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Iranian EFL University Students' Personality Traits and Their Online Learning Satisfaction

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Abstract
Based on the existing literature in the field of online learning, it has been found that learners' satisfaction is influenced by multiple factors such as course design, instructor interaction, and assessment fairness. All of these aspects play a crucial role in determining learners' overall satisfaction with their educational experience. To thoroughly investigate the contentment of the students regarding online learning systems, it is essential to investigate another significant factor related to their personalities. Therefore, the present quantitative study attempts to investigate the relationships between the big five personality traits and online learning satisfaction of Iranian EFL university students. To fulfill this aim, an election survey including the NEO Five-Factor Inventory questionnaire and online learning satisfaction questionnaire were sent out to 150 Iranian EFL students participating in university online classes. The research findings revealed that openness to experience and extroversion, two of the big five personality traits, show a favorable correlation with online learning satisfaction in general. The study discovered that learners who had higher levels of satisfaction with online learning also had higher levels of openness, conscientiousness, extraversion, and agreeableness, but lower levels of neuroticism. This research has the potential to have a considerable effect on the current body of literature by establishing a connection between students' personality traits and their satisfaction with online learning. Tailoring the class format to accommodate diverse personality types can significantly enhance the learning experience; therefore, it is essential to consider learners' personality traits during the stages of class development, instruction, and learning.

1. INTRODUCTION

The rapidly evolving technological landscape in today's world has led to a significant transformation in the way education is imparted and accessed. The traditional educational model, characterized by physical classrooms and face-to-face interactions, has been gradually complemented and, in some cases, replaced by online learning platforms. This shift towards online education has been accelerated by various factors, including the increasing accessibility of high-speed internet, the proliferation of mobile devices, and, most recently, the COVID-19 pandemic.

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On March 11, 2020, the World Health Organization (WHO) classified the Coronavirus disease (COVID-19) as a pandemic, which a few months later, rapidly spread all over the world and resulted in millions of infections and deaths. The pandemic served as a catalyst, compelling educational institutions worldwide to transition to remote learning modalities to ensure the continuity of education while safeguarding public health. Today's importance of online learning is increasing significantly and irreversibly (e.g.,Despotović-Zrakić et al., 2012). Online learning or e-learning refers to situations in which online teaching and learning activities are obtained. Online learning has a significant intensification in the modern days and students' happiness with it is a vital factor in determining their success or failure in online courses (Kedia & Mishra, 2023). Hence, it is important to probe the categories that could impact learners' satisfaction. Due to online learning intensification and blended educational technology, it seems essential to investigate students' satisfaction in online learning contexts (Du et al., 2020). According to Demuyakor (2020), the implementation of online teaching strategies in the creation of online courses post-COVID-19 affects student satisfaction and different perspectives related to the course. Research shows that students' online learning satisfaction is confirmed essentially to utilize individuals' abilities to enhance their learning experience in an online setting; However, assessing the level of contentment among learners regarding online learning has become a pressing concern among universities (Horzum & Uyanik, 2015; Isik, 2008). As online courses and entire learning programs are becoming more prevalent in higher education, and with the students at the focus of the learning system, it is crucial to provide accurate information on how different learners perceive online learning.

Satisfaction is considered a critical element of education, effectively impacting learners' success or failure (Kedia & Mishra, 2023). Several studies have shown that various factors have an impact on learners' satisfaction with online learning. These factors include learners' acceptance of technology, their prior experience with online learning, the level of support they receive from their institution, the academic environment in which they are learning, and the interaction they have with their instructors (Biber et al., 1994; Conrad, 2002; Fulford & Zhang, 1993; Palloff & Pratt, 2010). According to Arbaugh and Duray (2002) and Conrad (2002), students who had more exposure to online classes were more satisfied with online courses and had less fear and anxiety about e-learning. Pitcher et al. (2022) also found that some factors such as educational structure, teacher support, and experiences, as well as students' motivation, were effective in e-learning satisfaction. However, the impact of personal variations on online satisfaction has not adequately been accounted for in previous studies. The influence of individual differences—such as learning preferences, styles, experiences, and personalities—on online satisfaction remains insufficiently addressed in prior research, despite evidence from Bouhnik and Carmi (2013) suggesting that these factors significantly shape online learning outcomes and may render such environments suitable only for certain students. Many researchers have mentioned that online learning may only be influential for some individuals at the same level because of their varying personality traits. As put above, assessing whether specific personality traits of learners affect their satisfaction level with online learning can shed more light on personality-based determinants of online learning satisfaction. Understanding why individual learners react differently to the same online learning situations can be aided by recognizing and acknowledging their unique characteristics. Unfortunately, not many studies on online learning take into consideration how personality differences can affect the level of satisfaction experienced by learners. To the best of the researchers' enlightenment, there is a dearth of research evidence that explores the interrelation between individual traits and online gratefulness in the Iranian context. This issue, therefore, reveals that there is a pressing need for further analyses to fill this gap.

Accordingly, the objective of the current examination is to bridge the gap by directly exploring the correlation between individuality traits and web-based learning delight and enriching the existing literature. The important implication of the study on this topic is to probe the associations between learners' personality-driven differences and their learning satisfaction in online classes. In particular, this examination constitutes an endeavor to recognize the role of Iranian EFL learners' Big Five personality traits (McCrae & Costa, 1985) in anticipating their satisfaction with the e-learning system. The present research aims to answer the subsequent inquiries:

RQ 1: Is there a significant correlation between the big five personality traits and satisfaction with online courses among Iranian EFL learners?
RQ 2: To what extent do Iranian EFL learners' personality characteristics predict learners' level of satisfaction with online learning?

2. LITERATURE REVIEW

Online Learning Satisfaction

Bolliger and Erichsen (2013) stated that satisfaction is characterized as learners' sense of being happy or disappointed due to the contrast between their exceptions and experience of the service being experienced and what is presumed. Learning delight can be interpreted as the benefit that participants notice from their education experience in an educational system. Contentment with online sessions is a valuable topic for exploration since it is crucial to the student's motivation and scholarly performance (Sue et al., 2007; McFarland & Hamilton, 2005).

Learning pleasure in the circumstance of online learning pertains to how students assess the validity and merit of the educational online learning system provided by the instructor during a course; it can be measured by the extent to which students enjoy the online learning process. Online enjoyment is the term used to describe how students perceive their learning familiarity and how effectively the online learning semester confirms their theoretical achievements. E-learning satisfaction can be stated as the expanse to which individuals assume the online system comes across their information demands. Past research pinpoints that learners' satisfaction is a vital pointer to the excellence of academic courses (Yukselturk & Yildirim, 2008). Ezra et al. (2021) and Sahinidis and Tsaknis (2021) detected that learning by electronic device has restraints and may only work for some students. In general, while online learning is gaining impetus, it only meets different learners' needs simultaneously; particularly characteristics differences affect students' satisfaction (Bolliger & Erichsen, 2013), including in online learning contexts (Bolliger & Erichsen, 2013; Daughenbaugh et al., 2002a; Daughenbaugh et al., 2002b; Moller & Soles, 2001).

In their study, (Rainer Jr & Miller, 1996) argue that learners show a positive attitude toward online learning. Their attitude was evaluated based on a nonobjective assessment of learners' educative experiences and learning consequences in the blended learning environment. In addition, it has been shown that online learning satisfaction is related to learners' perception and academic gains (Rashidi & Moghadam, 2014). Hermans et al. (2009) state that assessing students' satisfaction with online programs is an important category in promoting higher education effectively. As online learning involves students from diverse academic backgrounds, they may have varying perspectives on online learning systems, as noted by (Zolotov et al., 2022).

Furthermore, research (e.g., Oliver, 1980; Oliver & Burke, 1999) indicates that learning satisfaction can be understood as a comparative outcome between expectations and perceived results, accompanied by a sense of happiness or disappointment, with learner satisfaction significantly predicting learning outcomes. Moreover, learners with a heightened overall awareness of social presence tend to achieve higher levels of perceived learning and satisfaction

with their e-learning courses. When instructive online strategies efficiently aid students in meeting the curriculum objective, learners would be satisfied. As a result, online learning satisfaction is an essential factor that we can use to evaluate the efficiency of e-learning. The empirical investigation of online learning satisfaction and its personality-based roots can facilitate learners' progress in their educational system.

Personality

According to Lounsbury et al. (1970), personality combines different attributes, feelings, properties, and emotions that dissociate a person from others. This inner characteristic emerges from within the person and stays throughout their lives. Personality precisely refers to an individual's district characteristics that contribute to shaping their individuality in society. Different models have been proposed to explain personality, as noted by (Parent-Lamarche et al., 2021), The Big Five model, created in 1985 by McCrae and Costa, is a highly popular and widely utilized psychological model. Numerous studies (e.g., Ghorbani & Montazer, 2015; Li & Armstrong, 2015; Sorić et al., 2017; Soto & John, 2017; Tlili et al., 2019) have provided support for its prominence and use in contemporary psychology. This model has increasingly been utilized in scientific research on personality (Papamitsiou & Economides, 2014).

According to many psychologists, the Big Five personality traits include five basic dimensions. These five broad personality traits include openness, conscientiousness, extraversion, agreeableness, and neuroticism. Openness refers to the trait of a curious and imaginative person who has a new perception of the world. It leads to a broad scope of curiosity and adventure. Individuals with this characteristic tend to be unpredictable, risk-taking, and more creative Friedman & Schustack, 2016; Sahinidis & Tsaknis, 2021) and commonly have high individual performance in academic courses (Zhao & Seibert, 2006). Conscientiousness includes work discipline, organization, self-directedness, and thoughtfulness (Zhao & Seibert, 2006). A conscientious person likes planning, scheduling, and organizing. Extraversion is a human characteristic that encompasses interpersonal skills, talkativeness, assertiveness, and the creation of emotional experiences by external factors related to sociability (O'Donoghue & Rabin, 2000). Agreeableness describes people's behavior towards each other. Individuals with this characteristic tend to be unselfish, trustful, and collaborative (Sahinidis & Tsaknis, 2021). Neuroticism is characterized by moodiness and emotional instability. According to Friedman and Schustack (2016), this characteristic pertains to experiencing psychological tension and experiencing negative emotional arousal.

Personality and Online Learning Satisfaction

The shift toward online learning has brought increased attention to the factors influencing students' learning experiences, with personality traits emerging as a crucial determinant of engagement and satisfaction (Tian et al., 2021). The Big Five Personality Traits framework (McCrae & Costa, 1985) provides a well-established model for understanding individual differences in learning behaviors. These traits—Extraversion, Conscientiousness, Openness to Experience, Agreeableness, and Neuroticism—have been linked to various cognitive and emotional processes that shape students' responses to online learning environments. The relationship between personality traits and online learning satisfaction can be explained through the Self-Determination Theory (Deci & Ryan, 2012), which highlights the importance of autonomy, competence, and relatedness in fostering motivation and satisfaction. Personality traits influence how students fulfil these psychological needs in online learning environments. For example, conscientious individuals may experience a stronger sense of competence due to their structured learning habits, while extraverts may derive greater satisfaction from courses that incorporate interactive elements.

Reviewing the literature suggests that personality strongly affects students' learning satisfaction and achievement (Horzum & Uyanik, 2015; Orvis & Leffler, 2011) particularly in the online context (Bishop-Clark et al., 2007; Bolliger & Erichsen, 2013). According to Bolliger and Erichsen (2013), personality can impact how satisfied individuals are with their online learning experience, as well as affect how much students enjoy online learning environments (Daughenbaugh, Daughenbaugh, et al., 2002a; Daughenbaugh et al., 2002b; Moller & Soles, 2001). Fatahi et al. (2009) also recommend that personality has a crucial impact on the efficiency of the education process and can have a great influence on both training and learning. According to Irani et al. (2003) people's personality traits can cause them to respond differently to various learning methods. Wicklein and Rojewski (1995) suggest that recognizing the influence of individuality may precede a better understanding of learning requirements and enable administrators to make sure that an ideal learning condition is established. Therefore, identifying students' personality traits is necessary to tailor learning to their individual needs. Therefore, personality trait identification is required to adapt learning to students' personalities. With the proliferation of studies on learner personality and related psychological factors in online learning contexts, it has been shown that some personality factors can anticipate satisfaction and motivation in an online environment (Horzum & Uyanik, 2015; Isik, 2008). Furthermore, crowds of students in an online class may be categorized based on their personality attributes and satisfaction (Baruth & Cohen, 2023). Individual satisfaction can denote success in online learning classes, as a result, satisfied learners are more likely to be participated and impressionable (Dziuban et al., 2015). Some scholars have even claimed that learners may not return for more if they are dissatisfied with their online courses (Moller & Soles, 2001). In their study, Vasileva-Stojanovska et al. (2015) investigated models to anticipate success in learning and students' satisfaction, revealing that satisfaction was an element that could portend learning achievements and that the students' personality could influence their efforts and achievements. In addition, regarding the role of satisfaction in learning outcomes, according to the research explored by Kuo et al. (2013), it was discovered that individuals who exhibit traits of extraversion and conscientiousness are to a great extent probable to be satisfied with online classes and display a strong drive to learn.

Baruth and Cohen (2023) conducted a study to investigate how personality traits, based on Costa and McCare's Big Five model, relate to learner satisfaction with diverse learning tasks and exercises in online classes known as Techno-Pedagogical Learning Solutions (TPLS). The tested TPLS included discussion groups, electronic books, online tasks, observations/polls, and media. The study involved 108 university learners who were participating in an approved online academic semester, and questionnaires were used to assess their characteristics and satisfaction levels. The study revealed a significant association between all five personality traits and satisfaction levels with various TPLS. To identify students with the same personality features, the researchers used the cluster analysis technique, which resulted in the formation of four groups. The satisfaction score of each group was then evaluated. The study found that students belonging to the "neurotic" group expressed low satisfaction levels with all TPLS, unlike those in the "non-neurotic" group. These results suggest that personality can play a crucial role in determining satisfaction levels in online learning.

Patitsa et al. (2021) also conducted researched to examine any correlation between individuals' personalities and their satisfaction with online educational platforms and found openness and conscientiousness, two specific personality traits from the Big Five model, were associated with students' learning enjoyment in synchronous online academic learning (SOAL), with conscientiousness having the most significant connection with satisfaction with SOAL in general. Their results furthermore revealed that students who were more pleased with the online learning system had greater levels of openness, conscientiousness, extraversion, and agreeableness, but

lower levels of neuroticism. In addition, research by Tlili et al. (2019) suggests that recognizing a student's personality can lead to more significant learning interactions. Studies by (Bolliger and Erichsen, 2013; Daughenbaugh et al., 2002a; Daughenbaugh et al., 2002b; Moller & Soles, 2001) also indicated that the satisfaction of learners with online learning systems can be influenced by their personality types.

In sum, it is believed that personality influences students' learning happiness in classes. Despite several studies conducted in this field (e.g., Bolliger & Erichsen, 2013) there is still insufficient information available on the exact correlation between the Big Five personality traits and contentment with online platforms in the EFL context. Therefore, more studies are needed to investigate the nature of the relationship between the students' personalities in the manner of the Big Five model and their satisfaction with online learning. By bridging this gap, the present study aims to provide empirical insights into how individual personality differences shape their online learning experiences and satisfaction levels.

3. METHOD

Design of the Study

This study followed a quantitative approach and had a correlational design. Questionnaires were used for collecting data to examine the relationship between personality traits and remote learning gratefulness among Iranian EFL learners. Multiple regression was conducted to identify the contribution of any prognosticator variable to learners' online learning satisfaction.

Participants and Setting

The sample of this study was 150 Iranian EFL university students (Male = 45.3%, Female = 54.7%). The participants included all English language students (N of Bachelor of Arts = 72; N of Master of Arts = 71; N of Ph.D. = 7) who had attended online university classes for at least one semester. As Bonebrake (2002) stated, university students were recruited because they have had online learning exposure and attainability to the Net on and off university. The age of respondents varied from 19 to 27 years. The individuals who took part in the research were selected via the convenience sampling method. Gass et al. (2005) defined convenience sampling as a nonrandom sampling technique where individuals who are available for the study are selected. This method is frequently used in EFL studies, as noted by (Cheng & Dörnyei, 2007)

Instruments

NEO Five-Factor Inventory Personality Questionnaire: The NEO-FFI Personality Questionnaire assesses an individual's personality on five dimensions of personality based on Big Five personality traits. It was initially created by McCrae and Costa (1985) and consisted of 30 items (6 per trait). This measure assesses five-factor domains, including neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The test was initially developed for adults without overt psychopathology. The instrument was chosen because it is easily accessible, simple to administer, and applicable. According to Goldberg (1992), the alpha coefficients for extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience were .87, .82, .79, .86, and .84, respectively. Students rated each item on a scale of 1 (strongly disagree) to 6 (strongly agree) according to how agreeably they believed it reflected their personality. In the present study, the reliability for all Big Five traits was adequate, α's > 0.80.

Online Learning Satisfaction Questionnaire: Bolliger and Martindale (2004) created the Online Learning Satisfaction Questionnaire, which is composed of 24 items that are sorted into six components: professor, technology, session organization, engagement, achievements, and total satisfaction. Participants rate their level of concurrence with each utterance on a 6-point Likert scale, where 1 represents "strongly disagree" and 6 means "strongly agree." The questionnaire

items were exactly taken from the literature that discusses the factors related to student satisfaction in online courses, including works by (Liaw, 2008; Sahin & Shelley, 2008; Shee & Wang, 2008). These studies reported Cronbach's alpha coefficients within an acceptable range of .69 to .86 for the sub-scales. Additionally, Bolliger and Halupa (2012) reported an internal reliability coefficient of .92.

Reliability and Validity Assessment

To ensure the reliability and validity of the data collected through the Online Learning Satisfaction Questionnaire, statistical analyses were conducted to examine internal consistency and construct validity.

Reliability Analysis: Cronbach's alpha was calculated for the key constructs of the questionnaire. The results indicated satisfactory internal consistency, with the following reliability coefficients: personality traits: $\alpha = 0.82$ and online learning satisfaction: $\alpha = 0.86$. Since all values exceed the commonly accepted threshold of 0.70, the instrument demonstrates good reliability.

Validity Analysis: The validity of the questionnaire was evaluated through content validity and construct validity analyses. Content validity was ensured by adapting items from previously validated instruments and having three subject matter experts review the questionnaire for relevance and comprehensiveness. Construct validity was assessed using Confirmatory Factor Analysis (CFA), where factor loadings for all items exceeded 0.50, indicating that each item significantly contributed to its respective construct. The model fit indices confirmed an acceptable fit (CFI = 0.91, TLI = 0.89, RMSEA = 0.06, and SRMR = 0.05), demonstrating that the questionnaire appropriately measures the intended variables. Additionally, convergent validity was confirmed by the Average Variance Extracted (AVE > 0.50 for all constructs), and discriminant validity was supported using the Fornell-Larcker criterion. These results collectively indicate that the questionnaire has strong validity for measuring personality traits and online learning satisfaction.

Data Collection Procedure

In this study, the participants were picked based on their availability from state universities in Iran. The purposes of the study were clarified to them. Additionally, all students provided online consent and were given contact details. Accordingly, the participants were appealed to complete the questionnaires according to their experiences with the distance learning system. All students provided online consent and were given contact details, as well as being ensured the confidentiality of their data.

The researchers sent a link to a Google form questionnaire to students via Telegram and made it clear that participation in this research was optional and they could opt out at any point. Each questionnaire took around 10 to 15 minutes to finish.

Data Analysis

To address the study questions, the clustered data was dissected via the Statistical Package for Social Sciences (SPSS) 26.0. The Pearson product-moment correlation analysis investigated the relationship between the Big Five personality traits and online learning satisfaction. Multiple regression was also used to investigate whether five personality traits predict students' online learning satisfaction.

4. RESULTS

The study findings are reported below in terms of descriptive (i.e., demographic data, mean, standard deviation, skewness, and kurtosis) and inferential (i.e., Pearson correlations and multiple regression) statistics. Table 1 shows the demographic data of participants. One hundred fifty

Iranian EFL university students completed the questionnaires. Concerning gender, 68 representing (45.3%) were male and 82 presenting (54.7%) were female.

Table 1: Frequency distribution of the sample group based on gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	68	45.3	45.3	45.3
Female	82	54.7	54.7	100.0
Total	150	100.0	100.0	

Table 2 shows the demographic data of participants based on education; of the one hundred fifty participants, 72(48%) were at BA level, 71 (47.3%) were at MA level, and 7 (4.7%) were at PhD level.

Table 2: Frequency distribution of the sample group based on education

Education	Frequency	Percent	Valid Percent	Cumulative Percent
BA	72	48.0	48.0	48.0
MA	71	47.3	47.3	95.3
Phd	7	4.7	4.7	100.0
Total	150	100.0	100.0	

As seen in Table 3, all the skewness and kurtosis amounts were found within the limit of -1 to +1, which proves the standard distribution of the data. Moreover, among personality factors, neuroticism had the maximum mean (M = 22.6, SD = 5.1), while conscientiousness had the lowest (M = 15.5, SD = 5.03).

Table 3: Descriptive Statistics Indices of Research Variables

Descriptive Statistics	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Neuroticism	150	22.63	5.119	.191	.198	-.761	.394
Extraversion	150	17.21	6.685	.123	.198	-.630	.394
Openness	150	17.63	7.208	-.136	.198	-.583	.394
Agreeableness	150	18.27	4.548	.525	.198	1.118	.394
Conscientiousness	150	15.58	5.038	.383	.198	-.388	.394
Satisfaction	150	68.6133	17.35642	.478	.198	-.601	.394
Valid N (list-wise)	150						

To explain the first investigation question, Pearson's product-moment correlation analyses were utilized to investigate the association between personality components and happiness levels with online sessions. Table 4 displays the results, which indicate significant correlations with varying degrees of strength. Overall, the analysis revealed a momentous positive interrelation (r = .611, p <.01) between personality and online learning satisfaction. Additionally, there was a positive, comparatively high noteworthy correlation between conscientiousness and satisfaction (r = .304, p <.01), as well as between agreeableness and satisfaction (r = .225, p <.006). Students who scored high in conscientiousness and agreeableness were to a greater extent pleased with online learning than those who scored inferior in these sections. There was also an intensified and meaningful correlation between extraversion and satisfaction with online learning (r = .578, p <.01), in addition to an extremely positive correlation between openness to experience and online learning satisfaction (r = .673, p < .01). Students who scored high in extraversion and openness to experience were more delighted with online courses in contrast with individuals who scored lower in these domains. Conversely, there was an inverse correlation between neuroticism and learning satisfaction (r = -.352, p < .01). Students who scored high in neuroticism were less gratified with web-based education than trainees who scored lower in this component. Overall, the data suggests that students who are defined as extroverts and open to experience tend to be more contented with online courses, while those with high neuroticism scores are less satisfied.

Table 4: Descriptive Statistics and Correlations Coefficient

Correlations	1	2	3	4	5	6	7
1. Neuroticism	1						
2. Extraversion	-0.612**	1					
3. Openness	-0.644**	0.747**	1				
4. Agreeableness	-0.170*	0.312**	0.268**	1			
5. Conscientiousness	-0.176*	0.420**	0.276**	0.439**	1		
6. Personality	-0.341**	0.806**	0.744**	0.640**	0.706**	1	
7. Satisfaction	-0.352**	0.578**	0.673**	0.225**	0.304**	0.611**	1

To address the second question in this investigation, a multiple regression analysis was conducted to probe how much the big five personality traits contribute to predicting web-based learning contentment. Table 5 displays the results, which show that the big five independent variables can account for 49.1% of the variance in online gratification (F (5,144) = 27.7, p= .000). Neuroticism and openness to experience were detected to have a positive and statistically indicative connection with total online learning pleasure. However, all other traits (extraversion, agreeableness, conscientiousness) did not demonstrate statistically significant results. In summary, the data suggests that neuroticism and openness to experience are the most powerful anticipators of remote learning fulfilment among the big five personality traits. The variables that contributed to students' online learning satisfaction to a large extent were neuroticism and openness.

Table 5: Multiple Regression of online Learning Satisfaction by big five personality

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	15.959	9.661		1.652	.101
neurtocism	.605	.274	.179	2.209	.029
extraversion	.475	.257	.183	1.849	.066
openness	1.514	.231	.629	6.547	.000
agreeableness	-.039	.257	-.010	-.152	.879
conscientiousness	.308	.244	.090	1.267	.207

Note. Dependent variable: satisfaction

Table 6 provides a summary of the regression model, illustrating how personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) predict satisfaction with online learning. The R-value indicates the correlation between the independent and dependent variables, while the R Square value represents the proportion of variance explained by the model. Additionally, the Adjusted R Square value accounts for the number of independent variables in the model, providing a more accurate estimate. The error of the Estimate reflects the standard error of the model's predictions.

Table 6: Model Summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. The error in the Estimate**
1	.701	.491	.473	12.59842

Note. Predictors: (Constant), conscientiousness, neuroticism, agreeableness, openness, extraversion

Table 7 presents the results of the ANOVA test, which is used to assess the overall significance of the regression model. The F-value in this table indicates whether the independent variables significantly explain the variance in the dependent variable (online learning satisfaction). A Sig value of less than 0.05 suggests that the model is statistically significant, meaning that at least one of the independent variables has a meaningful impact on the dependent variable. This test helps determine whether the regression model is appropriate for predicting the dependent variable.

Table 7: ANOVA

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	22029.873	5	4405.975	27.759	.000[b]
Residual	22855.700	144	158.720		
Total	44885.573	149			

Note. Dependent variable: satisfaction, Predictors: (Constant), conscientiousness, neuroticism, agreeableness, openness, extraversion

5. DISCUSSION

The current research aimed to investigate the relationships between the big five personality traits and online learning satisfaction of Iranian EFL university students The results indicate a correlation admits the five-factor model and the general satisfaction of college learners with the online learning system. The three personality traits that have an essential and positive correlation with overall pleasure in online semesters condition are openness to experience, extraversion, and conscientiousness. These findings are compatible with the results of Tsai (2001), which found a

clear correlation between satisfaction, extraversion, and conscientiousness. Among these three traits, openness to experience has the greatest influence on overall satisfaction. Nonetheless, there is a significant inverse correlation between neuroticism and learning happiness, while agreeableness did not demonstrate a statistically significant result.

In general, those learners who have an outstanding level of satisfaction in their education are those who score high in extraversion, agreeableness, conscientiousness, and openness to experience, but not in neuroticism (which showed a negative relationship with learning satisfaction). Moreover, learners with similar traits prefer founding, predominantly, even computer-assisted or face-to-face courses. Blau and Barak (2012) conclusions are consistent with this, as they demonstrated a meaningful correspondence between temperament (even though not specifically related to the Big Five model) and the synchronous treatment of students. As a result, the groups that were formed highlight the distinctions between the student groups, while also revealing similarities within each group. Furthermore, the results demonstrated that learners who were found to be more pleasured with electronically connected learning systems were likely to possess an eminent degree of extraversion, conscientiousness, and openness. The study's discoveries regarding the impression of character on online contentment could aid in the creation of effective course designs and ultimately result in greater satisfaction among students (Baruth & Cohen, 2023). The discoveries of the present search showed that, aside from different essential components, like the merits of online classes, the condition of curriculum design, the role of the trainers, the infrastructure available, and the fairness of the assessment system, the institutional preparedness, there exists equally a demand to accentuate on temper factors when we want to evaluate learners' cheerfulness with online courses. The findings of this research align with earlier studies that propose that personality traits could impact learners' contentment with correspondence course settings (Bolliger & Erichsen, 2013; Daughenbaugh et al., 2002a; Daughenbaugh, et al., 2002b; Moller & Soles, 2001).

In recent years, online courses have been a growing trend in academic and educational institutions, notably in higher education (Allen & Seaman, 2017). Satisfaction is an essential requirement for effective e-learning (El Bachari et al., 2012). Innumerable investigations have discovered a close correlation between student satisfaction and interactions in the computer-assisted learning condition (Dziuban et al., 2015). Additionally, online classes may be customized to suit learners' satisfaction based on their personality style and favorite learning style, as suggested by Denphaisarn (2014). It is crucial to consider student satisfaction as a significant factor when assessing course effectiveness, as emphasized by (Bolliger & Erichsen, 2013). Lim and Lee (2020) found that learners' satisfaction was linked to the presence of well-defined guidelines for online courses and clear rubrics for assignments. It might be productive to explore to what extent learners with different personality traits benefit from online classroom guidelines. It is essential to point out that online courses can only be appropriate for some learners at the same level due to their diverse personalities (Bouhnik & Carmi, 2013). Discovering learners' characteristic traits can help meet their learning goals and needs which subsequently helps increase their satisfaction with online classes. Although considerable studies have explored the benefits of online courses, more needs to be concentrated on students' personality traits in an online context (Orvis & Leffler, 2011). Regarding the results of the current detection, it is implied that before designing effective e-learning courses, it would be beneficial to achieve an understanding of their personality types and preferences. The fact that these attributes are different from each other suggests that there is no universal approach that is perhaps used to boost successful online learning experiences in higher learning conditions. Instead, it is necessary to have a specific understanding of the attributes that students value in each context to develop a suitable strategy for enhancing online learning

engagement. This entails the view of Tlili et al. (2019) that recognizing a student's personality can be useful in delivering more influential learning participation.

6. CONCLUSION AND IMPLICATIONS OF THE STUDY

This research aimed to analyze the function that personality has in Iranian EFL university learners' satisfaction with the online system, strikingly amid the COVID-19 pandemic. In particular, this study investigated five significant personality traits as predictors of online learning satisfaction. The finding indicated that Iranian EFL learners' personality was related to their online learning satisfaction, with openness and neuroticism being the most two important components predicting student's satisfaction with online learning. The study found that two important components that predicted students' satisfaction with online learning were their level of openness and neuroticism. This suggests that an individual's personality possesses a serious domination of the effectiveness of the learning procedure and is linked to their satisfaction with it, as noted by Fatahi et al. (2009), Different individuals respond diversely to various educational manners based on their diverse attributes, which can result in varying levels of satisfaction (Irani et al., 2003; Simo-Serra et al., 2015). This study focused on the relationship between personality traits and online learning satisfaction to contribute to curriculum development and teaching strategies. The findings suggest that learners with certain personality characteristics, such as low extraversion and high neuroticism, may experience greater satisfaction with online learning compared to others. Therefore, online education platforms should be designed to accommodate different personality traits and learning preferences.

Institutions, instructors, and policymakers can consider the findings of the present study and accordingly form educational courses that will more completely meet the requirements of individuals and enhance learners' enjoyment. According to the findings of this research, educational institutions, instructors, and policymakers can develop learning programs that are more tailored to individual personality differences. By taking into account the diverse characteristics of learners, online education platforms can improve student engagement and satisfaction. For instance, individuals with high neuroticism might benefit from a structured and supportive learning environment, whereas those with high openness may perform better in flexible and exploratory learning settings. It is crucial to consider the learners' personality traits during the development, instruction, and learning stages. The class format should be tailored to accommodate different personality types and online learning platforms should be designed to cater to a variety range of student types, with concentrating on their trait levels.

This study has some limitations that are supposed to be considered in future studies. The first restraint is that this study only focused on Iranian EFL students. Future research could analyze the validity of the outcomes reported in this study across disparate subject areas as well as contexts. They could consider the study population from different majors, not just limited to EFL students. In addition, this research employed self-report survey data. Using qualitative approaches such as interviews and case studies would gain a deeper understanding of the potential interrelationships among these constructs. Additionally, this research does not take into account the demographic attributes related to the learners, for instance, gender, age, ethnicity, background, and year of academic study.

References

Allen, I. E., & Seaman, J. (2017). *Digital Compass Learning: Distance Education Enrollment Report 2017*. https://files.eric.ed.gov/fulltext/ED580868

Arbaugh, J. B., & Duray, R. (2002). Technological and structural characteristics, student learning and satisfaction with web-based courses: An exploratory study of two on-line MBA

programs. *Management Learning*, *33*(3), 331-347. https://doi.org/10.1177/1350507602333003

Baruth, O., & Cohen, A. (2023). Personality and satisfaction with online courses: The relation between the Big Five personality traits and satisfaction with online learning activities. *Education and Information Technologies*, *28*(1), 879-904. https://doi.org/10.1007/s10639-022-11199-x

Biber, D., Conrad, S., & Reppen, R. (1994). Corpus-based approaches to issues in applied linguistics. *Applied Linguistics*, *15*(2), 169-189. https://doi.org/10.1093/applin/15.2.169

Blau, I., & Barak, A. (2012). How do personality, synchronous media, and discussion topic affect participation. *Journal of Educational Technology & Society*, *15*(2), 12-24.

Bolliger, D., & Erichsen, E. (2013). Student satisfaction with blended and online courses based on personality type/Niveau de satisfaction des étudiants dans les cours hybrides et en ligne basé sur le type de personnalité. *Canadian Journal of Learning and Technology/La revue canadienne de l'apprentissage et de la technologie*, *39*(1). https://doi.org/10.21432/T2RK5K

Bolliger, D., & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *3*, 61-67.

Bolliger, D. U., & Halupa, C. (2012). Student perceptions of satisfaction and anxiety in an online doctoral program. *Distance Education*, *33*(1), 81-98. https://doi.org/10.1080/01587919.2012.667961

Bonebrake, K. (2002). College students' Internet use, relationship formation, and personality correlates. *CyberPsychology & Behavior*, *5*(6), 551-557. https://doi.org/10.1089/109493102321018150

Bouhnik, D., & Carmi, G. (2013). Thinking styles in virtual learning courses. Proceedings of the 2013 International Conference on Information Society (i-Society), Toronto.

Cheng, H. F., & Dörnyei, Z. (2007). The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan. *International Journal of Innovation in Language Learning and Teaching*, *1*(1), 153-174. https://doi.org/10.2167/illt048.0

Conrad, D. (2002). *Community social presence and engagement in online learning*. [University of Alberta, Department of Educational Policy Studies].

Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 1, pp. 416-436). https://doi.org/10.4135/9781446249215

Demuyakor, J. (2020). Coronavirus (COVID-19) and online learning in higher institutions of education: A survey of the perceptions of Ghanaian international students in China. *Online Journal of Communication and Media Technologies*, *10*, e202018. https://doi.org/10.29333/ojcmt/8286

Denphaisarn, N. (2014). A new framework for e-learning using learning style and personality. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, *13*(1), 145-159. https://www.gssrr.org/index.php/JournalOfBasicAndApplied/article/view/1739

Despotović-Zrakić, M., Markovic, A., Bogdanović, Z., Barać, D., & Krco, S. (2012). Providing Adaptivity in Moodle LMS Courses. *Educational Technology and Society*, *15*.

Du, X., F, T., Ebead, U., Hasan, M., & Al-Ali, A. (2020). Engineering students' readiness to transition to emergency online learning in response to COVID-19: case of Qatar. *Eurasia Journal of Mathematics, Science and Technology Education*, *16*, em1886. https://doi.org/10.29333/ejmste/8474

Dziuban, C., Moskal, P., Thompson, J., Kramer, L., DeCantis, G., & Hermsdorfer, A. (2015). Student satisfaction with online learning: Is it a psychological contract? *Journal of Asynchronous Learning Network*, *19*. https://doi.org/10.24059/olj.v19i2.496

El Bachari, E., Abelwahed, E. H., & El Adnani, M. (2012). An adaptive teaching strategy model in e-learning using learners' preference: LearnFit framework. *International Journal of Web Science*, *1*(3), 257-274. https://doi.org/10.1504/IJWS.2012.045815

Ezra, O., Cohen, A., Bronshtein, A., Gabbay, H., & Baruth, O. (2021). Equity factors during the COVID-19 pandemic: Difficulties in emergency remote teaching (ert) through online learning. *Education and Information Technologies*, *26*(6), 7657-7681. https://doi.org/10.1007/s10639-021-10632-x

Fatahi, S., Kazemifard, M., & Ghasem-Aghaee, N. (2009). Design and implementation of an e-Learning model by considering learner's personality and emotions. In S. I. Ao, A. M. Korsunsky, H. Ma, & X. Xu (Eds.), *Advances in Electrical Engineering and Computational Science* (pp. 423-434). Springer Netherlands.

Friedman, H. S., & Schustack, M. W. (2016). *Psychology: An introduction*. Pearson.

Fulford, C. P., & Zhang, S. (1993). Perceptions of interaction: The critical predictor in distance education. *American Journal of Distance Education*, *7*(3), 8-21. https://doi.org/10.1080/08923649309526830

Gass, S., Mackey, A., & Ross-Feldman, L. (2005). Task-based interactions in classroom and laboratory settings. *Language Learning*, *55*(4), 575-611. https://doi.org/10.1111/j.0023-8333.2005.00318.x

Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, *4*(1), 26. https://doi.org/10.1037/1040-3590.4.1.26

Hermans, C. M., Haytko, D. L., & Mott-Stenerson, B. (2009). Student satisfaction in web-enhanced learning environments. *Journal of Instructional Pedagogies*, *1*. http://files.eric.ed.gov/fulltext/EJ1056347.pdf

Irani, T., Telg, R., Scherler, C., & Harrington, M. (2003). Personality type and its relationship to distance education students' course perceptions and performance. *Quarterly Review of Distance Education*, *4*(4), 445-453.

Kedia, P., & Mishra, L. (2023). Exploring the factors influencing the effectiveness of online learning: A study on college students. *Social Sciences & Humanities Open*, *8*(1), 100559. https://doi.org/10.1016/j.ssaho.2023.100559

Kuo, Y.-C., Walker, A. E., Belland, B. R., & Schroder, K. E. (2013). A predictive study of student satisfaction in online education programs. *International Review of Research in Open and Distributed Learning*, *14*(1), 16-39. https://doi.org/https://doi.org/10.19173/irrodl.v14i1.1338

Lim, J., & Lee, M. (2020). Effects of online learners' presence perception on academic achievement and satisfaction mediated by self-efficacy for self-regulated learning and agentic engagement. *The Korean Journal of Educational Methodology Studies*, *32*, 461-485. https://doi.org/10.17927/tkjems.2020.32.3.461

Lounsbury, J., Huffstetler, B., Leong, F., & Gibson, L. (1970). Sense of Identity and Collegiate Academic Achievement. *Journal of College Student Development*, *46*, 501-514. https://doi.org/10.1353/csd.2005.0051

McCrae, R. R., & Costa, P. T. (1985). Updating Norman's "adequacy taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, *49*(3), 710. https://doi.org/10.1037/0022-3514.49.3.710

Moller, L., & Soles, C. (2001). Myers Briggs type preferences in distance learning education. *International Journal of Educational Technology*, *2*(2), 1-12. https://www.ascilite.org/archived-journals/ijet/v2n2/soles/

O'Donoghue, T., & Rabin, M. (2000). The economics of immediate gratification. *Journal of Behavioral Decision Making*, *13*(2), 233-250. https://doi.org/10.1002/(SICI)1099-0771(200004/06)13:2<233::AID-BDM325>3.0.CO;2-U

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*(4), 460-469. https://doi.org/10.1177/002224378001700405

Oliver, R. L., & Burke, R. R. (1999). Expectation processes in satisfaction formation: A field study. *Journal of Service Research*, *1*(3), 196-214. https://doi.org/10.1177/109467059913002

Palloff, R. M., & Pratt, K. (2010). *Collaborating online: Learning together in community* (Vol. 32). John Wiley & Sons.

Papamitsiou, Z., & Economides, A. A. (2014). Learning analytics and educational data mining in practice: A systematic literature review of empirical evidence. *Journal of Educational Technology & Society*, *17*(4), 49-64. http://www.jstor.org/stable/jeductechsoci.17.4.49

Parent-Lamarche, A., Marchand, A., & Saade, S. (2021). A multilevel analysis of the role personality play between work organization conditions and psychological distress. *BMC Psychology*, *9*(1), 200. https://doi.org/10.1186/s40359-021-00703-6

Patitsa, C. D., Sahinidis, A. G., Tsaknis, P. A., & Giannakouli, V. (2021). Big Five personality traits and students' satisfaction with synchronous online academic learning (SOAL). *Corporate & Business Strategy Review*, *2*(2), 8-16. https://doi.org/10.22495/cbsrv2i2art1

Pitcher, B. D., Ravid, D. M., Mancarella, P. J., & Behrend, T. S. (2022). Social learning dynamics influence performance and career self-efficacy in career-oriented educational virtual environments. *PLOS ONE*, *17*(9), e0273788. https://doi.org/10.1371/journal.pone.0273788

Rainer Jr, R. K., & Miller, M. D. (1996). An assessment of the psychometric properties of the computer attitude scale. *Computers in Human Behavior*, *12*(1), 93-105. https://doi.org/https://doi.org/10.1016/0747-5632(95)00021-6

Rashidi, N., & Moghadam, M. (2014). The effect of teachers' beliefs and sense of self-efficacy on Iranian EFL learners' satisfaction and academic achievement. *TESL-EJ*, *18*(2). http://files.eric.ed.gov/fulltext/EJ1045203.pdf

Sahinidis, A. G., & Tsaknis, P. A. (2021). Exploring the relationship of the Big Five personality traits with student satisfaction with synchronous online academic learning: The case of COVID-19-induced changes. In A. Kavoura, A. G. Sahinidis, & E. Christou (Eds.), *Strategic Innovative Marketing and Tourism in the COVID-19 Era: 9th ICSIMAT Conference 2020* (pp. 87-94). Springer International Publishing. https://doi.org/10.1007/978-3-030-66154-0_10

Tian, Y., Zhao, Y., Lv, F., Qin, N., & Chen, P. (2021). Associations among the big five personality traits, maladaptive cognitions, and internet addiction across three time measurements in 3 months during the COVID-19 pandemic. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.654825

Tlili, A., Huang, R., Chang, T.-W., Nascimbeni, F., & Burgos, D. (2019). Open educational resources and practices in China: A systematic literature review. *Sustainability*, *11*(18).

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, *44*(5), 996-1004. https://doi.org/10.2307/3069443

Vasileva-Stojanovska, T., Malinovski, T., Vasileva, M., Jovevski, D., & Trajkovik, V. (2015). Impact of satisfaction, personality and learning style on educational outcomes in a blended learning environment. *Learning and Individual Differences*, *38*, 127-135. https://doi.org/10.1016/j.lindif.2015.01.018

Wicklein, R. C., & Rojewski, J. W. (1995). The relationship between psychological type and professional orientation among technology education teachers. *Journal of Technology Studies*, *21*(1). http://files.eric.ed.gov/fulltext/EJ513067.pdf

Yukselturk, E., & Yildirim, Z. (2008). Investigation of interaction, online support, course structure and flexibility as the contributing factors to students' satisfaction in an online certificate program. *Journal of Educational Technology & Society*, *11*(4), 51-65.

Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology*, *91*(2), 259. https://doi.org/10.1037/0021-9010.91.2.259

Zolotov, Y., Reznik, A., Bender, S., & Isralowitz, R. (2022). COVID-19 fear, mental health, and substance use among Israeli university students. *International Journal of Mental Health and Addiction*, *20*(1), 230-236. https://doi.org/10.1007/s11469-020-00351-8