

THE MOTIVATION SCALE FOR THE GAME (EMJ): STUDY OF THE USE OF THE GAME IN EDUCATIONAL CONTEXTS

[*Escala de motivación por el juego (EMJ): estudio del uso del
juego en contextos educativos*]

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Abstract

Even though games have been studied and described from multiple perspectives, highlighting their importance in human development, their use in education seems to be largely restricted to preschool education. In this sense, teacher motivation for the integration of new methodologies (including games) seems to be relevant when studying change and improvement in education. The aim of this paper is to present a scale that can help to study motivation for the use of the game. We report its psychometric characteristics. The Motivation Scale for the Game (EMJ, by its acronym in Spanish) has been built from Eccles and Wigfield's *Expectancy & Value Model* (2002). The EMJ scale assesses perception of competence to implement playful activities/elements in instructional design (expectation) and the value assigned to the 4 components of task value (utility, importance, interest and cost). The structure of the instrument, its theoretical foundations and its factorial structure and reliability are reported from a Chilean teacher's sample. The results show psychometric characteristics that make EMJ a solid, reliable and valid instrument that can provide clues for motivational intervention in the school setting.

Keywords

Motivation, play, learning, expectancy, task value, test.

Resumen

Aunque el juego ha sido estudiado y descrito desde múltiples ópticas, relevando su importancia en el desarrollo humano, su uso en el ámbito educativo pareciera estar restringido mayoritariamente al nivel de educación parvularia. En este sentido, la motivación de los docentes por la integración de nuevas metodologías (incluido el juego) parece ser una variable relevante a la hora de estudiar el cambio y la mejora en educación. El objetivo de este artículo es presentar una escala que puede ayudar al estudio de la motivación por el uso del juego y reportar sus características psicométricas. La Escala de Motivación por el Juego (EMJ) ha sido construida a partir del *Modelo de Expectativa y Valor* de Eccles y Wigfield (2002) y busca establecer el grado en que la persona se siente competente para implementar dispositivos lúdicos dentro del diseño didáctico (expectativa) y el valor que asigna a los 4 componentes del valor de la tarea (Utilidad, Importancia, Interés y costo). Se reporta la estructura del instrumento, sus fundamentos teóricos, así como su estructura factorial y confiabilidad a partir de una muestra de profesores chilenos. Los resultados muestran características psicométricas que hacen del EMJ un instrumento sólido, válido y confiable, que puede proporcionar pistas de intervención motivacional en el contexto escolar.

Descriptores

Motivación, juego, aprendizaje, expectativa, valor de la tarea, test.

The Game has been studied and described from different points of view: anthropological (Huizinga, 1955), sociological (Caillois, 1958), educational (Brougère, 1995, 1999; Sarlé, 2001, 2006, 2010) and psychological (Elkonin, 1985; Sarlé & Rosas, 2012; Stein, Migdalek, & Sarlé, 2012; Vigotsky, 1967). From this perspective, the game is described as an experience between the child and the environment, which is closely related to their level of development (Piaget, 1945), but also as an activity that has not been able to become a higher type of action, or a privileged learning experience that affords the child's development (Sarlé, 2001, 2008; Whitebread, Bingham, Grau, Pasternak, & Sangster, 2007). When playing with others, children display their *zone of proximal development* and get involved in more complex activities than the ones they normally experience in everyday life (Vigotsky, 1967).

When the game has an educational purpose it has been called a "serious game". However, this expression is not new (nor is its usage in the classroom), in fact, the expression "serious game" has been used in various contexts such as businesses, military, health and education (Jarvinen, 2007; Miller, 2008). More recently, it has even been found in electronic games (Abt, 1987; Annetta, 2010; Barrett & Johnson, 2010; Graesser, Chipman, Leeming, & Biedenbach, 2009; Johnson, Vilhjalmsson, & Marsella, 2005; Wouters, van der Spek, & van Oostendorp, 2009). This involves games that were created for learning. In this sense, Annetta (2010) claims that it is necessary to distinguish between serious games, serious games for educational purposes (*SEGs*), simulations and virtual worlds.

From an investigative point of view, serious games for educational purposes – especially board games - have clearly been studied less than computer based games¹. Along these lines,

¹ Since the boom of information technology in schools, games have once again found their place as a means for learning (De Aguilera & Mendiz, 2003). For this reason, interests have been focused on games for educational purposes, especially in education through electronic games.

serious games have been designed with the explicit purpose of helping the students to learn important subjects, such as problem solving strategies and social or cognitive skills. According to Graesser *et al.* (2009) only a few games have been merited by teachers.

In regards to the above, a basic requirement so that it is possible to integrate games in the scholastic educational design precisely involves the teachers' *motivation* to integrate the game as part of their teaching practices. The latter is highly important in our educational context, each time the instructional patterns –at least in Chile- seem to be highly rigid. Proof of this can be found in the description of such patterns in the Language and Mathematics classes carried out by Preiss (2009) in the context of the Teacher Assessment. In said study, it was shown, among other aspects, that the same teaching sequence which is characterized by devoting a similar amount of time to introduction, practice, content revision activities, as well as synthesis, and individual and group interaction. At the same time, even when there are teaching resources, the teacher seldom uses them, like in worksheets, textbooks, literary texts, multimedia or teaching material. Regarding the latter, and according to Graesser *et al.* (2009), we may think that this phenomenon is influencing the low value teachers grant to using the game as a means of learning.

Similarly, we may think that these patterns are strongly influenced by the models they were made of, in their school experience and during their pedagogical training (Gómez, Guerra, & González, 2011; Latorre, 2002, 2005). These models are subject to traditional parameters, as they build vertical and not very interactive relationships between the teacher and the students (González, 1999), which may make the teachers incorporate different activities to the traditional ones or some activities that may demand bigger cognitive challenges (Cf. Galdames, Medina, San Martín, Gaete, & Valdivia, 2011). This may be due to certain beliefs that inhibit the

incorporation of activities that may improve the students' learning (Gómez *et al.*, 2014) as if the only possible result were to learn others' mistakes when interacting freely (Davis, 2003).

Motivation through the use of the game in the classroom

Even though incorporating games in the classroom seems to be desirable, it appears that the teachers are still reluctant to its use (Aizencang, 2005). This resistance is based on the beliefs regarding the application of the game as a learning tool (cf. Gómez *et al.*, 2014; Kagan, 1992; Van Driel, Bulte, & Verloop, 2007) due to the institutional or personal conditions of the children being taught (Aizencang, 2005). Along these lines, one may conclude that the incorporation of the game depends on the teachers' beliefs about the *value* of the game as a learning facilitator. As we shall see later, both expectations and value are key factors of motivation.

As far as games are concerned, several researchers agree on their educational potential as well as the motivation to learn they provoke on children (Connolly, Boyle, MacArthur, Hainey, & Boyle, 2012; Garvey, 1977; Johnson *et al.*, 2005; Olson, 2010; Rosas *et al.*, 2003). According to Graesser (2009), serious games should ideally increase enjoyment and interest in the topic (Cf. Silvia, 2006), and also the "flow experience" (Csikszentmihalyi, 1990). This means the level of concentration is such that weariness and the notion of time disappear. This degree of *task engagement* would allow learning to be easier (Alonso Tapia, 1997; Pintrich & Schunk, 2005; Viau, 2009; Wigfield & Eccles, 2000), since there are motivation aspects involved that are specifically linked to the task (Eccles *et al.*, 1983; Eccles & Wigfield, 2002; Neuville, Frenay, & Bourgeois, 2007; Wigfield & Eccles, 2000) and also an important self-regulation component (Boekaerts, 1997; Deci, Vallerand, Pelletier, & Ryan, 1991b; Ryan & Deci, 2000b; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). On the other hand, the design of this specific type of games (SEG) would link motivation and learning in a

more direct manner, since it focuses on learning rather than on the superficial aspects of the game (Cf. Valenzuela, 2007; Viau, 2009).

Motivation Variables and Game

As mentioned earlier, there is evidence that the game could be a natural way for children to learn and an element that contributes to other kinds of learning (Gauntlett, Ackermann, Whitebread, Wolbers, & Wekstrom, 2010). Nonetheless, and despite that most of the teachers support the latter declaratively, there are only a few teachers that use playful elements for learning in their educational design (Aizencang, 2005). This seems to be explained, in some way, by motivational factors.

There are several ways to understand motivation and various models and theories that point out people's disposition to start and persist in a specific activity (Eccles & Wigfield, 2002; Gollwitzer & Oettingen, 2001; Nakaniishi, 2002; Urdan & Karabenick, 2010). The most widespread theories are Bandura's socio-cognitive theory (Bandura, 1997, 2002), the auto-determination theory (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991a; Ryan & Deci, 2000a) and the *expectancy/value* models (Eccles & Wigfield, 2002).

Since our aim is to present a scale that can assist the study of motivation by using games, we need an instrument that is able to describe how different motivational variables affect the will to implement the game as a resource for the classroom. In this sense, we are not looking to create general measure of motivation for predictive purposes, but rather to characterize, in a solid and trustful way, the pertinent motivational dimensions related to the use of this tool in the classroom.

In this context the model proposed by Jacqueline Eccles y Allan Wigfield is particularly pertinent (2002; Wigfield & Cambria, 2010a; Wigfield & Eccles, 2000). They claim that the motivation for the task depends on both the expectation on carrying out the task success-

fully and also on the value that said task holds for the person carrying it out.

The *expectation* construct is equivalent to the *self-efficacy* one (Bandura, 1997, 2012) and refers to the sentiment of competition that a person feels when doing an activity successfully. This dimension is proved to be highly predictive when the expectation or self-efficacy is low: “*Why...if I cannot, if I am not able? Why should I try if I am so bad at this?*”.

Furthermore, motivation does not only depend on expectations or self-efficacy, it also depends on if the task is valued. In this model, task value is composed of four elements: *the attainment value, the intrinsic value, the utility value and the cost* (Eccles *et al.* , 1983; Eccles & Wigfield, 2002; Neuville *et al.* , 2007; Wigfield & Cambria, 2010a). The attainment value corresponds to the degree of significance of achieving a certain task. This factor is related to the person him or herself, to their identity and the kind of person they desire to be. For this reason, the attainment value is less instrumental than the utility value. The intrinsic value refers to the enjoyment of doing a specific task. This element picks up on Deci and Ryan’s (Deci & Ryan, 1985, 1999; Deci *et al.* , 1991a; Vansteenkiste, Lens & Deci, 2006) contributions, who highlight the fact that when enjoying a task intrinsically, it has relevant psychological consequences that positively influence performance. In other words, this component of motivation corresponds to the interest the task triggers in the subject (Cf. Schiefele, 1991; Silvia, 2006; Wigfield & Cambria, 2010b). Moreover, the utility value refers to the adequacy of the task to the future plans of the person and it has a more instrumental dimension. Lastly, the cost corresponds to the person’s perception of how much they will need to sacrifice or invest in order to achieve the activity. Although the work of Jacqueline Eccles and her research team has been focused on the three first elements of motivation, Neuville, Bourgeois and Frenay (2004) provide some empirical evidence thanks to factorial analysis supporting the accuracy of the “value” construct, thus confirming the model.

With this theory we identify 5 components that clarify why the game is used so little in educational design and why it tends to be a superficial activity, even if there is a general and explicit claim of enhancing the game as an educational instrument (Valenzuela, Precht, Muñoz & Silva-Peña, 2014). To be more precise, this discrepancy may be due to the beliefs related to each of those dimensions. Because of this, we propose a scale as the first approach to the motivational aspects that influence the teacher to incorporate the game in the classroom.

In this context, and given that motivation and the aforementioned components are not directly observable, an instrument is needed that explains these constructs in a solid and trustful manner.

Method

Participants: 221 primary action teachers participated in this study (women = 86%), ages fluctuated between 21 and 56 years of age (M= 29.18; SD = 8.538). They belonged to different regions in Chile and participated anonymously as volunteers and were not paid for their participation in this study.

In order to ensure the stability of the results, the sample size was adapted to the general recommendation for Factorial Analysis. This is to use a sample 10 times larger than the number of variables or items (Nunnally & Bernstein, 1995), however, some authors like Guilford (1954) or Kline (1993) accept samples up to 2 or 3 times the amount of variables (only if there are more than 200 subjects in total). Since in this research we do not seek to prove the validity of a global motivation model through the game, but the analysis of its diverse components, the sample is calculated on the number of items of each scale and not on the whole instrument.

Instrument: The Gaming Motivation Scale (*EMJ*²) was created on the basis of items that point to the different motivation dimensions from Eccles and Wigfield’s (2002) *Expectation*

² From Spanish *Escala de Motivación por el Juego*

and Value model: attainment, utility, cost and intrinsic value (See **¡Error! No se encuentra el origen de la referencia.**).

The Gaming Motivation Scale (EMJ) consists of 27 items ranked on a Likert scale from 1 to 6, that seeks to define the degree of competence the person feels to use educational devices in educational design (*expectation*) and

Table 1 - Examples of EMJ items

Item	EMJ #	Dimension
If I decide to, I can make my students take advantage of using the game as a means of learning	13	Expectation
The game is a useful tool to enrich school learning	2	Utility
In my opinion, it is important to consider games in classroom activities	4	Attainment

the value assigned to the 4 components of the *Task Value* (*utility, attainment, interest and cost*). For this reason, people are asked to express how much they agree with a series of statements related to each of the five subcomponents of the model concerning the use of the game as a resource for learning in schools (See

I love when the class becomes a smart game that aids learning	21	Interest
I am willing to invest time in playful activities so my students learn	6	Cost

and **¡Error! No se encuentra el origen de la referencia.**).

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Methodology: The first stage of the present research consisted in creating the measuring instrument from the basis of the theoretical framework. Hence, various items were constructed whose content was evaluated by 3 expert judges, all of which who hold PhDs and have experience in building psychometric instruments. Meanwhile, the preliminary evaluation of the understanding of the items was carried out in the initial classes with a pilot sample of education majors. When creating the items, the degree of consistency of the items with the dimension evaluated was taken into consideration. Also, special care was taken to be accurate in its formulation for current teachers.

In a third stage, with the purpose of investigating the psychometric characteristics of this instrument, the definite version (27 items) was used with a broad sample of current primary education teachers. The data was collected electronically by asking the participants to voluntarily participate, and was done in accordance with the ethical standards that correspond to this kind of research.

Analytical Methodology: After the data was collected, organized and verified, the test's validity and reliability were reviewed. The validity was assessed through a Factorial Analysis, while the evaluation of the reliability of the test was done using Cronbach's Alpha calculation

(Bland & Altman, 1997; Cronbach, 2004; Santos, 1999; Streiner, 2003) for each motivation component. The statistics analysis was concerned using the 20th version of the SPSS program.

Results

Validity of the instrument: Due to the descriptive aspect of this scale, where every component evaluated should only have one dimen-

sion and should be measured accurately, five different factorial analyses of the main components took place. The results of Bartlett's sphericity test are significant in all cases ($p < .001$), obtaining at the same time high Kaiser-Meyer-Olkin (KMO) indices in all cases, showing how accurate the analysis is. In fact, the results show in every case only one factor, thus supporting the validity of the measurement.

Table 2: Factorial Analysis and reliability Indices (Cronbach's alpha)

Dimension evaluated	Items	KMO	Factors (AFE)	% variance	Cronbach's α
Expectation	6	.910	1	65.715	.894
(Task value)					
Utility	6	.910	1	77.831	.940
Attainment	6	.900	1	77.036	.939
Interest	5	.854	1	72.445	.901
Cost	4	.801	1	69.052	.832

Level of reliability

The levels of reliability were also measured for each of the components evaluated through the Cronbach's alpha (Cortina, 1993; Streiner,

2003), taking into consideration the requirement of only one dimension in this type of analysis. In this analysis, the degree of reliability was high in all the cases (see

Table 2). The highest reliability score was for the utility scale ($\alpha = .940$) and the lowest was the cost scale ($\alpha = .832$). Because of these results and setting aside the incremental effect on Cronbach's alpha which produces a high quantity of items per dimension, each of the scales were reviewed to verify that there were no redundancies in the formulation of the items, also setting aside the latter.

Descriptive results

Firstly, the results show that the teachers adhere firmly to the items proposed. However, this situation is not critical, since every time there was no *ceiling effect* there were significant differences ($p < .001$) towards the scale's ceiling.

Table 3: EMJ : Descriptions by components

Dimension evaluated	Measure	Sd
Expectation	5.4262	.69223
(Task value)	5.5349	.64912
Utility	5.6491	.65569
Attainment	5.5487	.71091
Interest	5.5767	.67971
Cost	5.3137	.74896

In addition, we will highlight the fact that diverse scales exist and they are significantly different from each other ($F(4,1094)=7.910$; $p < .001$). The statistical difference between the dimensions evaluated shows that the instrument is able to make the difference between them. The latter is relevant, for instance at the moment of choosing one of the dimensions to

promote the use of this device. In this specific case, the lower punctuations were obtained by the *cost* and *expectation* dimensions; followed in ascending order by the *attainment* and the intrinsic value; and eventually the highest score corresponds to the *utility* dimension. The differences between these dimensions were organized in 3 homogeneous subgroups (see

Table 4).

Table 4: EMJ: Means for groups in homogeneous subset

Scales	N	Tukey ^{ab} HSD		
		Subset for alpha = 0.05		
		1	2	3
Cost	221	5.3300		
Expectancy	221	5.4069	5.4069	
Attainment	221		5.5538	5.5538
Interest	221		5.5609	5.5609
Utility	221			5.6535
Sig.		.767	.131	.550

a. Used Harmonic Mean Sample Size = 221,000.

b. Means for groups in homogeneous subset are displayed

Discussion

Nowadays designing education requires innovation if one wishes to improve quality (Cf. Mourshed, Chijioke, & Barber, 2007, p. 20). Thanks to its autotelic character, games would bring needed novelty and fun to be interesting for children in schoolwork. At the same time, because of its intrinsic motivation (Sutton-Smith, 2009), games would allow children to learn in an atmosphere more respectful of their interests so they could explore freely, without being afraid of making mistakes or failing (Rogoff, 1990).

Games hold many virtues that enhancing human development, but in the educational context, at least in Chile, there is a resistance to introduce it as a sustained implementation further than kindergarten. In fact, the practical teaching methods in primary schools have been described in literature as highly rigid and, which is more serious, they do not represent a cognitive challenge to the kids. As a consequence, this situation may really be a source of learning demotivation in schools.

From the sociocognitive point of view, the Eccles and Wigfield's model (2002) understands motivation as a complex construct in which both *self-efficacy* to succeed in the task and the *value* assigned to it are combined. There could not be a real motivation without the previous two dimensions. Actually, the value is given by the person's *interest* and the *attainment* and *utility* assigned to the task, as well as the *cost* analysis the task requires. As far as the game in the school context is con-

cerned, one may claim that the teacher will be motivated to include the game in their everyday teaching methods, only if they believe it may be useful for their performance and if they feel able (self-efficacy) to do so, even though it may be difficult (personal cost) to implement, but it means an important and useful task for the child's learning process.

In this context, The *Gaming Motivation Scale* (EMJ) aims to identify and describe how competent the teacher feels about including the game as a resource in the classroom, and how much they will consider the game as a useful and important device, whose implementation is interesting for them. Finally, it also identifies and describes in which measure the teacher is willing to invest in the cost which means introducing this type of devices. According to this, the results may identify the dimensions needing some intervention in order to improve to motivation to use games. The measuring characteristics of this instrument confirm its usefulness in the school context. It is well known that every change in the teaching methods depends on the teacher who is in reality a catalyst or an obstacle for these changes.

Moreover, it is interesting to realize that the resistance to include the game in the classroom may be related to the personal dispositions to integrate the game in their own life. In the educational context, the teachers' resistance to innovations is based on the value they grant them, since teachers prefer something that has more chances of immediate and direct application in their classrooms, and that can solve a problem they have detected (Marcelo, 1994).

In this sense, what really matters is the integration of the game as an asset to education. In other words, to consider what Aubert and Caba (2010, p.: 93) call a “playful-educator”, this being a professional able to introduce the game into the didactic design, not as an anecdote, or as an “excuse to fulfill the extra time but as a way to approach a particular part of culture”. For this reason, the teacher must remember their own experience as a player, value it and place it to serve their students, including the ludic aspect in a smart, functional and prompt manner into the teaching methods.

We believe that an instrument as the Gaming Motivation Scale (EMJ) presented in this research, not only contributes with a solid and trustful measure of the evaluated dimensions, - that is to say, it measures what it is supposed to measure and the measure is highly precise - but also contributes to display different possible courses of action to improve the teachers’ disposition to introduce the game with educational purposes inside the didactic design.

In this respect, the EMJ allows us to explore in a solid and trustful manner the critical aspects that often prevent the teachers to include playful activities that encourage learning. It is probably that we may not obtain a key factor, but a *profile* combining a low feeling of competition to implement the game in the classroom (e.g. fear of losing control) and a task value, where, perhaps, the utility and attainment dimension would be very valued, but would not go along with the will to invest effort and time to integrate these playful activities as educational innovation.

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ANNEX 1

GAMING MOTIVATION SCALE (*EMJ*)

(Muñoz & Valenzuela, 2013)

Express if you agree or disagree with the following statements. Please make a circle around the option that best reflects your opinion. 1 means you completely disagree and 6 means you completely agree.

Completely disagree 1 2 3 4 5 6 Completely agree

1	I feel I am able to encourage my students with playful activities for educational purposes	1	2	3	4	5	6
2	The game is a useful tool to enrich school learning	1	2	3	4	5	6
3	Playful activities help students to learn better	1	2	3	4	5	6
4	In my opinion, it is important to consider games in classroom activities	1	2	3	4	5	6
5	I like when my students learn by playing in my classroom	1	2	3	4	5	6
6	I am willing to invest time in playful activities so my students learn	1	2	3	4	5	6
7	I consider that I chose effective didactic activities, games are one of them	1	2	3	4	5	6
8	Games are useful to facilitate learning	1	2	3	4	5	6
9	In my opinion, it is important to include playful activities in my class design	1	2	3	4	5	6
10	I think it is important that children learn by playing	1	2	3	4	5	6
11	I enjoy when my students make games out of the content	1	2	3	4	5	6
12	The time I spend in playful activities during my classes is profitable	1	2	3	4	5	6
13	If I decide to, I can make my students take advantage of using the game as a means of learning	1	2	3	4	5	6
14	I consider that playful activities aid in improving learning	1	2	3	4	5	6
15	I consider it is very important that children learn by playing	1	2	3	4	5	6
16	I enjoy when playful activities aid to learn in a deeper way	1	2	3	4	5	6
17	I invest a lot of time in playful activities in order to achieve a good learning	1	2	3	4	5	6
18	I am able to propose playful activities for learning when it is necessary	1	2	3	4	5	6
19	Playful activities facilitate learning, thus making it more fun	1	2	3	4	5	6
20	I consider games are very important for learning	1	2	3	4	5	6
21	I love when the class becomes a smart game that aids learning	1	2	3	4	5	6
22	I enjoy when my students learn by playing	1	2	3	4	5	6
23	I am willing to invest time preparing material or playful activities for my students' learning	1	2	3	4	5	6
24	Despite the complexities of teaching through games, I am able to achieve good learning by this method	1	2	3	4	5	6
25	Games help the students to learn more	1	2	3	4	5	6
26	I consider the game is a very important tool when integrating various kinds of learning	1	2	3	4	5	6
27	I am able to conceive a playful atmosphere for my class	1	2	3	4	5	6

ANNEX 2

EMJ: Dimensions' Items

EXPECTATION

- I feel I am able to encourage my students with playful activities for educational purposes
- I consider that I choose effective didactic activities, games are one of them
- If I decide to, I can make my students take advantage of using the game as a means of learning
- I am able to propose playful activities for learning when it is necessary
- I am able to conceive a playful atmosphere for my class
- Despite the complexities of teaching through games, I am able to achieve good learning by this method

UTILITY

- The game is a useful tool to enrich school learning
- Playful activities help students to learn better
- Games are useful to facilitate learning
- I consider that playful activities aid in improving learning
- Playful activities facilitate learning, thus making it more fun
- Games help the students to learn more

ATTAINMENT

- In my opinion, it is important to consider games in classroom activities
- In my opinion, it is important to include playful activities in my class design
- I think it is important that children learn by playing
- I consider it is very important that children learn by playing
- I consider games are very important for learning
- I consider the game is a very important tool when integrating various kinds of learning


INTEREST


- I like when my students learn by playing in my classroom
- I love when the class becomes a smart game that aids learning
- I enjoy when my students learn by playing
- I enjoy when my students make games out of the content
- I enjoy when playful activities aid to learn in a deeper way

COST

- I am willing to invest time in playful activities so my students learn
- The time I spend in playful activities during my classes is profitable
- I invest a lot of time in playful activities in order to achieve a good learning
- I am willing to invest time preparing material or playful activities for my students' learning.

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Abstract / Resumen	<p><i>Even though games have been studied and described from multiple perspectives, highlighting their importance in human development, their use in education seems to be largely restricted to preschool education. In this sense, teacher motivation for the integration of new methodologies (including games) seems to be relevant when studying change and improvement in education. The aim of this paper is to present a scale that can help to study motivation for the use of the game. We report its psychometric characteristics. The Motivation Scale for the Game (EMJ, by its acronym in Spanish) has been built from Eccles and Wigfield's Expectancy & Value Model (2002). The EMJ scale assesses perception of competence to implement playful activities/elements in instructional design (expectation) and the value assigned to the 4 components of task value (utility, importance, interest and cost). The structure of the instrument, its theoretical foundations and its factorial structure and reliability are reported from a Chilean teacher's sample. The results show psychometric characteristics that make EMJ a solid, reliable and valid instrument that can provide clues for motivational intervention in the school setting.</i></p> <p>Aunque el juego ha sido estudiado y descrito desde múltiples ópticas, relevando su importancia en el desarrollo humano, su uso en el ámbito educativo pareciera estar restringido mayoritariamente al nivel de educación parvularia. En este sentido, la motivación de los docentes por la integración de nuevas metodologías (incluido el juego) parece ser una variable relevante a la hora de estudiar el cambio y la mejora en educación. El objetivo de este artículo es presentar una escala que puede ayudar al estudio de la motivación por el uso del juego y reportar sus características psicométricas. La Escala de Motivación por el Juego (EMJ) ha sido construida a partir del <i>Modelo de Expectativa y Valor</i> de Eccles y Wigfield (2002) y busca establecer el grado en que la persona se siente competente para implementar dispositivos lúdicos dentro del diseño didáctico (expectativa) y el valor que asigna a los 4 componentes del valor de la tarea (Utilidad, Importancia, Interés y costo). Se reporta la estructura del instrumento, sus fundamentos teóricos, así como su estructura factorial y confiabilidad a partir de una muestra de profesores chilenos. Los resultados muestran características psicométricas que hacen del EMJ un instrumento sólido, válido y confiable, que puede proporcionar pistas de intervención motivacional en el contexto escolar.</p>
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