What's behind Work Engagement in Teaching Practice?

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Abstracts: This systematic review aims to identify the various antecedents, outcomes, and dynamics of engagement as a state, whereas the development of research on engagement leads to a state concept. The search was conducted in September 2017 using four e-databases: ScienceDirect, ERIC, ProQuest, and psycINFO. Review methods followed the PRISMA-P 2015 guideline. Through the screening process, 33 articles were obtained and included in this study. Ninety-nine factors that affect teacher engagement were identified and grouped into five topics: job resources, personal resources, job demands, psychosocial variables, and demographic variables. A total of 11 outcomes were grouped into three topics: performance, social outcomes, and personal outcomes. The dynamics of teachers' engagement is explained only by the tendency to change throughout their career as a result of personal and organizational influences. The definition of work engagement used in all these studies refers to Schaufeli, in which work engagement is considered a state. However, no single study has illustrated the dynamics of work engagement as a state, in detail.

1 INTRODUCTION

Educational institutions require teachers as its primary driving force. Teachers play a central role in increasing students' success and implementing educational policy. Every positive change in the school environment invariably involves a teacher's role in implementing, maintaining, and evaluating those changes (Chen, Lattuca, and Hamilton, 2008; Clifton and Harter, 2003). Teachers' significant role in school, especially in the classroom, makes the study of teachers' engagement relevant to the management of every school. Engagement appears to provide considerable impact towards job satisfaction, participation at work, positive aspirations towards future careers, resilience, and reducing absenteeism (Parker, Martin, Colmar, and Liem, 2012).

Teachers' work engagement is related to increasing job satisfaction, work productivity, and students' engagement (Parker et al., 2012). Teaching is a profession that has special characteristics that must be considered. The general requirements of teaching as a profession are closely related to their primary duties, which are to teach, to educate, to plan lessons, to evaluate, and to provide counselling. Although, in general, teachers' primary duties are identical, teachers are responsible for creating a unique learning experience in the classroom. In other words, teachers have to handle different situations with varying demands and resources (Doyle, 1986). Prior researches show that teachers are prone to experiencing burnout and stress at the highest level of overall job concomitance and a high level of fatigue and cynicism (Hakanen, Bakker, and Schaufeli, 2006; Johnson et al., 2005). Therefore, it is important to study and assess teachers' engagement. To date, there is an inadequate level of systematic review and documentation related to teacher engagement.

There are considerable amount of research about teacher engagement that have been published; however, it has not been reviewed systematically. A systematic review is necessary to identify antecedents, consequences, and an understanding of work engagement as a psychological state. The result of systematic review study might become a reference for researchers who have an interest in developing or replicating a study with a similar topic.

Work engagement is defined as a state of mind, which is indicated by the presence of vigor, dedication, and absorption (Schaufeli, Salanova, Gonzalez-Roma, and Bakker, 2002). In studies with

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an educational context, the teachers' engagement construct is emphasized to describe work engagement, which is specific to teachers. Studies of teachers' engagement is mainly explored using the job-demands resources model. This model examines various job demands and personal resources, which differentiate between teachers who experience fatigue and those who do not. It also distinguishes teacher who engage with their work and those who are disengaged. Teacher engagement is conceptualized by Klassen, Yerdelen, and Durksen (2013) based on Kahn's (1990) definition as a motivational construct, which encompasses four dimensions, which, among others, are cognitive engagement (CE), emotional engagement (EE), social engagement: student (SES) and social engagement: colleagues (SEC). Cognitive engagement (CE) is indicated by the presence of passion, persistence, and devotion to teach. Emotional engagement (EE) is manifested in positive emotional response during work. Social engagement: student (SES) is demonstrated by the extent of warmth given by teachers to students, their commitment, and connectedness. Meanwhile, social engagement: colleagues (SEC) is demonstrate through the degree of warmth, commitment, and effort to maintain a responsible relationship with colleagues.

The vast majority of work engagement studies have attempted to explain work engagement by using an inter-individual approach. Earlier researches have managed to explain antecedents and consequences, as well as describing a means to establish work engagement using the aforementioned approach, by measuring and comparing each individual degree of engagement (Schaufeli, 2012). Numerous studies used an inter individual approach due to its view of engagement as a static trait. In other words, engagement is considered to be permanent in an individual. Several of the latest researches employing an inter-individual approach, showed that teachers' engagement fluctuates regularly. This fluctuation depends on the event that occurs during the working day (Sonnetag, 2003; Xanthopoulou dkk, 2008; Xanthopoulou et al., 2009; Baker and Bal, 2010; Schaufeli, 2014; Kirkpatrick and Johnson, 2014; Makikangas, Hyvonen, and Feldt, 2017). Generally speaking, the notion of engagement is a state consistent with the definition of engagement proposed by Kahn (1990) and Schaufeli et al (2002). In terms of an intra-personal approach, the state in the engagement is focused on the fluctuation of vigor, dedication, and absorption during a short

period (daily or weekly basis) (Sonnetag, Dormann, and Demerouti, 2010).

The aim of this literature review is to systematically examine antecedents or factors that influence the outcomes of, and describe dynamics of teachers' engagement as a state. Therefore, the research questions behind this systematic review are:

1. What factors are known to influence or predict work engagement in teaching practice?
2. What outcomes are known to be associated with work engagement in teaching practice?
3. How is the dynamic of work engagement a state in teaching practice?

2 METHOD

This study used Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols 2015 (PRISMA-P 2015) for its guidelines. PRISMA-P 2015 consists of a 17-item checklist intended to facilitate the preparation and reporting of a robust protocol for a systematic review (Moher et al., 2015). Protocol preparation is a critical component of the systematic review process. It ensures that the literature study being conducted with scientific rigor, is documented explicitly before commencing the study, is consistent, and ensures transparency until the review process is complete.

2.1 Search Strategy and Data Sources

The search strategy in this study employed four electronic database resources, namely ScienceDirect, ERIC, ProQuest, and psycINFO. A data search was conducted in September 2017. Keywords used in the databases were "work engagement" and "teacher". See Table 1 for the search strategy.

Table 1: Research Strategy and Result. Total abstracts and titles reviewed: 1,857. Total abstracts and titles reviewed minus duplicates: 267. First selection of studies (after title and abstract review): 121.

Database/source (2008–2018)	Search term	Sum of titles and abstracts
Science Direct	"work engagement" AND "teacher"	895
ERIC	"work engagement" AND "teacher"	735
ProQuest	"work engagement"	210

	AND "teacher" , include grey publication (online dissertation)	
psycINFO	"work engagement" AND "teacher"	17

For the second selection of manuscripts/studies (after the full text review), there were 33 with only demographic data, such as gender and age.

2.2 Inclusion Criteria

The inclusion criteria applied were: 1) peer-reviewed journals; 2) articles fully written in English; 3) examining teachers' work engagement; 4) investigates antecedents, outcomes, and, or state of work engagement; and 5) quantitative and qualitative studies.

2.3 Screening

The initial screening was conducted by selecting all the titles and abstracts that corresponded to the inclusion criteria. Selected titles and abstracts from the initial screening were then further selected based on the inclusion criteria.

2.4 Data Extraction

Data that was extracted from articles involved the writer's name, the year, the name of the journal, countries, aims, theoretical framework or model, conceptualization or definition of work engagement, methodological approach, sample or participants, reported reliability and validity, data analysis techniques, and the results.

2.5 Methodological Quality Review

The review of methodological quality was performed by evaluating the study design, sampling techniques (articles or participants), the measurement or data collection process, and analysis techniques (Cowden, Cummings, Profetto-McGrath, 2011; Cummings, MacGregor, Davey, Lee, Wong, Lo, Muise, Stafford, 2010; Germain and Cummings, 2010).

2.6 Analysis

Data that had been extracted, was then synthesized by using narrative-descriptive techniques. Reviews carried out on teachers' work engagement outcomes and factors, were considered influential to the aforementioned construct. By using content analysis, these influencing factors and teachers' work engagement outcomes were then grouped into several topics. The Job Demands-Resource (JD-R) model of work engagement was used in almost all of studies that had been reviewed. The identified topics later compared with JD-R to discover consistent or novel findings to expand the explanation of the JD-R model. All the studies in this review applied a total score of work engagement in the same manner as Schaufeli dan Bakker (2003; in Bakker and Demerouti, 2008).

3 RESULTS

3.1 Search Result

The initial screening process to which was applied inclusion and exclusion criteria, yielded 121 manuscripts for which the full text would be reviewed. There were 17 articles with unavailable full texts, therefore they were omitted. Thirty-four out of 63 full-text manuscripts explained their methodology in a clear and detail manner. The 34 selected articles, which passed initial screening, were then further selected based on more rigid inclusion criteria. There was one article excluded (Klassen, Yerdelen, and Durksen, 2013; Klassen et.al, 2012) due to the aims which did not match this study. In total, 33 articles were analyzed.

Among the 33 articles analyzed, three of the articles were dissertations (Sokolov, 2017; Coleman, 2016; Munson, 2012). There were two articles with qualitative study design (Kirkpatrick and Johnson, 2014; Mäkinen, 2013) and one article employing a mixed-method study design (Munson, 2012), the rest of the 28 articles were quantitative correlation studies.

3.2 Summary of Methodological Quality Assessment

A methodological quality assessment for correlational studies was conducted by adapting Cummings et al. (2010) and the method of Germain and Cummings (2010), which consisted of evaluating study design quality, a sampling technique, measurement, a theoretical model/ the framework used for guidance, and statistical analysis. Meanwhile, for qualitative studies, an assessment was performed by using criteria from the Critical Skills Appraisal Program (CASP, 2010).

One study applied a mixed-method design wherein the quantitative method became primary procedure, whereas the qualitative method was applied to assist the data analysis process, methodological quality assessment through the application of quantitative criteria. According to the methodological quality assessment tool, 33 articles fulfilled 99% of the listed criteria. However, the "are outliers managed" criteria was unexplained in all quantitative study articles.

3.3 Descriptive - Narrative Synthesis of Result

During the analysis process, all of the articles used a definition of engagement definition from Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) and JD-R model (Bakker and Demerouti, 2008) to describe theoretical framework and the work engagement measurement (Schaufeli and Taris, 2014). The analysis result identified factors and outcomes, which were aligned with the JD-R engagement model.

Factors influencing teachers' engagement, cover:
1) Job resources topic, consisted of factors such as: perception of trust in colleagues and students, organizational support, and organizational climate (Altunela, Kocak, and Cankir, 2015; Song, Bae, Park, and Kim, 2013), communication of learning goals, feedback or evaluation of supervisor, leadership (Kulophas, Hallinger, Ruengtrakul, Wongwanich, 2017; Song, Bae, Park, and Kim, 2013); work-role fit (Rothmann and Hamukang'andu, 2013), learning and development opportunities (Altunela, Kocak, and Cankir, 2015; Bakker and Bal, 2010), job resource (autonomy, coaching, task significance) (Altunela et al., 2015; Runhaar, Konermann, and Sanders, 2013; Bakker et al., 2010), and job satisfaction, and extra-role behavior (Skaalvik and Skaalvik, 2013; Simbula and Guglielmi, 2013).
2) The personal resources topic, comprised of self-efficacy (Buric and Macuka, 2017; Gumbau, Salanova-Soria, 2014; Skaalvik and Skaalvik, 2014; Høigaard, Giske, and Sundsli, 2012), calling orientation (Rothmann and Hamukang'andu, 2013), teacher experience (Amini and Siyyari, 2018); academic optimism (Kulophas, Hallinger, Ruengtrakul, Wongwanich, 2017), career satisfaction (Timms and Brough, 2013), role conflict and ambiguity (Bermejo-Toro, Prieto-Ursúa, and Hernandez, 2015), belief about teaching and teacher ability to approach

mastery (Hana, Yin, and Wang, 2015), hope, resilience or buoyancy, and coping style (Munson, 2012; Parker and Martin, 2009), teacher goal orientation (Skaalvik and Skaalvik, 2013), mental health problems (Simbula and Guglielmi, 2013), compassion (Eldor and Shoshani, 2016), negative emotion (Buric et.al, 2017), psychological capital (Coleman, 2016), and personalities (Perera, Granziera, Mclleven, 2018; Li, Wang, and You, 2017).
3) Job demand topics shaped by two factors, namely work overload and challenging behaviour from students (Bermejo-Toro et al, 2015).
4) The psychosocial topic consisted of six factors, which were students' social background (Klusmann, Kunter, Trautwein, Ludtke, and Baumert, 2008), social support and parental involvement (Bermejo-Toro et al., 2015; Bakker et al., 2010), control, reward, fairness, and work-life balance (Timms et al., 2013).
5) The demographic variables topic involved two factors, namely gender and age (Guglielmi, Bruni, Simbula, Fraccaroli, and Depolo, 2015; Runhaar et al., 2013).

Teachers' work engagement outcomes include:
1) The performance topic, which contains five consequences, namely OCB and teaching performance (Scheepers, Arah, Heineman, and Lombart, 2014), teaching intention (Shuo Chen, 2017), number of differented instructional formats used in each class, and time to use instruction (Sokolov, 2017).
2) Social or organizational topic outcomes consisting of three consequences, namely attitude toward student and perception of organizational trust (Gülbahar, 2017).
3) The personal outcomes topic covers five consequences: job satisfaction (Skaalvik and Skaalvik, 2013; Simbula et al., 2013), burnout (Amini and Siyyari, 2018; Gumbau et al., 2014; Hakanen, Bakker, and Schaufeli, 2006), intention to quit (Høigaard, Giske, and Sundsli, 2012), commitment (Hana, Yin, and Wang, 2015), and mental health problems (Simbula et al., 2013).

A review of teachers' engagement dynamics showed several findings:
1) Teachers' engagement was inclined to change throughout their career and was formed by both personal or organizational influences (Kirkpatrick and Johnson, 2014).
2) There were dissimilarities between teachers' engagement types in some studies. For example, Kirkpatrick and Johnson (2014) proposed three types of teacher engagement, namely modified

engagement, focused engagement, and diversified engagement. Another study by Makinen (2013) suggested different categories of engagement, namely one-size-fits-all, engaging in didactic pedagogy, and engaging in transformational teaching.

There were very limited number of qualitative designed studies that could illustrate the process and dynamics of work engagement fluctuation in detail. Gaining an understanding of the dynamics of teachers' work engagement will potentially guide efforts to encourage and sustain the engagement itself.

4 DISCUSSION

The findings of this study offered a more comprehensive understanding of teachers' engagement. The result provided insights in term of antecedents and outcomes, which are unique to teachers. It clarified knowledge discrepancy and served as fundamental for study in the professional teaching field.

During the analysis process, synthesized findings were compared with the Job Demands-Resources (JD-R)model, which was mostly used in work engagement studies. However, the aforementioned model was considered inadequate to describe several essential variables in teachers' work engagement, such as psychosocial variables (e.g., students' social background and parents involvement in students' educational process). The JD-R model actually has limitations, namely specificity and an in-depth explanation of the process between the concept in the model (Schaufeli and Taris, 2014).

The JD-R model was inclined to be a heuristic and descriptive model rather than explanatory; thus, it is necessary for the researcher to provide an additional theoretical framework to explain the psychological mechanism that occurred. This psychological mechanism referred to relationship between job demands, resources, and outcomes of work engagement process. However, this JD-R model was mostly used due to its generalizability and flexibility, which was suitable with teachers' current work engagement study trends.

The association between control and rewards with teachers' work engagement still gains minimum attention. Generally, the job of teachers job demands a considerable overload; moreover they have to deal with students' challenging behavior, thus it is logically acceptable that control and rewards for

teachers should be given more attention (Bermejo-Toro et al., 2015).

Leadership and organizational support have also become key factors to encourage teachers' work engagement (Kulophas et al., 2017; Song et al., 2013). There was strong correlation between these two variables and teachers' work engagement. The head teacher's role, which manifested from transformational leadership, was critical to develop high levels of engagement in teachers. Leadership roles were not there merely to give feedback to teachers, but also to provide support (Altunela et al., 2015; Song, Bae, Park, and Kim, 2013), communicate study aims, and facilitate teachers with learning opportunities (Kulophas et al., 2017; Altunela et al., 2015; Song et al., 2013; Bakker and Bal, 2010).

The outcomes of this study were expected to bring some attention towards teachers' professional factors in future studies. Bakker and Demerouti (2008) and several other work engagement researchers mainly focused on organizational outcomes of work engagement or performance. However, this systematic review discovered that personal factor variables dominated studies and corresponded to teachers' engagement. Teachers' work engagement outcomes mostly contribute benefits to teacher as individuals rather than organizational level outcomes.

Several studies applied flagged analysis and feedback demonstrated that antecedents variables might became outcomes in relation to work engagement. Among others were job satisfaction, self-efficacy, and mental health (Skaalvik and Skaalvik, 2013; Simbula and Guglielmi, 2013). In fact, the result of this study also indicates its drawbacks. The articles reviewed were limited to correlational studies. Correlational studies merely indicated the relationship between variables. Thus, the researcher was unable to conclude any influence or causal relationships between variables. Therefore, future research should consider including teachers' work engagement studies, which utilize experimental or longitudinal design.

4.1 Implications for Teachers' Professional Practice

The review findings showed that personal resources and professionalism corresponded with work engagement. Identification towards specific variables from job demands and resources significantly contributed towards teachers as

individuals and the development of their professionalism.

4.2. Implications for Leaders and Policy Maker

The responsibility of improving work engagement is not solely a teacher's individual duty, but extends to the practical environment, such as the organization and educational system. Therefore, it is important for this issue to be taken into consideration when stakeholders and policy makers wish to improve teachers' professionalism. Leadership, organizational support (i.e. a supportive organizational climate, coaching, and training availability) and family and social support are also associated with teachers' work engagement.

5 CONCLUSIONS AND LIMITATIONS

This systematic review's findings showed that both individual and organizational factors were related to influencing teachers' work engagement. Teachers' work engagement also provides both positive and negative consequences on an individual and organizational level.

These literature review findings suggest further study to consider applying the JD-R model to explain teachers' work engagement. However, subsequent studies should consider teachers' work engagement, social resources, and outcomes. This is because teachers' duties require them to intensively build and maintain social relationships, especially with students, parents, and colleagues.

The results of this study could be grounding to develop various studies of teachers' work engagement antecedents and consequences based on teachers' social resources. Furthermore, a future study could develop an instrument to measure teachers' work engagement. However, the described teachers' work engagement still had some limitations. These solely consider engagement as a trait. The explanation of teachers' engagement as a state, by depicting its dynamics, requires further comprehensive study. Aside from contribution towards the work engagement theoretical gap, gaining a comprehensive understanding about the dynamics of engagement could contribute towards the establishment of evidence-based intervention for teachers.

There were few things that had been taken into consideration before conducting this study and it became our limitation. Among others were that this literature review exclusively analyzed articles about teachers' work engagement without considering schools' context (i.e. level of education and environment). Including the schools' context in the search keywords may lead to different articles. Most of the analyzed articles were correlational design studies, therefore it was impossible to draw any causal relationship that could directly support specific variables of a causal claim. Thus, antecedent variables and outcome variables could not be used interchangeably.

REFERENCES

Altunela, M., C., Kocak, O., E., and Cankir, B. 2015. The Effect of Job Resources on Work Engagement: A Study on Academicians in Turkey. *Educational Sciences: Theory and practice.* 15, 2, 409-417. Retrieved in September 21st 2017. doi: 10.12738/estp.2015.2.2349.

Bakker, A.B., Albrecht, S.L., Leiter, M.P., 2011. Key questions regarding work engagement. *Eur. J. Work Organ. Psychol*. 20, 1, 4–28. Retrieved in September 10th 2017. http://dx.doi.org/10.1080/1359432x.2010.485352.

Bakker, A.B., Bal, P.M., 2010. Weekly work engagement and performance: a study among starting teachers. *J. Occup. Organ. Psychol.* 83, 189–206. Retrieved in September 2017. http://dx.doi.org/10.1348/096317909X402596.

Bakker, A.B., Demerouti, E., 2007. The job demands-resources model: state of the art. J. Manag. Psychol. 22 (3), 309–328. Retrieved in April 2017. http://dx.doi.org/10.1108/02683940710733115.

Bakker, A.B., Demerouti, E., 2008. Towards a model of work engagement. Career Dev. Int. 13 (3), 209–223. Retrieved in September 2017. http://dx.doi.org/10.1108/ 13620430810870476..

Bakker, A., and Bal, M., 2010. Weekly work engagement and performance: A study among starting teachers. *Journal Of Occupational And Organizational Psychology, 83,* 189-206. Retrieved in September 2017. doi:10.1348/096317909X402596.

Bakker, A. B., Demerouti, E., 2008. Towards a model of work engagement. *Career Development International*, 13, 3, 209-223. Retrieved in February 2018. doi: 10.1108/13620430810870476

Bermejo-Toro, L., Prieto-Ursúa, M., and Hernández, V., 2015. Towards a model of teacher well-being: personal and job resources involved in teacher burnout and engagement. Educational Psychology. Retrieved in September 21st 2017. http://dx.doi.org/10.1080/01443410.2015.1005006.

Buric, I., and Macuka, I., 2017. Self-efficacy, emotions and work engagement among teachers: A two wave cross-lagged analysis. *Journal of Happiness Study.* Retrieved in September 2017. Doi: 10.1007/s10902-017-9903-9

Chen, I., S 2017. Work engagement and its antecedents and consequences: A case of lecturers teaching synchronous distance education courses. Computers in Human Behavior, 72, 655-663. Retrieved in September 2017. http://dx.doi.org/10.1016/j.chb.2016.10.002.

Chen, H. L., Lattuca, L. R., and Hamilton, E. R. (2008). Conceptualizing engagement: Contributions of faculty to student engagement in engineering. *Journal of Engineering Education*, *97*, 3, 339-353. Retrieved in September 2017. doi:10.1002/j.2168-9830.2008.tb00983.x

Coleman, S. 2016. Teachers as a leader: The role of Psycap on the work engagement of elementary school teacher. Proquest: online dissertation.

Cummings, G., MacGregor, T., Davey, M., Lee, H., Wong, C.A., Lo, E., Muise, M., Stafford, E., 2010. Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. Int. J. Nurs. Stud. 47, 363–385. Retrieved in April 2018. http://dx.doi.org/10.1016/j.ijnurstu. 2009.08.006.

Critical Appraisal Skills Programme (CASP), 2010. 10 Questions to Help You Make Sense of Qualitative Research. Retrieved in April 2018. http://www. caspinternational.org/mod_product/uploads/CASP%20 Qualitative%20Research%20Checklist%2031.05.13.p df.

Doyle, W. 1986. *Handbook on research on teaching*. New York: MacMillam.

Eldor, L., Shoshani, A. 2016. Caring relationships in school staff: Exploring the link between compassion and teacher work engagement. *Teaching and Teacher Education*, 59, 126-136. Retrieved in Sepetember 2017. doi: org/10.1016/j.tate.2016.06.001.

Eldor, L. Shoshani, A. 2017. Are you being served? The relationship between school climate for service and teachers' engagement, satisfaction, and intention to leave: A moderated mediation model. *The Journal of Psychology.* Retrieved in September 2017. http://dx.doi.org/10.1080/00223980.2017.1291488.

Faskhod, A., A., Siyyari, M., 2018. Dimensions of Work Engagement and Teacher Burnout: A Study of Relations among Iranian EFL Teachers. *Australian Journal of Teacher Education*, 43, 1. Retrieved in September 30th 2017. http://ro.ecu.edu.au/ajte/vol43/iss1/5

Germain, P.B., Cummings, G., 2010. The influence of nursing leadership on nurse performance: a systematic review. *J. Nurs. Manag*. 18, 425–439, http://dx.doi.org/10.1111/j.1365-2834.2010.01100.x.

Guglielmi, D., Bruni, I., Simbula, S., Fraccaroli, F., Depolo, M. 2016. What drives teacher engagement: a study of different age cohorts. *European Journal of Psychology and Educational*, 31:323–340. Retrieved in September 2017. doi: 10.1007/s10212-015-0263-8.

Gulbahar, B., 2017. The Relationship between Work Engagement and Organizational Trust: A Study of Elementary School Teachers in Turkey. *Journal of Education and Training Studies*, 5, 2; Retrieved in September 20th 2017. doi:10.11114/jets.v5i2.2052.

Hakanen, J. J., Bakker, A. B., and Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, *43*(6), 495-513. Retrieved in September 2017. doi:10.1016/j.jsp.2005.11.001

Halbesleben, J.R.B., Wheeler, A.R., 2008. The relative role of engagement and embeddedness in predicting job performance and turnover intention. Work Stress 22, 242–256.

Halbesleben, J.R.B., 2010. A meta-analysis of work engagement: relationships with burnout, demands, resources, and consequences. In: Bakker, A.B., Leiter, M.P (Eds.), *Work Engagement: A Handbook of Essential Theory and Research. Psychology Press,* New York, NY, pp. 102–117.

Hakanen, J. J., Bakker, A. B., and Schaufeli, W. B. 2006. Burnout and work engagement among teachers. *Journal of School Psychology, 43,* 495-513. Retrieved in September 2017. doi:10.1016/j.jsp.2005.11.001.

Han, J., Yin, H., and Wang, W., 2015. The effect of tertiary teachers' goal orientations for teaching on their commitment: the mediating role of teacher engagement. *An International Journal of Experimental Educational Psychology*. Retrieved in September 2017. http://dx.doi.org/10.1080/01443410.2015.1044943 .

Høigaard, R., Giske, R., and Sundsli, K., 2012, Newly qualified teachers' work engagement and teacher efficacy influences on job satisfaction, burnout, and the intention to quit. *European Journal of Teacher Education,* 35, 3, 347-357. Retrieved in September 2017.
http://dx.doi.org/10.1080/02619768.2011.633993

Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., and Millet, C. 2005. The experience of work-related stress across occupations. *Journal of Managerial Psychology*, *20*, 2, 178-187. Retrieved in September 2017. doi:10.1108/02683940510579803

Kahn, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*, 4, 692-724. Retrieved in September 2017. doi:10.2307/256287.

Kirkpatrick, C., L., Johnson, S., M. 2014. Ensuring the ongoing engagement of second-stage teachers. *Educational Change,* 15, 231–252. Retrieved in September 2017. doi: 10.1007/s10833-014-9231-3.

Klassen, R. M., Yerdelen, S., and Durksen, T. L. 2013. Measuring teacher engagement: Development of the engaged teachers scale (ETS). *Frontline Learning Research*, 1(2), 33–52.

Klassen, R., M., Aldhafri, S., Mansfield, C., A., Purwanto, E., Siu, A., F., Y., Wong, M., W., and Woods-McConney, A. 2012. Teacher' engagement: An international validation study. The journal of experimental education, 80, 4. Retrieved in September 2017. doi: 10.1080/00220973.2012.678409.

Klusmann, U., Kunter, M., Ulrich, T., Lüdtke, O., and Baumert, J., 2008. Engagement and Emotional Exhaustion in Teachers: Does the School Context Make a Difference?. *Applied Psychology: An International Review*, *57*, 127–151. Retrieved in September 2017. doi: 10.1111/j.1464-0597.2008.00358.x.

Kulophas, D., Hallinger, P., Ruengtrakul, A., Wongwanich, S., 2017. Exploring the effects of authentic leadership on academic optimism and teacher engagement in Thailand. *International Journal of Educational Management.* Retrieved in September 2017. https://doi.org/10.1108/IJEM-10-2016-0233

Leiter, M.P., Bakker, A.B., 2010. Work engagement: introduction. In: Bakker, A.B., Leiter, M.P. (Eds.), Work Engagement: A Handbook of Essential Theory and Research. Psychology Press, New York, NY, pp. 10–24.

Li, M., Wang, Z., Gao, J., and You, X., 2017. Proactive personality and job satisfaction: The mediating effects of self-efficacy and work engagement in teachers. *Curr Psychology*, 36, 48–55. Retrieved in September 12th 2018. Doi: 10.1007/s12144-015-9383-1.

Llorens-Gumbau, S., Salanova-Soria, M. 2014. Loss and gain cycles? A longitudinal study about burnout, engagement and self-efficacy. *Burnout Research* xxx (2014) xxx–xxx. Retrieved in September 2017. http://dx.doi.org/10.1016/j.burn.2014.02.001

Mäkinen, M. 2013. Becoming engaged in inclusive practices: Narrative reflections on teaching as descriptors of teachers' work engagement. *Teaching and Teacher Education*, 35, 51-61. Retrieved in September 2017. doi: org/10.1016/j.tate.2013.05.005.

Makikangas, A., Hyvonen, K., and Feldt, T. 2017. The energy and identification continua of burnout and work engagement: Development profiles over eight years. *Burnout Research*, 5, 44-54. Retrieved in June 2018. https://doi.org/10.1016/j.burn.2017.04.00

May, D. R., Gilson, R. L., and Harter, L. M. 2004. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77, 1, 11-37. Retrieved in September 2017. doi:10.1348/096317904322915892.

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L., A., and PRISMA-P Group 2015. 2015. 'Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement'. *Systematic Reviews*, 4, 1. Retrieved in May 10th 2018. http://www.systematicreviewsjournal.com/content/4/1/1.

Munson, V. 2012. *Teacher engagement in a northwestern british Columbia school district*. Proquest: online dissertation

Parker, P. D., Martin, A. J., Colmar, S., and Liem, G. A. 2012. Teachers' workplace well-being: Exploring a process model of goal orientation, coping behavior, engagement, and burnout. *Teaching and Teacher Education*, *28*, 4, 503-513. Retrieved in September 2017. doi:10.1016/j.tate.2012.01.001.

Pereraa, H., N., Granziera, H., McIlveen, P. 2018. Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality and Individual Differences*, 120 (2018) 171–178. http://dx.doi.org/10.1016/j.paid.2017.08.034.

Rothmann, S., and Hamukang'andu, L., 2013. Callings, work role fit, psychological meaningfulness and work engagement among teachers in Zambia. *South African Journal of Education, 33, 2.* Retrieved in September 2017. http://www.sajournalofeducation.co.za.

Runhaar, P., Konermann, J., Sanders, K., 2013. Teachers' organizational citizenship behaviour: Considering the roles of their Work engagement, autonomy and leader-member exchange. *Teaching and Teacher Education*, 30, 99-108. Retrieved in September 2017. doi: http://dx.doi.org/10.1016/j.tate.2012.10.008

Schaufeli, W.B. 2012. Work engagement: What do we know and where do we go? *Romanian journal of applied psychology*, 14, 1, 3-10.

Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V., and Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3,* 71–92. Retrieved in September 2017. doi: 10.1023/A:1015630930326.

Schaufeli, W.B., Taris, T.W., 2014. A critical review of the job demands resources model: implications for improving work and health. In: Bauer, G.F., Hammig, O. (Eds.), Bridging Occupational, Organizational, and Public Health: A Transdiscplinary Approach. Springer Science and Business Media, Dordrecht, pp. 43–68, http://dx.doi.org/10.1007/ 978-94-007-5640-3_4.

Schaufeli, W.B., Bakker, A.B., 2003. Utrecht Work Engagement Scale (UWES): Preliminary Manual. Occupational Health Psychology Unit, Utrecht University, ND.

Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V., and Bakker, A. B. 2002. The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3,* 71–92. Retrieved in September 2017. doi: 10.1023/A:1015630930326.

Scheepers, R., A., Arah, O., R., Heineman, M., J., Lombarts, K., M., J., M., H. 2015. In the eyes of residents good supervisors need to be more than engaged physicians: the relevance of teacher work engagement in residency training. *Advance in Health Science and Education*, 20:441–455. Retrieved in September 2017. doi: 10.1007/s10459-014-9538-0.

Simbulaa, S., Guglielmi, D. 2013. I am engaged, I feel good, and I go the extra-mile: Reciprocal relationships between work engagement and consequences. *Journal of Work and Organizational Psychology*, 29, 117-125. Retrieved in September 2017 doi: http://dx.doi.org/10.5093/tr2013a17.

Skaalvik, E., M., Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional

exhaustion. *Psychological Reports: Employment Psychology & Marketing. Retrieved in September 2018.* doi: 10.2466/14.02.PR0.114k14w0.

Sokolov, C., K. 2017. Teacher engagement in grades 4-8. Proquest: online dissertation.

Sonnentag S. 2003. Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal Applied Psychology*. 88:518–528.

Song, J., H., Bae, S., H., Park, S., Kim, H., K., 2013. Influential factors for knowledge creation practices of CTE teachers: mutual impact of perceived school support, transformational leadership, and work engagement. *Asia Pacific Educ. Rev*, 14:467–482. Retrieved in September 2017. Doi: 10.1007/s12564-013-9283-8

Sonnentag, S., Dormann, C., and Demerouti, E. 2010. Not all days are created equal: The concept of state work engagement. In A. B. Bakker and M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 25-38). New York, NY: Psychology Press.

Timms, C., and Brough, P. 2013. "I like being a teacher" Career satisfaction, the work environment and work engagement. *Journal of Educational Administration*, 51, 6, 768-789. Retrieved in Septemebr 2017. doi: 10.1108/JEA-06-2012-0072

Xanthopoulou, D., Bakker, A.B., Demerouti, E., Schaufeli, W.B., 2007. The role of personal resources in the job demands-resources model. Interv. *J. Stress Manag*. 14, 121–141.

Xanthopoulou, D., Bakker, A.B., Demerouti, E., Schaufeli, W.B., 2009. Work engagement and financial returns: a diary study on the role of job and personal resources. *J. Occup. Organ. Psychol.* 82, 183–200. Retrieved in September 2017. http://dx.doi.org/10.1348/096317908X28563