for the development of social cohesion, has worked through expert committees and work groups with 60 teachers (school, high school and college) to assess the adequacy, clarity and absence of bias on a proposed scale on the Subjective Social Value of Education. To analyze factors among students in primary and secondary education to help overcome these situations of inequality and help improve the situation for all students. Suitable results are detected and two scales of 20 items each: primary and secondary are presented. As prospectively the intention is to validate and debug to metric level (Classical Theory of Tests and Item Response Theory) to ensure her quality and application in future researches.

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1. Introduction

Whether a person has studied or been able to obtain an academic title is, at present, a key aspect for the labour market. This trend is clearly reflected in an international context, as people who have completed tertiary education are generally employed. However, people who are no longer studying or who could not complete their secondary or

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tertiary education are distributed between employment, unemployment or inactivity (OECD, 2015). For example, with regard to the Spanish case, the number of young people who neither study nor work is alarming. The conditioning factors imposed by the economic crisis have caused this group to not be able to finish their tertiary studies, for economic reasons, but it has also meant that they have been unable to enter the labour market, paradoxically also for economic causes due to the recession (Moreno, 2015). Undoubtedly there are various socio-educational factors that may also have contributed, although these factors have not been identified. The devaluation of education, arising in relation to causes at a national or international level, may be affecting academic achievement in a decisive way. Objectively, the socio-economic and cultural status of families is a key factor of different areas of the curriculum, a fact that has unfortunately been historically corroborated through different scientific studies (D'Angiulli, Siegel & Hertzman, 2004; Hoff & Tian, 2005; Gildlow et al., 2006; Casey et al., 2011).

However, this trend has been losing ground for several years and we can now see that students from low-income families achieve higher than expected results, considering the statistical expectations imposed on them because of their socio-economic and cultural status -hereinafter SECS (OECD, 2015). The optimum performance results for students from families in favourable situations is also on the decrease. This paper follows this line of research, as, depending on the importance that education is given socially, regardless of the students' background or their SECS, results can be positive (Jornet, 2012). Hence, we make special mention of the concept of the Subjective Social Value of Education (hereinafter SVE-Subjective) (Sancho-Alvarez, Jornet & González-Such, 2016), from an evaluation model focused, within the educational field, on social cohesion, defending social justice in order to avoid situations of inequality in schools and in the academic performance of students.

2. Social Value of Education

While it is true that context can influence students' performance, with objective aspects such as a government's investment in education or teacher salaries, the subjective view of that context can undoubtedly create expectations and be important to the educational process, so that in a certain way it can also have an influence. These aspects, regardless of the student's culture or economic background, are truly relevant to advancements in equality and improvements to the level of social justice for all families. This is what the present study intends to address, where the main objective is to provide an assessment tool that can discriminate the SVE-Subjective to determine contextual aspects that may be influencing educational practice.

It is necessary to undertake an evaluation of the school's process using a model that can focus the teaching-learning on social cohesion, preventing and improving different socio-educational issues. In this regard we find the proposal by Jornet (2012) to be appropriate to enable the discrimination of different contextual factors of school practices.

In this model, we define the concept of the Social Value of Education (hereinafter SVE). According to Jornet Perales and Sanchez-Delgado (2011), the SVE refers to:

the usefulness of education in a society for the development and promotion of people in the social and labour fields, as well as the advantages that it contributes as an element of the prevention of social exclusion, and as a guarantee for the development and improvement of their wellbeing throughout life (p. 53).

Also, within the concept of SVE itself, the Subjective Social Value of Education (SVE-Subjective) is immersed as a dimension that is built by "the perception that the main actors in the process of teaching and learning (students, families and teachers) have about the importance of education for social and work promotion, and personal and collective wellbeing throughout life" (p. 67).

3. Methodology

On the one hand, a qualitative analysis has been developed by a committee of experts (15 academic university staff members) in educational measurements/assessments, to discuss and select the items for each evaluation indicator in function of a set of items to do so, so that these will support, and provide initial proof of, the validity of the design and content of the measuring instruments. (Jornet & González-such, 2009). A proposal of items was also examined by two groups of judges made up of university teachers, high school teachers and primary school teachers (30 judges).

Formulations of the itemsII were evaluated by taking into account three criteria analysing their clarity, adequacy and absence of bias, for both primary and secondary education stages with the aim of finding detailed guidance and arguments for implementing possible modifications and improvements (Mérida, Serrano & Tabernero, 2015) to ensure the formulations are as adequate as possible before actual administration of the instrument on primary and secondary school students, according to the initial phases in the building of normative regulatory tests (Jornet & Suarez, 1996).

To end, a final analysis of the scales was made to ensure certain properties, offering up a final product which translated into the proposal of two different scales, differentiated for primary and secondary school students. In order to ensure a more objective view of the issue, the same committee of experts in educational measurements and assessments made up both the initial and final committees (15 university teachers). Therefore, the research is framed within a study of methodological complementarity (Dellinger & Leech, 2007), with 60 teachers in total. Presented below is the general scheme of research that has been followed, see Fig 1.

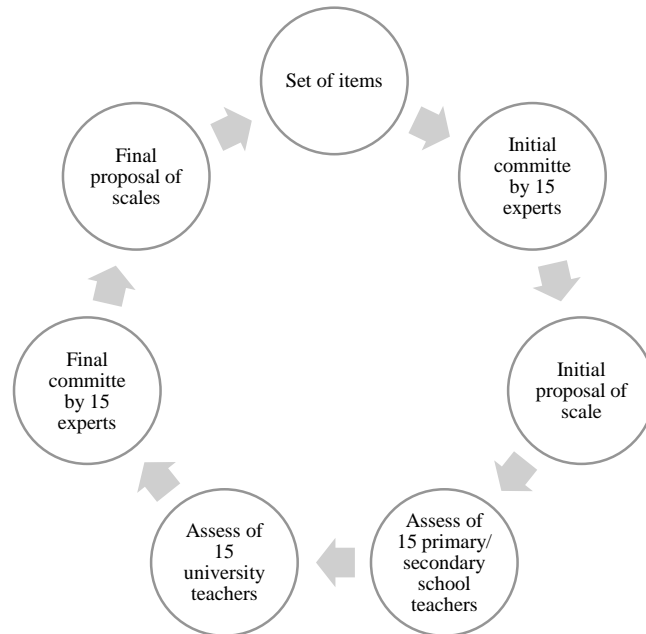


Fig 1. Cycle of committee and assessment by experts about the SVE-Subjective scales

4. Results

4.1. Logical revision of items on the SVE-Subjective in context questionnaires

In order to analyse the situation of the research, evaluation and theoretical development of the SVE-Subjective, an analysis of the existing questionnaires of context at an international level was undertaken. In regard to this, we make reference to the development of the logic revision based on the documentation that has been found and selected for our research process, forming an initial set of items, as basis for the design and orientation of items on the pilot SVE-Subjective questionnaire for students in primary and secondary education.

From the review undertaken (Sancho, Jornet & Perales, 2013; Sancho-Álvarez, Jornet & González-Such, 2015), where a total of 45 questionnaires of context were identified with 111 items, we added the results of a new and more

¹¹ The consultation with all participants was done via an online survey using the LimeSurvey program, adapted to the educational area by the educational innovation group InnovaMide <http://www.uv.es/innovamide/> to facilitate the administration and collection of data in relation to each evaluation criterion. (Dray, Lowenthal, Miskiewicz, Ruiz-Primo & Marczyński, 2011).

updated review, where 18 questionnaires of context were identified with 44 items, all of which were generally related with the construct for three distinct audiences: teachers, students and families, resulting in a list of 93 items directly related to students being presented –see Table 1-.

Table 1. International revisión about SVE-Subjective. Note: adapted from Sancho-Álvarez, Jornet, & González-Such. (2015)

Background questionnaires	N items sve-subjective
Simce. Government of Chile (2001; 2009)	5
Pirls. IEA (2001; 2006; 2011)	3
PISA of Mexico. INEE (2003; 2006; 2009)	8
Exscale. INEE (2005; 2010)	8
PISA of Chile. Government of Chile (2006; 2009)	1
PISA of Spain. INEE (2006; 2009)	3
Diagnostic evaluation of Spain. INEE (2006; 2009; 2010; 2011)	13
Timss. IEA (2007; 2011)	13
Avaco. Jornet et al. (2009)	22
ICCS of Chile. IEA (2009)	3
Oecd. Pisa (2012)	13
PISA of Colombia. %icfes (2009)	1
Total:	93

From the results it can be observed that there is concern in the field of assessment of the influence of various concepts involved in the definition of SVE-Subjective, as evidence of each of the dimensions involved in our construct have been found, but as isolated items or indicators. Thus, specific instruments to globalize these concepts have not been developed in the evaluation. Therefore, the need to create a collection of items about the concept was raised, as well as an expert assessment of their adequacy.

4.2. Committee and first assessment by experts on the initial SVE-Subjective scale.

A proposal with specific items on primary and secondary education was assessed by an initial committee. It was found that the results were adequate and then work continued with the next phases of research that had been planned. Therefore, the scale was subjected to the assessment of two groups of teachers, who assessed its clarity and appropriateness on a scale of 1 to 4 points on both criteria, where the teachers assessing the scale were required to have extensive experience of more than five years within the education system. We present the results of the opinions expressed regarding the adequacy of the scale (Fig 2) and its relevance (Fig 3) below.

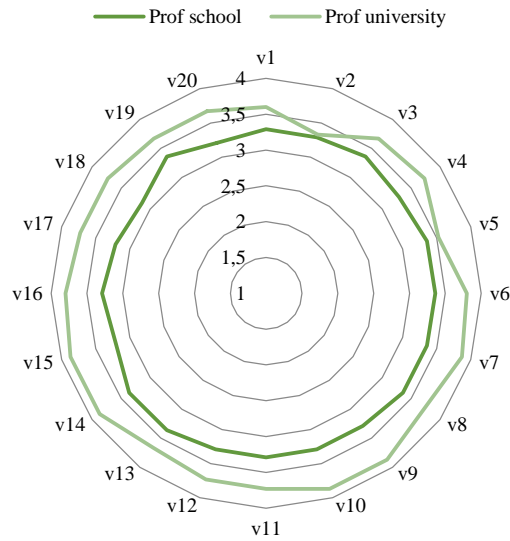


Fig 2. Average of adequacy (A) by experts of school (G1) and university (G2)

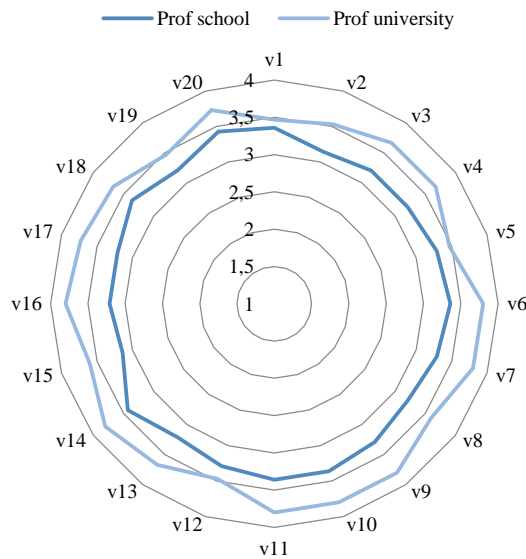


Fig 3. Average of adequacy (C) by experts of school (G1) and university (G2)

As can be seen, all ratings on each variable in the two sections are above an average value of 3 points for both groups of judges, so we consider all items appropriate at both an adequacy and clarity level. An open-ended question was also included where comments or observations for each section could be noted. No comments were included that suggested that any of the items needed to be reformulated, and it was concluded that the proposal was adequate, clear and does not show any kind of bias. The two groups of judges were also asked, using an open-ended variable for each item, whether they noticed any possible bias -either of a linguistic, cultural, socio-economic and/or genre related nature-, and space was given for them to include open comments or observations for each section's questions. No

comments were made suggesting a need to reformulate any item and it was concluded that the proposal was adequate, clear and no bias of any kind were observed.

4.3. Final committee on the pilot SVE-Subjective questionnaire

From the results of the assessments issued by the teachers of the committee and the initial judgment of the experts, a final committee was organised with experts in educational measurements and assessments, in order to map out the scale before its application. In this case, after a qualitative assessment of all the information found, and a discussion of each variable on the scale in relation to the stage of primary or secondary education, it was concluded that it was more appropriate to present two different scales for each stage of schooling. So, to improve its administration, some words/phrases were rewritten for each age group, ensuring that this did not affect the validity of the content of each evaluation criterion of the construct, and a decision was made to formulate the items for primary school students as questions and the items for secondary school students as statements.

5. Conclusions

To conclude, following final validation, an evaluation tool on the SVE-Subjective for primary and secondary school students was presented (Table 2).

Table 2. SVE-Subjective primary and secondary education student scales. Note: own creation.

EVAL/SECS_SVE-Subjective Primary Education	EVAL/SECS_SVE-Subjective Secondary Education
Does studying help me pass? (v1)	Studying helps me pass (v1)
Do my teachers believe that I will fail? (v2)	My teachers believe that I will fail (v2)
Is it important for me to do well in school? (v3)	It is important for me as a person to do well in school? (v3)
Do I have peers that pass without deserving it? (v4)	I have peers that pass without deserving it (v4)
Do my parents want me to work because studying is not useful to earn more money? (v5)	My parents want me to work because studying doesn't ensure that I can get a better job or earn more money in the future (v5)
Do my parents believe that studying is more important than earning money? (v6)	My parents believe that earning money is more important than studying (v6)
Do my parents want me to work as soon as possible because we need money at home? (v7)	My parents want me to work as soon as possible because we need money at home (v7)
Do my parents think I am going to pass? (v8)	My parents think I'm going to pass (v8)
Does school help me to have more self-confidence? (v9)	Primary school and high school have helped me to have more self-confidence when making decisions. (v9)
Am I taught useful things for future jobs at school? (v10)	Primary school and high school have taught me things that could be useful at work (v10)
Does school help me to find friends?(v11)	Primary school and high school are going to help me to find friends (v11)
Does school help me to function alongside others? (v12)	Primary school and high school help me to live in society (v12)
Is what I am learning at school going to be useful for me when I decide to look for a job? (v13)	What I am learning is going to be useful when I decided to look for a job (v13)
Do I believe that people who study have greater success? (v14)	I believe that people who study have greater success in life than those who haven't studied. (v14)
The more people that have studied in my city, the better for everyone? (v15)	The more people that have studied in a community, the better the quality of life there is; that is, education contributes to a better world. (v15)
Is being a teacher a very important profession? (v16)	Being a teacher is a very important profession (v16)
People who are successful in life have not studied? (v17)	People who are successful in life know how to earn money, even if they have not studied (v17)
Do my friends not want to study because they think it is useless? (v18)	My friends don't want to study because they think it is useless (v18)
Do politicians in my country do many things to improve our education? (v19)	Politicians in my country do many things to improve our education (v19)
In general, have famous people studied? (v20)	In general, famous people have not studied anything (v20)

In conclusion, the participating teachers have valued the two scales as appropriate and well formulated for possible application -see Fig. 6 in Appendix, Spanish version-, due to the positive results from all ratings. Its empirical validation will be addressed in future research, including an analysis of metric properties, according to the measurement of complex variables and the development of quality assessment (McCoach, Gable & Madura, 2013).

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Appendix A. Spanish version-SVE-Subjective primary and secondary education student scales

EVAL/SECS_VSE-Subjetivo Educación Primaria	EVAL/SECS_VSE-Subjetivo Educación Secundaria
¿Estudiar me ayuda a aprobar?	Estudiar me ayuda a aprobar
¿Mis profesores/as creen que voy a suspender?	Mis profesores/as creen que voy a suspender
¿Es importante para mí ir bien en los estudios?	Es importante para mí como persona ir bien en los estudios
¿Tengo compañeros/as que aprueban sin merecérselo?	Tengo compañeros/as que aprueban sin merecérselo
¿Mis padres quieren que trabaje porque estudiar no sirve para tener más dinero?	Mis padres quieren que trabaje porque estudiar no asegura que pueda tener mejor trabajo o ganar más dinero en el futuro
¿Mis padres creen que es más importante estudiar que ganar dinero?	Mis padres creen que es más importante estudiar que ganar dinero
¿Mis padres quieren que trabaje cuanto antes porque hace falta dinero en casa?	Mis padres quieren que trabaje cuanto antes pues hace falta dinero en casa
¿Mis padres creen que voy a aprobar?	Mis padres creen que voy a aprobar
¿En el colegio me ayudan a tener confianza en mí mismo?	La Escuela y el Instituto me han ayudado a tener confianza en mí mismo para tomar decisiones
¿En el colegio me enseñan cosas útiles para un futuro trabajo?	La Escuela y el Instituto me han enseñado cosas que podrían ser útiles en un trabajo
¿En el colegio me ayudan a encontrar amigos/as?	La Escuela y el Instituto me ayudan a encontrar amigos/as
¿En el colegio me ayudan a aprender a vivir con los demás?	La Escuela y el Instituto me ayudan a vivir en sociedad
¿Lo que estoy aprendiendo en el colegio me servirá cuando decida buscar trabajo?	Lo que estoy aprendiendo me va a servir cuando decida buscar trabajo
¿Pienso que las personas que estudian triunfan más?	Pienso que las personas que estudian, tienen más éxito en la vida que las que no tienen estudios
¿Cuanta más gente haya estudiado en mi ciudad, mejor para todos/as?	Cuanta más gente haya estudiado en una comunidad (sociedad), mejores niveles de vida hay en ella; es decir, la Educación contribuye a hacer un mundo mejor
¿Ser profesor/a es una profesión muy importante?	Ser profesor/a es una profesión muy importante
¿Las personas que triunfan en la vida no han estudiado?	Las personas con éxito en la vida saben ganar dinero, aunque no hayan estudiado
¿Mis amigos y amigas no quieren estudiar porque piensan que no sirve para nada?	Mis amigos y amigas no quieren estudiar, pues piensan que no sirve para nada
¿Los políticos de mi país hacen muchas cosas para que nuestra educación sea mejor?	Los políticos de mi país hacen muchas cosas para que nuestra educación sea mejor
¿Las personas famosas normalmente no han estudiado nada?	Las personas famosas normalmente no han estudiado nada

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