



Conceptions of Intelligence, Teaching Motivation and Teacher Creativity: A Mixed-Methods Study

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Abstract The present study, adopting a mixed-methods design, mainly aimed at 1) examining the significant relationship between conceptions of intelligence, teaching motivation, and teacher creativity, 2) determining the best predictor of teacher creativity in conceptions of intelligence and teaching motivation components, and 3) exploring the teachers' perspectives of the role of conceptions of intelligence and teaching motivation in teacher creativity. A total number of 130 teachers from secondary schools participated in this study based on criterion sampling. The results showed that there was a statistically significant association between conceptions of intelligence and teacher creativity as well as between teaching motivation and teacher creativity. Furthermore, the results revealed that the best predictor of teacher creativity was teacher motivation. Finally, following the coding reliability and agreement, seven common themes emerged from the teachers' responses to the semi-structured interview questions. In the end, some practical implications are offered by EFL teachers and teacher educators.

Keywords: *Conceptions of intelligence, Cognitive abilities, Motivation, Creativity, Teacher education*

1. Introduction

There is a direct line from the cognitive paradigm in psychology to the works on the emotional (Bar-On, 1988; Goleman, 1995; Salovey & Mayer, 1990) and embodied (Lakoff & Johnson, 1980) movements concerning intelligence. One can see this same shift in emphasis throughout the history of intelligence, from psychometric intelligence (Galton, 1879) to works on emotional intelligence (Goleman, 1995), sensory intelligence (Lombard, 2007), and emo-sensory intelligence (Pishghadam et al., 2020). In the same vein, Boustani (2023) discovered that cognitive changes during development aid in the maturation of the Theory of Mind.

The definition of intelligence, according to Pishghadam et al. (2020, p. 176), is "the mental ability with a heightened emphasis on reasoning, problem-solving, and abstract thinking". The term conceptions of intelligence is relatively new to the historical literature. How teachers define intelligence impacts their outlook (Dupeyrat & Mariné, 2005), classroom practices (Slate et al., 1990), and pedagogical aims (Lynott & Woolfolk, 1994). In this regard, teachers' conceptions of intelligence (TCoI) stem from teachers' assumptions

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about their learners' innate intellect and whether or not such IQs are amenable to growth via teamwork in the classroom.

However, in L2 learning, teachers' motivation has been largely overlooked (Craft, 2005). It has been taken for granted that teachers are themselves highly driven and dedicated to their work. Increasing social demand for encouraging creative thought has sparked what Craft (2005) called a "revolution of creativity in education". The existing literature recognizes motivation as connected with social processes and people's collective habits (Bourdieu, 1986; Pishghadam et al., 2019a). Few studies over the past two decades have built and summarized motivating strategies for instructors to use in the classroom (Williams & Burden, 1997). Moreover, Dörnyei (2001) combined some relevant motivational components into a multilevel, second-language motivational construct for a pedagogical understanding of second-language motivation.

Teachers' ideas about intelligence affect their instructional engagement with students and their emotional distance from them, increasing their risk of burnout (Bibou-Nakou et al., 1999). Actually, experts want to foster this foundational capacity by equipping teachers, institutions of higher learning, and educational systems, given that creative thinking is a crucial 21st-century competency. Pishghadam et al. (2020) recently developed and validated an inventory of emo-sensory intelligence based on emotioncy (Pishghadam, 2015) and sense-induced emotions (Pishghadam et al., 2016a). Similarly, Farsad and Modarresi (2023) developed a measure to assess L2 ego, and the results of the statistical analyses showed that personality characteristics and cognitive styles among L2 ego components significantly contributed to explaining emotional intelligence.

Despite teachers' growing recognition of the value of intelligence in the classroom, only some studies have explored how teachers conceptualize intelligence and how that may alter their outlook on the profession (Cherniss, 2004). Teachers who believe intelligence is innate are less likely to foster an environment where students feel safe taking risks and taking responsibility for their learning (Leroy et al., 2007). They are more likely to view student mistakes as obstacles to success in the classroom (Lee, 1996). Teachers in the L2 context may have overlooked the connection between their perception of intelligence and their creativity in the classroom. The present study addresses the conception of intelligence and teacher motivation and creativity.

2. Theoretical Framework

As pinpointed by Li and Schmierek (2001), intelligent people need to go beyond their cognitive talents. Petrides and Mavroveli (2018) found a clear correlation between intelligence and learning-related cognitive, emotional, and metacognitive abilities. In this regard, Gil-Olarte et al. (2006) discovered a clear correlation between intelligence and academic achievement. Similarly, Bracket and Salovey (2006) developed an emotional literacy curriculum to help students better understand and manage their emotions, and they discovered that the program boosted students' ability to engage in abstract thought and self-reflection. For example, the longitudinal research conducted by Costa and Faria (2015) showed that intelligence was a significant predictor of students' academic achievement, in contrast to the majority of previous cross-sectional studies that focused on the relationship between intelligence and some other variables without considering language learners. Recently, Li and Li (2018) explored the link between emotional intelligence and nursing performance and found that ego development improves emotional intelligence by acting as a moderator. Even though prior studies on emotional intelligence have focused on cognitive and emotional aspects (Mayer et al., 2016), Petrides and Mavroveli (2018) argue that socioeconomic position should also be included. However, critical cross-sectional studies imply a correlation between intelligence and other language-related characteristics in the L2 environment (Dewaele & Dewaele, 2020).

In the Iranian context, the experimental study by Rahimi Domakani et al. (2014) revealed that students' pragmatic performance was positively correlated with intelligence characteristics. In addition, Abdolrezaipoor (2017) found that L2 students with high-trait emotional intelligence demonstrated more significant levels of oral fluency. In a recent study validating the emo-sensory competence questionnaire, Gholami et al. (2021) developed the emosensory competence questionnaire and concluded that cognitive topics are negative predictors of L2 speaking performance.

2.1. Teaching Motivation

Williams and Burden (1997) referred to their model of L2 motivation as “cognitive and constructivist, socially contextualized, and dynamically interactive” (p. 137). To them, taking action is the catalyst for motivation. The point is that a person may have good intentions to take action but ultimately decide not to because of the fear of failure. Dörnyei (2001) presented the motivational strategies in his book, *Motivational Strategies in the Language Classroom*, in which he explained how motivation might be divided into four distinct subsets: laying the groundwork for motivation, stimulating early motivation, guarding and preserving motivation, and closing the loop in the learning process (promoting constructive self-evaluation).

The previous literature acknowledges the existing concepts and issues with respect to motivation, such as active/passive motivation, hint-based instruction, involvement, and engagement (Modarresi, 2021b; Pishghadam & Khajavy, 2014; Pishghadam et al., 2019b; Rouhani & Modarresi, 2023). External rewards (Staddon, 2001), internal drives to do things (Maslow, 1954), an intrinsic/extrinsic categorization (Vroom, 1964), and social processes and people’s collective habits (Bourdieu, 1986; Pishghadam et al., 2019a) are all considered to be determining in motivating people to act. Furthermore, Dörnyei and Csizér (1998), adopting a social-psychological perspective on the significance of L2 motivation, proposed integrative and instrumental motivations.

2.2. Teacher Creativity

Using his qualitative paradigm, Rhodes (1961), based on nearly 50 definitions of creativity, divided the definitions of creativity into four levels: (a) person, (b) process, (c) press, and (d) products. The person category indicates the characteristics of a person’s character, disposition, and outlook; the process is the interaction of drive, knowledge, and insight; Press depends on how people interact with their surroundings, whereas the product is the ultimate result of an artistic endeavor. According to Craft (2001), creativity with ‘big C’ and ‘small c’ are distinct from one another. The former has determining influence on society, whereas the latter emphasizes creativity in daily life.

Despite some research on what makes a good teacher (e.g., Alexander, 2001; Swank et al., 1989), an agreed-upon definition of what constitutes a successful teacher still needs to be constructed. For example, Weimer (2013) has explored educational achievement as a complex entity with many possible interpretations. Hence several definitions are appropriate, according to Pishghadam et al. (2016b), since different learners have their own experiences and responses to pedagogical instructions. Taking into mind the philosophy of applied ELT (Pishghadam, 2011), ELT teachers are now responsible for incorporating real-world situations into their lessons to help their students grow as whole-person learners. To help researchers focus on the possibilities of language classes, Pishghadam (2011) and Pishghadam and Zabihi (2012) introduced a new paradigm in the field: the life syllabus, which refers to enhancing the life qualities (such as creativity and emotional intelligence) in second /foreign language learning classes.

The present study focuses on the perception of the teachers with regard to intelligence which has been underrated in the field of SLA, and it tackles the creativity of the teachers. In this regard, the study mainly aims at 1) examining the significant relationship between conceptions of intelligence, teaching motivation, and teacher creativity, 2) determining the best predictor of teacher creativity in conceptions of intelligence and teaching motivation components, and 3) exploring the teachers’ perspectives of the role of conceptions of intelligence and teaching motivation in teacher creativity.

3. Methodology

3.1. Participants

The sample consisted of 130 teachers (males: n=74, 56%; females: n=56, 44%; Mean age=37.41, SD=1.87), teaching English language at secondary schools in Bojnord, the capital city of Northern Khorasan Province, Iran. The sampling strategy opted for criterion-based selection over random sampling. Actually, researchers use this technique to find people who fit a set of predetermined characteristics crucial to the goals of the study (LeCompte et al., 1993). Since high-quality studies

depended on their specific settings, researchers had to recruit people who could help them find answers to their questions in a practical and methodical way (Kairuz et al., 2007). The criteria set in this phase were: a) Being an EFL secondary school teacher, b) being officially employed, and c) having experience teaching for at least five years. Moreover, eight students were selected to participate in the interview phase of the study based on availability sampling. The sample size seemed to be adequate since, according to (Dörnyei, 2007), an interview study with a sample size of six to 10 might work well.

3.2. Instrumentations

3.2.1. Language Teachers' Conceptions of Intelligence Scale (LTCI-S)

To determine teachers' conceptions of intelligence, the study utilized the language teachers' conceptions of intelligence scale (LTCI-S), already developed and validated by Pishghadam et al. (2015). There are 12 questions in the questionnaire, and they cover a range of topics related to increasibility, modularity, and applied ELT dimensions. Each statement can be rated from 6 (very agree) to 1 (very disagree) on a continuous 6-point Likert scale. However, points should be deducted for items #1, #4, #8, #10, #11, and #12. The total points awarded to the respondent might be 12 to 72. According to Pishghadam et al. (2015), Cronbach's alpha reliability coefficient for this scale is .76.

3.2.2. Teaching Motivations

To measure teachers' motivation levels, the questionnaire on teaching motivation, designed by Wong et al. (2014), was used, entailing a 15-item questionnaire with a six-point Likert scale (strongly agree, agree, somewhat agree, slightly disagree, disagree, and strongly disagree). Five items assess altruistic motivation (e.g., "teaching allows me to influence the next generations"), six items assess intrinsic motivation (e.g., "I like teaching"), and four items assess extrinsic motivation (e.g., "the salary is relatively high").

3.2.3. English Language Teacher Creativity

To evaluate teachers' creativity, the study utilized the questionnaire created and validated by Pishghadam et al. (2012), having 63 items measuring English language teachers' levels of creativity on a Likert scale ranging from 1 (never) to 5 (always). Rasch's analysis provided an estimate of the survey's reliability ($r=.91$).

3.2.4. Semi-structured Interview Questions

To delve into the mind of the teachers regarding the importance of conceptions of intelligence and teaching motivation in their creativity, the researchers created a series of semi-structured interview questions. Topics included in the survey included teachers' views on intellectual ability, motivation, and the variables that foster their creative minds when instructing. The researchers conducted a pilot study in which three colleagues who were not involved in the study offered comments on the interview questions to ensure their content validity. Their feedback on the wording of the questions led to further changes.

3.3. Procedure

The study gathered data from 130 EFL teachers who responded over five weeks from September 2021 to November 2021. Since a big enough sample size is necessary for generalizing the results of correlational investigations (Dörnyei, 2007), the researchers tried to employ more individuals. In the first week of the study, they took the questionnaire of conceptions of intelligence to measure their views on intelligence. During the second week, teachers were given a teaching motivation questionnaire to measure their level of motivation for the profession. Teachers were given the creativity questionnaire in the third week, and instructions on responding within a specified amount of time were explained to them. In the fourth and fifth weeks, using the data saturation approach, the researchers interviewed eight teachers to collect their replies to the interview questions about the influence of teachers' beliefs of intelligence and teaching motivation on their creative minds. As "the researcher is the primary tool for data analysis and collection" (Merriam, 2009, p. 15) in qualitative research, the researchers took a

dispassionate stance when considering their biases. The researchers aimed to get as much information as possible from each interview. Hence the duration of the sessions varied.

To address the first objective of the study, the Pearson correlation coefficient we used to examine the statistically significant association between conceptions of intelligence, teaching motivation, and level of creativity. To address the second objective of the study regarding the possible predictors of teacher creativity in conceptions of intelligence and teaching motivation components, Multiple Regression was run. After that, the researchers used “theme-based classification” (Dörnyei, 2007) to classify the replies to the free-form questions to ensure high levels of consensus and consistency in coding the transcripts. It is important to note that for inter-coder agreement, both coders must be able to come to a consensus through conversation (Garrison et al., 2006). For inter-coder dependability, both coders must select the same code for the same unit of text (Krippendorff, 2004).

4. Results

4.1. Conceptions of Intelligence, Teaching Motivation, and Teacher Creativity

As for the significant relationship between conceptions of intelligence, teaching motivation, and teacher creativity, the researchers used descriptive statistics and the Pearson correlation coefficient to achieve the first objective of the study. There were 12 items on the concepts of intelligence questionnaire, each with a 6-point Likert scale response option (strongly agree, agree, somewhat agree, disagree, and strongly disagree), ranging from a low of 12 to a high of 72. There were 15 questions on the teaching motivation questionnaire, each with a six-point Lickert scale with responses ranging from 15 to 90. Finally, the teacher creativity questionnaire had 63 questions, each with a 5-Likert scale ranging from 1 (never) to 5 (always); a score of 63 was the lowest possible, and a score of 315 was the highest. The first step was to check that the skewness and kurtosis, which were within the expected range of +2 to 2. Descriptive analyses revealed the mean and standard deviation scores for three variables related to conceptions of intelligence, teaching motivation, and creativity, respectively: $M=40.80$; $SD=10.00$; $M=52.71$; $SD=11.49$; and $M=231.95$, $SD=26.35$.

Table 1
The Correlations between Conceptions of Intelligence, Motivation, and Creativity

		Teacher Creativity
Teachers' conceptions of intelligence	Pearson Correlation	.258**
	Sig. (2-tailed)	.003
	N	130
Teaching motivation	Pearson Correlation	.450**
	Sig. (2-tailed)	.000
	N	130

** . Correlation is significant at the 0.01 level (2-tailed).

As displayed in Table 1, the results obtained from Pearson product-moment correlation coefficient showed the relationship between scores of conceptions of intelligence, teaching motivation, and teacher creativity. There was a small, positive association between conceptions of intelligence and teacher creativity for EFL teachers [$r=.25$, $n=130$, $p<.05$], with higher scores on conceptions of intelligence associated with higher scores on teacher creativity. Moreover, there was a medium, positive correlation between teaching motivation and teacher creativity [$r=.45$, $n=130$, $p<.05$], with higher scores on teaching motivation associated with higher scores on teacher creativity, based on the guideline proposed by Cohen (1992).

4.2. The Predictors of Teacher Creativity in Conceptions of Intelligence and Motivation

The second objective of the research dealt with the possible predictors of teacher creativity in conceptions of intelligence, and teaching motivation for EFL teachers. In doing so, the following statistical analyses were performed. As of the first step, the researchers ensured that the independent

variables did not have a too-close connection (a condition known as Multicollinearity). As you can see from Table 1, there is some connection between the dependent and model variables. In addition, there was no breach of the multicollinearity condition because the tolerance value for each independent variable was more than .10. The VIF value, which was within the threshold of 10, provided further confirmation of this. There was thus no violation of data. The Mahalanobis distance was also inspected to see if there were any outliers. Since there were two independent variables in this research, the critical value could not be higher than 13.21, according to the recommendations of Tabachnick and Fidell (2001). The results showed no violation. Model Summary's output also showed that the value was 0.216. That is, the model (which included scores on conceptions of intelligence and teaching motivation) explained 21.6% of the variation in teacher creativity scores when expressed as a percentage (multiplied by 100, moving the decimal point two places to the right). After that, the ANOVA Test was run to assess the statistical significance of the results, which tested the hypothesis that multiple R in the population equals zero (0). The model reached statistical significance ($F=17.48$, $Sig = .00$, this really means $p<.05$).

Table 2
The Predictors of Teacher Creativity in Conceptions of Intelligence and Teaching Motivation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	180.58	9.93		18.16	.000
1 Teachers' conceptions of intelligence	.44	.30	.17	1.45	.148
Teaching motivation	1.32	.26	.57	4.92	.000

As shown in Table 2, to know which of the variables included in the model contributed to the prediction of the dependent variable, looking down the Beta column, the researchers found that the most significant beta coefficient was .57, which was for teaching motivation. This means that this variable made the most substantial contribution to explaining teacher creativity. The Beta value for conceptions of intelligence was insignificant since the Sig value for it was more than .05, so it made no significant contribution to the prediction of teacher creativity. Therefore, the best predictor of teacher creativity was teaching motivation.

4.3. Content Analysis of Responses Emerged from the Interviews

As for the third objective of the study regarding EFL learners' reactions to the role of conceptions of intelligence and teaching motivation in teacher creativity, the researchers held interview sessions with the participants based on the data saturation method. The main themes extracted from the interviews are reported below. One of the teachers said: *"Intelligence is a concept that is mostly associated with inventors and experimental scientists; however, the field of humanities should be highlighted because it has been lowlighted during the past decades and all of the other fields should be at the service of humanity. Because of this, I think intelligence should be evaluated not only by the invention but also by the theoretical ideas and creative publications produced by teachers in humanity"*.

Another teacher believed that teachers who are more motivated to teach and study new findings regarding teaching issues and do research are more creative. He mentioned: *"Some of the teachers just repeat the materials to the students for several years and they have no real experience of teaching since they have repeated what they had presented during their first years of teaching whether at secondary school or even university levels. However, there are also few teachers who like to pursue their academic studies to promote to higher degrees not only because of external motivation but also because of their interest and internal motivation among which there are intelligent teachers who publish useful textbooks and publications"*.

It seems that some teachers at secondary school levels also suffer from demotivation and burnout due to their lack of job satisfaction and income. They believed that they were not equipped with the prerequisites to think and do research. One of the teachers mentioned: *“For some of the teachers, teaching is associated with less income and hard work that would lead to their demotivation. Teachers who are not really interested in teaching English and speak mostly Persian in the class believe that intelligence does not bring money and they do not even think of such factors but they are concerned about the salary and costs of living. I myself was really among these teachers but after pursuing my studying at MA level, I became again motivated to learn new findings in linguistic issues and research methodology”*.

It seems that teachers themselves know that the concept of intelligence is related to hard work, perseverance, and motivation and those who exert more effort would become critical and creative since they can change their mindset. Another teacher commented: *“I would be more creative if I understood the meaning of intelligence and since intelligence, like any other concept or entity, is personal and there is no unanimous agreement on its definition, it can be regarded as dynamic and a matter of becoming not being and so having a positive and optimistic view towards this notion can help us to generate new ideas and have a creative mind”*.

Following this, having coded the data, the first researcher provided the second person with the data to code. Thereafter, the second researcher coded the responses by eliciting the commonalities and formulated rather similar findings with minor differences. Because the two coders arrived at the same conclusion, the inter-coder agreement on the findings was taken care of. In doing so, initially, following the guidelines suggested by Campbell et al. (2013), the researchers divided the number of coding agreements by the number of agreements and disagreements combined, and they achieved 66 percent inter-rater reliability. There were 15 common themes that at least one of the researchers invoked a code and of these, there were 10 cases that both of the two coders had invoked the code. Therefore, the overall level of inter-coder reliability would have been 66 percent ($10/15=0.66$). However, after negotiating discrepancies, they reached 70 percent inter-coder reliability ($7/10=0.70$). Therefore, following the coding reliability and agreement, the number of common themes that emerged from the teachers' responses was reduced to seven codes, including *effort, perseverance, desire to succeed, job satisfaction, dynamicity of intelligence, creative mind, and active motivation*.

5. Discussion

The findings of the current study shed new light on the teachers' understanding of intelligence, which needs to be more manifested in the existing literature. The acquired data demonstrated a statistically significant relationship between teachers' conceptions of intelligence and their creativity, as well as between teaching motivation and their creativity. Moreover, the study found that teaching motivation was the best predictor of teacher creativity since it contributed the most to explaining it. Finally, the content analysis of the teachers' comments revealed some common ground for discussion.

The findings corroborate the previous study by Mertler (2002), who also discovered a correlation increase between levels of motivation and creativity. By the same token, the findings are consistent with those of Karslı and İskender (2009), who surveyed 400 Turkish teachers and found that those with higher levels of motivation and income were happier and more effective in their jobs. In addition, the literature in the Iranian context shows that it seems logical to infer that the teachers who consider intelligence to be improved through learning a new language (Pishghadam, 2011) and learning a new language is related to such important concepts as multisensory learning, engagement, stroke, and emotioncy (Bahari & Dost Mohammadi, 2023; Khorsand & Modarresi, 2023; Modarresi, 2022; Shirzadeh & Jajarmi, 2023). Likewise, the findings are consistent with those of McLain et al. (2015), who discovered that intelligence and motivation are more fluid when tied to creativity, and who concluded that people who take a black-and-white view of the world seek firm truth and prefer a fixed dichotomy of events into unchangeable categories, and who may harbor feelings of incompetence and reduced productivity in their professional spheres as a result. Sargent and Hannum (2005) found that teachers' enthusiasm and dedication to their jobs increased in direct proportion to their level of job satisfaction.

The findings from the interviews are consistent with the existing literature on the topic, which has shown that teachers who view intelligence as a fixed and uncontrollable trait are more likely to experience feelings of demotivation and overwork than their peers who view intelligence as a changeable trait (Leroy et al., 2007). Some of the teachers surveyed for this study held that their salaries had a significant role in their motivation levels. However, as Spector (1997) noted, income has varying impacts on teachers' levels of job satisfaction. Some research has found that salary does have a favorable effect (Tickle et al., 2011), while other research has found that it corresponds with teachers' dissatisfaction (Akiri & Ugborugbo, 2009). Furthermore, Monyatsi (2012) found no correlation between teacher success and income, and teachers' demotivation from their jobs had no relation with their income.

Now EFL teachers may advocate for a more inclusive definition of intelligence considering a broader range of elements. Teachers are the most important and influential people in any classroom, and recent research has shown that by encouraging their students to think creatively and independently, teachers can improve their students' academic growth (Leont'ev, 2002) and language proficiency in terms of complexity, accuracy, and fluency (Modarresi, 2021a). Teachers' ideas on intelligence are to be reconsidered in second language contexts because this allows them to increase their motivation when teaching a second language. This study shows that focusing on the motivating elements might reveal the complexity of intellectual and psychological concerns in SLA, even though assessing mental components is challenging in second language teaching (Brown & Rogers, 2002).

Actually, higher-order demands are crucial for academic innovation. Reconsidering teachers' role in society and at school might have dire consequences for the educational system. Thus, language policymakers should proceed with caution. Motivated teachers are more likely to think beyond the box, which benefits students learning a new language. Indeed, teachers can influence their pupils, motivate them to excel, and transform them into top performers. The results, as a whole, demonstrate the usefulness of creative thinking and the need to focus on improving EFL teachers' intelligence. However, the researchers argue that intelligence is more than just an IQ score and that factors like emotion and engagement may do more to boost teachers' creativity. In fact, by developing a more congenial view of the bits of intelligence, the research can enrich the current understanding of intellect in important ways.

The current study offered some preliminary evidence that teachers' estimations of their intellect and their motivated responses to this idea might significantly enhance the quality of their pedagogical goals. For instance, Weiner (2000) argued that informal characteristics reveal data on the two motivational hindrances posed by low success expectations and low value. Value impacts one's logical responses, whereas success anticipation affects one's thoughts (Struthers et al., 1998). Teachers do better with confidence in their intelligence. In the end, the empirical data by Chien and Hui (2010) will inform the development of effective training programs for teachers to improve their understanding of and ability to foster student creativity. Teachers that have their students work on projects and in groups seem to be enthusiastic and energetic, verify their work, provide valuable comments, and value both correct and incorrect responses typically receive the highest levels of student appreciation.

L2 teachers are urged to view intelligence as a fluid concept that can be nurtured to foster innovation and serve as a stepping stone for their students' motivation if they are to be viewed as intellectual models in the classroom and beyond the classroom setting. Students are more likely to hold their teachers to a high standard if those teachers are themselves highly driven and enthusiastic about their job. Indeed, teachers' emotional and physical well-being may improve if they receive more significant attention to their motivation. Likewise, teachers' preparation programs should focus on preventing burnout and disillusionment that might result from demotivation. Teachers should become researchers and become aware of how they deal with such situations to monitor and alter their adverse reactions to increase their creativity. It includes keeping up-to-date with the latest findings in the psychology and sociology of education. Teacher educators should emphasize the importance of preservice education in shaping teachers' mindsets, as accentuated by Koc (2013). They have a responsibility to help their preservice teachers develop more effective teaching practices by educating them on how their implicit theories of intelligence affect their interactions with students and their job satisfaction. Educators may help future teachers become instructional language instructors who can boost students' IQs by teaching them a second language. Finally, teacher educators may train future teachers to view themselves not as arbiters

of students' innate intellect but as facilitators who can assist EFL students in improving their intelligence and elevating their motivation.

Although the current study includes some suggestions for further research, it does have some limitations. Since the sample is not a typical representation of English teachers at the secondary school level, caution is warranted in generalizing the results. Finally, as for the relationship between conceptions of intelligence, teaching motivation, and teacher creativity, a fruitful area for further research can examine the extent to which these variables can contribute to the development of teacher professionalism or the extent to which such factors are related to apathy and transpathy (Pishghadam et al., 2023) as well as to active/passive motivation (Pishghadam et al., 2019b) so that now the door is open for engaged researchers to carry out further research into the role of conceptions of intelligence and teaching motivation in enhancing teacher creativity in the Iranian context in order to construct a comprehensive picture of mental abilities in reference to teacher education.

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