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# Examining the roles of spiritual motivation, religiosity, and L2 WTC in English

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## Abstract

Recognizing the importance of students' attitudes in enhancing their educational achievements, this study aimed to examine the roles of spiritual motivation, religiosity, and L2 WTC (Willingness to Communicate) in students' English language achievements. The study aimed to create a scale to assess students' spiritual motivation. Additionally, it scrutinized the relationship between spiritual motivation, religiosity, and L2 WTC. The data was collected from 194 students (97 males; 97 females) coming from both social and non-social sciences who completed three questionnaires: spiritual motivation, religiosity, and L2 WTC scales. Descriptive and inferential statistics were obtained using SPSS (Statistical Package for Social Sciences), and AMOS (Analysis of a Moment Structure). The analysis confirmed that both spiritual motivation and religiosity scales have reliable psychometric properties. SEM (Structural Equation Modeling) also revealed that spiritual motivation and religiosity are positively associated with L2 WTC. However, neither of the dependent variables emerged as predictors of English language acquisition. Notably, when mediated by spiritual motivation, SEM revealed that religiosity can predict L2 WTC. The study concludes with a discussion of the results and implications for research.

**Keywords:** Spiritual motivation, Spirituality, Religiosity, Willingness, Academic achievement

## Introduction

Students express different attitudes towards various factors associated with learning outcomes and academic achievements based on their values, goals, motivational beliefs, and learning styles (Bai & Wang, 2023). Understanding these attitudes is critical in providing students with quality teaching and maximizing their learning outcomes. According to Verma (2022), one of the factors contributing to students' academic success is their commitment to a specific set of beliefs, values, or principles. Specifically, spiritual intelligence is essential to be integrated into the academic system for the all-round growth of the students. Spiritual intelligence can play a pivotal role in shaping and raising student's academic engagement in the class (Ma & Wang, 2022). Depending on students' values and principles, they view and perceive the role of spirituality and religiosity differently (Turi et al., 2020).

Pishghadam (2022) presented the term spiritual motivation for the first time, commonly seen in religion-dominated societies, which means to do something for God's willingness. Spiritual motivation can pave the ground for offering quality teaching and better learning outcomes. In other words, students with spiritual motivation study only for God's satisfaction and willingness not to gain materials or have personal choices (p. 65). Spiritual motivation and intelligence bring truthfulness, sincerity, and responsibility to the workplace and indicate that the teaching career is a kind of worship. Instructors who give sense to life and introduce spirituality in the workplace are also motivated to work better (Rahmawati et al., 2019). According to Anasrulloh (2015), spiritual intelligence is correlated with work motivation. Saying that, an instructor with spiritual intelligence may possess moral sensitivity, too.

Spirituality has been referred to be an ultimate and conclusive understanding of the universe's order and the meaning of life in philosophical contexts. According to psychology, spirituality refers to the deeds, words, and thought processes connected to more potent religious energies as determined by the individual (Lih, 2021). Developing a student's spirituality conveys the society's perspective, educational philosophy, and cultural orientation and gives them hope for the future (Rakhmonova, 2021).

Given the fact that Afghanistan is underrepresented in the field of research in general and language education in particular (Kakar & Sarwari, 2022; Sarwari & Kakar, 2023), it is important to investigate spiritual motivation, which is a new concept pertaining to contribute to language achievement, considering the Afghan context's specific features. Hence, it is vital to design a scale for spiritual motivation, and to investigate the interface between spiritual motivation, religiosity, and L2 WTC in Afghan EFL learners' English language achievements.

The researchers first developed and validated the spiritual motivation scale included two subconstructs; extrinsic and intrinsic spiritual motivation and the religiosity scale consisted of two subconstructs; religious engagement and religious commitment. With that in mind, this study intended to examine the relationship between spiritual motivation, religiosity, and students' willingness to communicate in English language classes as well as if these variables enjoy psychometric validity and predict English language achievements.

This study purported to address the following hypotheses:

- H01. The spiritual motivation scale does not enjoy psychometric validity.
- H02. The religiosity scale does not enjoy psychometric validity.
- H03. The spiritual motivation, religiosity, and students' willingness to communicate in English language classes do not predict English language achievement.
- H04. There is no significant relationship between spiritual motivation, religiosity, and students' willingness to communicate in English language classes.

### **Theoretical framework**

In order to investigate the roles of spiritual motivation, religiosity, and WTC in students' academic achievements, it is necessary first to review the available literature on the above-mentioned concepts from different perspectives. Thereafter, the concepts of spirituality, religiosity, WTC, and students' academic achievements are presented.

### **Perspectives into spiritual intelligence**

Pant and Srivastava (2019) stated that expressing one's intrinsic spiritual characteristics through his/her beliefs, performance, and manner is called spiritual intelligence, which helps mediate a discourse between logic and feeling as well as brain and body. Further, it helps to incorporate the intrapersonal and personal and to cross the gap between oneself and those around.

Spiritual intelligence enables individuals to be creative, thoughtful, honest and truthful, optimistic, and sometimes even change the rules and regulations to perform and work better and acceptably (Nasution, 2005). Undoubtedly, spiritual intelligence contributes to offering quality teaching within academic contexts. Spiritual motivation and intelligence bring truthfulness, sincerity, and responsibility to the workplace and indicate that the teaching career is a kind of worship. Instructors who give sense to life and introduce spirituality in the workplace are also motivated to work better (Rahmawati et al., 2019; Khodijah and Sukirman 2014).

Instructors with spiritual intelligence possess moral sensitivity, it activates the desire to consider ethics and morality in search of spirituality, affecting a teacher's academic performance quality (Anasrulloh, 2015). Spiritual intelligence helps students explore, realize their capacities, and understand themselves better. Spiritual intelligence is also described as one's mind's ability to overcome the spiritual facets of personal and career-related life; Further, it holds values, commitment, power, ideologies, and reliability and is a passionate phenomenon for different aspects of one's life. It makes the learner instinctive, sympathetic, modest, and flexible (Turi et al., 2020).

Kulshrestha and Singhal (2017) asserted that spiritual intelligence significantly helps instructors and academics to seek solutions to the world's challenges and issues. Institutions and academic settings try to develop commitment, career fulfillment, and intrinsic motivation by practicing different spiritual dominions. It is also stated that spiritual individuals have better, more joyful, and more fruitful lives at their workplaces. Further, spirituality massively assists instructors and educational institutions reach success and accomplish their goals. It is critical to help teachers become spiritually intelligent so that they can better improve educational policies.

### ***Spirituality effects on students' learning outcomes***

Spiritually motivated students have more favorable interactions with classmates, have higher GPAs, are more likely to graduate with honors, and are less likely to experience academic failure. Therefore, students' spiritual growth is positively correlated with many indicators of college success (Astin et al., 2011; Park, 2013; Verma, 2022).

Students who score highly on spiritual involvement are more likely to succeed academically, maintain their enrollment through their second year of college, and continue to graduate. Additionally, these students are more likely to graduate with honors and experience fewer academic setbacks. The higher spiritual engagement has benefits beyond the classroom, especially regarding students' capacity for positive interactions with peers and relationships with faculty and staff. These students are also more equipped to deal with upsetting and challenging circumstances and to interpret their college experience (Schreiner, 2020; Stephens, 2022).

Spirituality is how learners organize, recreate, and improve their mental and emotional worlds and lives. Developing a student's spirituality conveys the society's perspective, educational philosophy, and cultural orientation and gives them hope for the future. Spirituality impacts people's consciousness, thought processes, and educational experiences (Rakhmonova, 2021).

According to Smith et al., (2007), identity cannot be separated from social interaction; identity and culture are both shaped by and are influenced by the interactions that individuals engage in social setting, including the educational setting. Religious experiences of individuals are factors that shape their identity, and thus who they are as teacher or learners. Certain classroom interactions have been linked in recent writing to larger networks of beliefs and values, including religious ideas and values. Further, the authors link the teaching of foreign languages to broader educational concerns of moral and spiritual growth. They also make the case for a focus on spirituality when framing classroom approaches to language and literature by taking into account the role of spiritual and moral dimensions of personhood in the representation of members of the target culture in language teaching materials and exploring the potential of poetry, parables, and biography for addressing these dimensions.

Using specific types of speech in the language classroom, participants, in an adult ESL immigrant program sponsored by a church from a caring community, according to Kristjansson (2003). A student's interaction with her pastor played a part in her response while studying divisive slogans in an ESL class, according to Platt's (2004) study of a particular student dialogue. This student was a conservative Muslim student, and her religious beliefs informed her behavior during a pair work activity. These studies are again scant, but they raise the possibility of a connection between spirituality and the principles that underlie social interaction.

However, according to Makki Abadi et al., (2015), there is no obvious association amongst the academic success of engineering, fundamental science, art and architecture students and their spiritual well-being. Moreover, Sapp's (2017) study's results revealed a negative correlation between students' GPAs and their levels of spirituality and religion. Subsequent scholarships ought to investigate the variables that contributed to the inverse associations between spirituality, religion, and GPAs. There needs to be more scholarships investigating the relationship between spirituality and academic achievements (Cox, 2011; Reyes, 2006).

### **Perspectives into religiosity and students' academic achievements**

The notions of religious commitment, religious struggle, religious involvement, religious/social conservatism, and skepticism illustrate how religiosity is defined. Three components make up the definition of religion, which is as follows: (a) Religious commitment: how much we adhere to faith teaching in daily life, how pious we are, and how much benefit we can derive from trusting in the Absolute (internal faith); (b) Religious struggle: how much you consider the difficulty of faith, how far you feel from the Absolute, and how you inquire about your faith; and (c) Religious engagement: how much you participate in religious gatherings, pray, and read the scriptures with faith (Lih, 2021).

Religious faith is a compelling motivator, leading a person to various sorts and forms of action, claim Sokolovskaya et al. (2020). It is reasonable to suppose that students'

identity crises will eventually impact their desire for academic and professional pursuits and their professional activities. Relationships with leaders of social and professional groups can be improved psychologically through religion. This motivation forms the basis for students' positive socio-psychological adaptation after university studies.

According to Claro and Paunesku (2014), religion and spirituality have been shown to boost academic achievement and motivate learners. Students' motivation and performance are impacted by religion and spirituality. Religion affects learners' attitudes toward learning, particularly their mentality and level of perseverance. In their study, Derrico et al. (2015) discovered that "realistic optimism was an essential quality for student success and prolonged academic engagement; this perspective was often fueled by students' faith" (p. 317).

According to research by Derrico et al. (2015) on the connection between religion and academic success, more religious students had characteristics that contributed to their higher academic success than less religious ones. For instance, religiosity increased realistic optimism toward school and decreased cheating, negative behavior-related absenteeism, and absence. Their religiosity may predict students' academic achievement. Students report more connections with others, a sense of community on campus, and an uptick in optimism when religiosity and the learning environment are combined (Williams et al., 2021). Conversely, in their study of first-to-second-year persistence, Sax and Gilmartin (2002) found that religious behavior was a poor predictor of re-enrollment in the second year of college. This is due to students' commitment to religion taking priority over time spent on academic activities, given that their metrics captured time spent engaging in religious activities.

According to Oloyede and Mercy (2016), in an attempt to explore the effect of religiosity on students' academic achievements, they found a weak relationship between religiosity and students' academic performances, particularly in chemistry. Therefore, based on the findings of their study, religiosity was not found to impact academic performance and education significantly.

In contrast to motivation, which has been shown to be influential in language learning, many researchers are persuaded that variables related to identity, such as attitudes and a set of beliefs about learning, are among the determining factors that can affect the effectiveness of language learners in any context (Ellis, 1997). For the same reason, it is usually claimed that educators and instructors must think about these matters when they are teaching. According to Lennartsson (2008), when students think they won't be able to learn a new language successfully, their beliefs may make it more difficult for them to do so.

Behdash et al., (2017) assert that there is no doubt that learning and identity are related. The findings of their study indicated that those who are more devout are less likely to learn cultural practices like friendship, marriage, dating, ideology, and other things that directly contradict Islamic traditions. To put it another way, Muslim language learners have little to no tendency to learn components of foreign language culture that are against their religion because Islam is a religion that encompasses all facets of society and individual life. The results of the study revealed that Iranian language learners' religious identities are essentialist ones, which, according to Virkkula and Nikula (2010), are linked to a person's self and are therefore unique and stable. Participants in the study

were at the highest levels of a foreign language learning course. Instead of avoiding any communication in a foreign language, interaction with speakers of other languages and peoples is, in the opinion of Anderson and his colleagues (2009), a further crucial aspect that influences how language learners develop their second language identities.

### **L2 students' WTC and their academic achievements**

Participation is a complex and dynamic process that is impacted by various variables, including psychological, sociocultural, and cognitive elements (Aslan & Sahin, 2020). According to Nosratinia and Deris (2015), students' willingness to communicate is a significantly important factor related to learners' autonomy. The L2 WTC (willingness to communicate) is recently considered a responsible factor in learners' L1 and L2 communication and discourses. Further, the concept of L2 WTC also refers to entering a conversation or dialogue with someone at a specific time and setting practicing an L2. Learners' WTC using an L2 should be considered severe because of its essential role in developing autonomous learning. Several factors influence the learners' WTC, to name a few, learners' personality, self-esteem, desire to practice an L2, and their perspective towards the L2 values and culture as well as the communication settings and atmosphere. Moreover, WTC facilitates an L2 learning process, allowing students to practice authentic materials and develop their L2 (MacIntyre & Legatto, 2011).

More communicative students can take advantage of more learning opportunities and are more likely to participate in learning activities inside and outside the classroom. The success of every learning endeavor depends on how enthusiastically students approach the material they hope to learn. Such a favorable outlook or attitude is known as willingness, which refers to students' desire or intentional desire to study. Willingness is crucial for the development of L2 communication. When students are asked a question, it relates to their conscious decision to respond or remain silent (Bergil, 2016).

Gholami and Barzegar (2018) examined the relationship between WTC and writing ability among Iranian EFL students. The results showed a substantial relationship between writing proficiency and WTC. In a related study, Rostami et al. (2016) examined the association between WTC in English and English language proficiency in Iranian EFL. The findings demonstrated a substantial correlation between learners' L2 WTC and competence levels. Numerous studies have examined the relationship between or effect of WTC on language learning up to this point, but no study has focused on this variable in the EFL context.

The case studies presented by Nematizadeh and Wood (2019) support the idea that L2 speakers' WTC and temporal fluency mutually reinforce how well they complete spontaneous tasks. These investigations presuppose that the L2 WTC is a fluid, dynamic construct that fluctuates from one moment to the next while a single task is being completed. A person's L2 WTC may change depending on psychological and environmental circumstances (Kim et al., 2022).

The foundation of WTC in a second language was the idea that situational and persistent factors influenced L2 competence. The stable and long-lasting traits of people and situations that apply to any circumstance include learner personality, interpersonal motivation, and self-confidence. Contrarily, situational factors such as the desire to

speak to a particular person, communicative self-confidence, and comprehension of the subject matter are more ephemeral and context-dependent (Chojimah & Widodo, 2023).

Zarei et al. (2019) believe that students’ willingness to communicate in language classes is a context-bound phenomenon that may change under different circumstances. Therefore, a learner’s low or high participation and WTC percentage depend on varying external context-bound factors where instructors’ role in provoking WTC is incredibly valuable and essential. Further, the instructors’ application of specific interactive-based teaching approaches affects learners’ participation and academic performance.

**Methodology**

The research design employed in this study was a quantitative one. The data were used to examine the roles of spirituality, religiosity, and L2 WTC in Afghan EFL students’ academic achievements. The participants were 194 participants; Males (N=97); Females (N=97) from different colleges of Herat University.

**Participants**

A total of 194 Afghan EFL university undergraduate students included males (N=97) and females (N=97) were selected through convenient sampling. Participants were Herat University students who were volunteers to share their experiences with the researchers regarding the topic being explored (Table 1).

**Instrumentations**

The data were collected through three separate questionnaires distributed among 194 Afghan EFL students through Google Forms. The questionnaires particularly examined the roles of spiritual motivation, religiosity, and students’ WTC in their English language achievements. Alpha Cronbach test was conducted to check the reliability of the spiritual motivation, religiosity and WTC scales. The reliability estimates for spiritual motivation, religiosity and L2 WTC, as well as their underlying subconstructs exceeded the threshold of 0.70, are deemed satisfactory (Nunnally & Bernstein, 1994). The items were designed on a six-point Likert scale of strongly agree, agree, slightly agree, strongly disagree, disagree, and slightly disagree.

**The spiritual motivation scale**

The spiritual motivation, a 10-item scale with two subconstructs namely extrinsic spiritual motivation and intrinsic spiritual motivation, was developed and validated. The overall reliability of the spiritual motivation scale was  $\alpha = .88$  (extrinsic spiritual motivation

**Table 1** The survey questionnaire participants’ demographic information

No	Language Proficiency	Quantity	Female	Male	Age Range
1	Elementary	13	97	97	Ranging from 17 to 25 years old
2	Intermediate	111			
3	Advanced	70			
Total		194	97	97	

$\alpha = .83$  and intrinsic spiritual motivation  $\alpha = .83$ ) which exceeded the threshold of .70 and is considered satisfactory.

#### ***The religiosity scale***

The religiosity, a 10-item scale with two subconstructs namely religious engagement and religious commitment was adapted from Lih (2021). The overall reliability of the religiosity scale was  $\alpha = .89$  (religious engagement  $\alpha = .86$  and religious commitment  $\alpha = .87$ ). therefore, the estimates are all above .70, which is considered acceptable.

#### ***The L2 WTC scale***

The L2 WTC, a 15-item scale consisting of three constructs, namely, classroom environment, motivation, and confidence, was adapted from Weda et al. (2021) and Tan et al. (2018). The Cronbach's Alpha was conducted to measure the reliability of the WTC scale. As a result, the overall reliability of the L2 WTC was  $\alpha = .84$  (Classroom environment  $\alpha = .86$ , Motivation  $\alpha = .71$ , and Confidence  $\alpha = .79$ ).

#### **Procedure**

The data were collected online from 194 participants on Google Forms. SPSS version 25 and Analysis of Moment Structures (AMOS) software was utilized to analyze the data collected through survey questionnaires. The data was analyzed using descriptive statistics techniques. Further, to explore potential associations among the variables, the Pearson product-moment correlation was employed. In order to substantiate the construct validity of the Spiritual motivation scale and religiosity scale, Confirmatory Factor Analysis (CFA) was utilized. Prior to the CFA, Harman's single-factor test was conducted. To check the predictive power of the independent variables (i.e., spiritual motivation and religiosity), Structural Equation Modeling (SEM) was conducted through Amos.

#### **Results**

In order to answer the first and the second research questions regarding the psychometric validity of the spiritual motivation and religiosity scales, the Confirmatory Factor Analysis (CFA) was used. Further, the Pearson product-moment correlation was employed to answer the third research question on the potential relationship among variables. Structural Equation Modeling (SEM) was conducted through Amos to examine the fourth research question on the predictive power of spiritual motivation and religiosity in students' English language achievements.

#### **Descriptive statistics**

Descriptive statistics, including mean and standard deviation, for the Spiritual Motivation, Religiosity, and Willingness to Communicate in English Language Classes (L2 WTC) scales can be seen in Table 2.

As the first step, the normality of the data was verified. According to Table 3, the Skewness and Kurtosis estimates are within the range of -2 and +2, indicating the distribution's normality.



**Table 2** Descriptive statistics for spiritual motivation, religiosity, and L2 WTC

	Min	Max	Mean	SD
<b>Spiritual Motivation</b>	33	60	53.40	5.81
Extrinsic Spirituality	18	30	27.04	2.88
Intrinsic Spirituality	13	30	26.36	3.54
<b>Religiosity</b>	18	54	42.71	7.81
Religious Engagement	4	24	17.67	4.69
Religious Commitment	9	30	25.04	4.04
<b>L2 WTC</b>	48	90	74.14	8.43
Classroom Environment	13	30	25.32	3.23
Motivation	14	30	25.23	3.48
Confidence	10	30	23.59	4.03

**Table 3** Normality test for spiritual motivation, religiosity, and WTC

	Skewness	Kurtosis
<b>Spiritual Motivation</b>	-.81	.13
Extrinsic Spirituality	-.93	.24
Intrinsic Spirituality	-.97	.67
<b>Religiosity</b>	-.65	-.02
Religious Engagement	-.84	.28
Religious Commitment	-.77	.64
<b>L2 WTC</b>	-.49	.20
Classroom Environment	-.66	.62
Motivation	-.79	.27
Confidence	-.69	.86

**Table 4** Reliability estimates for spiritual motivation, religiosity, and L2 WTC scales

	N of Items	Cronbach's Alpha
<b>Spiritual Motivation</b>	10	.88
Extrinsic Spirituality	5	.83
Intrinsic Spirituality	5	.83
<b>Religiosity</b>	9	.89
Religious Engagement	4	.86
Religious Commitment	5	.87
<b>L2 WTC</b>	15	.84
Classroom Environment	5	.76
Motivation	5	.71
Confidence	5	.79

### Reliability estimates

Table 4 shows the reliability estimates for Spiritual Motivation, Religiosity, and L2 WTC, in addition to their underlying subconstructs. As can be seen, the estimates are all above 0.70, which is considered acceptable.

**Correlational analysis**

To explore potential associations among the variables, the Pearson product-moment correlation was employed. Table 5 indicates that a number of variables in the study exhibit statistically significant correlations with each other.

**Validation of the spiritual motivation scale**

In order to substantiate the construct validity of the Spiritual Motivation Scale, Confirmatory Factor Analysis (CFA) was used. Prior to the CFA, Harman’s single-factor test was conducted. The result indicated that the first factor accounted for only 48.15% of the variance, confirming the construct’s multidimensionality. The scale includes two subconstructs of Extrinsic Spirituality (5 items) and Intrinsic Spirituality (5 items). Standardized factor loadings can be seen in Fig. 1. No items were removed from the scale to improve model fit. Goodness-of-fit indices are reported in Table 5.

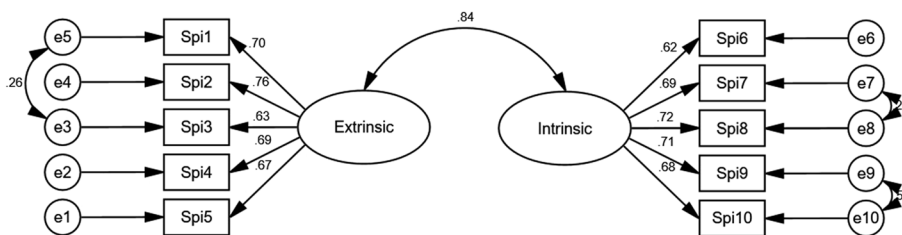
**Validation of the religiosity scale**

In order to substantiate the construct validity of the Religiosity Scale, CFA was used. Prior to the CFA, Harman’s single-factor test was conducted. The result indicated that the first factor accounted for only 47.05% of the variance, confirming the construct’s multidimensionality. The scale includes two subconstructs of Religious Engagement (6 items) and Religious Commitment (6 items). Standardized factor loadings can be

**Table 5** Correlational analysis for ELA, spiritual motivation, religiosity, and L2 WTC

	1	2	3	4	5	6	7	8	9	10	11
<b>1. ELA</b>	1										
<b>2. Spiritual Motivation</b>	-.04	1									
3. Extrinsic Spirituality	-.07	.88**	1								
4. Intrinsic Spirituality	-.01	.92**	.64**	1							
<b>5. Religiosity</b>	-.09	.53**	.48**	.50**	1						
6. Religious Engagement	-.10	.45**	.41**	.41**	.91**	1					
7. Religious Commitment	-.06	.50**	.44**	.47**	.88**	.60**	1				
<b>8. L2 WTC</b>	.06	.47**	.48**	.38**	.42**	.31**	.46**	1			
9. Classroom Environment	.09	.46**	.44**	.40**	.39**	.30**	.41**	.82**	1		
10. Motivation	-.00	.38**	.42**	.28**	.35**	.26**	.37**	.77**	.57**	1	
11. Confidence	.06	.28**	.28**	.23**	.27**	.19**	.31**	.77**	.43**	.30**	1

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



**Fig. 1** Measurement Model for the Spiritual Motivation Scale

seen in Fig. 2. Three items (i.e., 1, 2, & 7) were removed from the scale to improve model fit. Goodness-of-fit indices are reported in Table 5.

**SEM analysis**

To check the predictive power of the independent variables (i.e., spiritual motivation and religiosity), structural equation modeling (SEM) was conducted through Amos. Two models were proposed for the prediction of the dependent variables (i.e., ELA & WTC). Goodness of fit indices showed that the models fit the data adequately (see Table 5).

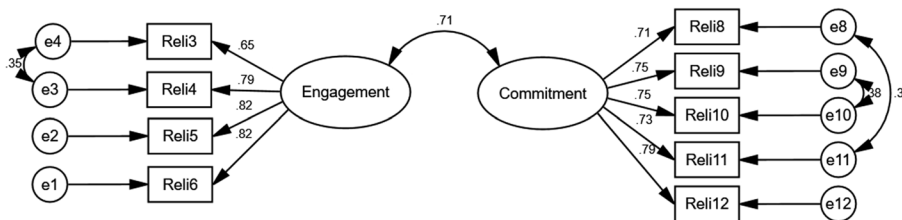
**Model 1**

The first model (Fig. 3) verifies the power of spiritual motivation and religiosity in predicting ELA and L2 WTC. As Fig. 2 illustrates, spiritual motivation and religiosity are positive predictors of WCELC ( $\beta=0.46, p<0.01$ ;  $\beta=0.27, p<0.05$ ). Yet, neither of the dependent variables predict ELA.

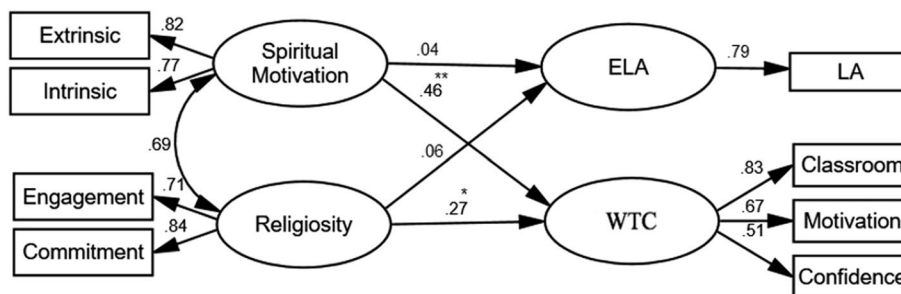
**Model 2**

The second model (Fig. 4) verifies the power of religiosity in predicting ELA and L2 WTC with spiritual motivation as the mediator. The bootstrap analysis of mediation was performed for the indirect effects. Religiosity and spiritual motivation are positive predictors of L2 WTC ( $\beta=0.27, p<0.05$ ;  $\beta=0.46, p<0.01$ ). Moreover, mediated by spiritual motivation, religiosity can only predict WTC ( $\beta=0.31, p<0.05$ ).

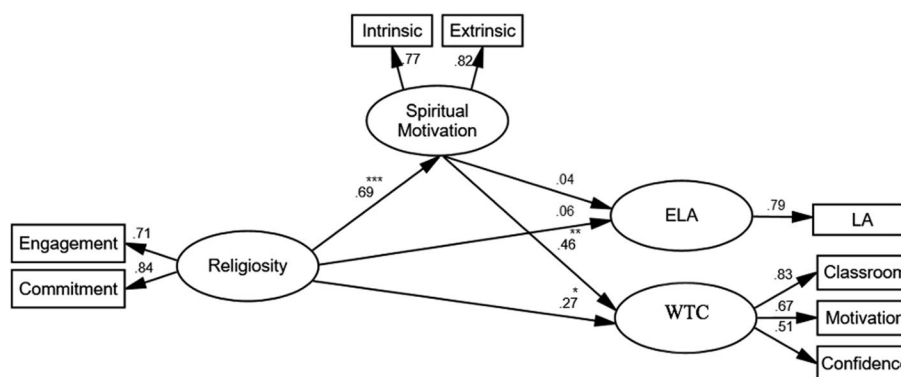
To see whether the models fit the data, goodness of fit indices were calculated using Amos. Table 5 shows the relative chi-square (i.e., chi-square index divided by the degrees of freedom ( $\chi^2/df$ )), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Squared Error



**Fig. 2** Measurement Model for the Religiosity Scale



**Fig. 3** The Schematic Representation of the Relationships among Spiritual Motivation, Religiosity, L2 WTC, and ELA



**Fig. 4** The Schematic Representation of the Relationships among, Religiosity, L2 WTC, and ELA with Spiritual Motivation as the Mediator

**Table 6** Goodness of fit indices for the models

Models	$\chi^2/df$	df	CFI	TLI	RMSEA	SRMR
The Spiritual Motivation Scale (Fig. 1)	2.10	31	.96	.94	.08	.04
The Religiosity Scale (Fig. 2)	2.18	23	.97	.96	.08	.05
Model 1 (Fig. 3)	1.20	16	.99	.98	.03	.03
Model 2 (Fig. 4)	1.20	16	.99	.98	.03	.03

(SRMR). The criterion for acceptance is different across researchers. In the present study, values for  $\chi^2/df$  should be less than 3 (Ullman, 2001), TLI and CFI were over 0.90, and RMSEA and SRMR were equal to or less than 0.08 (Browne & Cudeck, 1993) (Table 6).

**Discussion**

Given the significance of spirituality, religiosity, and students’ L2 WTC in English language classes, this study attempted to first examine the psychometric validity of the spiritual motivation and religiosity scales, second examined the potential correlation between spiritual motivation, religiosity and L2 WTC, and third analyzed the predictive roles of spirituality, religiosity, and L2 WTC in students’ English language achievements. The outcomes of the Confirmatory Factor Analysis (CFA) demonstrated that the newly-designed scale on spiritual motivation, measuring two subconstructs: intrinsic spiritual motivation and extrinsic spiritual motivation as well as the religiosity scale, measuring two subconstructs: religious engagement and religious commitment are valid.

The findings revealed that spiritual motivation has a significant positive relationship with religiosity and its two subconstructs, namely, religious engagement and religious commitment. Moreover, spiritual motivation is positively correlated with L2 WTC and all its subconstructs including classroom environment, motivation, and confidence. Further, spiritual motivation is a positive predictor of L2 WTC. This is aligned with Stephens (2022) and Turi et al. (2020), who asserted that higher spiritual engagement has benefits beyond the classroom, especially regarding students’ capacity for positive interactions with peers and relationships with faculty and staff. Further, spiritual intelligence holds values, commitment, power, ideologies, reliability, and an emotional experience for different aspects of one’s life.

The findings also indicated that religiosity is positively correlated with L2 WTC and all its subconstructs, that is, classroom environment, motivation, and confidence. Further, religious commitment (as a subconstruct for religiosity) is significantly correlated with all subconstructs for L2 WTC including classroom environment, motivation, and confidence. Moreover, mediated by spiritual motivation, religiosity can only predict L2 WTC. Sokolovskaya et al. (2020) asserted that relationships with social and professional group leaders can be psychologically improved through religion. This motivation forms the basis for students' positive socio-psychological adaption after university studies.

According to the findings, spiritual motivation and religiosity are positive predictors of L2 WTC, but there is no significant relationship between religiosity and students' ELA. Oloyede and Mercy (2016) in an attempt to explore the effect of religiosity on students' academic achievements, found a weak relationship between religiosity and students' academic performances. Therefore, based on the findings of their study, religiosity was not found to impact academic performance and education significantly. In a similar vein, in their study of first-to-second-year persistence, Sax and Gilmartin (2002) found that religious behavior was a poor predictor of re-enrollment in the second year of college. This is due to students' commitment to religion taking priority over time spent on academic activities, given that their metrics captured time spent engaging in religious activities. However, this finding opposes Claro and Paunesku (2014) who stated that religiosity and spirituality boost academic achievements and motivate students. Religion affects learners' attitudes toward learning, particularly their mentality and level of perseverance.

Notably, no significant correlation was found between spiritual motivation and ELA. In other words, students' level of spirituality does not affect their academic achievements and GPA in English language classes. However, according to Makki Abadi et al., (2015), there is no discernible correlation between the academic success of engineering, fundamental science, and art and architecture students and their spiritual well-being. Furthermore, Sapp's (2017) study's findings showed a negative relationship between students' GPAs and their levels of spirituality and religiosity. Subsequent studies ought to investigate the variables that contributed to the inverse relationships between spirituality, religion, and GPAs. There needs to be more scholarships exploring the relationship between spirituality and academic achievements (Cox, 2011; Reyes, 2006).

Further, the SEMS analysis indicated that religiosity and spiritual motivation are positive predictors of L2 WTC, but no significant correlation was found between L2 WTC and ELA. This finding also contrasts the available scholarships, which indicate a positive relationship between L2 WTC and students' academic achievements. More communicative students can take advantage of more learning opportunities and are more likely to participate in learning activities inside and outside the classroom. The success of every learning endeavor depends on how enthusiastically students approach the material they hope to learn (Bergil, 2016).

The findings of this study confirmed the research hypotheses which indicated that religiosity and spirituality do not predict English language achievement. This is in contrast with that of Park (2013), who stated that spirituality helps students have more favorable interactions with classmates, have higher GPAs, are more likely to graduate with honors, and are less likely to experience academic failure. Given that religion is compulsory in Afghanistan, and there is no choice for people to be

religious or non-religious (Baiza, 2013; Sarwari, 2018), and since we are dealing with a homogeneous culture in terms of religiosity, no significant contribution was observed in students' language achievement.

The findings of this study contribute to the body of literature in an Afghan context which is underrepresented in the field of research. The results help to offer quality teaching, maximize students' academic achievements, and develop local and contextual curricula and teaching materials. It also provides the teachers with a deeper understanding of how spirituality, religiosity, and students' L2 WTC influence students' learning outcomes, what the challenges and barriers, and the opportunities, are so that the teaching should occur accordingly. Further research can be conducted using the current study's validated scales in a broader context. In other words, spiritual motivation was introduced as a new concept in an Afghan context. The findings of this study on spiritual motivation and religiosity in connection to learning outcomes collected from students help the instructors understand what their students think about spirituality, how important spirituality is, the relationship between spirituality and students' English language achievements, and if spirituality and religiosity are encouraged or discouraged in an Afghan society from the perspectives of Afghan university students. The teachers' knowledge of students and society's attitudes towards spiritual motivation helps them align their teaching content and pedagogies to encourage and support spirituality.

This study only employed questionnaire for survey; However, according to the available literature language learners' cognitions differ according to varied learning contents, teaching approaches, learning environments and other influencing factors. Therefore, to find the complexity of learners' spiritual motivation and willingness for writing needs much more longitudinal work. That said, more longitudinal work is needed to ensure the relationship between spiritual motivation and students' WTC. Further, this study was conducted at Herat University in Afghanistan, where 194 BA students. The results of the study cannot be extrapolated to a larger population because it only included a small number of individuals from the same institution. It is possible to do additional study looking at MA and PhD applicants from various public and private institutions nationwide. Additionally, the surveys were distributed via Google Forms, on paper, or in the field when the researcher was present, which may have helped to capture higher-quality data by preventing ambiguity and misunderstanding. Moreover, since religion is obligatory in Afghanistan, it is difficult to say who is a true believer and who is not; therefore, religiosity can be either nominal or fake in that sense. Further, individuals are afraid of telling the truth, which could be one of the limitations in gathering accurate data.

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#### **Availability of data and materials**

Not applicable.

## Declarations

### Ethics approval and consent to participate

All the participants expressed their consent to participate in the study, which was approved by the Ferdowsi University of Mashhad Ethics Committee, Mashhad, Iran.

### Competing interests

The authors declare no competing interests.

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