Effects of Conceptions of Intelligence and Ambiguity Tolerance on Teacher Burnout: A Case of Iranian EFL Teachers¹

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Abstract

This study investigated teachers' conceptions of intelligence (TCoI) and ambiguity tolerance in the burnout levels of 202 Iranian EFL teachers. To this end, 3 inventories were utilized: Language Teachers' Conceptions of Intelligence Scale (LTCI-S), Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II), and Maslach Burnout Inventory (MBI). Pearson multiple correlation coefficients and path analysis were employed for the data analysis. Results exhibited significant relationships among TCoI, ambiguity tolerance, and teacher burnout. Moreover, the results indicated that increasibility and applied ELT subscales of TCoI were negative significant predictors of emotional exhaustion and reduced personal accomplishment dimensions of teacher burnout. Additionally, ambiguity tolerance was found to be a negative significant predictor of all teacher burnout dimensions. Finally, the results are discussed and implications are provided in the context of education.

Keywords: Ambiguity Tolerance; Path Analysis; Teacher Burnout; Teachers' Conceptions of Intelligence (TCoI)

1. Introduction

Burnout is defined as a cumulative reaction to prolonged job stressors characterized by the symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Leiter, 2016). Since its emergence, burnout has been identified as a work-related threat for people-oriented occupations which demand a large amount of personal contact (Leiter & Maslach, 2000).

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Teaching has specifically been recognized as one of the professions with the highest levels of work stress and burnout (Stoeber & Rennert, 2008). Teacher burnout can have devastating effects on both learners and the educational system as a whole. In other words, teachers who are exhausted and emotionally detached from learners cannot fulfill their function adequately in the educational system (Shukla & Trivedi, 2008). Hence, teacher burnout can be considered as a serious educational dysfunction and, therefore, worthy of deliberate attention (Evers, Tomic, & Brouwers, 2005). To this end, a myriad of research has focused on identifying the main sources of teacher burnout. For instance, age, gender, marital status, and years of experience (Friedman, 1991; Shaufeli & Enzmann, 1998); personality and emotional intelligence (Pishghadam & Sahebjam, 2012); pupils' misconduct (Geving, 2007); perceived autonomy (Gavrilyuk, Loginova, & Buzovkina, 2013); perceptions of work stressors (Rodriguez, 2006); and conceptions of assessment (Pishghadam, Adamson, Shayesteh, & Kan, 2013) have been recognized as influential in burnout among teachers.

Meanwhile, teachers' conceptions of intelligence (TCoI) has gone largely unnoticed by researchers as potential antecedents of teacher burnout. The way teachers conceive of intelligence can affect their beliefs (Dupeyrat & Mariné, 2005), their preferred teaching behaviors (Slate, Jones, & Charlesworth, 1990), and their educational goals (Lynott & Woolfolk, 1994). TCoI originates from teachers' views of students' mental abilities and whether these abilities can be improved through collaborative efforts of teachers and students in the classroom. Hence, they have roles both in students' educational performance and teachers' perceptions of their profession. In the same vein, TCoI influences teachers' responses to students' needs (Lee, 1996) and their caring practices toward students (Pishghadam, 2014). Therefore, as TCoI affects pedagogical engagement of teachers with learners, they can also influence their detachment from learners and, thus, their experience of burnout (Bibou-Nakou, Stoqiannidou, & Kiosseoqlou, 1999).

Moreover, individuals' conceptions and beliefs are suggested to be affected by their level of ambiguity tolerance (Bisini & Musthafa, 2015; Naghipoor & Abedini, 2013). Ambiguity tolerance was defined as "a person's ability to function rationally and calmly in a situation in which interpretation of all stimuli is not clear" (Chappelle & Roberts, 1986, p. 30). Managing ambiguity and uncertainty represents a fundamental competence in career progression (Monrouxe & Mattick, 2006), and research has recently focused on the role of ambiguity tolerance in employees' perceptions and productivity (McLain, 2009). Teaching, in particular, is laden with dilemmas and ambiguities. These ambiguities result from various reasons such as uncertainties about appropriate teaching approaches, instructional content, and students' learning outcomes (Berlak & Berlak, 1981). Therefore, how teachers judge,

respond, and react to such situations depends a great extent on their level of ambiguity tolerance. Despite the heightened awareness of the importance of ambiguity tolerance in the teaching practices of educators, there is a paucity of research in teaching literature on the way teachers' tolerance/intolerance of ambiguity might affect how they feel and think about their career. The dearth of research in this area justifies the need for further research on their relationship.

Considering the previously conducted studies and the significance of teacher burnout, different studies have been conducted to detect its genesis. However, it goes without saying that education is still suffering from teacher burnout. This gap in the findings of previous studies necessitates further research on the phenomenon. Thus, in the present study, TCoI and ambiguity tolerance were examined as two other potential predictors of teacher burnout.

2. Literature Review

2.1. Burnout

A concept first introduced by Freudenberger (1974), burnout refers to a reaction to chronic work stressors. At first, burnout emerged as a one-dimensional concept (Freudenberger, 1974), characterized by the single dimension of exhaustion, which was described in a simple dichotomous fashion. Later, Maslach and Jackson (1981) developed a multifaceted conception of burnout by keeping the emotional exhaustion dimension and adding two other dimensions of depersonalization and reduced personal accomplishment to the concept. Emotional exhaustion refers to the feelings of being emotionally drained by one's work as a result of work overload and social conflicts at work. Depersonalization refers to the feelings of being callous toward one's job or the recipients of one's service. And reduced personal accomplishment refers to the feelings of incompetence and reduced productivity in one's profession (Leiter & Maslach, 2000).

The experience of work-related stress seems to influence both employees' work performance and health (Halbesleben & Buckley, 2004; Peterson, et al., 2008). In this line, burnout has been related to different forms of job withdrawal, such as lateness, intention to quit the job, absenteeism, and actual turnover. For those individuals who keep the job, however, burnout results in presenteeism, reduced effectiveness, decreased engagement, and reduced job satisfaction as those experiencing burnout perform at their minimum level rather than performing at their very best (Maslach, Schaufeli, & Leiter, 2001). In general, the stress experienced as a result of emotional exhaustion affects physical well-being which manifests itself through headaches, sleep disturbance, muscle tension, and gastrointestinal disorders, whereas the senses of depersonalization and reduced personal accomplishment influence mental health and social functioning (Leiter & Maslach, 2000).

2.2. Teacher Burnout

In the domain of education, teaching is recognized as a very stressful career (McCarthy, Lambert, O'Donnell, & Melendres, 2009), and teachers are at higher risk of leaving their profession in comparison to people of other occupations (Hanushek, 2007). To mitigate burnout rate among teachers, various studies have been conducted to identify its possible sources. For instance, demographic variables of age, gender, marital status, work experience (Friedman, 1991; Shaufeli & Enzmann, 1998), and level of education (Maslach & Jackson, 1981) were found to influence teacher burnout, Moreover, low parental involvement (Colangelo, Assouline, & Gross, 2004) and pupils' misconduct (Geving, 2007) were suggested to have roles in teacher burnout. Some others have reported that lack of support, work overload, and role ambiguity precipitated burnout occurrence among teachers (Dworkin, 1986; Maslach & Goldberg, 1998). Furthermore, the risk of burnout was indicated to be high among teachers with low self-efficacy (Khani & Mirzaee, 2014; Schwarzer & Hallum, 2008) and low levels of resilience (Schaufeli & Enzmann, 1998). Additionally, life-wise language teaching perceptions (Pishghadam, Zabihi, & Shayesteh, 2013), emotional intelligence, personality traits (Pishghadam & Sahebjam, 2012), perceptions of work stressors (Rodriguez, 2006), perceived autonomy (Gavrilyuk, et al., 2013), and conceptions of assessment (Pishghadam, et al., 2013) were found to contribute significantly to teacher burnout.

2.3. Intelligence in Education

The findings of different investigations in the realm of education approved the influential role that intelligence plays in student learning, school performance, and academic achievement (Deary, Strand, Smith, & Fernandes, 2007; Laidra, Pullmann, & Allik, 2007; Soares, Lemos, Primi, & Almeida, 2015). In the area of language education, in particular, there exist two contrasting views toward the relationship between intelligence and language learning. The first perspective (i.e., nonmodularity view) states that language learning ability is similar to other abilities, whereas the second perspective (i.e., modularity view) claims that language ability operates independently of other cognitive abilities and opens up a distinct ability for language learning (Pishghadam, et al., 2015). The modularity view was supported by studies reporting that some students were very weak at learning a new language (Ganschow & Sparks, 2001) although they had a high IQ, whereas some students were very good at learning a new language although they had a low IQ (Sparks & Atzer, 2000).

Research in the past has underlined the role of intelligence in learning, in general, and learning a new language, in particular (Pishghadam, et al., 2015). Recently, however, a new perspective toward the relationship between intelligence and L2 learning has been introduced by Pishghadam (2011) in his theory of applied

ELT. Applied ELT focuses on the role of L2 learning in learners' psychometric and emotional intelligences. That is, how learners' intelligence levels can be improved through learning a new language. Taking the theory of applied ELT into account, there is a new role for ELT teachers to take as educational language teachers who are expected to incorporate life issues into the ELT curriculum to aid students to develop as 'whole-person' individuals (Pishghadam, 2011). By educational language teachers, Pishghadam, Zabihi, and Norouz Kermanshahi (2012) meant that besides being expert in language teaching, ELT teachers should be educational experts in their professional area.

2.4. Teachers' Conceptions of Intelligence (TCoI)

Individuals have their own unique conceptions of intelligence which affect how they view themselves and other people, their goal orientations, and their achievements in educational settings (Dweck, 1999; Sternberg, 1985). Conceptions of intelligence are often called implicit theories of intelligence implying that individuals' beliefs about the nature of cognitive abilities are to some extent systematic, and—while they reside in the mind— they can influence their behaviors and evaluations of the surrounding environment (Dweck & Leggett, 1988). There are two contrasting views regarding the implicit theories of intelligence. The entity theory describes intelligence as static, innate, and uncontrollable, whereas the incremental theory describes intelligence as dynamic, developmental, and controllable (Dweck & Leggett, 1988).

Like other human beings, teachers' behaviors and beliefs are believed to be affected by their conceptions of intelligence (Dupeyrat & Mariné, 2005). Indeed, the way teachers judge their students' academic performances and the types of behavior they value in students are influenced by their views of students' intellectual abilities (Lynott & Woolfolk, 1994; Nicholls, Patashnick, & Mettetal, 1986). Probably, those teachers who regard intelligence as a fixed trait are less likely to create autonomy-supportive climates that promote learners' intrinsic motivation (Leroy, Bressoux, Sarrazin, & Trouilloud, 2007), and they tend to conceive learners' failures as hindrances to their academic achievements (Lee, 1996). TCoI may also relate to teachers' preferred teaching behaviors in classrooms. In a study, Slate et al. (1990) reported that the more the teachers endorsed an incremental view of intelligence, the more they tended to utilize diverse teaching methods and emphasize effort, critical thinking, and collaboration. In contrast, the more the teachers endorsed an entity view of intelligence, the more they tended to use single teaching methods and stress performance, success, and competition.

Additionally, TCoI influences the types of care and feedback that teachers provide their learners with. In this line, the findings of a study conducted by

Pishghadam et al. (2015) revealed that teachers' beliefs in applied ELT and Increasibility of intelligence resulted in their use of less corrective feedback, and their beliefs in the modularity of mind led to their provision of more stroke to their learners. Furthermore, in a study in 2009, García-Cepero and McCoach examined the relationship between TCoI and teachers' beliefs about the identification of gifted students. Their findings indicated that the teachers who had considered creativity as a significant feature of intelligence preferred multiple methods to identify gifted students. In contrast, the teachers who had favored the employment of IQ test as the sole method of giftedness identification were more inclined toward accepting analytical abilities as an important attribute of intelligence. Comparing conceptions of intelligence in teachers from different disciplines manifested that the teachers of language studies, social sciences, and practical disciplines had more inclination toward incremental view of intelligence, whereas the teachers of disciplines such as mathematics preferred the entity view of intelligence. Further findings indicated that the youngest and least experienced and oldest and most experienced teachers were more likely to prefer the entity theory of intelligence (Jonsson, Beach, Korp, & Erlandson, 2012).

2.5. Ambiguity Tolerance/Intolerance

A concept first introduced by Frenkel-Brunswik (1948), intolerance of ambiguity has prompted a good deal of research for more than 60 years (Merrotsky, 2013), and it is still a progressively popular subject of scrutiny (McLain, Kefallonitis, & Armani, 2015). Ambiguity intolerance was initially viewed from a sociopsychological perspective and defined through its relation with constructs of ethnocentrism, dogmatism, and authoritarianism (McLain, et al., 2015). Later, however, with the conceptual focus of Budner (1962) and the construction of more rigorous measures of ambiguity tolerance (e.g., MacDonald, 1970; Norton, 1975; Rydell & Rosen, 1966), a new definition of the concept, built upon a more psychologically-grounded basis, was introduced (McLain, 1993). Budner (1962) defined ambiguity intolerance as an inclination toward perceiving ambiguous situations as sources of threat, and ambiguity tolerance as an inclination toward perceiving ambiguous situations as interesting. In this definition, ambiguous situation refers to a situation in which the lack of sufficient cues hinders individuals from fully structuring or categorizing the situation. Three types of such a situation exist, which are characterized by their novelty, complexity, or insolubility. Novel situations are those situations in which all cues are unfamiliar, complex situations are those situations in which there are too many cues to be considered, and insoluble situations are those situations in which different cues mean different structures (Budner, 1962). Stress, anxiety, denial, or delay occurs, as Budner (1962) pointed out, when there is

a need to react to ambiguous situations and simultaneously, there is a desire to clearly understand them.

Later, McLain (1993) interpreted tolerance/intolerance of ambiguity as "a range of reactions" (p. 184) to ambiguous situations. In this view, tolerance implies reluctant acceptance, whereas intolerance implies rejection. However, there is not a dichotomy between tolerance and intolerance, and one's level of tolerance for ambiguity is rated on a continuum ranging from rejection to attraction toward new, complex, and insoluble stimuli (McLain, 1993). Intolerance of uncertainty is a concept that is synonymously used with intolerance of ambiguity (Furnham & Marks, 2013), defined as the degree to which people attempt to keep away from uncertain situations which seem threatening to them (Hofstede, 1984). Most research on uncertainty avoidance is conducted in the field of sociology, aiming at measuring this variable in groups of people, as opposed to considering it as an individual characteristic (Furnham & Marks, 2013).

Despite the fact that ambiguity tolerance is assumed to be an integral part of the professional practice (Hammond, Hancock, Martin, Jamieson, & Mellor, 2017), there is a dearth of research on the role of ambiguity tolerance in teacher burnout. Additionally, a few studies that have investigated the effect of ambiguity tolerance on job stress and burnout are outside the realm of education. In a study, conducted by Iannello, Mottini, Tirelli, Riva, and Antonietti (2017), it was found that physicians with high intolerance for ambiguity dealt more rigidly with ambiguous situations and, consequently, experienced more job stress. Intolerance of ambiguity was also associated with role stress and work-related outcomes (Jdaitawi, Saleh, Ishak, Abo-Safyah, & Musallam, 2013). In the same vein, the relations of ambiguity tolerance and openness have been explored to well-being in the context of academic life transition (Bardi, Guerra, Sharadeh, & Ramdeny, 2009). Moreover, in 1990, Frone conducted a meta-analysis of 13 empirical studies on the associations among role stress, job satisfaction, and ambiguity tolerance. He concluded that those with higher tolerance for ambiguity tended to be more satisfied with their careers.

Furthermore, Cooke, Doust, and Steele (2013) made a survey of burnout, resilience, and tolerance of uncertainty in Australian general practice registrars. Their findings indicated that uncertainty avoidance, reluctance to reveal uncertainty, and anxiety were related to higher levels of burnout. Furthermore, resilience was negatively related to uncertainty avoidance, burnout, and reluctance to reveal uncertainty. Similarly, Kuhn, Goldberg, and Compton (2009) maintained that intolerance of uncertainty, which was manifested in a concern for bad outcomes, was strongly associated with emotional exhaustion and was the greatest predictor of burnout.

3. Purpose of the Study

Developing a more thorough understanding of the conceptions that teachers hold toward intelligence can be beneficial owing to the fact that these conceptions are directly related to their professional identity and practice (Grossman & Stodolsky, 1994). Consequently, as the first goal of the study, it is hypothesized that the conceptions that teachers hold toward intelligence affects their experience of burnout. Additionally, lower levels of tolerance for ambiguity are suggested to cause individuals to experience higher states of anxiety and stress (Budner, 1962). Hence, as the second goal of the study, it is hypothesized that burnout, which is a special type of job stress, can be influenced by teachers' level of ambiguity tolerance. In retrospect, the present study addressed the following research questions:

- 1. Do EFL teachers' conceptions of intelligence (TCoI) significantly predict their level of burnout?
- 2. Does EFL teachers' tolerance for ambiguity significantly predict their level of burnout?

4. Methodology

4.1. Participants

This study used a convenience sample of 202 EFL teachers of different private language institutes in Mashhad, a city in northeast part of Iran. The rationale behind choosing teachers from private language institutes and not public schools is that teachers of private language institutes are not permanently employed; therefore, they strive to be more effective to keep their jobs. However, teachers of public schools are permanently employed in Iran, not facing the problem of losing their jobs. Additionally, private language institutes are in a tough competition to attract more students, whereas there is no competition among public schools because education in public schools is free of charge. Furthermore, the educational system is centralized in public schools in Iran, meaning that the government decides on the materials and the books to be taught. However, the educational system is decentralized in private language institutes, meaning that the teachers have more freedom in choosing the materials to teach in their classrooms.

The sample included both female (n = 101) and male (n = 101) teachers whose ages ranged from 24 to 56. The participants differed in their level of education with 121 teachers with B.A., 64 teachers with M.A., and 17 teachers with Ph.D. degrees, all majors in different branches of English including English translation (n = 39), English teaching (TEFL; n = 128), and English literature (n = 35). It is necessary to mention that in Iran, those who graduate from diverse branches of English are permitted to teach English.

4.2. Instrumentation

4.2.1. Language teachers' conceptions of intelligence scale (LTCI-S)

LTCI-S was designed and validated by Pishghadam et al. (2015) to determine EFL TCoI (see Appendix A). The questionnaire includes 12 items measuring three subscales of increasibility (items # 2, 3, 6, & 8), modularity (items # 1, 4, & 11), and applied ELT (items # 5, 7, 9, 10, & 12). The items are scored on a 6-point continuous Likert scale ranging from 6 (*strongly agree*) to 1 (*strongly disagree*. However, for items # 1, 4, 8, 10, 11, 12, which are negatively worded, scoring should be reversed. The respondent's total score can range from 12 to 72. Pishghadam et al. (2015) reported a Cronbach's alpha reliability coefficient of .76 for this scale. In this study, the reported Cronbach's alpha reliability coefficient of the scale was equal to .89.

4.2.2. Multiple stimulus types ambiguity tolerance scale-II (MSTAT-II)

MSTAT-II is designed and validated by McLain (2009) to measure individuals' general tolerance/intolerance for ambiguity (see Appendix B). The scale consists of 13 items scored on a 5-point continuous Likert scale ranging from 1 (*strongly disagree*) 5 (*strongly agree*). However, for items #1, 2, 3, 4, 5, 6, 9, 11, and 12, which are negatively worded, scoring should be reversed. Individuals' low scores represent their aversion to ambiguity, whereas their high scores represent their interest in ambiguity. McLain (2009) reported a Cronbach's alpha reliability coefficient of .82 for the scale. In this study, the scale's estimated Cronbach's alpha reliability coefficient was equal to .93.

4.2.3. Maslach burnout inventory (MBI)

MBI is the most extensively used instrument designed and validated by Maslach and Jackson (1981) to measure individuals' level of burnout (see Appendix C). The questionnaire includes 22 items measuring three subscales of emotional exhaustion (items # 1, 2, 3, 4, 5, 6, & 7), Depersonalization (items # 8, 9, 10, 11, 12, 13, & 14), and reduced personal accomplishment (items # 15, 16, 17, 18, 19, 20, 21, & 22). The items are scored on a 7-point frequency scale ranging from 0 (*never*) to 6 (*every day*). Each respondent's total score can range from 0 to 154. In this scale, individuals' higher scores represent their higher level of burnout (Maslach & Jackson, 1981). MBI displayed a Cronbach's alpha reliability coefficient of .83 (Maslach & Jackson, 1981). In this study, the scale's estimated Cronbach's alpha reliability coefficient was equal to .85.

4.3. Procedure

A number of 202 EFL teachers working at different private language institutes in Mashhad, Iran, filled out LTCI-S, MSTAT-II, and MBI. Initially, they

were informed that participation was not compulsory. Moreover, ethical approval was obtained from the participants before commencing the data collection. They were also reassured that their responses would be kept confidential and their identities would not be revealed.

The fundamental statistics were Pearson multiple correlation coefficients and path analysis. The dependent variable was teacher burnout, and the independent variables were TCoI and ambiguity tolerance. To explore (possible) relationships among the variables, Pearson multiple correlation coefficients were run using SPSS (version 22). Thereafter, path analysis was performed using Amos (version 22) to examine whether TCoI and ambiguity tolerance significantly predict teacher burnout. In statistics, path analysis is used to describe the directed dependencies among a set of variables. It can be viewed as a special case of structural equation modeling (SEM) in which only single indicators are employed for each of the variables in the causal model. That is, path analysis is SEM with a structural model but no measurement model. Other terms used to refer to path analysis include causal modeling, analysis of covariance structures, and latent variable models.

5. Results

5.1. Descriptive Statistics and Correlations

This study intended to examine the roles of TCoI and ambiguity tolerance in teacher burnout. Table 1 shows the results of descriptive statistics as well as correlations among the variables:

Table 1 Descriptive Statistics and Correlations for Variables

	Mean (SD)	1	2	3	4	5	6	7
1. Emotional Exhaustion	7.31(7.4)	1.00						
2. Reduced Personal Accomplishment	15.47(7.85)	.51**	1.00					
3. Depersonalization	5.96(6.06)	.81**	46**	1.00				
4. Ambiguity Tolerance	48.33(10.43)	62**	65**	53**	1.00			
5. Modularity	10.91(2.58)	02	07	01	.10	1.00		
6. Increasibility	18.25(3.91)	33**	26**	21**	.27**	.11	1.00	
7. Applied ELT	21.34(4.64)	18**	24**	06	.16*	03	.59**	1.00

p < .05, p < .01.

First, the relationships between teacher burnout and ambiguity tolerance were investigated. As Table 1 indicates, there was a negative and significant relationship between all the subscales of teacher burnout and ambiguity tolerance. Among the three subscales of teacher burnout, reduced personal accomplishment had the highest relationship with ambiguity tolerance (r = -.65, p < .05), and depersonalization had the lowest relationship with ambiguity tolerance (r = -.53, p < .05)

.05). Following this, the relations between TCoI and teacher burnout were investigated. Among the three subscales of TCoI, modularity indicated no significant relationship with any subscale of teacher burnout. Increasibility was negatively and significantly related to emotional exhaustion (r = -.33, p < .05), reduced personal accomplishment (r = -.26, p < .05), and depersonalization (r = -.21, p < .05). Moreover, applied ELT was negatively and significantly related to emotional exhaustion (r = -.18, p < .05) and reduced personal accomplishment (r = -.24, p < .05). Finally, the relations between ambiguity tolerance and TCoI were investigated. Ambiguity tolerance was positively and significantly related to increasibility (r = .27, p < .05) and applied ELT (r = .16, p < .05).

5.2. Path Analysis

In order to investigate the legitimacy of the theoretical hypotheses of the current study, a model was proposed through SEM to examine whether TCoI and ambiguity tolerance significantly predict teacher burnout. A number of fit indices were examined to evaluate the model fit: Chi-square magnitude which should not be significant, chi-square/df ratio which should be less than 3, the normed fit index (NFI), the good fit index (GFI), the comparative fit index (CFI) with the cut value greater than .90, and the root mean square error of approximation (RMSEA) of less than .08 (Hu & Bentler, 1999). As shown in Table 2, all the fit indices except RMSEA lie within the acceptable fit thresholds. Hence, it can be concluded that the proposed model had an acceptable fit with the empirical data. Goodness of fit indices can be seen in Table 2:

Table 2. Goodness of Fit Indices

	X^2	df	X2/df	GFI	CFI	RMSEA
Acceptable Fit			<3	>.90	>.90	<.08
Model	14.23	7	2.03	.917	.902	.089

To check the strengths of the causal relationships among the variables, the standardized estimates were examined. As indicated in Figure 1, an estimate is displayed on each path. This standardized estimate is the standardized coefficient or beta coefficients (β), resulting from an analysis carried out on independent variables that have been standardized. It explains the predictive power of the independent variable and the effect size. The closer the magnitude to 1.0, the higher the correlation and the greater the predictive power of the variable is.

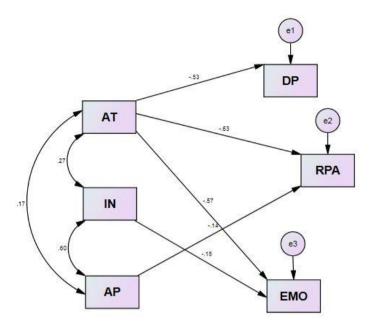


Figure 1. Modified model of TB, AT, and TCoI. IN: Increasibility, AP: Applied ELT, DP: Depersonalization, RPA: Reduced personal accomplishment, and EMO: Emotional exhaustion.

As depicted in Figure 1, regarding the role of TCoI in teacher burnout, it can be mentioned that two subscales of TCoI are negative significant predictors of teacher burnout dimensions. That is, increasibility is negative significant predictor of emotional exhaustion ($\beta = -.18$, p < 0.05), and applied ELT is negative significant predictor of reduced personal accomplishment ($\beta = -.14$, p < 0.05). However, the paths from modularity to all subscales of teacher burnout are not significant and removed from the model. As for the role of ambiguity tolerance in teacher burnout, it can be mentioned that ambiguity tolerance is negative significant predictor of emotional exhaustion ($\beta = -.57$, p < 0.05), depersonalization ($\beta = -.53$, p < 0.05), and reduced personal accomplishment ($\beta = -.63$, p < 0.05).

6. Discussion

The two goals put forward by this study were, in the first place, to discover the role of TCoI in teacher burnout, and in the second place, to investigate the effect of ambiguity tolerance on teacher burnout. With regard to the first goal, the results of the path analysis indicated that TCoI could significantly predict teacher burnout. Increasibility was suggested to be a negative significant predictor of emotional exhaustion. It is quite justifiable that teachers who endorse intelligence as a fixed and uncontrollable trait (Leroy, et al., 2007) seemingly feel overextended and exhausted (Leiter & Maslach, 2000) more than their colleagues who conceive of intelligence as

a changeable trait. In fact, when teachers regard intelligence as an innate capacity, they may consider their efforts to promote learners' fixed level of intelligence as futile, which may consequently lead to their feelings of work exhaustion. In contrast, teachers who consider intelligence as being increasable may regard their jobs to be worthwhile and, consequently, become more engaged with their works as they attempt to aid learners to surpass their inborn capacities.

Furthermore, applied ELT was found to be a negative significant predictor of reduced personal accomplishment. It seems logical to infer that the teachers who consider intelligence to be improved through learning a new language (Pishghadam, 2011) may hold feelings of competence and achievement in their jobs (Leiter & Maslach, 2000). Taking the theory of applied ELT into account, the change in the role of ELT teachers to become educational language teachers may influence their perceptions of their productivity in the educational context. In other words, educational language teachers are considered as facilitators who can help learners improve their mental abilities in ELT classes (Pishghadam, 2011). Hence, they may regard their jobs as more significant and, consequently, feel more accomplishment as they encourage learners to develop in other areas along with language learning.

As for the second goal, our hypothesis was confirmed. As the results of the path analysis exhibited, teacher burnout was found to be predicted by teacher ambiguity tolerance. These results are similar to those obtained in another study (Cooke, et al., 2013). To be more specific, ambiguity tolerance was a negative significant predictor of emotional exhaustion, thus agreeing with the outcomes of the study by Kuhn et al. (2009). Due to the fact that people with low tolerance for ambiguity generally exaggerate their life events in a very straightforward fashion (McLain, et al., 2015), they may undergo anxiety and stress as they attempt to respond to ambiguous situations (Iannello, et al., 2017) and, consequently, become more vulnerable to experience emotional exhaustion that is a core component of burnout (Kuhn, et al., 2009).

Moreover, ambiguity tolerance was found to be a negative significant predictor of depersonalization. That is, teachers who perceive ambiguous situations as sources of threat (McLain, et al., 2015) may become disengaged with their students and their jobs (Leiter & Maslach, 2000), as they limit their relations with others in order to avoid facing new complex situations. Finally, ambiguity tolerance was a negative significant predictor of reduced personal accomplishment. This finding is justifiable considering that managing ambiguity is a necessary skill for career progression (Hammond, et al., 2017) because work life is full of new, complex, and insoluble situations. Hence, it is no surprise that those who tend to have a black-and-white perspective toward life look for firm truth and prefer a fixed dichotomy of

events into unalterable categories (McLain, et al., 2015) may hold feelings of incompetence and reduced productivity in their profession (Leiter & Maslach, 2000), as they are incapable of dealing with "situations in which interpretation of all stimuli is not clear" (Chappelle & Roberts, 1986, p. 30).

This study has a number of implications for more effective education. Highlighting the role of teachers' ability to tolerate ambiguity in their level of burnout, the findings suggest focusing on such abilities. Particularly, such individual characteristics should be assessed during the admission test to teach in private and public schools. Perhaps, attending to teachers' tolerance for ambiguity may influence their mental and physical health and lead to their more appropriate behavior in the face of ambiguous situations. Indeed, the stress and anxiety caused by ambiguity can be harmful and need to be addressed in teacher education. In this regard, it is recommended that teachers become conscious of their own reactions to situational ambiguities because when teachers become fully aware of how they deal with ambiguous situations, they may monitor and alter their negative reactions to perceived ambiguity.

Additionally, in order to prevent teacher burnout, it would be worth paying particular attention to teacher cognition. Specifically, the results underscore the vital role of TCoI in this negative dysfunction. Considering the importance of preservice education in shaping teachers' mindsets (Koc, 2013), teacher educators should inform student teachers how their implicit theories of intelligence affect their relations with leaners and their judgments of their work accomplishments, and they should attempt to modify student teachers' conceptions in order for them to achieve more effective teaching practices. To this end, teacher educators should aid student teachers to dismiss their preconceptions of students' fixed level of intelligence and perceive themselves as facilitators who can help learners enhance their intelligence in language learning classrooms. Furthermore, teacher educators can instruct student teachers to become educational language teachers capable of increasing learners' cognitive abilities through learning a new language.

All in all, the findings should be interpreted in light of some limitations. First, due to feasibility considerations, convenience sampling was employed to choose the participants. Therefore, caution must be exercised if the results are to be generalized to other contexts. Second, because the participants comprised of EFL teachers of some private language institutes, the results may be more beneficial to the decentralized educational systems, rather than the centralized ones such as public schools. Third, the results are based on self-report questionnaires of the variables that may be susceptible to bias and limited in terms of their validity. Therefore, we suggest more investigations on these constructs be done using qualitative techniques like case studies, interviews, and observations. Last but not least, only gender was controlled

for in this study. Further studies are recommended to control for other equally important variables such as age, marital status, major, work experience, and level of education. This study highlights the roles of teacher cognition and individualistic characteristics in teacher burnout. More studies of this kind are advised to be conducted to track other uncovered sources of teacher burnout.

References

- Bardi, A., Guerra, V. M., Sharadeh, G., & Ramdeny, D. (2009). Openness and ambiguity intolerance: Their differential relations to wellbeing in the context of an academic life transition. *Personality and Individual Differences*, 47, 219-223.
- Berlak, A., & Berlak, H. (1981). *Dilemmas of schooling: Teaching and social change*. New York: Methuen.
- Bibou-Nakou, I., Stoqiannidou, A., & Kiosseoqlou, G. (1999). The relation between teacher burnout and teachers' attributions and practices regarding school behavior problems. *School Psychology International*, *20*, 209-217.
- Bisini, P. S., & Musthafa, M. A. M. N. (2015). Irrational beliefs and tolerance for ambiguity among prospective teachers. *International Journal of Current Research*, 7(4), 15392-15395.
- Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality*, 30, 29-50.
- Chappelle, C. A., & Roberts, C. (1986). Ambiguity tolerance and field independence as predictors of proficiency in English as a second language. *Language Learning*, 36(1), 27-45.
- Colangelo, N., Assouline, S. G., & Gross, M. U. M. (Eds.). (2004). *A nation deceived: How schools hold back America's brightest students* (Vol. II). Iowa City, IA: The Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development.
- Cooke, G. P. E., Doust, J. A., & Steele, M. C. (2013). A survey of resilience, burnout, and tolerance of uncertainty in Australian general practice registrars. *BMC Medical Education*, 13(2), 1-6.
- Deary, I. J., Strand, S., Smith, P., & Fernandes, C. (2007). Intelligence and educational achievement. *Intelligence*, *35*, 13-21.
- Dupeyrat, C., & Mariné, C. (2005). Implicit theories of intelligence, goal orientation, cognitive engagement, and achievement: A test of Dweck's model with returning to school adults. *Contemporary Educational Psychology*, 30(1), 43-59.

- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256-273.
- Dworkin, A. G. (1986). *Teacher burnout in the public schools: Structural causes and consequences for children*. New York: State University of New York Press.
- Evers, W., Tomic, W., & Browers, A. (2005). Constructive thinking and burnout among secondary school teachers. *Social Psychology in Education*, 8, 425-439.
- Frenkel-Brunswick, E. (1948). Intolerance of ambiguity as an emotional and perceptual personality variable. *Journal of Personality*, 18, 108-123.
- Frenkel-Brunswik, E. (1951). Personality theory and perception. In R. Blake & G. Ramsey (Eds.), *Perception: An approach to personality* (pp. 356-419). New York: Oxford University Press.
- Freudenberger, H. J. (1974). Staff burnout. Journal of Social Issues, 30, 159-65.
- Friedman, I. A. (1991). High- and low-burnout schools: School culture aspects of teacher burnout. *Journal of Educational Research*, 84, 325-333.
- Frone, M. R. (1990). Intolerance of ambiguity as a moderator of the occupational role stress-strain relationship: A meta-analysis. *Journal of Organizational Behavior*, 11, 309-320.
- Furnham, A., & Marks, J. (2013). Tolerance of ambiguity: A review of the recent literature. *Psychology*, 4(9), 717-728.
- Ganschow, L., & Sparks, R. (2001). Learning difficulties and foreign language learning: A review of research and instruction. *Language Teaching*, *34*, 79-98.
- García-Cepero, M. C., & McCoach, D. B. (2009). Educators' implicit theories of intelligence and beliefs about the identification of gifted students. *Universitas Psychologica*, 8(2), 295-310.
- Gavrilyuk, O. A., Loginova, I. O., & Buzovkina, N. Y. (2013). Relations of perceived autonomy and burnout syndrome in university teachers. *International Journal of Applied Psychology*, *3*(3), 52-62.
- Geving, A. M. (2007). Identifying the types of student and teacher behaviors associated with teacher stress. *Teaching and Teacher Education: An International Journal of Research and Studies*, 23(5), 624-640.

- Grossman, P., & Stodolsky, S. (1994). Considerations of content and the circumstances of secondary school teaching. *Review of Research in Education*, 20, 179-221.
- Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, 30, 859-879.
- Hammond, J. D., Hancock, J., Martin, M. S., Jamieson, S., & Mellor, D. J. (2017). Development of a new scale to measure ambiguity tolerance in veterinary students. *Journal of Veterinary Medical Education*, 44(1), 38-49.
- Hanushek, E. A. (2007). The single salary schedule and other issues of teacher pay. *Peabody Journal of Education*, 82(4), 574-586.
- Hofstede, G. (1984). Cultures' consequences. Beverly Hills, CA: Sage.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria vs. new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Iannello, P., Mottini, A., Tirelli, S., Riva, S., & Antonietti, A. (2017). Ambiguity and uncertainty tolerance, need for cognition, and their association with stress. A study among Italian practicing physicians. *Medical Education Online*, 22(1), 1-10.
- Jdaitawi, M., Saleh, A. A., Ishak, N. A., Abo-Safyah, L., Musallam, F. (2013). The moderating role of tolerance ambiguity in the stressors strain relationship: An empirical study among university lecturers in Saudi Arabia. *Journal of Education and Practice*, 4(28), 178-188.
- Jonsson, A. C., Beach, D., Korp, H., & Erlandson, P. (2012). Teachers' implicit theories of intelligence: Influences from different disciplines and scientific theories. *European Journal of Teacher Education*, 35(4), 387-400.
- Khani, R., & Mirzaee, A. (2014). How do self-efficacy, contextual variables, and stressors affect teacher burnout in an EFL context? *An International Journal of Experimental Educational Psychology*, *35*(1), 93-109.
- Koc, M. (2013). Student teachers' conceptions of technology: A metaphor analysis. *Computers & Education*, 68, 1-8.
- Kuhn, G., Goldberg, R., & Compton, S. (2009). Tolerance for uncertainty, burnout, and satisfaction with the career of emergency medicine. *Annals of Emergency Medicine*, 54(1), 106-113.

- Laidra, K., Pullmann, H., & Allik, J. (2007). Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary school. *Personality and Individual Differences*, 42, 441-451.
- Lee, K. (1996). A study of teacher responses based on their conceptions of intelligence. *Journal of Classroom Interaction*, 31, 1-12.
- Leiter, M. P., & Maslach, C. (2000). Burnout and health. In A. Baum, T. Revenson, & J. Singer (Eds.), *Handbook of health psychology* (pp. 415-426). Hillsdale, NJ: Lawrence Erlbaum.
- Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate. *European Journal of Psychology of Education*, 22(4), 529-545.
- Lynott, D. J., & Woolfolk, A. E. (1994). Teachers' implicit theories of intelligence and their educational goals. *Journal of Research and Development in Education*, 27(4), 253-264.
- MacDonald, A. P. (1970). Revised scale for ambiguity tolerance: Reliability and validity. *Psychological Reports*, 26, 791-798.
- Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. *Applied and Preventive Psychology*, 7, 63-74.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99-113.
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, *15*, 103-11.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- McCarthy, C., Lambert, R., O'Donnell, M., & Melendres, L. (2009). The relation of elementary teachers' experience, stress, and coping resources to burnout symptoms. *The Elementary School Journal*, 109, 1-19.
- McLain, D. L. (1993). The MSTAT-I: A new measure of an individual's tolerance for ambiguity. *Educational and Psychological Measurement*, *53*, 183-189.
- McLain, D. L. (2009). Evidence of the properties of an ambiguity tolerance measure: The multiple stimulus types ambiguity tolerance scale-II. *Psychological Reports*, 105, 975-988.

- McLain, D. L., Kefallonitis, E., & Armani, K. (2015). Ambiguity tolerance in organizations: Definitional clarification and perspectives on future research. *Frontiers in Psychology*, 6, 1-7.
- Merrotsky, P. (2013). Tolerance of ambiguity: A trait of the creative personality? *Creativity Research Journal*, 25, 232-237.
- Monrouxe, L., & Mattick, K. (2006). When I first came here, I thought medicine was black and white: Making sense of medical students' way of knowing. *Social Science & Medicine*, 63, 1084-1096.
- Naghipoor, M., & Abedini, F. (2013). The effect of personality factors on learners' view about translation. *International Journal of Applied Linguistic Studies*, 2(3), 60-64.
- Nichols, J. G., Patashnick, M., & Mettetal, G. (1986). Conceptions of ability and intelligence. *Child Development*, *57*(3), 636-645.
- Norton, R. W. (1975). Measure of ambiguity tolerance. *Journal of Personality Assessment*, 39, 607-619.
- Peterson, U., Demerouti, E., Bergström, G., Samuelsson, M., Asberg, M., & Nygren, A. (2008). Burnout and physical and mental health among Swedish healthcare workers. *JADV Nurse*, 62(1), 84-95.
- Pishghadam, R. (2011). Introducing applied ELT as a new approach in second/foreign language studies. *Iranian EFL Journal*, 7(2), 8-14.
- Pishghadam, R. (2014). Social conceptions of intelligence and their influence on English language teacher care. Paper presented at the 2014 Annual International Conference on LSP and Specialized Translation Skills Training.
- Pishghadam, R., Adamson, B., Shayesteh, S., & Kan, F. L. F. (2013). Conceptions of assessment and teacher burnout. *Assessment in Education: Principles, Policy, & Practice, 21*, 34-51.
- Pishghadam, R., Naji Meidani, E., & Khajavy, G. (2015). Language teachers' conceptions of intelligence and their roles in teacher care and teacher feedback. *Australian Journal of Teacher Education*, 40(1), 60-82.
- Pishghadam, R., & Sahebjam, S. (2012). Personality and emotional intelligence in teacher burnout. *The Spanish Journal of Psychology*, 15(1), 227-236.
- Pishghadam, R., Zabihi, R., & Norouz Kermanshahi, P. (2012) Educational language teaching: A new movement beyond reflective/critical teaching. *Life Science Journal*, *9*(1), 892-97.

- Pishghadam, R., Zabihi, R., & Shayesteh, S. (2013). The perception-practicum interface revisited: Life-wise language teaching perceptions and teacher burnout. *Asia-Pacific Education Researcher*, 23(2), 287-297.
- Rodriguez, E. (2006). An exploration of factors contributing to stress and burnout in male Hispanic middle school teachers. Unpublished doctoral dissertation, University of Huston, Huston, TX.
- Rydell, S. T., & Rosen, E. (1966). Measurement and some correlates of need-cognition. *Psychological Reports*, *19*, 139-165.
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis.* London, UK: Taylor & Francis.
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, *57*, 152-171.
- Shukla, A., & Trivedi, T. (2008). Burnout in Indian teachers. *Asia-Pacific Ocean Review*, 9, 320-334.
- Slate, J. R., Jones, C. H., & Charlesworth, J. R. (1990). Relationship of conceptions of intelligence to preferred teaching behaviors. *Action in Teacher Education*, 12(1), 25-29.
- Soares, D. L., Lemos, G. C., Primi. R., & Almeida. L. S. (2015). The relationship between intelligence and academic achievement throughout middle school: The role of students' prior academic performance. *Learning and Individual Differences*, 41, 73-78.
- Sparks, R., & Artzer, M. (2000). Foreign language learning, hyperlexia, and early word recognition. *Annals of Dyslexia*, 50, 189-211.
- Sternberg, R. (1985). *Beyond IQ: A triarchic theory of human intelligence*. New York: Cambridge University Press.
- Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress*, & *Coping, 21*, 37-53.

Appendix A
Language Teachers' Conceptions of Intelligence Scale (LTCI-S)

Concep	itions of	micinge	ice sca		-0 <i>)</i>
Strongly	Mostly	Moderately Agree	Slightly	Mostly	Strongly
Agree	Agree	118,00	118700	Disagree	Disagree
		Strongly Mostly	Strongly Mostly Moderately	Strongly Mostly Moderately Slightly Agree Agree	Agree Agree

Appendix B
Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II)

	Strongly Disagree	Somewhat Disagree	No Idea	Somewhat Agree	Strongly Agree
I don't tolerate ambiguous situations well.					
I would rather avoid solving a problem that must be viewed from several different perspectives					
I try to avoid situations that are ambiguous					
I prefer familiar situations to new ones					
Problems that cannot be considered from just one point of view are a little threatening					
I avoid situations that are too complicated for me to easily understand.					
I am tolerant of ambiguous situations					

I enjoy tackling problems that are complex			
enough to be ambiguous.			
I try to avoid problems that don't seem to have			
only one "best" solution.			
I generally prefer novelty over familiarity.			
I dislike ambiguous situations.			
I find it hard to make a choice when the			
outcome is uncertain.			
I prefer a situation in which there is some			
ambiguity			

Appendix C Maslach Burnout Inventory (MBI)

	Never	A few	Once	A few	Once	A few	Every
		Times	а	Times	а	Times	Day
		Per	Month	Per	Week	Per	
		Year		Month		Week	
I feel emotionally drained by							
my work.							
Working with people all day							
long requires a great deal of							
effort.							
I feel like my work is breaking							
me down.							
I feel frustrated by my work.							
YC 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
I feel I work too hard at my job.							
It stresses me too much to work							
in direct contact with people.							
I feel like I'm at the end of my							
rope.							
I feel I look after certain							
patients/client impersonally, as							
if they are objects.							
I feel tired when I get up in the							
morning and have to face							
another day at work.							
I have the impression that my							
patients/clients make me							
responsible for some of their							
problems.							
I am at the end of my patience							
at the end of my work day.							
I really don't care about what							
happens to some of my							
patients/clients.							

I have become more insensitive to people since I've been working.				
I'm afraid that this job is making me uncaring.				
I accomplish many worthwhile things in this job.				
I feel full of energy.				
I am easily able to understand what my patients/clients feel.				
I look after my patients'/clients' problems very effectively.				
In my work, I handle emotional problems very calmly.				
Through my work, I feel that I have a positive influence on people.				
I am easily able to create a relaxed atmosphere with my patients/clients.				
I feel refreshed when I have been close to my patients/clients at work.				