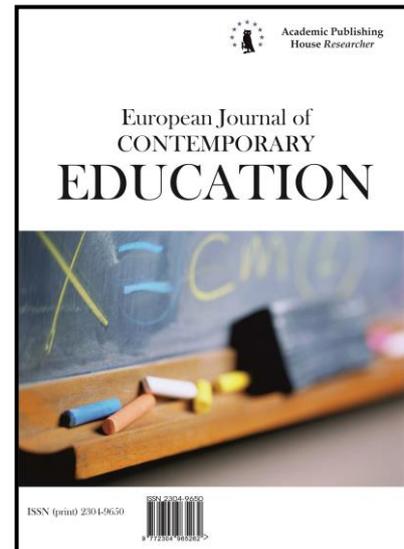




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## Challenges in Teacher Leadership: Workload, Time Allocation, and Self-Esteem

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### Abstract

In research on teacher leadership, teacher workload, teaching time allocation, and teacher self-esteem in teaching and at school are neither studied as challenges or influencing factors nor are they seen as related to leadership at all. In educational research the mentioned factors are mostly studied in relation to teaching effectiveness or quality. The present study is aimed at identifying the relationship between teacher workload, time allocation, self-esteem, and leadership at school. The study involved 418 subjects, primary school, pre-school, and vocational teachers. Results suggest no significant differences among teachers in terms of aggregate study variables by the type of school or teachers' position at school, yet differences emerged among teachers with different workloads in two composite variables, school activity and school stress as teachers with less than half a day workload are statistically significantly less active at school and experience less stress than full-time teachers; also, there is a significant link between teacher workload and time allocated to a number of activities as well as stress, and the same two determinants of teacher self-esteem both in teaching and at school are the level of activity in school and stress. The other variables important in the formation of teacher self-esteem differ, although both types of self-esteem are interrelated as the level of one is predictive of the level of the other. These findings accentuate that workload, time allocation, and self-esteem are important challenges in teacher leadership. The relationship between teacher workload, time allocation, self-esteem, and leadership needs to be defined and managed at the institutional and individual levels to avoid potentially undesirable effects and counterproductive teaching and learning behaviors.

**Keywords:** leadership challenges, self-esteem, school, teaching, teacher leadership, time allocation, workload.

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## **1. Introduction**

Teacher leadership started facing challenges as our society became more diverse and governments gradually began to view education as a path to meet the variety of social agendas. As a result of this view, students were encouraged to stay in school longer (Bellamy et al., 2003). Students who remained, instead of leaving school early, experienced some academic and social issues and these presented challenges for teachers who were not used to dealing with such types of problem. For teachers, this was the beginning of a change in the teaching profession as they had to spend more time dealing with social problems and learning to manage them within the classroom, no matter that sometimes it was at the expense of other students' academic achievement and a decline in the quality of teachers' own worklife (Winter et al., 2000). Creating student-centered classrooms with a collaborative learning environment where students focus on inquiry-based and authentic experiences demands much more than a teacher-centered classroom where the teacher transmits information to students (Dibbon, 2004). This context requires new skills from teachers, necessitating familiarity with different curricula, theories and methods of teaching and learning, IT application, lesson planning, leadership, etc.

The leadership of a schoolteacher is based on his / her pedagogical competence and subject-related knowledge, the success of students regarding their learning achievements, teacher professional development, active communication between him/her and students, dedication to the profession, and self-esteem (Berry et al., 2010). Teacher leadership is manifested through teaching and incorporates i) a purpose of the lesson as well as the expected outcome(s); ii) background by linking concepts to student background and past learning; iii) a structural idea for all students which allows for different approaches according to student needs; iv) questioning strategies used to encourage students' development of critical thinking, problem solving, and performance skills; v) adequate time for the students to respond; vi) teaching approaches that are adapted to meet the needs of diverse students; and vii) clear instructions to meet different levels of proficiency of all students in a classroom (McGregor, 2007).

Research on teacher leadership at school is focused on school principals-oriented school leadership, teaching position at school, and lack of leadership training (Alegado, 2018); providing opportunities for teachers to practice different approaches at school and in the classroom (Gumede, 2011); requirements for teachers to implement educational changes ignoring their lack of courage to implement innovations and their insufficient knowledge and skills (Sawalhi, Chaaban, 2019); leadership for learning to teach with ICTs and leadership in research for innovation (Laferrière, Breuleux, 2002); teachers' stress while working on school projects due to a lack of feedback on leadership from fellow teachers and school administration (Gordon, Solis, 2018); and the professional and cultural agenda of teacher leadership at school and teachers' disempowerment (Alsalahi, 2014). In research on teacher leadership the teacher workload, teaching time allocation, and teacher self-esteem in teaching and at school are not studied as challenges or influencing factors. The mentioned factors in research are mostly studied in relation to teaching effectiveness and/or quality (Treder et al., 2000; Gunter, 2001; Dolton et al., 2003; Ogundipe, Falade, 2014; Welch, 2018). Then there is a great deal of focus on the relationship between these mentioned variables with regard to teacher leadership at school.

Importantly, the relationship between teacher workload, time allocation, self-esteem, and leadership needs to be defined and managed at the institutional and individual levels to avoid potentially undesirable effects and counterproductive teaching and learning behaviors (Jenkins, 2004).

The study presented in this article is aimed at identifying the relationship between teacher workload, time allocation, self-esteem, and their leadership at school.

## **2. Background**

*Teacher workload.* Teacher workload means time spent in teaching, administrative or additional and extracurricular activities, and performing co-curricular responsibilities (Hosain, 2016). The teaching workload is confined to regular teaching activities like delivering classes, preparing lesson plans, assessing students' homework, etc. Hereby, teachers have to involve themselves in different non-teaching activities like counseling and organizing meetings with students' parents, etc. Teacher workloads are excessive and intensive, and the negative effects associated with an unrealistic workload are having a considerable impact on teaching quality, the quality of teachers' work life, and on students' learning achievements and experiences (Dibbon, 2004).

Teacher workload includes the following components (Leslie, 2002):

- Feedback (e.g., writing feedback about understanding of the progress of students' learning and planning of subsequent lesson(s)).
- Curriculum planning (e.g., considering running a curriculum plan and resources).
- Data management and teaching/learning interventions for students (e.g., self-reflection and review of data collection, which include reflecting on what the teaching and learning purpose is, what the most efficient and proportionate teaching and learning processes are, and how the teacher can ensure that the data collected are reliable and valid in regard to teaching and learning).
- Communication (e.g., thinking about all the communications in the working day and review if they are making a difference and what evidence there is for it; using a variety of communication channels with students and their parents, fellow teachers, and school administrative staff).
- Managing, implementing, and communicating changes (e.g., ensuring there is adequate time at the planning stage when preparing to make changes, collaborating with students, their parents, fellow teachers, etc. on proposals and involving all the components in assessing their performance; creating a shared understanding of the change process with the school community).

*Teacher time allocation.* It is known that teachers spend long hours at work (Harvey, Spinney, 2000). Activities other than teaching contribute significantly to teachers' workday time allocation: one-third of teacher time is spent on teaching and tutoring; twenty percent of teacher time is spent on preparation for lessons; more than ten percent of teacher time is spent on assessing students' homework; meetings and documentation each consume from four to seven percent of teacher time; the additional activities, e.g., supervision, administration, and extra-curricular activities also take around one-third of teacher time (Lieberman, Miller, 2005; Ogundipe, Falade, 2014).

For most teachers, most of their time is spent directly with students, yet the proportion of working time outside the classroom is considerable (Barbera, Reimann, 2014). This latter part of teachers' working time, also called "invisible work", e.g., assigned supervision time, preparation time, meeting and assessment time, testing/reporting time, time meeting with parents and voluntary activities (Wilson, 2016) has influenced the intensification of teaching.

Teaching time allocation, that is, which staff member teaches which subject, is an essential task carried out in schools every year and every semester. Teaching time must be reallocated for changes of staff (some teachers no longer available due to resignation, retirement, and new teacher availability) and/or program (some subjects cancelled and some newly developed). Teaching time allocation has been well recognized as a major contributing factor to teaching quality (Quet al., 2014).

The lack of teacher preparation time can affect teaching and learning quality in classes. When teachers are unable to properly assess student homework in a timely way and lack the time to provide tutorial classes or / and to do the additional or extracurricular work for students, they are not satisfied with the amount of time they spend preparing for lessons (Belliveau et al., 2002). Conversely, when teachers feel they have adequate planning time, they tend to be more satisfied with their teaching load and workload and are satisfied with the quality of their worklife. Teachers express concerns about the exorbitant amount of paperwork associated with the documentation process (Kocko, Wells, 2015).

*Teacher self-esteem.* Self-esteem has become a household word. Teachers and parents have focused efforts on boosting self-esteem, on the assumption that high self-esteem will cause positive outcomes (Baumeister et al., 2003). According to Sadler (2013), teacher self-esteem influences the use of teaching strategies that actively involve students in the classroom. Content knowledge and teaching skills are related to feelings of self-esteem as a key factor in the teacher's perceptions of their knowledge and skills. Mitchem et al. (2003) note that teacher self-esteem is related to specific aspects, for example, use of ICT. The teacher has to know what s/he is doing in the classroom, along with embracing a positive outlook toward using ICT as a means to teach students. Thus, teachers' attitudes towards innovation and self-esteem are key criteria when integrating ICT into the curriculum.

Teacher self-esteem consists of several components (Lawrence, 2006):

- *Self-concept* is an awareness of one's own self related to self-image, ideal self, and self-esteem and includes cognitive, affective, and behavioral aspects.

- *Self-image* is the authentic personal awareness of individual mental and physical characteristics.

- *Ideal self* develops with self-image, where an individual learns that there are ideal characteristics s/he must possess because they help one to behave and use skills according to standards that are valued in the society. In this context, the person builds the ideal self.

- *Self-esteem* is a feeling of self-worth and self-esteem with regard to a specific activity or behavior.

Enhancement of low self-esteem could be realized if teachers respect the self and others, are confident, care about the self, create loving and healthy relationships, are good friends to the self and others, accept the self just as they are, and like to be a part of life (Hartsell et al., 2010). If teachers have a positive self-esteem, it manifests in purposefulness, critical self-reflection, cooperativeness, openness to differences, optimism, taking responsibility in problem-solving, effectively managed emotions, relationships with others on the basis of trust, a good sense of personal and others' limitations, and providing opinions in a peaceful way (Mbuva, 2016).

### 3. Method

#### 3.1. Participants

Study participants were selected using a targeted convenience sampling technique. The study involved 418 teachers from five biggest regions in Lithuania. There were 48 (11.5 %) men and 370 (88.5 %) women, they all work at various educational institutions: gymnasiums (45 %), basic schools (26.1 %), vocational schools (16.3 %), primary schools (6.7 %), multifunctional educational centers (3.8 %), and secondary schools (2.2 %), their mean age was 50.6 (SD = 9, range: 23-70 years).

*Position held.* 81.6 % of participants were subject teachers, 15.8% primary school teachers, 1.9 % pre-school education teachers, and .7 % vocational teachers.

*Teaching subjects.* The largest number (65) of teachers teach national language (reading, writing, and literature), 59 teachers teach natural sciences and 58 mathematics, 45 teachers teach technologies, 35 teachers – social sciences, 35 teach arts and 25 – music, 32 teach foreign languages, 29 – physical education, 20 – religion and ethics, 5 teach the subject of civil society, and 10 are vocational teachers.

*Education.* The largest part of the sample (55.7 %) consists of teachers with a university level bachelor's degree; 1.9 % (or 8) of the respondents indicated that they have acquired a professional bachelor's degree at college (non-university level). The second most frequently indicated degree among respondents was a master's degree (42.2 %). One participant (or .2 %) holds a PhD.

*Work experience.* The total length of pedagogical work experience of teachers varied from 1 to 48 years (average 26.1 years, SD = 11). Data on time worked in the same school revealed that teachers had worked in current workplaces (schools) from several months to 47 years (average 18.4 years, SD = 12).

*Workload.* The majority of teachers (71.3 %) indicated that they work full-time at school, 17.7 % – half a working day, and 11 % work less than half a day.

#### 3.2. Measures

A questionnaire on challenges in teacher leadership was used. The instrument consists of two parts – *Background* and *Leadership*. The construction of the questionnaire was based on the Four Models of Teacher Leadership (Angelle, DeHart, 2016) and the concept of School Leaders (Mulford, 2003).

The *demographic* part, based on the research of Gunter (2001), Gumede (2011), and Sawalhi, Chaaban (2019), consists of 28 items in total covering gender, education, type of educational institution in which the pedagogical qualification was acquired, position at school, workload, work experience, level of education, and teaching subject(s). All questions were multiple choice, where respondents were asked to choose one response from the list provided.

The *leadership* part is based on the publications of Laferrière, Breuleux (2002), Margolis, Doring (2012), Alsalahi (2014), Alegado (2018), and Gordon, Solis (2018) and consists of eight topics incorporated into 11 broad questions with 106 items:

- *Time Distribution:* at school and in the classroom, e.g., planning or preparing for lessons in or out of school; assessing students' homework; communicating with fellow teachers, counseling,

and educational communication with students' parents; professional development; extracurricular activities; teaching students in the classroom; maintaining order in the classroom; drawing up educational plans, etc. – 2 questions with 12 items.

- *Professional Development*: i) activities: educational courses/seminars/conferences; formal in-service training programs; participation in teacher networks, etc.; ii) topics – curriculum knowledge; analysis of student inspection/assessment methods; classroom and student behavior management; application of ICT skills in teaching; development of interdisciplinary competencies; training in a multilingual and multicultural environment; communication and cooperation with students' parents, etc. – 2 questions with 18 items.

- *Feedback*: i) whether the feedback is received or provided by the school management, fellow teachers, parents, students, external evaluators, or no feedback was received; ii) aspects of feedback – knowledge of the main subject; pedagogical skills; student learning outcomes; classroom management and student discipline; training of students with special educational needs; extracurricular activities with students, etc. – 1 question with 11 items.

- *Positive Self-esteem*: i) *in teaching* (e.g., coming up with new teaching/learning ideas; being open to change; providing practical assistance to school teachers in applying new ideas; knowing how to overcome the challenges faced by students with disabilities; dealing effectively with students' behavioral problems; getting recognition from students' parents, etc.) – 1 question with 14 items; ii) *at school* (e.g., beliefs that colleagues are fair and cooperative; teachers are open and consider the needs of students; parents are actively involved in the day-to-day running of the school and contribute to solving problems; fellow teachers communicate effectively with students and their families; the school administration responds effectively to the needs and requests of teachers, etc.) – 1 question with 8 items.

- *Activities at School*: participation in school staff meetings; sharing educational material with colleagues; delivering lessons with colleagues; observing lessons of other teachers and providing feedback; participation in the development of the school curriculum, etc. – 1 question with 8 items.

- *Stress Factors at School*: e.g., time for preparing for lessons; workload; assessment of students' homework; administrative work (documentation); supplementary work (e.g., mentoring of young teachers); responsibility for student achievements; maintaining discipline in the classroom; verbal insults from students or their parents; adapting to changing school and country requirements; search for solutions to problems faced by parents; adaptation of lessons for students with special needs, etc.) – 1 question with 11 items.

- *Teaching in a Classroom*: setting lesson goals at the beginning of the lesson; explaining what students need to learn; explaining the connection between new and old topics; inspecting/assessing students' homework; assigning tasks that encourage students to think critically; organizing work in small groups so that students work together to solve a problem; working with students individually; encouraging students to follow class rules; assigning project work to students; allowing students to use ICT; encouraging students to evaluate themselves and reflect on their work; encouraging students to argue their opinions, etc. – 2 questions with 24 items.

The questionnaire parts are formed from closed-ended statements and each part is presented in a matrix-type question which is expanded by separate items. Items are assessed on different scales, such as “strongly disagree”, “disagree”, “neither agree nor disagree”, “agree”, “strongly agree”, or – “never”, “less than once a year”, “once a year”, “3-4 times a year”, “once a month”, “once a week or more”, etc. Study participants had to rate each item with a single value.

Based on the results of our study sample, internal consistency reliability (Cronbach's  $\alpha$ ) coefficients for items of the separate scales of the questionnaire were calculated and the following Cronbach's alpha estimates were obtained:  $\alpha = .898$  for *Time Distribution*,  $\alpha = .911$  for *Professional Development*,  $\alpha = .798$  for *Feedback*,  $\alpha = .876$  for *Positive Self-esteem in Teaching*,  $\alpha = .843$  for *Positive Self-esteem at School*,  $\alpha = .792$  for *Activities at School*,  $\alpha = .835$  for *Stress Factors at School*, and  $\alpha = .811$  for *Teaching in a Classroom*. All these values are higher than .7, therefore it can be stated that the data were reliable and it was not necessary to exclude any scale estimates from further analysis.

### 3.3. Statistical analysis

Data were collected between February 4, 2019 and December 20, 2019.

The software package SPSS 21.0 and Excel program were used to calculate internal consistency reliability coefficients (Cronbach's  $\alpha$ ), to test the distribution of data (Kolmogorov-Smirnov tests), to run intergroup comparisons (Kruskal-Wallis tests) and perform correlation (Pearson and Spearman) and multiple regression analyses. The level of significance was set at  $p < .05$ .

### 3.4. Ethics

Ethical aspects and validity of the current study were assessed and an ethical permission to conduct the survey was received from the Research Board of Vytautas Magnus University (17-12-2018, Protocol No. 12A). The questionnaire was anonymously completed online with no risk of revealing personal or institutional identity of respondents.

## 4. Results

In the first stage of the analysis, the Kruskal-Wallis H with *post hoc* tests\* were performed to examine whether teachers working in different types of schools, in different positions, and with different workloads differ by the factors that challenge teacher leadership at school. For this purpose, the differences were analyzed both according to the individual items of the various blocks of the questionnaire and according to the total estimates of positive attitudes about the self, positive attitudes about the school, and other variables such as time distribution, etc.

Our analysis of differences between teachers by the type of school revealed relatively few significant differences. In particular, the Kruskal-Wallis H tests with *post hoc* comparisons did not find significant differences in terms of aggregate variables (in all instances,  $p > .05$ ). The differences emerged only in terms of individual items in the questionnaire blocks, as indicated by the  $p$  values (see the description below).

*Time distribution by type of school.* Results of the Kruskal-Wallis H tests with *post hoc* comparisons suggest that teachers working in progymnasiums spend statistically significantly more time ( $p < .01$ ) on assessing students' homework ( $M = 5.00$ ,  $SD = .6$ ) than teachers in primary schools ( $M = 1.68$ ,  $SD = .8$ ), basic schools ( $M = 1.60$ ,  $SD = 1.1$ ), vocational schools ( $M = 1.67$ ,  $SD = 1.7$ ), gymnasiums ( $M = 1.98$ ,  $SD = 1.3$ ), and multifunctional centers ( $M = 1.75$ ,  $SD = 1$ ). In addition, gymnasium teachers spend significantly more time ( $p < .05$ ) on professional development ( $M = 1.44$ ,  $SD = .9$ ) than primary school ( $M = 1.18$ ,  $SD = .5$ ), basic school ( $M = 1.17$ ,  $SD = .5$ ), vocational school ( $M = 1.08$ ,  $SD = .4$ ), and progymnasium ( $M = 1.00$ ,  $SD = .3$ ) teachers. Lastly, gymnasium teachers spend significantly more time ( $p < .05$ ) on other /supplementary activities (documentation, communication, organization of events at school, etc.) ( $M = 1.24$ ,  $SD = 1.2$ ) than teachers working at vocational schools ( $M = .74$ ,  $SD = .6$ ) and progymnasium teachers ( $M = .50$ ,  $SD = .7$ ).

*Positive self-esteem in teaching and at school by type of school.* Our analysis of the answers to individual questions about attitudes towards the self and activities at school (the Kruskal-Wallis H tests with *post hoc* comparisons) revealed statistically significant differences in only three questionnaire items:

1) Using advantages of ICT in teaching, suggesting that teachers working in progymnasiums ( $M = 2.50$ ,  $SD = 2.1$ ) are statistically significantly less able ( $p < .05$ ) to take advantage of technology than teachers in all other types of schools (primary schools  $M = 4.04$ ,  $SD = .6$ ; basic schools  $M = 4.08$ ,  $SD = .7$ ; vocational schools  $M = 4.06$ ,  $SD = .7$ ; high schools  $M = 4.22$ ,  $SD = .4$ ; gymnasiums  $M = 4.12$ ,  $SD = .6$ ; multifunctional centers  $M = 4.06$ ,  $SD = .7$ ).

2) Belief that colleague teachers are fair and cooperative, whereby primary school teachers ( $M = 4.21$ ,  $SD = .8$ ) are significantly more likely ( $p < .01$ ) to say that colleagues are fair and cooperative than colleagues in basic ( $M = 3.87$ ,  $SD = .8$ ), vocational ( $M = 3.64$ ,  $SD = .7$ ), high schools ( $M = 3.33$ ,  $SD = .9$ ), gymnasiums ( $M = 3.73$ ,  $SD = .7$ ), and progymnasiums ( $M = 3.50$ ,  $SD = .7$ ).

\* A significant Kruskal-Wallis test used for non-normally distributed data indicates a stochastic dominance of at least one sample over one other sample, yet the test does not identify where the dominance occurs or for how many pairs of groups it obtains. To analyze the specific sample pairs for stochastic dominance, Kruskal-Wallis H tests with *post hoc* comparisons were performed.

3) Belief that fellow teachers interact effectively with students and their families, suggesting that primary school teachers ( $M = 4.07$ ,  $SD = .5$ ) are significantly more likely ( $p < .01$ ) to agree that fellow teachers interact effectively with students and their families than teachers working in high schools ( $M = 3.56$ ,  $SD = .9$ ), gymnasiums ( $M = 3.44$ ,  $SD = .8$ ), and progymnasiums ( $M = 3.50$ ,  $SD = .7$ ).

Teachers' responses about *activities at school* (the Kruskal-Wallis H tests with *post hoc* comparisons) indicate significant differences in two variables:

1) Participation in school staff meetings, suggesting that gymnasium teachers ( $M = 4.24$ ,  $SD = .8$ ) are statistically significantly more likely ( $p < .001$ ) to attend school staff meetings than vocational school ( $M = 3.74$ ,  $SD = .9$ ) and high school teachers ( $M = 3.89$ ,  $SD = .8$ ).

2) Sharing teaching/learning materials with colleague teachers, whereby primary school teachers ( $M = 3.96$ ,  $SD = 1.1$ ) are significantly more likely ( $p < .01$ ) to share teaching material than vocational school ( $M = 2.94$ ,  $SD = .9$ ) and multifunctional center teachers ( $M = 2.94$ ,  $SD = 1.3$ ).

*Activities in the classroom.* The answers to the block of questions about the most frequently used tasks and activities in the classroom (the Kruskal-Wallis H tests with *post hoc* comparisons) indicate significant differences in the following three questionnaire items:

1) Setting particular goals in the lesson, in which basic school teachers ( $M = 4.80$ ,  $SD = .6$ ) are statistically significantly more likely ( $p < .05$ ) to set lesson goals at the beginning of the lesson than primary school ( $M = 4.41$ ,  $SD = .9$ ), vocational school ( $M = 4.42$ ,  $SD = 1.1$ ), and progymnasium teachers ( $M = 4.00$ ,  $SD = 1.4$ ).

2) Explaining what students need to learn, indicating that gymnasium teachers ( $M = 4.76$ ,  $SD = 1.4$ ) significantly more often ( $p < .05$ ) explain to students what they need to learn than primary school ( $M = 4.22$ ,  $SD = 1.2$ ) and progymnasium teachers ( $M = 4.00$ ,  $SD = 1.4$ ).

3) Encouraging students to follow rules in the class, whereby basic school teachers ( $M = 4.61$ ,  $SD = .8$ ) significantly more often ( $p < .01$ ) encourage students to follow class rules than high school ( $M = 3.11$ ,  $SD = .9$ ), gymnasium ( $M = 4.11$ ,  $SD = 1.4$ ), and progymnasium teachers ( $M = 3.50$ ,  $SD = 2.1$ ).

Lastly, our comparison of teachers with different *workloads* by relevant study variables (the Kruskal-Wallis H tests with *post hoc* comparisons) yielded differences in two composite variables, school activity and school stress. First, teachers with less than half a day workload are statistically significantly less active at school than full-time teachers ( $M = 20.72$ ,  $SD = 6.1$  vs  $M = 23.2$ ,  $SD = 5.4$ ,  $p < .05$ ). Second, teachers working less than half a day also experience significantly less stress than full-time teachers ( $M = 21.54$ ,  $SD = 8.2$  vs  $M = 25.91$ ,  $SD = 7.1$ ,  $p < .01$ ). In addition, answers to individual items of the questionnaire suggest that teachers working less than half a day are statistically significantly less likely to share teaching/learning materials than their colleagues who work full time ( $M = 2.78$ ,  $SD = 1.4$  vs  $M = 3.41$ ,  $SD = 1$ ,  $p < .01$ ).

In the next stage of the analysis, the following statistically significant links (Pearson and Spearman bivariate correlations) were computed between variables that raise challenges to teacher leadership:

*Teacher workload.* A very significant moderate positive correlation was found between teacher workload and time spent on teaching ( $r = .34$ ,  $p < .01$ ). Teacher workload is also linked to time spent on students' homework assessment ( $r = .2$ ,  $p < .01$ ), time spent on parent counseling ( $r = .19$ ,  $p < .01$ ), time allocated to preparation for classes ( $r = .16$ ,  $p < .01$ ), activity in school ( $r = .14$ ,  $p < .01$ ), time devoted to collaboration with colleagues ( $r = .11$ ,  $p < .05$ ), and, importantly, there is a modest, although very significant relationship between teacher workload and stress experienced at school ( $r = .18$ ,  $p < .01$ ) (see [Table 1](#)).

• *Time allocation:*

A. Lesson planning. A medium-strength statistically significant positive correlation emerged between the time a teacher spends planning lessons and the time spent on assessing students' homework ( $r = .61$ ,  $p < .01$ ). There are also modest significant links between teacher time spent on lesson planning and time devoted to collaboration with colleagues ( $r = .29$ ,  $p < .01$ ), time for parent counseling ( $r = .23$ ,  $p < .01$ ), and, again, stress ( $r = .26$ ,  $p < .01$ ). Lastly and intuitively, time to plan lessons is moderately linked with time devoted to professional development ( $r = .26$ ,  $p < .01$ ).

Assessment of students' homework. The study does not support the assumption that the time spent on students' homework assessment is strongly related to specific school subjects. Such links,

although rather weak, are to be found only in relation to two things. The time spent on assessment of students' homework is positively but weakly related to teaching of a particular subject, namely, national language ( $r = .22, p < .01$ ) and mathematics ( $r = .12, p < .05$ ). It is perhaps intuitive that the time spent on assessment of students' homework is linked with the time devoted to parent counseling ( $r = .32, p < .01$ , time for collaboration with colleagues ( $r = .29, p < .01$ ), time for professional development ( $r = .23, p < .01$ ), and stress ( $r = .28, p < .01$ ). Interestingly, the time spent on assessment of students' homework is also positively and very significantly, albeit only modestly, associated with teachers' age ( $r = .16, p < .01$ ). It must be noted that this is the only variable in our study that correlated with age.

B. Reflecting on personal teaching. Several positive statistically significant relationships are characteristic of teachers' time given to reflect on personal teaching and other variables: there is a robust relationship with the time spent on lesson planning ( $r = .58, p < .01$ ); a substantial correlation with the time devoted to assessment of students' homework ( $r = .43, p < .01$ ); a modest association with the time devoted to collaboration with colleagues ( $r = .17, p < .01$ ); time for professional development ( $r = .22, p < .01$ ) and, importantly, stress ( $r = .2, p < .01$ ).

C. Collaboration with fellow teachers. The results also show a substantial positive statistically significant relationship between teachers' time devoted to collaboration with fellow teachers and time spent on counseling students' parents ( $r = .47, p < .01$ ) as well as a moderate association with time devoted to professional development ( $r = .34, p < .01$ ). As mentioned above, the time devoted to collaboration with colleagues is also linked with workload, time for lesson planning, time for homework assessment, and reflecting on teaching. And there is a modest relationship between the time a teacher spends collaborating with fellow teachers and implementing other/supplementary activities at school ( $r = .23, p < .01$ ).

**Table 1.** Relationships between teacher workload, time allocation, and self-esteem

	Age	Work-load	Education	Nat. lang.	Mat.	T. for reflecting on teaching	T. for lesson planning	T. for home-work assessm.	T. for collaboration with colleagues	T. for parental counseling	T. for professional development	T. for other/ supplementary activities	Teacher self-esteem in teaching	Teacher self-esteem at school	Activity in school	Stress
Gender	.0	.0	.1	.1	.0	.0	.0	.1	.0	.1	-.11*	-.1	.0	.0	.0	.1
Age		.0	.0	.0	.1	.1	.0	.16*	.0	.0	.1	.0	.1	.1	.0	.0
Workload			.0	.1	.0	.34*	.16*	.2**	.11*	.19**	.1	.1	.1	.0	.14**	.18*
Education				.1	.0	.1	.0	.0	.0	.0	.0	.1	.0	.11**	-.1	-.1
Subject: National language					.0	.1	.0	.22*	.1	.1	-.1	.1	.1	.1	.1	.11*
Subject: Mathematics						.0	.0	.12*	.1	.1	.0	-.1	.0	.0	.0	.1
Subject: Natural sciences						.0	.0	.0	-.1	-.1	.0	-.13*	-.1	.0	-.1	.0
Time for reflecting on teaching							.58*	.43*	.17**	.1	.22**	.12*	.0	-.1	-.1	.2**
Time for lesson planning								.61*	.29**	.23**	.32**	.1	.0	-.1	.0	.26*
Time for homework assessment									.29**	.32**	.23**	.11*	.0	-.1	.0	.28**



( $\beta = -.09$ ,  $t = 1.985$ ,  $p < .05$ ). This means that teachers feel better about their teaching if they have a positive view about the school they work at, are more active, allow more time for assessment of their students' homework and for other/supplementary activities, and stress out less; besides, teachers of foreign languages are likely to have a lower self-esteem in teaching.

**Table 2.** Predictors of teacher self-esteem in teaching

Predictors	B	SE	$\beta$	t	p
Gender	-.463	.953	-.023	-.486	.627
Age	.004	.079	.007	.057	.955
Education	1.005	.560	.082	1.796	.073
Workload	.799	.455	.083	1.757	.080
Subject: National language	.602	.925	.034	.651	.516
Subject: Mathematics	-1.704	.982	-.092	-1.735	.084
Subject: Natural sciences	-1.685	.925	-.090	-1.821	.069
Subject: Social sciences	.654	1.025	.028	.638	.524
<b>Subject: Foreign languages</b>	<b>-2.116</b>	<b>1.066</b>	<b>-.086</b>	<b>-1.985</b>	<b>.048</b>
Subject: IT	1.553	1.034	.075	1.503	.134
Subject: Arts	1.704	1.244	.073	1.370	.172
Subject: Physical education	.495	1.477	.019	.335	.738
Subject: Religion and ethics	-.237	1.336	-.008	-.177	.860
Time for reflecting on teaching	-.262	.170	-.090	-1.542	.124
Time for lesson planning	.194	.254	.050	.763	.446
<b>Time for homework assessment</b>	<b>.616</b>	<b>.311</b>	<b>.119</b>	<b>1.982</b>	<b>.048</b>
Time for collaboration with colleagues	-.545	.469	-.061	-1.162	.246
Time for parental counseling	.415	.564	.038	.736	.462
Time for professional development	.073	.467	.008	.157	.875
<b>Time for other/supplementary activities</b>	<b>.786</b>	<b>.367</b>	<b>.107</b>	<b>2.139</b>	<b>.033</b>
<b>Teacher self-esteem at school</b>	<b>.465</b>	<b>.070</b>	<b>.321</b>	<b>6.597</b>	<b>.000</b>
<b>Activity in school</b>	<b>.262</b>	<b>.058</b>	<b>.221</b>	<b>4.483</b>	<b>.000</b>
<b>Stress</b>	<b>-.132</b>	<b>.041</b>	<b>-.150</b>	<b>-3.231</b>	<b>.001</b>
$R^2 = .325$ . $F(28, 376) = 6.462$ , $p = .000$					

In the second model (see Table 3), which explored teacher self-esteem at school, activity in school remains a significant positive predictor ( $\beta = .25$ ,  $t = 5.199$ ,  $p < .01$ ), while the level of stress at school continues to serve as a significant negative predictor of this outcome variable ( $\beta = -.11$ ,

$t = 2.264, p < .05$ ); self-esteem at school is also predicted positively by teacher self-esteem in teaching ( $\beta = .32, t = 6.618, p < .00$ ) and negatively by the level of education ( $\beta = -.15, t = 3.249, p < .01$ ) and teaching the subject of arts ( $\beta = -.12, t = 2.248, p < .05$ ). This means that teacher self-esteem at school is likely to be higher if they feel good about their teaching, are more active, stress out less, and, interestingly, are less educated; in addition, teachers of arts tend to have more negative beliefs about the school they work at.

**Table 3.** Predictors of teacher self-esteem at school

Predictors	B	SE	$\beta$	t	p
Gender	.235	.657	.017	.357	.721
Age	.065	.054	.136	1.198	.232
<b>Education</b>	<b>-1.242</b>	<b>.382</b>	<b>-.147</b>	<b>-3.249</b>	<b>.001</b>
Workload	-.041	.315	-.006	-.132	.895
Subject: National language	.538	.639	.043	.842	.400
Subject: Mathematics	.586	.679	.046	.863	.389
Subject: Natural sciences	1.057	.632	.082	1.673	.095
Subject: Social sciences	1.112	.706	.068	1.574	.116
Subject: Foreign languages	.597	.740	.035	.807	.420
Subject: IT	-.855	.715	-.060	-1.195	.233
<b>Subject: Arts</b>	<b>-1.925</b>	<b>.856</b>	<b>-.118</b>	<b>-2.248</b>	<b>.025</b>
Subject: Physical education	.821	1.020	.046	.805	.421
Subject: Religion and ethics	.296	.923	.014	.321	.749
Time for reflecting on teaching	.033	.118	.016	.277	.782
Time for lesson planning	.025	.176	.009	.140	.888
Time for homework assessment	-.409	.214	-.115	-1.909	.057
Time for collaboration with colleagues	.224	.324	.036	.691	.490
Time for parental counseling	-.219	.390	-.029	-.562	.575
Time for professional development	.058	.321	.009	.182	.856
Time for other/supplementary activities	-.067	.249	-.013	-.270	.788
<b>Teacher self-esteem in teaching</b>	<b>.223</b>	<b>.034</b>	<b>.323</b>	<b>6.618</b>	<b>.000</b>
<b>Activity in school</b>	<b>.208</b>	<b>.040</b>	<b>.253</b>	<b>5.199</b>	<b>.000</b>
<b>Stress</b>	<b>-.065</b>	<b>.029</b>	<b>-.106</b>	<b>-2.264</b>	<b>.024</b>
$R^2 = .323, F(27, 378) = 6.558, p = .000$					

Hence, the same two determinants of teacher self-esteem both in teaching and at school are the level of activity in school and stress. The other variables important in the formation of teacher

self-esteem differ, although both types of self-esteem are interrelated as the level of one is predictive of the level of the other.

### **5. Discussion and limitations**

Teacher leadership is seen and implemented first and foremost through teaching and targeted educational activities in the classroom, at school, and out of it. In addition, it is directly related to workload, time allocation, and self-esteem of a teacher (Lieberman, Miller, 2005). Workload, time allocation, and self-esteem are seen by researchers typically as part of a teacher's managerial competence or are related to the quality or effectiveness of teaching. The mentioned factors in this study are viewed as challenges to teacher leadership, as the teacher must not only fulfill, but also fully withstand their obligations carrying out the teaching workload, and must devote time to students, their parents, and fellow teachers at school. Thus, teacher leadership is associated with skills that the teacher demonstrates by teaching students in the classroom and performing supplementary and extracurricular activities, operating in the space of the teaching profession, and representing it in and out of school. This requires the teacher's self-esteem, which is reflected in teaching and other activities at school. Then it is important to see the teacher's workload as a whole – it has formal “visible” and “invisible” parts (Lieberman, Miller, 2005). The latter usually involves additional work done as a responsibility and commitment, which boosts the teacher's self-esteem by demonstrating their competence. Thus, the teacher's workload and the time s/he allocates to various targeted or purposeful activities are components of their leadership, but they are not self-evident, and they are challenging. The teacher's ability to meaningfully and purposefully implement the workload and allocate time to important activities that are professionally mandatory and complementary manifests the teacher's leadership (Ballet, Kelchtermans, 2009).

The results of the current study show that teacher workload is very significantly related with stress. This relationship is of great importance as it might indicate that the most draining and buffering aspect is the workload coming from the teaching activity itself and the quality of the relationships experienced at school with students and their parents, fellow teachers, and school administration. Non-teaching-related workload includes excessive paperwork and high-stakes accountability demands that are among the important challenges to teacher leadership and could cause stress (Van Droogenbroeck et al., 2014).

Our findings also suggest that the teacher's positive self-esteem in teaching does not depend on demographic variables, but rather depends on whether the teacher shows positive self-esteem at school. This means that the age of the teacher, and thus the work experience, should not be considered as reasons for good teaching in terms of the teacher's self-confidence. Self-confidence of a teacher is an independent variable that determines the effectiveness and quality of teaching. Thus, it is not age or work experience as a quantitative aspect, but the self-confidence developed by the teacher and directly based on the quality or effectiveness of teaching that are variables of teacher leadership (Mohammed, 2017).

Our findings show that workload directly influences teacher's stress – a bigger workload predetermines greater teacher stress. It must be noted that any ignored amount of teacher workload has a negative impact on both teacher and student performance, which are signs of teacher leadership (Wakoli, 2015).

It is very likely that the more time the teacher spends assessing students' homework, the more effective the teaching they provide in specific subjects, as indicated by the robust correlations of this variable with time devoted to reflecting on teaching and time for lesson planning and a modest but very significant link with time allocated to professional development. It could be explained that systematic examination provides the opportunity for the teacher to learn about the strengths and limitations of students' learning, and then inspires the teacher to reflect on their own teaching, which directs the teacher to the path of leadership (Hosain, 2016). Thus, it is obvious that the results of the study confirm the importance of reflection, and our findings also indicate that the more time the teacher spends reflecting on teaching, the more attention they pay to lesson planning.

Furthermore, the results of our study allow the assumption that the more time the teacher devotes to collaboration with fellow teachers, the more time they spend on counseling students' parents; the more time the teacher devotes to their own professional development, the more time they spend on counseling students' parents; the more time allocated to supplementary/extracurricular work with students at school, the more time devoted to cooperation with fellow teachers and the more time

spent on parental counseling. Time spent on collaboration with colleagues and students is considered essential to success in teacher leadership (Qu et al., 2014).

The results also show that higher self-esteem in a teacher determines teacher time spent on performing extracurricular and other/supplementary work at school. But greater teacher self-esteem also determines a lower level of stress. Thus, the more competent the teacher is in teaching, the less stress they experience and the more effectively they act in the classroom and at school: this is when the teacher's leadership is recognized (Kilinc et al., 2015).

It must be stated that the study was limited to relationships between workload, time-allocation, and teacher self-esteem, although there might be other challenges in teacher leadership in the classroom and at school. In addition, the scope of the current research was limited to one particular area and culture. A cross-cultural study involving several different countries might provide other important findings.

## 6. Conclusion

Workload, time allocation, and self-esteem are important challenges in teacher leadership. The results of the present study indicate that the heavier the workload the teacher has, the more difficulties they experience in time allocation regarding the variety of activities in the classroom and at school, which leads to greater stress and lower self-esteem. Importantly, the same two determinants of teacher self-esteem both in teaching and at school are the level of activity in school and stress. In view of this, the school should develop its potential to support teacher leadership and needs to revise systematically the teachers' workload and time allocation so that teachers could experience less stress and raise their self-esteem. Teachers need to have the opportunity to discuss their attitudes towards strategies and approaches they see as meaningful in regard to workload and time allocation so that they might develop their leadership through teaching, implementing changes at school, and so on. Teachers need open, clear, and respectful communication from school administrations about reasons for additional or extracurricular work. Such active support for teacher leadership at school could be a significant factor in implementing effective strategies for teacher workload and time allocation management. If it is not effective, then teachers have no support, and their access to professional development, as the basis for teacher leadership, is limited because of the heavy workload and a complicated time allocation due to work overload.

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