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Research Paper

Relationship between Personality Traits/Learning Styles and EAP Students' Reading Proficiency in Online Courses

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Abstract
The current study aimed to find the relationship between personality traits and learning styles of English for Academic Purposes (EAP) students across high, intermediate, and low levels of reading proficiency in online courses. To this purpose, 50 male and 50 female BA students were selected through convenient sampling from the executive management department at Iran University of Science and Technology, Tehran, Iran. Their age range was 20 to 26 years. They were divided into three groups of high, intermediate, and low reading proficiency based on a simulated TOEFL CBT reading test. Their learning style and personality type were assessed through Myers-Briggs Type Indicator (MBTI)-Form M and the Learning Style Inventory-3 (LSI3), respectively. Upon collecting the data from the MBTI, the LSI3, and the reading tests, the researchers coded the scores and used path analysis. The results showed that there were significant relationships among a number of the variables under investigation; especially extroversion was found to be an important personality trait affecting online reading proficiency and other variables. The results also showed that the extroversion trait had a positive significant relationship with high reading proficiency, while the thinking dimension resulted in low reading proficiency. Moreover, The participants who had the objective experience trait possessed a high ability in reading, and those who had the reflective observation trait were less proficient in reading.

Keywords: *EAP, Learning Styles, Online Courses, Personality Traits, Reading Proficiency*

بررسی ارتباط سبک شناختی جامع و تحلیلی در دوره های آنلاین و پنج صفت شخصیتی بزرگ در بین زبان آموزان زن و مرد ایرانی
هدف از این مطالعه، بررسی ارتباط سبک شناختی جامع و تحلیلی در دوره های آنلاین و پنج صفت شخصیتی بزرگ در بین زبان آموزان زن و مرد ایرانی بود. در این تحقیق همبستگی شرکت کنندگان از طریق نمونه گیری مناسب انتخاب شدند و 100 دانش آموز (50 مرد و 50 زن) بودند که سن آنها بین 20 تا 26 سال بود. آن ها دانشجویان ارشد مدیریت اجرایی بودند. دلیل انتخاب چنین دانشجویانی این بود که به دلیل رشته تحصیلی، آنها دید عمیق تری درمورد مسائل روان شناسی دارند. داده های مربوط به نوع شخصیت دانشجویی و سبک یادگیری با استفاده از شاخص نوع Myers Briggs (MBTI) فرم M و فرم سبک یادگیری نسخه 3 (LSI3) جمع آوری شد. هر دوی این ابزارها برای کمک به افراد برای شناسایی راه هایی که در آن اطلاعات را یاد می گیرند و پردازش می کنند طراحی شده بودند. هنگامی که MBTI و LSI3 در پایان ترم توزیع و داده ها در SPSS 21.0 وارد شدند، با استفاده از آزمون های آماری مرتبط مورد تجزیه و تحلیل قرار گرفتند. نتایج تجزیه و تحلیل داده ها نشان داد که بین متغیرهای مورد مطالعه به طور خاص رابطه معنی داری وجود دارد که عامل برون گرایی به عنوان یک نوع شخصیت مهم در یادگیری آنلاین یافت شد. به این ترتیب لازم است به ویژگی های هر دانش آموز در یادگیری توجه کامل شود و با به کارگیری کارشناسان این رشته و انجام آزمون های لازم، سبک و ویژگی های شخصیتی هر دانش آموز مورد ارزیابی قرار گیرد تا بهترین روش تدریس پیدا شود
. **واژگان کلیدی**: سبک یادگیری، دوره های مجازی آنلاین، صفات شخصیتی، یادگیرندگانEAP

Introduction

The teachers of English for Academic Purposes (EAP) courses are interested in using methodologies that result in optimal learning (Ackerman, Bowen, Beier, & Kanfer, 2001). EAP learners vary in ability and needs, and teachers should attend to them; furthermore, needs are not a new issue in education in general and language learning in particular (Brown, 2010; Peyton, 2003).

The need for online reading arose when the internet was first introduced 1980s. There is a huge change in literature reading on the internet, advertising, research and articles, and exams. Specifically, language proficiency exams highlighted the importance of online reading as a norm, rather than an exception, these days.

In reading proficiency, different personality traits, including, though not limited to, learning style and personality type, are at work. These variables are based on psychology, and various studies were conducted on them in different disciplines (Mainemelis et al., 2002). As defined by Kolb and Kolb's (2000) theory of experiential learning, learning style comprises four modes of learning, which correspond to four processing aspects: perceptual, symbolic, affective, and behavioral. These modes are theorized as learning abilities, namely abstract conceptualization, concrete experience, active experimentation, and reflective observation.

The above-mentioned learning abilities ease the tension between analytical detachment and immediate concrete holistic style of learning (Kolb & Kolb, 2000). The present study was an attempt to investigate how learning Style (holistic vs. analytic) in EAP virtual online courses and the Big Five personality traits across reading proficiency levels among male and female Iranian EAP learners are related and how they interact with one another. Nowadays, the second language is taught online; therefore, it is required to find the relation between online courses and reading rates in English courses. However, few studies have dealt with such a relationship concerning online reading/performance or English as a second language context.

Recent studies highlighted that no particular teaching method benefits all English language learners (Terry, 2001). Therefore, language learning courses should match the characteristics of learners to make it possible for them to select their desired learning environment. Also, program developers should develop programs that match the personality types and learning styles. Thus, the current study specifically aimed at finding the relation between personality traits and learning styles of male and female EAP students at three reading proficiency levels (high, intermediate, and low) in online courses.

Research Questions

RQ1. Is there any relationship between the personality trait and reading proficiency of university students in online courses?

RQ2. Is there any relationship between learning style and reading proficiency of university students in online courses?

Literature Review

Reading proficiency is becoming a more important issue in the new world of technology, and as a matter of fact, it remains the most influential human way of transforming knowledge and information. Reading is one of the major academic skills, and students are expected to read abstracts of articles and summaries. However, reading from the screen has received increasing attention and interest since online reading materials are rapidly growing (Sawaki 2001).

The term "reading literacy" refers to the dynamic and functional use of reading in different conditions and for different purposes (Wu, 2008). Reading literacy means knowing, apprehending, appraising, and

getting involved with texts to develop and apply our knowledge. With this definition, reading is a decoding process, communicating with the text and matching the readers' expectations with the text. It also involved several linguistic and cognitive procedures from decoding words, reading comprehension, some complex interactions between the reader and text, and the reader's background to their expectations and decision-making. The definition includes metacognitive processes since the readers' feelings, thinking, evaluating, or reflections on the text help achieve goals (Wu, 2008).

Myers (1962) defined personality as somewhat static and detailed forms of behavior, emotional responses, and thoughts to handle life conditions. The studies on personality suggested that individuals are categorized by their behavior patterns, i.e., the specific ways they talk, walk, laugh, or express their needs. Personologists systematically study personality; they study how humans differ in expressing themselves and explain the causes or the reasons for the differences. In comparison, experts in other areas of psychology focus on some of these actions and processes, e.g., motivation, attention, etc., personologists work on how such processes are integrated to give each individual a unique personality. The scientific study of personality is inspired by different resources, such as case studies, philosophy, anthropology, etc. (Holzman, 2018).

Personality characteristics are the main learning procedure variables. Understanding personality traits in teaching and learning settings is crucial for educators, program developers, and learners (Dewar & Whittington, 2000). Messick (2013) stated that personality traits can improve learners' performance or interfere with it. Kretovics and McCambridge (2002) also showed the significance of personality types, especially in the virtual online learning settings.

Learning styles are related to collecting, processing, and maintaining information required for learning (Kolb & Kolb, 2000). Personality styles are somewhat fixed and might affect various learning behaviors (Ackerman, Bowen, Beier, & Kanfer, 2001). Piaget's work is related to life-long changes in learners and their adaptation to situations. His theory directly influenced learning style theorists.

Based on Kolb's (1984) experiential learning theory, four learning modes correspond to the four dimensions of processing: perceptual, affective, behavioral, and symbolic. The learning modes, theorized as learning abilities are abstract conceptualization, concrete experience, active experimentation, and reflective observation. Two learning continuums are included in Kolb's model. Learners need to locate themselves in abstract conceptualization and concrete experience on one side and active experimentation and reflective observation on the other.

The vital role of personality traits in online courses and reading proficiency level was noticeable in the issues put forward. Then, two seemingly influential learning styles that might affect the type of learning were evaluated. Afterward, the previous pertinent studies reviewed online courses, Big Five personality traits, and two learning styles and personality traits categories. What seemed to be missing from the earlier studies was that, although those research studies focused on online learning courses, most of them, unfortunately, did not adopt a theoretical perspective for needs analysis.

Previous studies have shown that more learners are choosing distance learning setting than ever before, at least at the postsecondary level, and that the condition of distance learners are changing to reflect that of the typical college student (Roblyer, 2017). Also, the invention of electronic technologies made online education more touchable, accessible and pave the way for new pedagogical trends to emerge the revolution of the new digital knowledge age that cause greater and faster human communication and collaboration and led to new forms of activity that bring changes in education. (Bozkurt, Yılmazel , Akgün Özbek & Erdoğdu, 2015).

Higher education and difficult condition are forcing the demand for increases in virtual online courses environment (Howell, Williams, & Lindsay, 2003). Many universities and institutions agree that their

setting is not large enough to accommodate the increasing number of students (Oblinger et al., 2001). Virtual online courses programs may be one good solution for those who are not convenient to attend a face-to-face classroom.

Recent growth in technology development has made it increasingly easy for colleges and universities to take benefit from distance methodologies. Institutions are able to offer online programs to students who need to have flexibility in their learning styles such as individuals living in remote areas, holding full-time jobs, or those with family needs. Regarding these factors, students are beginning to look for courses that can meet their individual needs and learning styles. As more virtual online courses opportunities become popular, the need for quality competitive programs will grow.

From past studies, we know that more students are choosing distance learning formats than ever before, at least at the postsecondary level, and that the demographics of distance learners are changing to reflect that of the typical college student (Roblyer, 2017).

Method

Research Design

This study was conducted using a predictive design. Different statistical procedures can be employed for prediction. Here, the relationships of (a) reading proficiency levels and personality type and (b) learning style and reading proficiency level were examined in online courses.

Participants

The Iran University of Science and Technology students who enrolled in a distant language learning program participated in this study. They were selected through convenience sampling and comprised 50 male and 50 female senior students of the executive management department, aged 20-26. They were assigned to three groups based on their reading proficiency test scores. Their course was held in both semesters (spring and fall), and the same teacher taught all three groups.

Instruments

The Myers-Briggs Type Indicator (MBTI, Form M), Learning Style Inventory-version 3 (LSI3), and a simulated TOEFL CBT reading subset were the instruments used in this study for data collection.

The Myers-Briggs Type Indicator (MBTI; Myers, 1962) is a used personality test inspired by Jung's theories. It is used to find about normal personalities and can be used for different purposes like career development, academic counseling, relationship counseling, etc. The MBTI measures preferences using four opposite pairs or "dichotomies," namely: Extraversion (E) – Introversion (I), Sensing (S) – Intuition (N), Thinking (T) – Feeling (F), and Judging (J) – Perceiving (P). the personality is divided into 16 types, each comprised of the four dichotomies.

LSI3 is the revised version of Kolb's Learning Style Inventory which examines how individuals learn from their experiences. It measures the learning styles resulting from experiential learning theory. The LSI has two aims: a) increasing the person's understanding of learning from their experiences and approaching learning, and b) empirically studying the theory of experiential learning and learning styles.

A simulated TOEFL CBT Reading Subtest was used to evaluate reading proficiency.

Procedure

To conduct the study, the participants were initially asked to sit for a simulated TOEFL CBT reading subtest in order to assess their reading level and divide them into three groups (high, intermediate, and low) of reading proficiency. Then, the Learning Style Inventory-version 3 (LSI3) and Myers Briggs Type

Indicator (MBTI) were administered. Finally, the elicited data were analyzed through linear regression. The functional model for statistical entities was used to find the relationship between reading proficiency level and personality traits and reading proficiency level and learning styles.

Results

The results of descriptive and inferential statistics are presented in the following tables. The following table summarizes the results obtained from the simulated TOEFL CBT
reading subtest:

Table 1

Descriptive Statistics of Reading Proficiency Level

Level of Reading Proficiency	Mean	Std. Deviation	Min	Max
High	33.14	5.78	15	46
Intermediate	32.03	5.9	14	44
Low	26.30	5.23	17	47

According to the table above, based on the two tests of simulated TOEFL CBT reading subtest, the participants were divided into three groups of high, intermediate, and low reading proficiency levels.

Table 2

Learning Styles Descriptive Statistics

LSI	M	SD	Min	Max	Male	Female
Objective Experience	26.27	5.58	16	45	18	10
Reflective Observation	27.81	5/80	17	48	12	19
Abstract Conceptualization	32.31	5.70	16	47	11	11
Active Testing	31.26	5.68	17	44	9	10

According to the table above, male students obtained the highest learning style score regarding the objective experience section (18 out of 28 participants who opted for objective experience were male). There was no gender difference for abstract conceptualization, and for the active experimental, the ratio of female to male participants was 10:9. It can be concluded that male students probably benefit more from direct observation, and female ones probably prefer to memorize concepts.

Table 3

Descriptive Statistics related to Personality Styles

Sign	Personality Style	Frequency (Male Students)	Frequency (Female Students)
ESTP	Extroverted, Sensitive, Thinker, Perceptual	4	2
ESFJ	Extroverted, Sensitive, Feeling, Judgment	4	6
ESTJ	Extroverted, Sensitive, Thinker, Judgment	6	4
ESFP	Extroverted, Sensitive, Feeling, Perceptual	1	1

ENFP	Extroverted, Intuitive, Feeling, Perceptual	2	4
ENTP	Extroverted, Intuitive, Thinker, Perceptual	4	3
ENTJ	Extroverted, Intuitive, Thinker, Judgment	2	5
ENFJ	Extroverted, Intuitive, Feeling, Judgment	2	2
ISTJ	Introverted, Sensitive, Thinker, Judgment	1	3
ISTP	Introverted, Sensitive, Thinker, Perceptual	4	2
ISFP	Introverted, Sensitive, Feeling, Perceptual	1	4
ISFJ	Introverted, Sensitive, Feeling, Judgment	5	4
INFP	Introverted, Intuitive, Feeling, Perceptual	4	2
INFJ	Introverted, Intuitive, Feeling, Judgment	1	3
INTJ	Introverted, Intuitive, Thinker, Judgment	5	3
INTP	Introverted, Intuitive, Thinker, Perceptual	4	2

Male participants scored higher in ESFJ. In other words, they were dominantly extroverted and interested in communicating verbally with others. It is noteworthy that this is the dominant personality trait of industrious and interested students. The highest frequency was found for male learners in the case of the ESTJ factor. Regarding thoughtful learning, male participants preferred memorization while female students preferred to sit at the front row and memorize everything.

Model Fit

The model fit, shown by R-Square, is presented below (Table 2), where R indicates the multivariate correlation coefficient and R Square signifies the coefficient of determination. The coefficient of determination is among the critical regression indices. If multiplied by 100, it reveals the degree of the dependent variable variance explained by the independent variable variance.

The closer R^2 to one, the more robust the model, and the closer to zero, the less robust the model is. The acceptable limit is 50% and above. Sample size and independent variables significantly influence Adjusted R Square. It is also is a more accurate coefficient of determination value a researcher might report.

Table 4

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimated	Durbin – Watson
0.761	0.723	0.701	16.5500	2.075

Based on the table above and the R-square value, it can be concluded that the research model fitted well because its value (0.72) is higher than 0.5.

Model Linearity or Non-linearity

This table shows whether the model is assumed to be linear or not, and its assumptions are H0 and H1:

H0: The model is not linear

H1: The model is linear

If a significant value is obtained, the null hypothesis is rejected and the linearity claim is accepted. Otherwise, the claim of linearity will be rejected.

Table 5

ANOVA Results

Model	Sum of Square	Mean Square	*F*	Sig.
Regression	1753.120	830.566	2.64	0.001

According to the table above and the value of Sig, no linearity problem was in the data because Sig is below 0.05, and the non-linearity is confirmed.

Inferential Statistics

The relationships among the variables were examined in this section. For this purpose, the KS test was initially used to check the normality.

Table 6

KS-test

	Sig.
One-sample Kolmogorov-Smirnov test	0.002

According to the table above, the *p*-value is less than 0.05, and the distribution was not normal. This means that a Spearman test can be used to examine the relationship between the two variables. The correlation and path coefficients were presented in the table below.

Table 7

Learning Style Inventory→High Reading Proficiency Level

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading
LSI→RPL	0.732	0.865	0.799	20.56	1.06

The effect of LSI on HRPL was positive and significant. The t-statistic (20.56) was higher than 1.96. besides, the R-square value was higher than 0.5, and the model reliability was 0.732, confirming its credibility.

Table 8

Learning Style Inventory→Intermediate Reading Proficiency Level

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading
LSI→RPL	0.673	0.798	0.688	19.58	1.05

The effect of LSI on IMRPL was significant and positive. The t-statistic (19.58) was higher than 1.96 and was equal to 19.58. Moreover, the R-square value was higher than 0.5, and the model reliability was 0.68, confirming its credibility.

Table 9

Learning Style Inventory→Low Reading Proficiency Level

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading
LSI→LRPL	0.667	0.789	0.588	20.11	1.03

The effect of LSI on LRPL was significant and positive. The t-statistic (20.11) was higher than 1.96. Furthermore, the R-square value was higher than 0.5, and the model reliability was 0.58, confirming its credibility.

Table 10

LSI dimensions → HRPL

Path	t-value	Variable power	Validity
OE→HRPL	16.22	0.742	Confirmed
RO→HRPL	12.448	0.567	Confirmed
AC→HRPL	13.677	0.698	Confirmed
AT→HRPL	12.45	0.566	Confirmed

According to the table above, the objective experience was the most effective dimension related to high reading proficiency level and reflective observation had the least effect on high reading proficiency level.

Table 11

LSI dimensions → IMRPL

Path	t-value	Variable power	Validity
OE→IMRPL	18.11	0.789	Confirmed
RO→IMRPL	11.678	0.563	Confirmed
AC→IMRPL	12.767	0.663	Confirmed
AT→IMRPL	12.88	0.498	Confirmed

According to the table above objective experience was the most effective dimension related to intermediate reading proficiency level and reflective observation had the least effect on intermediate reading proficiency level.

Table 12

LSI dimensions → LRPL

Path	t-value	Variable power	Validity
OE→LRPL	16.13	0.789	Confirmed
RO→LRPL	10.60	0.446	Confirmed
AC→LRPL	12.99	0.663	Confirmed
AT→LRPL	11.18	0.543	Confirmed

According to the table, the objective experience was the most effective dimension related to low reading proficiency level and reflective observation had the least effect on low reading proficiency level.

Table 13

MBTI → HRPL

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading

MBTI→RPL	0.809	0.867	0.798	22.42	1.020

The effect of MBTI on RPL was significant and positive. The t-statistic (22.42) was higher than 1.96. Additionally, the R-square value was higher than 0.5, and the model reliability was 0.79, confirming its credibility.

Table 14

MBTI → IMRPL

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading
MBTI→IMRPL	0.878	0.798	0.793	21.36	1.032

The effect of MBTI on IMRPL was positive and significant. The t-statistic was higher than 1.96 and was equal to 21.36, and the impact of MBTI on RPL was significant. Also, the R-square value was higher than 0.5, and the model's reliability is 0.79, which confirmed the model's credibility.

Table 15

MBTI → LRPL

Path	R-square	Original Sample	Path-coefficient	t-value	Factor Loading
MBTI→LRPL	0.887	0.893	0.689	22.33	1.06

The effect of MBTI on LRPL was significant and positive. The t-statistic (22.33) was higher than 1.96, and the MBTI impact on LRPL was significant. Besides, the R-square value was higher than 0.5, and the model's reliability was 0.68, confirming its credibility.

Table 16

MBTI dimensions → HRPL

Path	t-value	Variable power	Validity
Extroversion→ HRPL	13.56	0.690	Confirmed
Introversion→ HRPL	11.244	0.569	Confirmed
Sensing→ HRPL	10.73	0.475	Confirmed
Intuition→ HRPL	9.33	0.422	Confirmed
Thinking→ HRPL	3.45	0.321	Confirmed
Feeling→ HRPL	7.55	0.381	Confirmed
Judging→ HRPL	6.878	0.606	Confirmed
Perceiving→HRPL	6.334	0.376	Confirmed

According to the table above, the extroversion dimension had the most effect on high reading proficiency level and thinking variable had the least effect on high reading proficiency level.

Table 17

MBTI dimensions → IMRPL

Path	t-value	Variable power	Validity
Extroversion→ IMRPL	12.68	0.698	Confirmed
Introversion→ IMRPL	11.456	0.578	Confirmed
Sensing→ IMRPL	10.87	0.511	Confirmed
Intuition→ IMRPL	10.33	0.431	Confirmed

Thinking→ IMRPL	3.87	0.311	Confirmed
Feeling→ IMRPL	6.88	0.378	Confirmed
Judging→ IMRPL	6.989	0.651	Confirmed
Perceiving→IMRPL	6.4556	0.322	Confirmed

According to the table above, the extroversion dimension had the most effect on intermediate reading proficiency level, and the thinking variable had the least effect on reading proficiency level.

Generally, the reading proficiency included three levels high, intermediate, and low. The tables below show the general relationship between the reading proficiency level and personality traits and learning styles.

Table 18

RPL → MBTI

RPL	Relationship	MBTI
HRPL	Positive Relationship	Extroversion
IMRPL	Positive Relationship	Extroversion
LRPL	Positive Relationship	Extroversion
HRPL	Negative Relationship	Thinking
IMRPL	Negative Relationship	Thinking
LRPL	Negative Relationship	Thinking

The table below shows the general relationship between the reading proficiency level and the two main determining learning style dimensions.

Table 19

RPL → LSI

RPL	Relationship	LSI
HRPL	Positive Relationship	objective experience
IMRPL	Positive Relationship	objective experience
LRPL	Positive Relationship	objective experience
HRPL	Negative Relationship	reflective observation
IMRPL	Negative Relationship	reflective observation
LRPL	Negative Relationship	reflective observation

The table above shows a positive relationship between objective experience in the LSI model and high, intermediate, and low reading proficiency. At the same time, there was a negative relationship between reflective observation in the LSI model and three levels of reading proficiency.

Discussion

The results of data analysis revealed that extroversion has a significant positive relationship with high reading proficiency level while thinking dimension resulted in low reading proficiency level. Also, students who have the objective experience character are those with high ability in reading, and the students who have the reflective observation were less able in reading proficiency. In this vein, Lam, Lam, Liu, and Shhin (2000) examined the relationships between personality traits and reading proficiency. The findings revealed a positive relationship between extraversion and reading proficiency. Also, among the underlying factors of personality traits, the extroversion factor has a greater impact on reading proficiency among male and female students. The present study findings align with their results

and those of Artelt, Schiefele, and Schneider (2001), who concluded that being extroverted plays a major role in reading proficiency.

Jolliffe, Ritter, and Stevens (2001) also reported a significant relationship between reading proficiency and personality traits. It was found that more extroverted learners scored the highest in the reading proficiency measure. These findings are also similar to Brodney, Kehoe, Mallinson, and Pozil (2001), who studied the relationship between learning style and reading proficiency among EFL students; they found that abstract conceptualization significantly correlated with reading proficiency level.

The present study findings were compatible with those of Feldmann and Fish (2013). Their study was based on Learning Style Inventory (LSI), general traits, and valid reading tests. They found that abstract conceptualization is highly related to capability in speed reading. The findings were also partially consistent with those of DelVecchio, Jae, and Ferguson (2019). They attributed the relationship between reading speed and learning style, especially to the abstract conceptualization factor. Furthermore, the findings are similar to those of Gu and Roehrig (2011). In a study on Malaysian university students, they evaluated the relationship between reading strategies and personality traits, and different learning styles. They found that students who have the potential of being extroverted and have the factor of abstract conceptualization have a higher skill in reading.

The findings of the present study are also in line with those of Ehri (2014), who studied the reading proficiency of EFL students at the University of Colombia and concluded that metacognitive skills, extroversion, and abstract conceptualization are important factors in reading proficiency.

Conclusion

As the findings showed, there was a significant positive relationship between reading proficiency level and personality traits and also between reading proficiency level and learning style. Based on the result, the characteristics of each student in learning should be taken into account by employing experts in this field and performing the necessary tests prior to providing instruction.

Regarding personality traits, the findings showed that extraversion significantly determines the level of reading proficiency. So, experts are advised to attend to the traits through which students reveal their inner potentials. It is also necessary to attend to the learning styles and personality types and select pedagogical materials to find better teaching methodologies.

The aim of the current study was to find the relationship between EAP Students' learning styles and personality traits across reading proficiency levels in online courses. Further studies need to be conducted to find and prove other aspects of using the two factors of LSI and MBTI in relation to reading comprehension.

In the present study, the MBTI personality test was used to examine students' personality traits in this study. It is suggested that in future research, other personality assessment tests be used to investigate and examine this issue from other angles. This will also enable future researchers to check and verify the results found in the present study. Likewise, to measure the student's learning styles, the LSI learning style was used here, and future researchers are recommended to use tests for measuring other learning styles be used so that this issue can be researched and studied from other perspectives as well. Moreover, to measure the student's reading proficiency level, an online reading speed test and simulated CBT TOEFL reading subset were used. For measuring reading proficiency level there are so many other tests and measures that can be used to evaluate this type of skill. This study was conducted in an online setting. It is recommended to replicate the same study in face-to-face settings to see if there are similarities or differences between the two settings in terms of the relationships between the variables under study.

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