WORK ENGAGEMENT, TEACHING PRACTICES WITH MOTIVATIONAL EFFECTS, AND LEARNING-ORIENTED CLASSROOM MOTIVATIONAL CLIMATE

Francisco Leal-Soto
Marcos Carmona-Halty
Juan Dávila-Ramírez
Yesennia Valdivia
Universidad de Tarapacá, Chile

ABSTRACT
The influence of teaching practices on student motivation is indisputable. The concept of work engagement developed by positive psychologists can help pinpoint this influence. This study aimed to determine the relationships between work engagement of teachers, their teaching practices with motivational effects and learning-oriented classroom motivational climate. The study involved 46 teachers and 1,266 students. Students answered the Classroom Motivational Climate Questionnaire and teachers answered the Utrecht Work Engagement Scale and an adapted form of the Classroom Motivational Climate Questionnaire. Work engagement of teachers was positively and significantly correlated with learning-oriented classroom motivational climate perceived by students and with teaching practices with motivational effects reported by teachers. The relevance of work engagement and wellbeing of teachers on teaching practice and student motivation is discussed.

Keywords
work engagement; classroom motivational climate; teaching practices; secondary students

RESUMEN
El objetivo fue determinar la relación entre vinculación psicológica de los docentes con su trabajo, prácticas de enseñanza con efectos motivacionales y clima motivacional orientado al aprendizaje en la clase. Participaron 46 profesores y 1,266 alumnos. Los estudiantes respondieron el Cuestionario de Clima Motivacional de la Clase y los maestros respondieron al Utrecht Work Engagement Scale y una forma adaptada del Cuestionario de Clima Motivacional de Clase. Vinculación psicológica con el trabajo correlacionó positiva y significativamente con clima motivacional de clase orientado al aprendizaje percibido por estudiantes y con prácticas de enseñanza con efectos motivacionales informadas por maestros. Se discute la relevancia de la vinculación psicológica con el trabajo y el bienestar de los profesores en la práctica docente y la motivación del estudiante.

Palabras clave
vinculación psicológica con el trabajo; clima motivacional de la clase; prácticas pedagógicas; estudiantes secundarios.

Correspondence about this article should be addressed to Francisco Leal-Soto. Email address: fleal@academicos.uta.cl.
VINCULACIÓN PSICOLÓGICA CON EL TRABAJO, PRÁCTICAS DOCENTES CON EFECTOS MOTIVACIONALES Y CLIMA MOTIVACIONAL DE LA CLASE ORIENTADO AL APRENDIZAJE

Teaching involves processes of creativity and organization to meet learning objectives and to motivate students to learn; all these in a social environment in which current educational models place high demands on teachers, and the teacher's role is the source of a variety of expectations (Bernal & Donoso, 2013; Cornejo & Quiñones, 2007). In this context, teaching practices constitute an important factor in the creation of a classroom atmosphere that improves motivation in educational processes (Alonso-Tapia, 2000, 2005a, 2005b, 2007; Fernández, 2009; García, Ferrá, Monjas, & Marane, 2014; Wetzell, 2009). In turn, academic motivation is frequently related to students’ outcomes and characteristics, such as academic performance (Almeida, Barca-Lozano Brenilla-Blanco, Peralbo-Uzquiano, & Porto-Rioboo, 2012), resilience (Caamaño, Hernández, Leal-Soto, & Lizana, 2012; Galindo, Jadue, & Navarro, 2005); and school success (Anderman, Anderman, & Meece, 2006; Doménech & García, 2002; Heath, 2006; Pozo & Monereo, 1999). The impact of teaching practices in the classroom climate, the educational micro space where students and teachers interact daily, has been also studied (Cornejo & Redondo, 2001; Heath, 2006). Classroom motivational climate is a concept that incorporates the set of attitudes, emotional responses and perceptions of students about the relationship with their teachers and the learning activities that they propose and develop in classes, which influence their motivation (Heather, 2006).

Alonso-Tapia (2000) emphasizes the importance of teaching practices for generating motivation in student learning; the classroom motivational climate oriented to learning is characterized by forms of teachers’ action as an external motivational element that activates and promotes the improvement and mastery of students’ learning skills. Students’ perception of classroom motivational climate depends on and interacts with internal motivational elements of the students themselves that influence the motivation to learn (Alonso-Tapia, 2005b). In classrooms where learning is valued, it was found that students show adaptive models of knowing, emotions and behaviors that are associated with the use of appropriate learning strategies, self-regulating and positive emotions towards the tasks and to the school, and even show better performance (Fernández, 2009; Núñez, Vallejo, Rosário, Tuero & Valle, 2014). Alonso-Tapia and Fernández-Heredia (2009) formalized a model of classroom motivational climate oriented to learning, setting sixteen teaching practices with motivational effects that promote a learning-oriented classroom motivational climate. Is important to note that classroom motivational climate differs from teaching practices with motivational effects. While former refers to the perception of the students about how the actions of the teacher influence their own motivation to learn, the latter refers to the guidelines that teachers claim to use to motivate students to learn.

Positive psychology, which emerged in a clinical setting, has been extended to the field of work psychology and occupational health (Avey, Luthans, Smith, & Palmer, 2010; Bakker, Rodríguez-Muñoz, & Derks, 2012; Rodríguez-Carvajal, Moreno-Jime nez, Rivas, Bejarano, & Sanz-Vergel, 2010). Its focus emphasizes and promotes high performance, motivation, well-being and health of people at work (Bakker et al., 2012). Some variables emerged from this field have been related to the motivation that teachers promote in their students, such as subjective well-being (González-Pérez & Pablos, 2012), life satisfaction (Cuadra-Peralta, Fuentes-Soto, Madueño-Soza, Veloso-Besio, & Bustos, 2012), or psychological well-being (Doménech, 2011). Nevertheless, all of these variables are general in nature, and they are not situated or related to context. For example, psychological well-being is conceptualized as a set of characteristics of the person present in different areas of life (Ouweneel, Schaufeli, & Le Blanc, 2009) while the classroom motivational climate is a variable set in the specific context of the work of the teacher. In this regard, Leal-Soto, Dávila and Valdivia (2014) found that psychological well-being of teachers is related to their teaching practices with motivational effects, but not related to the classroom motivational climate perceived by their students. Therefore, they suggest exploring a more specific variable related to the well-being of teachers in the context of the educational setting, such as work engagement (Hakanen, Bakker & Schaufeli, 2006; Bakker & Matthijs, 2010; Durán, Extremera, Montalbán, & Rey, 2005).

Work engagement has been defined as a positive mental state related to the workplace, highlighting the high sense of connection and motivation with work shown by those who achieve high scores for this variable. Work engagement refers to vigor, dedication and absorption in the workplace. Vigor is characterized by high levels of energy and mental resilience while working, by the desire to strive for the work being completed even when difficulties arise. Dedication refers to high job involvement, along with the manifestation of a sense of significance, enthusiasm, inspiration, pride and challenge. Finally, absorption occurs when the person is totally focused on their work, when time passes quickly and it is difficult to disconnect from what is being done (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Among the psychological consequences of work engagement are positive attitudes towards work and the organization, good task performance, improved health and a decrease in psychosomatic complaints, presence of proactive behavior and personal initiative, the presence of high levels of motivation to learn new things and take on new challenges at work, as well as higher quality of service (Salanova, Agut, & Peiró, 2005).

Literature on effective teachers discusses concepts like passion for teaching (Day, 2006), teacher
vocation (López de Maturana, 2010) and teacher commitment (Bentein, 2006; Ramos & Sánchez, 2012), which either are not clearly defined or well operationalized constructs or are polyvalent (Bentein, 2006). The construct of work engagement could help operationalize the proposals contained in such concepts. Work engagement is related to the ability of teachers to promote a learning-oriented classroom motivational climate through its practices in the classroom, which is the central hypothesis of this paper. Accordingly, the present study had two objectives: a) to establish the correlation between work engagement and learning-oriented teaching practices reported by teachers; and b) to determine whether there is a relationship between work engagement and the learning-oriented classroom motivational climate perceived by students.

Method

Participants were teachers (N = 46, female = 20) and students (N = 1,266 from 7th to 12th grades, male = 48%, female = 50%, not respond = 2%) from four private schools with public funding from the cities of Iquique and Alto Hospicio (Chile) who volunteered to participate. Schools have no relation between them, but share similar conditions of psychosocial vulnerability of students and low school achievement. On average, teachers had 7 years of teaching experience (ranging from 1 to 24 years) and 4 hours each week with participant classes (ranging from 2 to 10) and had taught the same class group for between 1 and 8 years, the average number of years being 2. Age of students ranged from 12 to 19 years old (M = 14.8, Mdn = 15, Mode = 15), and the size of class groups ranged between 17 and 40 students.

The learning-oriented classroom motivational climate was evaluated by giving students the Classroom Motivational Climate Questionnaire (CMCQ; Fernández, 2009), consisting of 16 subscales (novelty, prior knowledge, related topics, encouraging participation, learning-related messages, clarity of purpose, clarity of organization, autonomy support, step-by-step action, frequent use of examples, right pace, regular feedback, assessment for learning, use of praise, equity treatment, affection, and emotional support). Of the total of 32 items, one is written positively and one negatively for each subscale (e.g. ‘On this subject, the teacher listens to our opinions and gives us enough autonomy to work’ and ‘This teacher almost never lets us review how or with whom we work: he gives us very little freedom’). The questionnaire provides a general indicator of the extent to which students perceive that the motivational climate facilitated by the teacher corresponds to the characteristics of a learning-oriented climate. Reliability in Spanish and Mexican samples was Cronbach’s alpha of .92 and .93 accordingly.

An adaptation of the CMCQ was used for the evaluation of teaching practices with motivational effects. The adaptation was to change the form of items to fit the descriptions of practices by the teacher were changed to suggest the teacher’s perception of his/her own practices (e.g. the original item: ‘This teacher tries to see what we know…’ was reformulated as: ‘Before I explain, I try to see what the students know… ’). This scale also offers, as a whole, a general indicator of the extent to which teachers report the realization of educational practices that constitute a classroom motivational climate oriented to learning. Reliability was acceptable (α > .70; Lagos, 2013).

The Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2004) was used to measure work engagement. It consists of three subscales: vigor, dedication and absorption, and includes 17 items (e.g. ‘My job is full of meaning and purpose’). The global reliability of this scale is highly satisfactory (α = .93). All these instruments have a Likert format, which was stated as 5 levels, from strongly disagree to strongly agree.

The instruments were applied simultaneously to the teachers and students in the same classroom. Subsequently, a computerized statistical analysis program performed (a) the calculation of reliability indicators for each scale by internal consistency, using Cronbach's alpha, (b) the calculation of the average scores of each scale and comparison with the center point of each scale, using Student's t test for one sample, and (c) the calculation of bivariate correlation coefficients between the variables.

Results

Reliability Analysis

Cronbach’s alpha indicators in this group of students and their teachers for general scales were .77 for teaching practices with motivational effects, .92 for learning-oriented classroom motivational climate, and .74 for work engagement. These indicators imply that the reliability of all scales in the study sample was acceptable for correlational studies (Morales, 2008).

Descriptive statistics and mean comparisons

Students reported an overall mean of 3.85 (SD = 0.63) in general perception of learning-oriented classroom motivational climate, which lies significantly above the midpoint of the range of responses (t = 47.73, df = 1,264, p = .000). Teachers reported an overall mean of teaching practices with learning-oriented motivational effects of 4.14 (SD = 0.33), which is also significantly above the midpoint of the range of responses.
Regarding work engagement, teachers reported an overall mean of 4.25 (SD = 0.35) also located significantly above the midpoint of the range of responses (t = 23.29, df = 45, p = .000).

**Correlation analysis**

Significant correlation was found between the overall scores of learning-oriented classroom motivational climate and work engagement $r_{overall} = .37$, $p <.01$ and between teaching practices with motivational effects and work engagement $r_{mot} = .33$, $p <.01$. Correlation matrices between work engagement and subscales of learning-oriented classroom motivational climate and between work engagement and teaching practices with motivational effects are presented in Table 1 and Table 2.

Table 1

*Significant correlations between subscales of Classroom Motivational Climate Questionnaire and Work Engagement dimensions.*

<table>
<thead>
<tr>
<th>Classroom Motivational Climate subscales</th>
<th>Work Engagement dimensions</th>
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<tr>
<td></td>
<td>VI</td>
</tr>
<tr>
<td>Novelty</td>
<td>.38**</td>
</tr>
<tr>
<td>Prior knowledge</td>
<td></td>
</tr>
<tr>
<td>Related issues</td>
<td></td>
</tr>
<tr>
<td>Encouraging participation</td>
<td>.38**</td>
</tr>
<tr>
<td>Learning messages</td>
<td></td>
</tr>
<tr>
<td>Clear objectives</td>
<td></td>
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<tr>
<td>Clarity of organization</td>
<td></td>
</tr>
<tr>
<td>Autonomy support</td>
<td>.38**</td>
</tr>
<tr>
<td>Action step-by-step</td>
<td>.34*</td>
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<tr>
<td>Frequent use of examples</td>
<td>.36*</td>
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<tr>
<td>Right pace</td>
<td>.36*</td>
</tr>
<tr>
<td>Regular feedback</td>
<td>.47**</td>
</tr>
<tr>
<td>Assessment for learning</td>
<td></td>
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<tr>
<td>Use of praise</td>
<td></td>
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<tr>
<td>Fair treatment</td>
<td></td>
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<tr>
<td>Affection and emotional support</td>
<td>.40**</td>
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</tbody>
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$** p < 0.01, * p < 0.05$

**Note.** VI = Vigor, DE = Dedication, AB = Absorption.
Table 2

Significant correlations between subscales of Teaching Practices with Motivational Effects and Work Engagement dimensions.

<table>
<thead>
<tr>
<th>Teaching practices with motivational effects</th>
<th>Work Engagement dimensions</th>
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<td></td>
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<td>Novelty</td>
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<td>Prior knowledge</td>
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<td>Related issues</td>
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<td>.39**</td>
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<td>Clear objectives</td>
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<td>Clarity of organization</td>
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<td>Autonomy support</td>
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<td>Action step-by-step</td>
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<td>Right pace</td>
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<td>Regular feedback</td>
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<td>Use of praise</td>
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<td>Fair treatment</td>
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<tr>
<td>Affection and emotional support</td>
<td>.32*</td>
</tr>
</tbody>
</table>

** p < 0.01, * p < 0.05

Note. VI = Vigor, DE = Dedication, AB = Absorption.

Discussion

Considering global indicators of work engagement, teaching practices with motivational effects and learning-oriented classroom motivational climate, it can be concluded that both teachers and students perceive that there is a learning-oriented motivational climate in their classes. Also, from self-reported work engagement of teachers, they perceive themselves as workers linked positively with their teaching. The significant correlation between the learning-oriented classroom motivational climate reported by students and the work engagement reported by teachers indicates that teachers’ commitment to their work is an element that is perceived by children and young people as a factor in motivation for learning, resulting in the generation of positive emotional states towards involvement in learning and towards establishing goals related to the acquisition of knowledge and skills (Alonso-Tapia, 2005b). This fact is consistent with the approaches of various authors who have realized the association between aspects of teachers’ commitment or welfare and student learning motivation. For example, Stipek (2002), based on his analysis of empirical and theoretical research, points out that teachers can motivate students if they themselves are motivated and can only make students feel valued if they feel valued and safe. In the same vein, Damasio and Immordino-Yang (2007) points out that when teachers transmit passion and enthusiasm for the subject they teach, education, and students, these factors constitute the best context for students to learn. Based on a theoretical analysis of effective teachers, other authors have said that a teacher who is self-confident and who has trust in the educational environment that he/she has built, is able to motive his/her students to discover new ways of learning, to find new strategies for problem-solving, and to seek their own goals making them more independent learners. (Arancibia, Herrera & Strasser, 2011, p. 265; translated by author)

Based in his very large meta-analysis study on learning effectiveness, Hattie (2012) maintains that belief and commitment of teachers has a great influence on student achievement, and he identified five main dimensions of excellence and expertise in teachers. One of these refers to the passion for student success, and the significant relationship between the work engagement of teachers and the learning-oriented classroom motivational climate the students perceive is consistent with this claim.

From teachers’ self-reports, we observe a statistically significant correlation between the overall scores of learning-oriented teaching practices with motivational effects and work engagement of teachers. Teachers who feel good and committed about their work reported learning-oriented practices with motivational effects more frequently than teachers who were less committed and whose welfare at work was lower. So, it seems that welfare of teachers at work is part of a virtuous circle: the more welfare and commitment of teachers, the more...
learning-oriented teaching practices and more learning-oriented classroom motivational climate perceived by students.

Among the relationships between work engagement and learning-oriented CMCQ subscales (Table 1), it is first important to note that almost all subscales of CMCQ correlated positively and significantly with the dedication dimension of UWES. The dedication dimension refers to high job involvement, along with a sense of significance, enthusiasm, inspiration, pride and challenge for the work, which supports the idea that a learning-oriented classroom motivational climate is linked to the teacher's own motivation for instructional work. Secondly, the significant relationship found between the vigor dimension of the UWES and some subscales of the CMCQ suggests that teaching practices oriented to learning, in general, are pedagogical practices involving great behavioral effort from teachers (persistence and tolerance for uncertainty and frustration). These practices are consistent with the description of the vigor subscale, and are characterized by the expression of high levels of energy and mental resilience while working.

It is noteworthy that there are significantly fewer correlations between UWES subscales and different teaching practices with motivational effects reported by teachers (Table 2) than between UWES subscales and the learning-oriented classroom motivational climate perceived by students (Table 1). Students perceive more clearly the relations between teacher engagement and the resulting motivational climate than the teacher perceives the relationship between their engagement and their motivational practices. Students’ and teachers’ perceptions of teaching practices with learning-oriented motivational effects are significantly different, both in the present study and in others (Leal-Soto, Dávila, & Valdivia, 2014). In addition, students perceive greater amplitude variations in classroom motivational climate promoted by their teachers than the amplitude of variability that teachers themselves perceive in their own teaching practices with motivational effects (students, M = 120.68, SD = 19.288; teachers, M = 131.85, SD = 10.602, t = -18.737, df = 1267, t = .000). This smaller variability may have an effect on the correlations, which are sensitive to variability measures (Morales, 2008).

Finally, the absence of significant relationships between the absorption subscale of the UWES and the classroom motivational climate perceived by students or teaching practices with motivational effects reported by the teacher is noteworthy. Absorption is the dimension of work engagement that is less correlated with others dimensions, only moderately correlated with dedication, and did not correlate with vigor. Consequently, the absorption subscale is no longer considered a central variable of work engagement (unlike vigor and dedication), but rather one of its possible consequences (Salanova & Llorens, 2008).

In conclusion, results allow us to respond positively to both objectives proposed for our work: to determine the correlation between the work engagement of teachers and teaching practices with motivational effects reported by the teacher, on the one hand, and the learning-oriented classroom motivational climate perceived by students, on the other. This results underscores the importance of the welfare of teachers in their work, as work engagement, not only for the welfare of the teacher, but also for its effect on the pedagogical relationship, adding to other research that shows the importance of the well-being of teachers, specifically their commitment to teaching (Roness, 2011) and, on the other hand, the effects of teacher discomfort such as the burden of excessive work and the lack of identification with educational (Skaalvik & Skaalvik, 2011).

A psychological link with teaching is just as relevant for teachers, and should form part of their initial training, especially when one takes into account the fact that teachers become teachers for very different reasons associated with varying degrees of commitment to teaching in the future (Fokkens-Bruinisma & Canrinus, 2014). Consideration of intervention strategies that improve teaching commitment and overall well-being at work appears to be an imperative in the initial training and the development of the teaching profession (Bernal & Donoso, 2013; Ferrández, Grau & Parandones, 2010; Jiménez Rosales and Serio, 2010).

Limitations point the way for future research. Firstly, the cross-sectional nature of the study, why it is not known how variables behave over time. Secondly, the analyses are correlational: they do not establish causation relations on the phenomena. Likewise, results encourage consideration of other constructs of occupational health psychology, such as psychological capital (PsyCap; Luthans & Youssef, 2004) or the development of the work (Job Crafting, Wrzesniewski & Dutton, 2001) in connection with classroom motivational climate, to propose a model to optimize the classroom motivational climate by optimizing the teacher's positive psychological resources.
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