

PISA and TALIS, congruence or discrepancy?

PISA y TALIS ¿congruencia o discrepancia?

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Abstract

International educational evaluations on a grand scale provide information of interest to the educational, scientific and political community. Many studies have derived from them, both nationally and internationally. On the other hand, it is well known from the beginning of these macro-assessments the diversity of opinions they have generated. In this context, the aim of the study presented here is to analyse the relationships between the results from PISA 2012 and those relating to teaching practice of secondary TALIS 2013, trying to find out the consistencies and discrepancies between the results of both. Data from TALIS-PISA link have been used. The descriptive analysis carried out taking the overall scores on both evaluations show obvious discrepancies, as countries occupying the top positions in the results of students in PISA are located in the last places in teaching practice of teachers. The analysis also show the lack of the expected coherence. These results lead to reflect on the possible underlying causes and so it is proposed the need for a coordinated design of both evaluation processes

Keywords: TALIS, PISA, OECD, educational assessment, international evaluations, academic achievement, teaching practice, teaching staff, research, compulsory secondary education

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Resumen

Las evaluaciones educativas internacionales a gran escala ofrecen información de interés para la comunidad educativa, científica y política. Son muchos los estudios derivados de ellas, tanto a nivel nacional como internacional. Por otra parte, es bien conocida, desde el origen de estas macro-evaluaciones, la diversidad de valoraciones que han generado. En este contexto, el objetivo del trabajo que aquí se presenta es estudiar las relaciones entre los resultados de PISA 2012 y los relativos a práctica docente de secundaria de TALIS 2013, tratando de analizar las congruencias o discrepancias entre los resultados de ambas. Se tomaron los datos del estudio TALIS-PISA link. Los análisis realizados, de tipo descriptivo, tomando las puntuaciones globales en ambas evaluaciones muestran discrepancias evidentes, ya que países que ocupan primeras posiciones en los resultados de los estudiantes en PISA se ubican en últimos lugares en práctica docente del profesorado., donde se supone que las relaciones se debieran producir con mayor intensidad al existir una relación más directa entre los alumnos y los profesores evaluados. Los análisis realizados muestran igualmente la falta de coherencia esperada. Estos resultados, llevan a reflexionar sobre las posibles causas que subyacen y se propone la necesidad de un diseño coordinado de ambos procesos evaluativos.

Palabras clave: TALIS, PISA, OCDE, evaluación educativa, evaluaciones internacionales, rendimiento académico, práctica docente, profesorado, investigación, Educación Secundaria Obligatoria

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The publications that they are generating about these two international evaluations reflect the academic and professional community's interest of a majority of the countries for these studies. Undoubtedly, they undo well diverse positions in the academic sphere, from the loyal defenders to those

detractors who launch relevant criticism from different positions (Mendizábal, 2016; Carabaña, 2015; Sjøberg, 2015; Sánchez & Delgado, 2013; Ferrer, 2012; Pérez & Soto, 2011; Ruiz, Gil, Navas, Ramos, Ruiz & Núñez, 2011; Font, Badia, Alemany, Besora, Gisbert, Arce, Alonso, Seuba, Castilla, Lamo,

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Valdivia, Villanueva & Boekaerts, 2009; Grek, 2009; Martín & Rizo, 2009; Mortimore, 2009; Neves, 2008; Dohn, 2007; Hernández, 2006; Sánchez & García-Rodicio, 2006).

It's evident that these macro evaluations or grand-scale evaluations support relevant information and permit conducting studies that surpass the narrowed local range and with less representativeness, including when they take samples at the country level, the more common way of doing in the academic sphere. Without a doubt, this international vision offers unthinkable possibilities, information that allows doing comparisons and detect associated factors to the differences between the countries. However, in many cases, their interpretations are used with objectives and goals for those that were neither designed nor developed, as much for the followers as the opposers. Discrepancies and arguments of ideological, political, economic type, and a good number of diverse reasons that allow assessing or rejecting these evaluations.

Our objective is not deepening these reasonings of one another, but much rather trying to analyze the relations between the two most important evaluations sponsored by the OECD (*Organization for Economic Co-operation and Development*) that, naturally, seems that they should demonstrate some sort of relationships. So, it is well known in the academic sphere, PISA (*Programme for International Student Assessment*), whose first evaluation was conducted in the year 2000, periodically done every three years. Although it focuses on three areas of evaluation: reading, mathematics and science, in each of the PISA editions, one of them is always analyzed to a greater depth than the other two. Thus, reading was the main area in the editions of 2000 and 2009, sciences in 2006 and mathematics in 2003 and 2012.

One of the objectives of the PISA study is trying to contribute to the evaluation of what fifteen-year-olds know and are capable of doing. This study not only aims to assess what young people of that age have learned in the school environment, but also their learning in other formal and informal environments. All

this from a well applied and contextualized point of view in the student's own environment.

It is aimed at evaluating competencies that the high school student has developed throughout his life, demonstrating the behaviors or reactions to daily life situations. It is evident that an important part of this influence is determined by the experiences the student has acquired in his/her school career, knowledge, attitudes, skills, etc. that, integrated with the experiences lived in other areas, such as family, friends, social relations with different people, etc. are configuring a way of reacting to the stimuli that constitute the PISA test. Undoubtedly, they are influenced by experiences in different areas and contexts but, taking into consideration that the tests are applied at the secondary level, it is logical to think that the student has spent a large part of his/her time in the school environment and its influence is relevant for the educational centers' own objectives.

All PISA editions have generated a large amount of literature and publications, both nationally and internationally. Regarding the last edition of 2012, the MECD (Ministry of Education, Culture and Sport) and the OECD have published several publications (MECD, 2014a, 2014b, 2014c, OECD, 2014a, 2014b, 2014c, 2013a, 2013b, 2013c). Several authors have also studied different aspects and contexts of this PISA edition (Stacey, 2015, Kelly, Nord, Jenkins, Chan & Kastberg, 2013, Sedghi, Arnett & Chalabi, 2013, Thomson, De Bortoli & Buckley, 2013, Villar, 2013; Wheater, 2013; Calero & Escardíbul, 2012; Peña-López, 2012).

On the other hand, the TALIS evaluation also sponsored by the OECD, has more recent origins. This is an international study of a cyclical nature that repeats every five years, whose main objective is to provide timely, comparable and useful information to help in the countries in the review and definition of educational policies for the development of high quality teaching. School principals and teachers answers to questionnaires on the educational situation, the teaching profession,

teaching effectiveness, climate and job satisfaction, among other aspects. It is a self-evaluation system, with the limitations that this system entails, but, without a doubt, offer information on important aspects of the teaching-learning processes that should be used to reflect on the situation of each country and, consequently, establish policies that allow improving education at the level of each country in particular and internationally. So far, two editions have been made, TALIS 2008 and TALIS 2013. With the data, numerous studies have been conducted and other conclusions of interest for the scientific community have been deduced (Gumus & Bellibas, 2016; Perry, Sealy & Hawkins, 2016; Albergaria-Almeida, da Silva Lopes & Martinho, 2015; Lizasoain, Tourón & Sobrino, 2015; Ming-ren, 2015; MECD, 2014d; OECD, 2014d; Jensen, Sandoval, Knoll & González, 2012; Vieluf, Kaplan, Klieme & Bayer, 2012; ME 2009; OECD, 2009).

Both the first and second editions have focused on the educational stage of Compulsory Lower Secondary Education (Level 2, according to the International Standard Classification of Education). However, other international options were also offered, such as Primary Education (Level 1) and Higher Secondary Education (Level 3). In the second edition of this study, TALIS 2013, the option of participating in one modality has also been given, TALIS-PISA Link, which relates the last TALIS edition and PISA 2012 edition, at the center level. This study has allowed linking information provided by students, teachers and directors about different factors related to teaching and learning. Thus, among other aspects, it has allowed to know in greater depth the relation between the academic performance of the students in different competences and the attitudes and educational practices of the teachers who teach class in the same educational center.

Now, it is clear that it is necessary to advance in these studies, attempting to link the PISA data with the TALIS data, taking students and professors from the different areas to be able to establish relationships that, from theoretical approaches, should occur, and

that the empirical studies should make clear. As expressed by Marina (2013 p.4) "the fact that this study is independent of PISA is scandalous to a professional teacher".

Several authors have analyzed the relationship between teacher training, their practices and the achievements of students (Clotfelte, Ladd & Vidgor, 2007, Gustafsson, 2003, Wayne & Youngs, 2003, Wenglinisky, 2002), even taking the results of the TALIS 2008 and PISA 2009 evaluations (Kaplan & Turner, 2012). With this edition of TALIS 2013, there has been some research based on the relationship between teachers and students as well. There are studies such as Eveleigh & Freeman (2012) where the authors propose correlational exploratory analysis, Sealy, Perry & DeNicola (2016) in which they analyze, among other aspects, the existing relationships between job satisfaction and student performance, or like that of Méndez (2015), who performs an analysis of the effect of different teaching practices on the performance of their students. However, although all of them are based on the analysis of different relationships between both international evaluations, none of them do so in the line presented here.

It seems obvious that if the evaluated students show results largely influenced by the education system, schools and teachers, they should be related to the best systems, the best schools and the best teachers. Before the timid attempts that have been made with the studies of TALIS-PISA link and trying to evaluate the results of the evaluations made in PISA 2012 and TALIS 2013, this work intends to analyze, with the depth that the information allows up to now, if the results obtained in both evaluations reflect congruences or discrepancies between the evaluations of the teaching practice of the professors in TALIS 2013 and the results obtained by the students in PISA 2012, raising some questions derived from them that allow reflection and advance in these processes.

METHOD

Design

This study is a not experimental,

exploratory, ex-post-facto design.

Population and sample

The population from the PISA 2012 study was formed by 13,142,800 students of second year of Compulsory Lower Secondary Education (ESO, a Spanish acronym), in correspondence to 34 countries. The last sample was formed by 295,416 ESO students of these countries.

The population of the TALIS 2013 study was configured by 2,835,184 secondary teachers from a total of 34 countries. From this population and refining the database, eliminating the correspondents to the United States and Cyprus by order of OECD, it obtained a final sample of 103,862 professors from 32 countries. From this sample were 27,022 professors that also formed part of the TALIS-PISA Link study, teachers pertaining to a total of 8 countries. This subsample is formed by professors from educational centers that also participated in PISA 2012.

Instrument

In the case of PISA 2012, the test employed by the OECD consists of 3 major evaluation groups: Mathematics, Reading, and Sciences. The questions in each area are ones of multiple choice and free response. Although the development and detailed description of these tests is not part of the objective of this paper, it is sent to the information contributed by the OECD in any of its publications (OECD, 2014a, 2014b, 2014c, 2014d, 2013a, 2013b, 2013c, 2013d). For the current study, we will use, as reference, the final punctuations obtained in each of the areas, as well as the three evaluated subjects.

From the instruments used by the OECD in TALIS 2013, a questionnaire for directors and other professors, the latter was utilized for the current study, taking the items about the teaching practice. Specifically, 38 items were used of the set total that forms the TALIS questionnaire, where each professor would evaluate each one of them on a Likert scales with 4 and 6 answer choices, according to the item.

Said items were organized in the following dimensions (Fernández-Díaz, Rodríguez-Mantilla & Martínez-Zarzuelo, 2015): Professional collaboration and coordination (0-40 points. 8 items), Methodological teaching (0-33 points. 11 items), Evaluation (0-21 points. 7 items), Motivation toward the student body (0-12 points. 4 items) and Control of the classroom (0-24 points. 8 items). Similarly, it created the variable *Item Total*, corresponding to the global punctuation of the measurement (on a scale of 0-130).

The psychometric quality of the PISA tests, according to OECD (2013d), show a level of great reliability for the subscales of PISA 2012 (α of Cronbach = 0.914, 0.888 and 0.885 for Mathematics, Reading and Science, respectively). A reliability study was carried out on the 38 items of the TALIS 2013 instrument, obtaining also an excellent value (α by Cronbach = 0.867). We don't find values outside the expected values in the item homogeneity indexes (below 0.2, according to Hair, Anderson, Tathan & Black, 2009).

Data analysis and interpretation of results

In order to analyze the congruence or discrepancy between the results of PISA 2012 and TALIS 2013, various statistical studies were carried out using the SPSS software 22.

First, the data was analyzed globally, from the 32 countries, both in PISA 2012 and in TALIS 2013, in order to identify possible relationships between the scores of both evaluations.

Subsequently, taking the sample of the 8 countries participating in TALIS-PISA Link, the global scores in TALIS 2013 and each of its dimensions were analyzed and compared with the global scores in PISA 2012, specifically in Mathematics. With this group of countries a descriptive study was carried out, represented graphically, which aims to show the teachers with different teaching levels (high, medium and low) in each country, which allows to illustrate coherences or discrepancies worthy of review.

Finally, in order to empirically study the relationships between the two groups of scores, a simple correlational analysis was made, taking the Mathematics scores in PISA 2012 and the scores in each of the dimensions of TALIS 2013, in addition to the global score. In a complementary way, an analysis of variance study (ANOVA and its subsequent contrasts of Scheffé) was made trying to prove the possible differences in Mathematics according to the different levels of teaching practice, according to the three categories defined above.

Global analysis of scores in TALIS 2013 and PISA 2012: approximation to the study of congruence or discrepancy.

In order to know the scores obtained by the 32 countries in TALIS 2013 and PISA 2012 and analyze their results trying to find possible coherence or discrepancy between the two tests, descriptive studies of each one are presented.

For the configuration of Table 1, the Total Item scores in TALIS 2013 of each of the participating countries have been used, ordering the same from highest to lowest score obtained. Likewise, the countries have been ordered by their overall score obtained in PISA 2012 (graphically, using arrows, the inverse relationship of the scores in TALIS 2013 and PISA 2012 of some countries is shown).

Table 1: Comparative table of the 32 countries ordered according to their results in TALIS 2013 and PISA 2012¹

TOTAL TALIS			TOTAL PISA		
	TOTAL TALIS	Posición	Posición	TOTAL PISA	
U.A.E. (Abu Dabi)	82,4	1	1	555,7	Singapur
Portugal	78,2	2	2	542,5	Korea
Denmark	77,7	3	3	540,4	Japan
Australia	76,6	4	4	529,4	Finland
Romania	76,6	5	5	526,1	Estonia
U.K. (England)	76,3	6	6	522,2	Canada
Bulgaria	76	7	7	520,5	Poland
Mexico	75,7	8	8	518,8	Netherland
Italy	73,6	9	9	512,5	Australia
Poland	73,5	10	10	509,3	Belgium (Flanders)
Singapur	73,3	11	11	502,5	U.K. (England)
Canada	72,7	12	12	500,1	Czech Republic
Serbia	71,8	13	13	499,8	France
Slovakia	70,7	14	14	498,2	Denmark
Latvia	70,6	15	15	495,9	Norway
República Checa	69,8	16	16	493,8	Latvia
Israel	69,7	17	17	489,6	Spain
Spain	69,4	18	18	489,5	Italy
Chile	69,1	19	19	488	Portugal
Noruega	69,1	20	20	484,5	Iceland
Brasil	68,2	21	21	482,4	Croatia
Sweden	67,8	22	22	482,1	Sweden
Estonia	67,8	23	23	474,1	Israel
France	67,4	24	24	471,9	Slovakia
Malaysia	67,1	25	25	446,6	Serbia
Belgium (Flanders)	66,1	26	26	441,4	U.A.E. (Abu Dabi)
Croatia	65,5	27	27	440,4	Bulgaria
Finland	64,9	28	28	440,3	Romania
Netherland	64,1	29	29	436,3	Chile
Iceland	63	30	30	417,3	Mexico
Japan	59,8	31	31	412,7	Malaysia
Korea	57,1	32	32	398,9	Brasil

¹ The shaded countries correspond to the countries participating in the TALIS-PISA Link study

Analyzing and comparing the scores obtained by the countries in PISA 2012 with TALIS 2013, it is observed that countries with high scores in TALIS 2013, in many cases, present non-congruent scores in PISA 2012. This is the case of Korea, Japan, Finland and even The Netherlands, with very low scores in TALIS 2013, but with high or very high scores in PISA 2012. This discrepancy between results is also found in countries such as the United Arab Emirates (Abu Dhabi), Portugal, Romania, Bulgaria or Mexico, which obtain high scores in TALIS 2013, but low or very low averages in PISA 2012. Only in the case of countries such as Spain, Latvia or Sweden do we find some congruence between the results obtained in both tests.

It should be noted that, in general terms, the countries with the highest scores in the Total Item of TALIS 2013 present high scores in the different evaluated dimensions. In this sense, although a more detailed descriptive study in this line of analysis (relationship between scores in the Dimensions and the Total Item) is interesting, it exceeds the objective of this work. However, the detailed description by countries in each dimension is shown in the final Annex.

Analysis of congruencies or discrepancies in TALIS-PISA Link

In order to delve a little deeper into these congruencies or discrepancies, only part of the global sample, corresponding to the participants in the TALIS-PISA Link study, has been taken for this study, configured by 8 countries for which information is available of students and teachers of Secondary Mathematics of each center that participated in TALIS 2013 and PISA 2012, so we would expect a greater relationship between the results of both tests. Although unfortunately it cannot be guaranteed that all the teachers evaluated have been of the students evaluated in each center in PISA, this circumstance has been produced in some cases, and it is also understandable that the team of teachers has been able to use similar methodologies with the students of the same educational level and in relation to the Curricular Project of each center. Recall that the countries participating in TALIS-PISA Link are: Australia, Spain, Finland, Latvia, Mexico, Portugal, Romania and Singapore.

In the first place, studies have been carried out by dimensions in TALIS 2013 and in Mathematics (PISA 2012), trying to relate the results.

Table 2: Descriptive studies of the 8 countries participating in TALIS-PISA Link ordered by the global score obtained in the Total Item of TALIS 2013, together with the global average and mathematics in PISA 2012

	Teach. Collab coor. (0-40)		Teacher Method. (0-33)		Evaluation (0-21)		Motiv. to Students (0-12)		Control Climate in classroom (0-24)		TOTAL TALIS (0-130)	Mathematics PISA		GLOBAL PISA
	M	SD	M	SD	M	SD	M	SD	M	SD		M	SD	
Portugal	19,3	6,0	18,7	4,5	12,9	2,9	10,0	1,7	16,3	3,8	77,2	487,1	55,38	481
Romania	20,5	6,5	16,9	6,0	12,5	3,7	9,4	1,9	17,5	4,3	76,7	444,6	55,72	442
Australia	22,2	7,4	18,2	5,9	11,7	3,5	8,4	2,4	16,1	4,7	76,4	504,2	56,65	508
Mexico	18,9	8,3	19,0	6,8	13,0	4,1	9,3	2,1	16,2	4,3	76,2	413,3	43,85	423
Singapur	21,0	6,9	16,6	5,3	12,3	3,6	8,6	2,4	15,4	4,2	73,7	573,5	65,56	552
Latvia	18,8	5,9	16,2	5,0	12,6	3,3	8,2	2,0	15,5	4,0	71,1	490,6	40,28	499
Spain	19,8	6,2	17,4	5,8	11,0	3,2	7,6	2,3	14,5	4,4	70,1	484,3	40,01	493
Finland	18,5	6,8	13,0	5,2	10,5	3,6	8,0	2,3	14,8	4,4	64,8	518,8	30,08	522

Table 2 shows that countries such as Portugal, Romania and Mexico have high and medium-high scores in the Total Item of

TALIS 2013, as well as in Teacher Methodology, Motivation towards students and in Climate Control in the classroom.

However, as in the overall study of the 32 countries as a whole, it is observed that countries that present high global scores in TALIS 2013 present levels in Mathematics (and in PISA 2012 global) not always congruent. Thus, for example, countries such as Portugal, Australia and Mexico have high scores in TALIS, but low scores in Mathematics. In other cases, as in Finland,

they obtain very low scores in TALIS and very high scores in Mathematics.

Disaggregating the information of the results of TALIS 2013 and categorizing teaching performance into 3 levels (High, Medium and Low levels), in Figure 1 it is observed how countries with high scores in PISA 2012, such as Finland, have a higher percentage of teachers with low level in teacher performance.

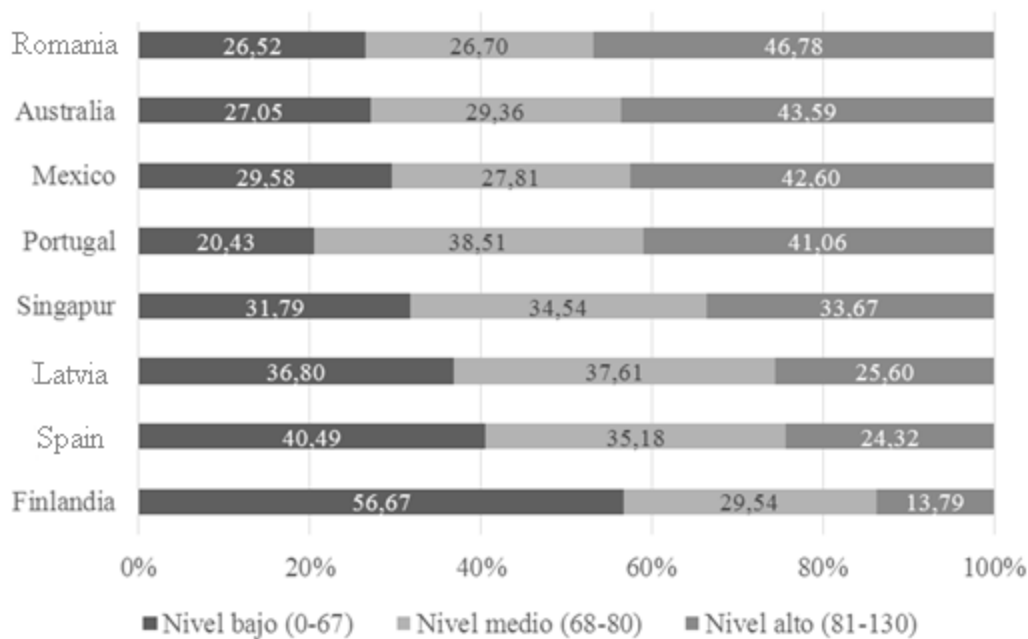


Figure 1: Percentages of teachers with high, medium and low level of teaching performance in TALIS-PISA Link countries.

Similarly, countries such as Romania and Mexico have high percentages (over 42%) of teachers with high teaching performance, when their scores in PISA 2012 put them in last positions. For its part, Portugal presents equal percentages of teachers with high and medium level teachers, while Singapore and Latvia have very balanced percentages of teachers with low, medium and high teacher performance, and yet their scores in PISA 2012 are not consistent (Singapore, for example, ranks first in PISA 2012 and in Mathematics, while Latvia is in an intermediate position).

Correlational analysis of the participating countries in TALIS-PISA Link

Trying to contribute to the objective of the work from different analysis techniques, a correlational study between the results of the TALIS-PISA Link countries is presented below.

The Pearson correlations obtained between the TALIS 2013 and the PISA 2012 Mathematics indicate the non-existence of correlation (see Table 3), although the magnitude of the sample shows that these correlations are, in almost all cases, significant at level of significance of 0.01 (except for $r_{\text{Mathematics-Collaboration}}$), although with values that

are practically irrelevant (close to zero). The results are consistent with those obtained in the previous analyzes. It is even striking how in the case of the correlation between Mathematics (PISA 2012) with Evaluation,

Motivation towards the students, Control of classroom climate and the Total Item, although low, they are negative, reflecting an inverse relationship and, consequently, showing the discrepancy that has already been alluded to.

Table 3: Pearson correlation between the TALIS 2013 dimensions with the results in Mathematics PISA 2012 (sub-sample of participating countries in TALIS-PISA Link)

		Teach Collab.	Teach Method.	Evaluat.	Motiv. to Students.	Ctrl. classr climate	Total Item TALIS
PISA MATEM.	Pearson	0,009	-0,064	-0,03	-0,027	0,017	-0,025
	Sig.	0,146	0,000	0,000	0,000	0,007	0,000

Differential analysis in the performance in Mathematics according to the level of teacher performance

To illustrate with more evidence the results that have been obtained so far, we return to the categories in which all the teachers of the 8 countries have been classified according to the

scores in TALIS 2013 (High, Medium and Low teacher performance). An analysis of variance (ANOVA and the subsequent contrasts of Scheffé) was performed to verify the differences in the results in Mathematics (PISA 2012) according to the level of teaching practice, taking the 3 categories indicated.

Table 4: ANOVA as a factor for the results in Mathematics PISA 2012 according to the teacher's level of teaching performance categorized in Low, Medium and High according to TALIS 2013.

		N	Mean	SD	F	Sig.	η^2
Mathematics (PISA 2012)	Low Level (0-67)	9068	495,44	61,47	17,79	,000	,001
	Medium Level (68-80)	8614	496,24	64,12			
	High Level (81-130)	8517	490,79	68,53			

As can be seen (Table 4), the averages in Mathematics present few differences between the levels of teaching practice (averages between 490.79 and 496.24). However, the differences are significant ($p < 0.01$) due to the magnitude of the sample -as already noted above-, but irrelevant, as indicated by the low value of the effect size ($\eta^2 = 0.001$). It is

especially surprising how high-level professors present the lowest score in PISA, evidence of what has been proven in the previous analyzes, that is, of the discrepancy in the results between TALIS and PISA.

Subsequent Scheffé contrasts have been made, the results of which are shown in the following table:

Table 5: Subsequent Scheffé contrasts for the results in Mathematics PISA 2012 according to the teacher's level of teaching performance categorized as Low, Medium and High according to TALIS 2013

		Mean differences	Standard Error	Sig.
Medium Level (68-80)	Low Level (0-67)	,80306	,97354	,712
High Level (81-130)	Low Level (0-67)	-4,65115*	,97638	,000
	Medium Level (68-80)	-5,45422*	,98876	,000
	Medium Level (68-80)	-8,56893*	,95621	,000

As can be seen, there are significant differences in Mathematics among teachers of high level in teacher performance with respect

to the Middle and Low level (Table 5). However, no significant differences are found in Mathematics in PISA 2012 among

professors of Low and Average levels in teaching performance.

Conclusions and discussion

As indicated, the objective of the work was to try to analyze and deepen the relationships between results in two international evaluations that, from the theory, should have some relationship, student performance in PISA and valuations of teachers in TALIS of the same educational level, that is Secondary. In short, does the data show coherencies or discrepancies?

In the first place, we should highlight the scarce research carried out in this line that should largely inform these studies and the need to link the TALIS evaluations with those of PISA, from its design, in order to deepen the data and results, and draw relevant and consistent conclusions to reflect on and make the changes that come from different countries, in their policies, their education systems, the training of their teachers, among other elements. This could allow conclusions of more depth to which we should take this type of evaluation, without undermining in any case the importance of those carried out so far, large scale, which have been a turning point in the partial evaluations, localist, made with small samples and with dubious representativeness, in many cases. The data extracted from these evaluations are generating studies, research, comparative analysis and, in some cases, changes in the educational policies of certain countries that look at those who, in general, consistently maintain high positions throughout the evaluations that have been carried out so far. But it is obvious that we must advance in an improvement of these processes, since it is an intrinsic part of a dynamic evaluation that progresses and advances to extract the best and produce a change based on evidence.

The results of the various analyzes carried out, within the aforementioned limitations of the available databases, point to some reflections and interesting questions.

As it has been possible to appreciate, the analyzes clearly show the lack of congruence between the results of the different countries obtained in PISA 2012 and TALIS 2013, producing in many cases notable inconsistencies. Thus, countries that, consistently and in this evaluation of PISA 2012, occupy first positions by the scores obtained by the Secondary students evaluated, nevertheless they are in last positions in the evaluation of the teaching practice carried out in TALIS 2013. Countries such as Korea, Japan or Finland are a true reflection of the clear discrepancies between the two sets of scores. Similarly, in the opposite direction, countries such as Abu Dhabi, Romania or Mexico, among others, are located in the last places in the results of PISA 2012, while they are in the first places in the evaluation of teaching practice of teachers. Undoubtedly, the results of this first analysis lead us to reflect on the possible causes that may underlie this discrepancy and on which we will refer, after the conclusions that are derived from the analyzes that were subsequently carried out.

In the same line, the analyses carried out to prove the differences in Mathematics according to the different level of teaching practice (High, Medium and Low) also show significant and irrelevant differences, however, the highest average score of the students in Mathematics corresponds to teachers with a low level of teaching practice, one more evidence of the conclusions derived from this work.

These conclusions lead, without any doubt, to raise some reflections, questions and questions about these evaluations that, we hope, can be used to introduce changes in subsequent editions.

In the first place, it must be emphasized that both evaluations were not carried out to be studied in this way, that is, to relate the results of both, which does not invalidate, in any case, the empirical evidences that show the mentioned discrepancies. It is evident that an approach in the design of both evaluations, aimed at a study of the relationships between

the results of both, would allow arriving at integrated and non-fragmented conclusions, with a greater practical application for the improvement of educational policies and systems; teacher training, among other key elements of education.

In any case, the limitations of the data available to carry out the study must be taken into account. On the one hand, in the global studies of the 32 countries, the results of PISA correspond to some centers and, possibly, the results of TALIS correspond to others, although there is a representative sample of both groups from each country, but the variability is evident that can exist between its different centers. On the other hand, in the studies of the 8 countries of TALIS-PISA Link, although theoretically the relationship seems clearer (teachers and students from the same center, same educational level and same subject -Mathematics-), the impossibility of matching teacher with their own students can generate variability difficult to control with the analyzes that can be performed.

But what are the possible causes or hypotheses in which these results can be sustained? On the one hand, it would be important to analyze the theoretical foundation that underpins each of the evaluations, especially the one related to TALIS, whose approach may not respond to the model / s of teaching practice of the teaching staff of some of the countries. Likewise, contextual and cultural reasons may be at the basis of these discrepancies, which would lead us to take into account some relevant and differentiating variables among the countries that could explain, in large part, the differences shown.

On the other hand, although there is great experience in the development of PISA tests for the already repeated editions and the repeated and exhaustive technical and psychometric studies of them, it seems that it is not so much in the instruments used for the evaluation of teachers, who may need technical and psychometric studies that could provide more information regarding the consistency, reliability and validity of them.

In summary, we consider of special relevance the approach of processes of elaboration of both evaluations that can be put in relation from their design, analyzed technically with the rigor demanded in the evaluative processes and, consequently, in the instruments. On the other hand, it is necessary to promote studies related to each of the two evaluations and, especially, those that allow studying the relationships between the results of both to incorporate improvements in each and every one of the countries derived from the conclusions of the same.

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ANNEX

Descriptive studies of TALIS 2013 ordered by the overall score obtained in the Total Item

	TOTAL TALIS (0-130)	Teach. Collab. (0-40)		Teach. Method. (0-33)		Evaluation (0-21)		Motiv. to students. (0-12)		Control classroom climate (0- 24)	
		M	DT	M	DT	M	DT	M	DT	M	DT
U.A.E. (Abu Dabi)	82,4	23,2	8,7	18,7	8,5	13,0	5,2	10,4	1,9	17,0	4,8
Portugal	78,2	19,9	6,1	18,8	4,6	13,2	2,9	10,1	1,7	16,3	3,9
Denmark	77,7	22,8	6,7	17,6	6,1	10,7	3,5	9,5	1,8	17,1	4,6
Australia	76,6	22,5	7,1	18,1	6,0	11,7	3,5	8,4	2,4	15,9	4,6
Romania	76,6	20,6	7,0	16,5	6,3	12,3	3,9	9,5	1,9	17,6	4,5
U.K. (England)	76,3	20,9	7,1	17,6	6,7	12,5	4,2	9,0	2,3	16,4	4,7
Bulgaria	76,0	18,8	6,6	18,8	4,3	12,7	2,7	8,5	1,9	17,3	3,7
Mexico	75,7	19,4	8,1	18,5	6,4	12,9	4,0	9,1	2,1	15,9	4,3
Italia	73,6	20,7	7,8	16,3	6,7	11,2	4,0	9,4	1,8	15,9	4,6
Polonia	73,5	21,8	6,1	15,9	5,7	11,5	3,6	7,7	2,2	16,5	4,5
Singapur	73,3	20,9	7,1	16,8	5,3	12,3	3,5	8,4	2,5	14,9	4,1
Canada	72,7	19,7	7,6	17,2	6,3	11,5	3,8	8,4	2,4	15,9	4,5
Serbia	71,8	18,6	6,8	16,6	5,2	12,2	3,4	8,0	2,1	16,6	4,3
Slovalia	70,7	17,8	6,7	16,2	5,9	12,2	3,9	8,9	2,0	15,6	4,2
Latvia	70,6	18,3	6,1	16,1	4,9	12,6	3,3	8,0	1,9	15,7	4,0
Czek Republic	69,8	20,9	6,3	16,1	4,9	11,4	3,2	6,0	2,0	15,4	4,3
Israel	69,7	20,7	7,4	14,8	6,6	10,5	4,2	8,7	2,3	15,0	4,8
Spain	69,4	19,5	6,2	17,1	5,8	11,0	3,3	7,6	2,3	14,2	4,4
Chile	69,1	16,9	9,8	17,1	8,2	12,0	5,1	9,1	2,2	14,1	4,6
Norway	69,1	21,8	6,8	16,3	6,5	9,6	3,5	6,9	1,9	14,6	4,6
Brasil	68,2	15,7	8,1	16,4	6,2	12,3	4,0	9,6	2,0	14,2	4,0
SWeden	67,8	21,8	6,8	14,4	6,8	9,3	3,8	8,1	2,0	14,3	4,9
Estonia	67,8	19,9	6,7	14,4	5,6	10,5	3,6	8,1	2,1	14,9	4,4
France	67,4	15,2	6,0	16,5	5,1	10,9	3,0	8,5	1,9	16,3	4,2
Malaysia	67,1	18,2	7,1	13,8	7,8	10,7	5,2	9,8	1,9	14,6	4,5
Belgium (Flanders)	66,1	15,8	5,5	14,9	5,7	10,8	3,6	8,5	2,0	16,2	4,4
Croatia	65,5	15,5	5,8	16,3	5,7	11,1	3,5	6,9	1,9	15,8	4,7
Finland	64,9	18,2	6,7	13,1	5,2	10,7	3,6	8,1	2,4	14,9	4,3
Netherland	64,1	18,2	5,8	13,5	5,8	10,0	3,6	7,8	2,0	14,6	4,2
Iceland	63,0	17,0	7,1	12,9	5,6	9,9	3,5	8,5	2,3	14,8	4,6
Japan	59,8	20,2	6,8	12,4	5,2	8,5	3,6	4,5	1,7	14,2	4,7
Korea	57,1	13,6	6,8	13,1	6,0	9,4	3,8	7,4	2,3	13,7	4,5
TOTAL: 32 COUNTRIES	70,36	19,21	6,91	16,02	5,98	11,28	3,73	8,35	2,06	15,51	4,41

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