

The Effect of Education Level on Psychological Empowerment and Burnout-The Mediating Role of Workplace Learning Behaviors

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Abstract—The study investigates the relationship between education level, workplace learning behaviors, psychological empowerment and burnout in a sample of 191 teachers. We hypothesized that education level will positively affect psychological state of increased empowerment and decreased burnout, and we purposed that these effects will be mediated by workplace learning behaviors. We used multiple regression analyses to test the model that included also the 6 following control variables: The teachers' age, gender, and teaching tenure; the schools' religious level, the pupils' needs: regular/ special needs, and the class level: elementary/ high school. The results support the purposed mediating model.

Keywords—Education level, Learning behaviors, Psychological empowerment, Burnout.

I. INTRODUCTION

HIGH education is a desired characteristic of the work force in the competitive and dynamic environment, and is considered as a necessary condition for many jobs. Beyond the knowledge acquired during the years of studies which is often necessary for carrying out the job, is there also other advantage for higher education regarding the way the worker copes with his job and with organizational conditions?

Surprisingly, there is a lack of research regarding the effect of education level on the worker's learning behaviors, psychological empowerment, burnout, or any other aspect of his coping behavior, well-being, or performance. The present research aims to contribute by reducing that research deficiency, and to point on the relationship between higher education and workplace learning behaviors, psychological empowerment and burnout.

A major difficulty in investigating the effects of higher education is that employees with different education levels usually have different jobs, which are characterized by different demands, discretion, rewards, and other job and organizational conditions.

Therefore, in the present research we investigate workers within the same job, but with different education levels. Teaching is an occupation that requires a certain level of education and certification but still there is a considerable variability among the education levels of teachers as some have higher education than the required minimum level and

have more advanced academic degrees. Therefore, the present research investigates the relationship between teachers' education level, workplace learning behaviors, psychological empowerment and burnout.

We suggest that higher education contributes not only to the level of knowledge that is necessary to carry out the job but also has other advantages as it is related to learning behaviors in the workplace that further contribute to the worker's psychological state of increased empowerment and reduced burnout.

A. Effect of Education Level on Learning Behaviors in the Workplaces

Former research raised support for the effect of several job characteristics such as demands and control [9], [14], [15], [26]-[29] and worker characteristics such as proactive personality [3], [5], [8], [20] on proactive coping and workplace learning behaviors. In the present research we focus on the worker education level as contributing to proactive learning behaviors in the workplace. We suggest that higher education nurtures motivation for mastery and development, and fosters learning behaviors.

Learning behaviors in the workplace include behaviors such as seeking new information and feedback on job performance, reflecting on results, errors and unexpected outcomes, and figure out ways to improve work processes [4], [6], [7], [10], [11]. They lead to smarter work as one improves his work methods, processes and strategies and thus invest his efforts in more fruitful ways [12], [15], [22]. They are proactive behaviors, meaning, self-initiated, future-oriented, and aim to change and improve [8], [21], [28]. Higher education level strengthens confidence and mastery motivation that are manifested by that learning behavior pattern [27].

Therefore, we hypothesize:

Hypothesis 1. Education level will be positively related to workplace learning behaviors. Teachers with higher education level will demonstrate higher levels of workplace learning behaviors.

B. Effect of Proactive Learning on Psychological Empowerment and Burnout

Both, burnout [16], [17], and psychological empowerment [23]-[25] raised a lot of interest as central concepts describing the worker psychological state at work, and there is a lot of research support regarding their effect on the worker's behaviors (for example turnover, and organizational

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citizenship behavior), attitudes (for example, job satisfaction and organizational commitment), well-being, health, and performance.

Burnout is an adverse psychological consequence of prolonged job related strain and it is defined by three dimensions of exhaustion, cynicism, and inefficacy [16], [17]. Exhaustion prompts actions to distance oneself emotionally and cognitively from one's work, presumably as a way to cope with the work overload. Depersonalization is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique. Outside of the human services, people use cognitive distancing by developing an indifference or cynical attitude. It is difficult to gain a sense of accomplishment when feeling exhausted or when helping people toward whom one is indifferent [16], [17]. Psychological empowerment [24], [25] is a state of increased intrinsic motivation manifest in a set of four dimensions: meaning, competence, self-determination and impact. Meaning is the value of a work goal or purpose. Competence, or self-efficacy, is an individual's belief in his or her capability to perform activities with skill. Self-determination is an individual's sense of having choice in initiating and regulating and it reflects autonomy in the initiation and continuation of work behaviors and processes. Impact is the degree to which an individual can influence strategic, administrative, or operating outcomes at work [24], [25]. Our argument that job learning activity reduces burnout and increases psychological empowerment is supported by the "active learning hypothesis" of the demand- control model of job stress: "Only average psychological strain is predicted for 'active jobs' because much of the energy aroused by the job's many stressors ('challenges') are translates into direct action-effective problem solving- with little residual strain to cause disturbance." [13]. Elsewhere the "active learning hypothesis" was phrased as follows: "An active job and its successful learning opportunities lead to increased feelings of mastery and confidence. This feeling in turn helps the person to cope with the inevitable strain inducing situations of the job. The result is reduced residual strain and thus increased capacity to accept still more learning and positive personality change, *ad infinitum*" [14]. Karasek's active learning hypothesis, points to a two phase process where job characteristics affect learning and learning affect strain. Previous research on the active learning hypothesis mainly focused on the effect of job characteristics (demands and control levels) on learning (for example, [20], [27]) but neglected the effect of learning on strain and on the worker psychological state of burnout or empowerment. Therefore, a main contribution of the present research is help to fill that gap. Smarter behavior, meaning the use of improved work strategies might relieve the workload and thus relieve exhaustion. Also, by investing in learning the worker avoids indifference and exercises discretion and self-determination in initiating the learning behaviors. Learning behaviors improves the worker's performance level and therefore lead to higher professional efficacy and accomplishment. A higher sense of impact results as the worker succeeds in improving organizational affairs.

Introducing new work methods also make the work less repetitive and thus more meaningful.

Therefore, we hypothesize:

Hypothesis 2. Workplace learning behaviors will be positively related to psychological empowerment. Teachers with higher level of workplace learning behaviors will demonstrate higher levels of psychological empowerment.

Hypothesis 3. Workplace learning behaviors will be negatively related to burnout. Teachers with higher level of workplace learning behaviors will demonstrate lower levels of burnout.

C. Learning Behaviors as Mediating the Effect of Education Level on Psychological Empowerment and Burnout

We suggest that education level will have positive effect on burnout and psychological empowerment but that these effects will be mediated by workplace learning behaviors. Higher education does not directly lead for increased psychological empowerment or for decreased burnout. It is the learning behaviors that bridge between the worker education and the resulting psychological state of higher empowerment and reduced burnout. When considering the workers within the same job it's the differences between the workers, presumably their coping and learning behaviors, which account for the differences in their psychological state.

Therefore, we hypothesize:

Hypothesis 4. Education level will have a positive effect on psychological empowerment. Teachers with higher education level will demonstrate higher levels of psychological empowerment

Hypothesis 5. Education level will have a negative effect on burnout. Teachers with higher education level will demonstrate lower levels of burnout.

Hypothesis 6. Workplace learning behaviors will mediate the effect of education level on psychological empowerment.

Hypothesis 7. Workplace learning behaviors will mediate the effect of education level on burnout.

For sum, as seen in Fig. 1, we suggest that higher education will lead to higher level of workplace learning behaviors, higher level of psychological empowerment and lower levels of burnout, and that the effect of education level on psychological empowerment and burnout will be mediated by the learning behaviors.

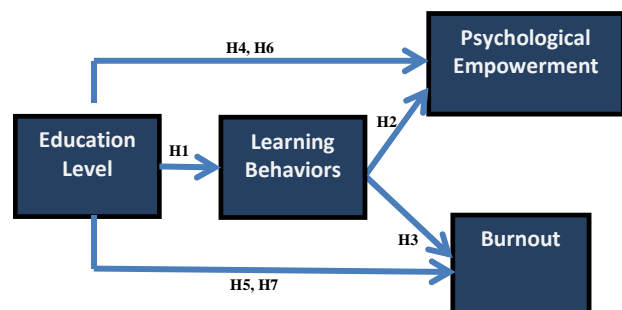


Fig. 1 The research model

II. METHOD

A. Sample

191 teachers from variety of schools in north Israel participated in the study. As seen in Table I the teachers' mean age was 42 years ($SD= 6.89$), and their mean tenure in teaching was 16.24 years ($SD= 7.39$). 33 of the teachers (17.3%) were man and 158 were woman (82.7%).

5 teachers (2.6%) had undergraduate education (4 certificated teachers, and 1 senior teacher), 95 teachers (49.7%) had first degree, 90 teachers (47.1%) had second degree, and 1 teacher (0.5%) had third degree.

140 (73.3%) teachers work in elementary schools and 41 teachers (21.5%) work in high schools (10 teachers (5.2%) didn't report). 142 teachers (74.3 %) work in non-religious schools and 45 work in religious schools (23.6%). 148 teachers (77.5%) teach regular pupils and 41 teachers (21.5%) teach pupils with special needs (2 teachers (1%) didn't report).

B. Procedure

The research questionnaires were administered to the teachers after the experimenter assistants asked them for their full cooperation, guarantee the anonymity of their responses, and explain the importance of full disclosure.

C. Research Variables and Measures

1. Education Level

This variable has five levels: the lowest education level was "certificated teacher", then "senior teacher", then academic education- first degree, then academic education- second degree, and then academic education- third degree.

2. Workplace Learning Behaviors

Self - report measure using a six-point Likert type scale. It consisted of 6 items based on Edmondson [11]. It was adapted to the individual level and to teaching context [7]. For example: "I always make sure that I stop and reflect on my teaching processes".

The Cronbach's Alpha reliability (as reported in Table I) was 0.91.

3. Burnout

Self - report measure using a six-point Likert type scale. This measure consisted of 14 items based on [17], and adapted to measure teachers' burnout. It includes three subscales: 5 items for exhaustion scale, for example: "I feel exhausted at the end of the day at school"; 4 items for depersonalization scale, for example: "I feel that it isn't so important for my pupils to prove themselves as good pupils"; and 5 items in the personal accomplishment scale, for example: "I think that I would choose to be a teacher again if I could start my professional life from beginning" (reversed item).

The Cronbach's Alpha reliability (as reported in Table I) was 0.93.

4. Psychological Empowerment

Self - report measure using a seven-point Likert type scale. It consisted of three subscales [24]: 3 items for the meaning

scale, for example: "The work I do is very meaningful to me"; three items for the impact scale, for example: "My impact on what happens in my school is substantial"; three items for the competence scale, for example: "I am confident about my ability to do my job"; and three items for the self-determination scale, for example: "I have significance autonomy in determining how I do my job".

The Cronbach's Alpha reliability (as reported in Table I) was 0.87.

5. Control Variables

We controlled for teachers' age, teaching tenure, and gender; for the school religious level (religious/ non-religious); for the pupils needs (regular/ special needs); and for the class level (elementary/ high school).

D. Data Analysis

Seven multiple linear regressions served for testing the research model. According to [1] first, we tested for the effect of education level on the mediating variable- learning behaviors. Then, we tested for the effect of learning behavior on each of the two dependent variables: psychological empowerment and burnout. Then, we tested for the effect of education level on each of these two dependent variables: psychological empowerment and burnout. Then, we tested for the combined effect of education level and proactive learning on each of the two dependent variables: psychological empowerment and burnout.

III. RESULTS

The means, standardized deviations, correlations, and scale reliabilities of the research variables are presented in Table I.

As seen in Table I, education level had a significant ($P<0.01$) positive correlation with proactive learning, a significant ($P<0.01$) positive correlation with psychological empowerment, and a significant ($P<0.01$) negative correlation with burnout. There was also significant ($P<0.05$) positive correlation between education level and gender meaning, that females had higher education level than males; significant ($P<0.01$) negative correlation between education level and pupils' needs meaning, that teachers who teach pupils with special needs had lower education level than teachers who teach pupils with regular needs; and significant ($P<0.05$) negative correlation between education level and class level meaning that teachers in high school had lower education level than teachers in elementary schools.

There was a significant ($P<0.01$) positive correlation between proactive learning and empowerment, and a significant ($P<0.01$) negative correlation between proactive learning and burnout. There was also significant ($P<0.01$) positive correlation between proactive learning and gender meaning that females had higher proactive learning levels than males; significant ($P<0.05$) negative correlation between proactive learning and pupils' needs meaning, that teachers who teach pupils with special needs had lower proactive learning level than teachers who teach pupils with regular needs; and significant ($P< 0.01$) negative correlation between

proactive learning and class level meaning that teachers in high school had lower level of proactive learning than teachers in elementary schools.

There was a significant ($P < 0.01$) negative correlation between psychological empowerment and burnout. Psychological empowerment also had a significant ($P < 0.05$) positive correlation with school religious level, meaning that teacher in religious schools had higher levels of psychological empowerment than teachers in non-religious schools; and a significant ($P < 0.01$) negative correlation with class level meaning that teachers in high-schools had lower levels of

psychological empowerment than teachers in elementary schools. There was a significant ($P < 0.01$) positive correlation between age and teaching tenure meaning that older teachers had higher teaching tenure; significant ($P < 0.05$) negative correlation between gender and class level meaning that females were more dominant in elementary schools than in high-schools; There was a significant ($P < 0.01$) positive correlation between pupils' needs and class level meaning that there were more teacher with pupils with special needs in high schools than in elementary schools.

TABLE I
MEANS, STANDARD DEVIATIONS, INTER-CORRELATION AND SCALE RELIABILITIES OF THE RESEARCH VARIABLES

	N	Mean	SD	1	2	3	4	5	6	7	8	9	10
Education Level	191	3.43	.63	—									
Proactive Learning	191	5.12	.80	.35**	.91								
Psychological Empowerment	191	5.36	.55	.29**	.59**	.87							
Burnout	190	1.98	.79	-.25**	-.68**	-.68**	.93						
Age	191	41.96	6.89	.08	.04	.04	-.11	—					
Gender	191	1.83	.38	.18*	.27**	.13	-.18*	.09	—				
Teaching Tenure	191	16.24	7.39	.11	-.01	.02	-.05	.82**	.10	—			
School (religious/ non-religious)	187	1.24	.43	-.01	.10	.16*	-.11	-.10	-.02	-.01	—		
Pupils' needs (regular/ special needs)	189	1.22	.41	-.20**	-.15*	-.13	.13	.04	.01	-.02	-.05	—	
Classlevel (elementary/ high-school)	181	1.23	.42	-.16*	-.54**	-.48**	.60**	-.04	-.19*	.06	-.04	.24**	—

We tested the research model, meaning the mediating role of proactive learning on the effect of education level on psychological empowerment and burnout according to [1] criterions. First, we tested for the effect of education level on learning behaviors (Hypothesis 1) using a multiple regression including the six control variables- age, gender, teaching tenure, school: religious/ non-religious, population: regular/ special needs, and class level: elementary/ high school. As seen in Table II- Model 1, in congruence with Hypothesis 1, there was a significant ($P < 0.001$) effect of education level on learning behaviors beyond the effect of the control variables. Then, we tested for the effect of learning behaviors on psychological empowerment (Hypothesis 2), and for the effect of learning behaviors on burnout (Hypothesis 3) using multiple regressions including the six control variables. As seen in Table II-Model 2, in congruence with Hypothesis 2, there was a significant ($P < 0.001$) effect of learning behaviors on psychological empowerment beyond the effect of the control variables. Also, as seen in Table II, model 5, in congruence with Hypothesis 3, there was a significant ($P < 0.001$) negative effect of learning behaviors on burnout beyond the effect of the control variables. Third, we tested for the effect of education level on psychological empowerment (Hypothesis 4), and for the effect of education level on burnout (Hypothesis 5) using multiple regressions including

the six control variables. As seen in Table I – Model 3, in congruence with Hypothesis 4, there was a significant ($P < 0.001$) effect of education level on psychological empowerment beyond the effect of the control variables. Also, as seen in Table I – Model 6, in congruence with Hypothesis 5, there was a significant ($P < 0.001$) negative effect of education level on burnout beyond the effect of the control variables. Last, we tested for the joint effect of education level and learning behaviors on psychological empowerment (Hypothesis 6), and for the joint effect of education level and learning behaviors on burnout (Hypothesis 7), using a multiple regression including the six control variables. As seen in Table II- Model 4, in congruence with Hypothesis 6, there was a significant ($P < 0.001$) effect of learning behaviors on psychological empowerment but there was no significant effect of education level on psychological empowerment, meaning that the effect of education level on psychological empowerment was fully mediated by the learning behaviors. Also, as seen in Table II- Model 7, in congruence with Hypothesis 7, there was a significant ($P < 0.001$) negative effect of learning behaviors on burnout but there was no significant effect of education level on burnout, meaning that the effect of education level on burnout was fully mediated by the learning behaviors.

TABLE II

THE EFFECT OF TEACHERS' EDUCATION LEVEL ON PSYCHOLOGICAL EMPOWERMENT AND BURNOUT –THE MEDIATING ROLE OF PROACTIVE LEARNING

	Learning Behaviors	Psychological Empowerment				Burnout	
	Model 1:	Model 2:	Model 3:	Model 4:	Model 5:	Model 6:	Model 7:
Age	.07	.04	.07	.03	-.11	-.14	-.10
Gender	.14*	-.03	.02	-.04	.00	-.06	.01
Teaching Tenure	-.11	.05	-.01	.04	-.00	.06	.00
School (religious/ non-religious)	.10	.10	.14*	.10	-.05	-.09	-.05
Pupils' needs(regular/ special needs)	.04	.03	.06	.04	-.01	-.04	-.02
Class level (elementary/ high school)	-.45***	-.22**	-.42***	-.22	.31***	.53***	.31***
Education level	.25***		.24***	.13		-.19***	-.07
Learning Behaviors		.48***		.44***	-.51***		-.48***

IV. DISCUSSION

The presented results fully support our research model and hypothesis. First, education level positively affected workplace learning behaviors. That means that people with higher education tend to be more engaged with learning behaviors than less educated workers. That supports the proposition that higher education promotes the motivation for mastery and fosters learning behaviors in the workplace.

Second, these learning behaviors found to reinforce psychological empowerment and decreases burnout. These results are in congruence with the second phase of Karasek's active learning hypothesis [13], [14] regarding the effect of active learning on strain. These effects are presumably take place by the following mechanisms: Learning behaviors leads to better work methods and higher performance which promotes profession efficacy and achievement. These in turn reinforce feelings of meaningfulness because valued work targets are successfully fulfilled. Experimenting with new work methods decreases repetitive work and therefore increases meaningfulness. Achievements outside the class, meaning in the school domain reinforce feelings of impact. Improved work methods might help to relieve workload and thus reduces the resulting exhaustion. Learning behaviors are self-initiated and therefore manifest and reinforce self-discretion and encounter indifference.

Third, it was found that education level promotes psychological empowerment and decreases burnout through learning behaviors. Thus, within the same jobs and organizational characteristics, workers with higher education level do have the advantages of behavioral pattern of learning, and psychological state of increased empowerment and reduces burnout. That means that higher education provides with advantages in the way the worker copes with his job which are beyond the level of the knowledge acquired during the years of studies.

Therefore, a practical conclusion from the present research is that encouragement for acquiring higher education might not only produce more learning behaviors in school but also help in reducing burnout and in empowering the teachers. Direct encouragement for engagement in learning behaviors in the workplace might also achieve those psychological results.

A. Research's Limitations and Further Research

Our research design is correlative. Therefore, the results do not necessarily provide reinforcement for casual relations but

only for correlations between the variables. Another theoretical explanation for our findings might be that teachers with higher proactive learning behaviors have greater tendency to purchase higher education. It might also be argued the more empowered teachers tend to engage more in learning behaviors and that burnout interfere with these behaviors. These different theoretical explanations do not contradict each other and might describe together a more complete picture of mutual effects as workplace learning behaviors reinforce psychological state of empowerment and decreased burnout and that psychological state reinforces learning behaviors. Similarly a more complete explanation might be that teachers with higher levels of learning behaviors tend to purchase higher education and simultaneously higher education facilitates more workplace learning behaviors. It might also be purposed that some personality characteristics such as proactive personality [8] or openness to experience [2], [19], [18] lead to all three results: level of learning behaviors, empowerment and burnout, and therefore are responsible for the observed relationships among them. Future research is needed for reconcile and integrate the different theoretical explanations. But, from practical point of view the current research suggests that in employee selection processes the bio data of education level which is relatively straightforward and reliable might be used to predict workplace learning behaviors.

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