



ISTANBUL MEDENİYET UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF FOREIGN LANGUAGE EDUCATION

**The Impact of the Use of Artificial Intelligence-
Generated Materials on Reading Motivation
among EFL Learners**

Master's Thesis

Özge Kübra Yılmaz

June 2024



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Supervisor

Prof. Dr. Selami Aydın

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THESIS JURY APPROVAL

This Master's thesis titled "The Impact of the Use of Artificial Intelligence-Generated Materials on Reading Motivation among EFL Learners" written by Özge Kübra Yılmaz at the Department of Foreign Language Teaching was accepted by our jury.

JURY MEMBERS

SIGNATURE

Supervisor:

Prof. Dr. Selami AYDIN

Istanbul Medeniyet University

Other Jury Members:

Asst. Prof. Dr. Ferdane DENKÇİ AKKAŞ

Istanbul Medeniyet University

Assoc. Prof. Dr. Suzan KAVANOZ

Yıldız Technical University

Date of Defense: 26/06/2024

STATEMENTS

Style and Reference Manual Statement

Having reviewed this thesis written under my supervision, I confirm that it has been written in accordance with APA (7th Edition) Manual of Style and used its [footnote/in text] reference format consistently throughout the entire text.



Signature

Prof. Dr. Selami Aydın

Declaration of Originality

I hereby declare that all information in this dissertation has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conducts, I have fully cited and referenced all material and results that are not original to this work.

Signature

Özge Kübra Yılmaz

GENİŞ ÖZET

Yapay Zeka ile Geliştirilmiş Materyal Kullanımının Yabancı Dil Olarak İngilizce Okuma Motivasyonu Üzerindeki Etkileri

Yılmaz, Özge Kübra

Yüksek Lisans Tezi, Yabancı Diller Eğitimi Anabilim Dalı

Danışman: Prof. Dr. Selami Aydın

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Bu çalışma bağlamında okuma becerileri, yabancı dil öğreniminde kabul gören dört temel beceriden biri olarak ele alınmıştır. Okuma, genel anlamda yazılı formda bulunan mesajların anlaşılmasını içeren bir aktivite olarak tanımlanabileceği gibi, daha ayrıntılı olarak “dil performansı ile ilgili tüm bilişsel süreçleri içerebilen bir dil etkinliği” olarak da düşünülebilir (Urquhart & Weir, 1998: 14). Okuma becerileri, dil öğrenen bireyler için birçok anlamda fayda sağladığından dolayı, öğrenim sürecinde oldukça büyük önem taşımaktadır (Aydın, 2011; Aydın, 2013; Day & Bamford, 1998; Yakut & Aydın, 2017). Aynı zamanda, dil öğrenen bireylerin kelime dağarcıklarını, yapısal dil bilgilerini, heceleme ve telaffuz becerilerini geliştirerek (Usta & Gündoğdu, 2018), başlangıç seviyesinden hedef seviyeye ulaşmalarında bir köprü görevi görmektedir (Krashen, 2004). Dil öğrenen bireylerin hedef dilde okuma becerilerinin gelişmesi, yalnızca dil gelişimini desteklemekle kalmayıp, aynı zamanda akademik anlamda daha yetkin okur yazarlar olmalarını kolaylaştırmaktadır (Krashen, 2004). Bununla birlikte,

bilişsel anlamda da gerektirdiği kompleks zihinsel süreçlerden dolayı daha stratejik okurlar haline gelerek, metinleri anlama ve yorumlama becerilerinin gelişmesini sağlamaktadır (Goodman, 1967).

Okuma becerilerine dair yukarıda bahsedilen bu faydalar, ancak gerekli motivasyon koşulları sağlandığında gözlemlenebilmektedir. İtici güç görevi gören motivasyon olmaksızın, dil öğrenen bireylerin okuma aktiviteleriyle meşgul olmaları oldukça güç, hatta neredeyse imkansızdır. Öyle ki, bilişsel anlamda üstün kabul edilebilecek öğrenciler bile okuma aktivitelerine çok fazla zaman ayırmayı tercih etmeyebilirler (Wigfield vd., 2004) ve yetkin okurlar olamayabilirler (Cambria & Guthrie, 2010). Gardner (1985), yabancı dil öğrenimi bağlamında, motivasyonu çaba, istek ve yapılan aktiviteden alınan hazzı belirleyen bir enerji merkezi olarak tanımlamaktadır. Ancak motivasyon içsel faktörler tarafından belirlenebileceği gibi, dışsal faktörler tarafından da belirlenebilmektedir (Deci & Ryan 1985; Dörnyei, 1994). Vallerand (1997) içsel motivasyonu, öğrenme, başarıma ve deneyimleme arzusu olarak üç alt kategoriyle ifade etmektedir. Dışsal motivasyonda ise bu regülasyonun sağlanması için dışarıdan gelebilecek ödüllere ihtiyaç vardır (Dörnyei et al., 2014). Bir başka deyişle, içsel motivasyonda direkt olarak dil öğrenme sürecinde gerçekleştirilen aktivitelerin etkilerine ve sonuçlarına bir değer atfedilirken (Ryan & Deci, 2000a), dışsal motivasyonda daha iyi bir kariyer, övgü alma ve cezadan kaçınma gibi sonuçlar ön plana çıkmaktadır (Savran Çelik & Aydın, 2021). Bu ayrıma ek olarak, yabancı dil öğreniminde

motivasyonun belirli alanlara özgü olarak farklı gelişim gösterebilmesi, spesifik olarak okumaya yönelik motivasyonun da tanımlanmasını ve ne gibi faktörlerin etkisi altında olduğunun araştırılmasını gerekli kılmaktadır. Wei (2023) yabancı dilde okuma motivasyonunu bireylerin hedef dilde okuma faaliyetlerine katılmasını sağlayan itici güç olarak tanımlamaktadır. Mori'ye göre (2002) yabancı dilde okuma motivasyonu çalışmalarında genellikle Öz Belirleme Teorisi ve Beklenti-Değer Teorisi yaklaşımları ön plana çıkmaktadır. Öz Belirleme Teorisi'ne göre uzun vadeli kazanımlar elde etmek için içsel motivasyon bir ön koşul olsa da, Van Lier (1996: 112) dil öğrenme gibi karmaşık bir etkinlikte öğrenmenin başlatılması ve sürdürülmesi için içsel ve dışsal motivasyon türlerinin koordinasyonlu bir şekilde rol aldığını vurgulamaktadır. Ayrıca, Beklenti-Değer Teorisi'ni ikinci dilde okuma motivasyonu bağlamında yorumlayan Day ve Bamford (1998), öğrenme sürecindeki bireylerin okumaya yönelik motivasyonlarının şu dört kavrama bağlı olduğunu düşünmektedir: materyallere yönelik beklentiler, okuma kabiliyetlerine yönelik beklentiler, hedef dilde okumaya yönelik tutumlar ve sosyo-kültürel etkiler.

Öngörülebileceği gibi, motivasyon eksikliği yabancı dil olarak İngilizce öğrenen bireylerin okuma becerilerinin gelişmesinde bir engel teşkil edebilmektedir. Okuma motivasyonunun döngüsel yapısından dolayı, okumaya dair olumlu başlangıçlar sonraki tecrübeleri olumlu etkileyerek kazanımları ve olumlu tutumları artırabileceği gibi, motivasyon eksikliği

yaşayan öğrenciler okuma aktivitelerine ket vuran bariyeri kaldıramayabilir ve motivasyonlarını artıramayabilirler (Day & Bamford, 1998). Okuma motivasyonunun düşük olması Türkiye bağlamında da İngilizce öğrenen bireyler için problem teşkil etmektedir. İngilizce öğrenen Türk öğrenciler her ne kadar İngilizce’de okuma faaliyetlerinin başarıları için önemli olduğunu kabul etseler de, bu alanda öz yeterlikleri düşük olabilmektedir. Ayrıca okumaya karşı negatif olmasa bile nötr bir tutum geliştirdiklerinden dolayı okuma faaliyetlerinden keyif alamayabilirler (Şentürk, 2015).

Okuma motivasyonunun düşük olmasına, yeterlilik düzeyinin (Chen, 2019), ve dil öğrenme sürecine dair özgüvenin yetersiz olması gibi içsel faktörler (Cambria & Guthrie, 2010; Fatemi & Vahidnia, 2013; Ghafournia & Farhadian, 2018), ve öğretmenin yetkinliği, öğretim tarzı gibi dışsal faktörler sebep olabilmektedir (Kikuchi & Sakai, 2009). Ayrıca, ilgili okuma materyallerin geliştirilmesi de okuma motivasyonu için çok belirleyici bir etkiye sahiptir. Okuma materyallerinin özellikle içsel anlamda motive edici etki oluşturabilmesi için öğrencilerde ilgi uyandıracak ve seviye olarak onları ideal seviyede zorlayacak şekilde hazırlanması gerekmektedir (Pintrich & Schunk, 2002, as cited in Dörnyei & Ushioda, 2011). Ek olarak, otantik okuma materyalleri, dilin doğal yapısını yansıtarak, öğrencilerin dil ile olan bağını ‘gerçek’ kılarak okuma motivasyonlarını artırmaktadır (Dörnyei & Ushioda, 2011). Ancak, öğretmenler bu anlamda gerekli uzmanlığa ve teknik stratejilere halihazırda sahip olmayabilecekleri (Hutchinson & Waters, 1987;

Gilmore, 2012), ve gerekli yetkinliğe sahip olsalar bile zaman ayırmakta zorlanabilecekleri için (McDonough et al., 2013) uygun materyallerin geliştirilmesi zorlu bir süreç olarak karşımıza çıkmaktadır.

Günümüz yapay zeka (YZ) araçları, yukarıda yabancı dilde okuma ve okuma motivasyonu ile ilgili bahsedilen problemlerin bir çoğuna yönelik çözüm sağlayabilecek potansiyele sahiptir. Özellikle, materyal geliştirme alanında YZ araçlarının entegrasyonu birçok fayda sağlayabilmektedir. Örneğin, bu araçların seviyeye uygun metinler ve okuduğunu anlamaya yönelik sorular geliştirebilme kapasitesi, metinleri basitleştirme, yeniden ifade etme, ve geri dönütlerle yeniden şekillendirme gibi özellikleri (Aljanabi et al., 2023; Koraishi, 2023; Young & Shishido, 2023a), öğrencilerin seviyesi uygun olmayan metinlerden dolayı yaşayabileceği motivasyon problemlerinin önüne geçebilir. Aynı zamanda, otantik dili yansıtan ve konu anlamında ilgi çekici materyaller oluşturarak, öğrencilerin motivasyonunu artırabilir ve var olan motivasyonlarını koruyabilir.

Bilgisayar faaliyetlerini, insan beynine benzeyen bir sistemle çalışan bilgisayarlı araçların faaliyetleriyle birleştiren bir bilgisayar bilimi teknolojisi olarak tanımlanan yapay zeka (Baker et al. 2019), hayatımızın her alanına dahil olduğu gibi, eğitim faaliyetlerinde de etkisi son zamanlarda dikkat çekici şekilde artmıştır (Hwang et al., 2020). Öğrenme ve öğretme süreçlerine sağlayabileceği katkılardan dolayı (Zhu & Ren, 2022), YZ araçlarının etkileri dil öğrenimi ve öğretimi bağlamında da araştırılmaya başlanmıştır. Jiang

(2022), İngilizce öğrenimi alanında en çok kullanılan YZ teknolojilerini altı başlıkta toplamıştır. Bunlar; Otomatik Değerlendirme Sistemleri, Çeviri Araçları, Akıllı Özel Ders Sistemleri, Sohbet Robotları, Akıllı Sanal Ortamlar ve Duygusal Hesaplama Sistemleri'dir. Yakın zamanda yapılan birçok çalışma, her ne kadar ön çalışma niteliğinde olsalar da, YZ teknolojilerinin hem genel dil öğrenme motivasyonu üzerinde (Moybeka et al., 2023; Wei 2023), hem de okuma motivasyonu üzerinde (Ali et al., 2023) olumlu etkileri olduğunu göstermektedir. YZ araçlarının direkt olarak materyal geliştirme aracı olarak okuma motivasyonuna olan etkilerini araştıran çalışmalar ise oldukça kısıtlı olmasına rağmen, hem içsel hem de dışsal okuma motivasyonu üzerinde olumlu sonuçlar gözlemlendiğinden dolayı son derece umut vaat edicidir (Aydın Yıldız, 2023; Lee et al. 2023).

Bu çalışma, materyal geliştirme aracı olarak YZ araçlarının (özellikle ChatGPT sohbet robotunun) İngilizce öğrenen bireylerin okuma motivasyonu üzerine etkilerini araştırmayı amaçlamaktadır. Bununla birlikte, ders kitaplarından seçilen geleneksel şekilde hazırlanmış materyallerin okuma motivasyonu üzerine etkilerinin de araştırılması amaçlanmakta ve bu sayede bir karşılaştırma yapılması hedeflenmektedir. Yarı deneysel olarak dizayn edilmiş olan bu çalışma rastgele atanan 15'er kişilik kontrol ve deney grubu ile toplamda 30 katılımcı ile yürütülmüştür. Çalışmada ön test ve son test ölçüm aracı olarak, Komiyama (2013) tarafından geliştirilen ve son hali 44 Likert-tipi maddeden oluşan İngilizce'de

Okuma Motivasyonu Ölçeği kullanılmıştır. Aynı zamanda yaş, cinsiyet, seviye sınıfı ve iletişim bilgilerine ilişkin bir ön anket gerçekleştirilmiştir. Yapılan ön test sonrasında beş haftalık bir uygulama programı yürütülmüş olup, katılımcılar her hafta 45 dk'lık periyotlarda bir okuma dersine katılmışlardır. Bu süreçte kontrol grubu iki farklı kitaptan seçilmiş okuma materyalleri kullanırken, deney grubu ChatGPT tarafından geliştirilen ve format olarak diğer grubun materyalleriyle standart hale getirilen materyalleri kullanmıştır. Katılımcılara kullandıkları materyalin kaynağına dair bilgi verilmemiştir. Bu çalışma sonunda, katılımcılar motivasyonlarındaki olası değişikliklerin gözlemlenmesi için son teste tabi tutulmuştur. Elde edilen veri SPSS yazılımı ile analiz edilmiştir. Veri analizi sonucunda elde edilen bulgular, araştırmanın başında kontrol grubunun deney grubuna göre çok daha yüksek bir okuma motivasyonuna sahip olduğunu göstermiştir. Ancak ilk etapta okuma motivasyonu göreceli olarak düşük olan deney grubunda, yapılan çalışmalar sonrasında istatistiksel anlamda önemli bir motivasyon artışı gözlemlenmiştir. Bu artış, motivasyonun tüm boyutlarında, yani hem içsel hem de dışsal motivasyon formlarında gerçekleşmiş olmakla beraber, istatistiksel anlamda yalnızca *dışsal sınav uyumu* alanında önemli bir artış olmuştur. Bu da, YZ tarafından geliştirilen materyallerin yalnızca okuma motivasyonu geliştirmekle kalmayıp, aynı zamanda sınavların gerekliliklerine yönelik olarak öğrencileri destekleyerek, akademik performanslarına katkıda bulunabileceğini göstermiştir. Bunun yanı sıra, kontrol grubunun motivasyonunda artış

gözlemlenmemiş, hatta çok küçük bir düşüş gözlemlenmiştir. Bu düşüş genel ortalama anlamında istatistiksel açıdan önemli olmasa da, ölçeğin alt boyutlarına bakıldığında *dışsal sınav uyumu* için önemli bir düşüş vardır. Her iki grupta da önemli değişimlerin bu boyutta gerçekleşmesi, dışsal motivasyon formlarının değişime daha yatkın olduğunu hatırlatmaktadır. İki grubun ön ve son testleri karşılaştırıldığında, ön testleri arasında istatistiksel olarak anlamlı bir farklılık saptanmıştır. Ancak son test sonuçlarında bu farklılık kaybolmuştur. Sonuçların geneline bakıldığında, YZ materyallerinin okuma motivasyonu üzerinde olumlu etkileri olduğu görülmüştür. YZ araçlarının bu anlamdaki potansiyeli özellikle öğretmenler için pratiğe yönelik, önemli faydalar sağlayabilir. İş yükünün fazlalığı, kısıtlı zaman, ideal zorlukta, ilgi çekici ve otantik metinlere ulaşmanın zorluğu gibi durumlar düşünüldüğünde, ChatGPT gibi YZ araçları yalnızca birkaç komut ile saniyeler içerisinde, öğrencilerin ihtiyaçlarına cevap verebilecek materyaller oluşturabilmesi açısından oldukça büyük avantaja sahiptir. Dolayısıyla, öğretmenler bu araçları yetkin bir şekilde kullanabilmek ve öğrencilerini de bu araçlardan maksimum fayda kazanabilecekleri şekilde yönlendirebilmek için, kendilerini bu alanda devamlı olarak güncel tutmalılardır. Bunun yanı sıra, öğretmenler, bu araçların öğretim sürecine dengeli bir şekilde entegre edildiğinden emin olmalı, monotonlaşan uygulamaların uzun vadede öğrencilerin öğrenim sürecine ve motivasyonlarına olumsuz etki edebileceğini de unutmamalıdır.

Anahtar Kelimeler: Yabancı dil olarak İngilizce öğrenimi, İngilizce okuma motivasyonu, teknoloji, yapay zeka, materyal geliştirme aracı olarak yapay zeka kullanımı



ABSTRACT

The Impact of the Use of Artificial Intelligence-Generated Materials on Reading Motivation among EFL Learners

Master's Thesis, Department of Foreign Language Education

Supervisor: Prof. Dr. Selami Aydın

June 2024

Reading motivation plays a critical role in the process of learning English as a foreign language (EFL). Therefore, insufficient reading motivation leads to several problems concerning the learners' reading development. One of the strategies to maintain and boost learners' motivation is the integration of artificial intelligence (AI) tools into the language teaching practices, considering the many opportunities they may provide. One way to achieve this is to utilize their function of materials development. However, the research investigating the impact of such tools on learners' reading motivation is quite limited, both on a global scale and in the context of Turkey. Therefore, this study attempts to reveal the potential benefits of AI as a tool for materials development and its impact on reading motivation. In addition, it also attempts to investigate Turkish EFL learners' reading motivation, and to compare the impact of traditional materials with AI generated ones. This quasi-experimental study was conducted with 30 participants, who were randomly assigned to control and experimental groups. As the data collection tool, the Motivation for Reading in English

(MREQ) questionnaire, developed by Komiyama (2013) was used. After the pre-test administration to explore the participants' initial motivation, a five-week treatment was implemented. During this process, the control group used traditional textbook materials, while the experimental group used materials generated by ChatGPT. After the post-test administration, the data was analyzed on SPSS. The overall findings revealed that AI-generated materials significantly enhanced learners' reading motivation. However, traditional textbook materials did not lead to any improvement. As a result, the findings suggest that the teachers should find an effective way to integrate AI tools into their teaching practices to support their learners, possibly to maintain and increase their motivation.

Keywords: Foreign language education, motivation for reading in English, technology, artificial intelligence, artificial intelligence in material development

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LIST OF ABBREVIATIONS

AI : Artificial Intelligence

AIED : Artificial Intelligence in Education

AT : Activity Theory

CEFR : Common European Framework of Reference for Languages

EFL : English as a Foreign Language

FL : Foreign Language

IEEE : Institute of Electrical and Electronics Engineers

LL : Language Learning

MREQ: Motivation for Reading in English Questionnaire

SLA : Second Language Acquisition

SPSS : Statistical Package for the Social Sciences

STD : Self-Determination Theory

1. INTRODUCTION

The primary goal of this section is to present the rationale behind this study. For this purpose, first, the background of the study is explained. The importance of EFL reading, EFL reading motivation, materials development, and the role of AI in the new educational era are discussed, respectively, and a very popular AI-based chatbot, ChatGPT, is introduced. Second, problems regarding EFL reading and EFL reading motivation are stated and discussed. Third, the aims and the significance of the study are expressed.

1.1. Background of the Study

Reading plays a central role in the process of foreign language learning, as it provides learners with many different benefits (Aydın, 2011; Aydın, 2013; Day & Bamford, 1998; Yakut & Aydın, 2017). First of all, reading in EFL learning allows learners to *bridge the gap* from the start point to the target level (Krashen, 2004) by helping them develop their vocabulary repertoire, build on their structural language knowledge, and improve their spelling and pronunciation (Usta & Gündoğdu, 2018) — even in silent reading (Alexander & Nygaard, 2008; Gross et al., 2013, as cited in Taguchi et al., 2016). Second, reading makes it possible for learners to become good readers and good writers, as it helps them comprehend challenging academic texts more easily and produce prose acceptable in academic contexts (Krashen, 2004). In addition, the more they read, the more willing they become to read, which in turn helps them acquire advanced reading skills and comprehend better (Taguchi et al., 2016). Third, reading is of great importance for language learners as it requires a complex interactive process for comprehension, and several strategies need to be

developed to become efficient readers (Grabe, 1991). It is a *psycholinguistic guessing game* in which thought and language must interact with each other (Goodman, 1967). Reading helps learners go beyond decoding and receiving information from printed materials and incorporate a selective process where they utilize several strategies such as sampling the text, producing hypotheses, and confirming or rejecting them by building upon their background knowledge (Goodman, 1967). Fourth, reading could open doors to numerous different contexts, and this could allow learners to interact socially and culturally by getting exposed to different genres and different modes of discourse (Usta & Gündoğdu, 2018), which helps learners become efficient users of a second or foreign language. However, all these potential benefits of reading can be provided as long as there is a driving force that makes the learners engaged in reading, which simply refers to motivation.

As noted above, motivation plays a critical role in the EFL reading process since without the will to read, even if learners have strong cognitive skills, they may not prefer to spend much time on reading (Wigfield et al., 2004) and cannot be good readers (Cambria & Guthrie, 2010). Moreover, being the initiator of language learning and the *driving force* that allows for sustaining it (Dörnyei, 2005), motivation is central to an effective EFL reading process when considered from a narrower perspective (Pirih, 2015). Additionally, reading motivation requires special attention firstly because it has been conceptualized as distinct from the general notion of motivation, relying on the belief that learners' motivation could be domain-specific (Wigfield, 1997; Wigfield et al., 2004). In other words, although learners could be motivated to listen and speak in the EFL context, this may not be the case for reading (Pirih, 2015). Second, EFL reading motivation is of great importance

because as McDonough et al. (2013) state, written materials provide primary contact with the target language, especially for learners who can rarely be exposed to English outside the classroom. The opportunity for contacting and getting exposed to English language is enhanced by intrinsic motivation (Wang & Guthrie, 2004) and extrinsic motivation (Tercanlioglu, 2001) as they both strongly correlate with the learners' reading amount. Third, EFL reading motivation is critically important as it substantially impacts reading comprehension and facilitates reading in different proficiency levels (Dörnyei, 2006; Grabe, 2009). Thus, higher reading motivation allows learners to improve their reading comprehension and advance more effectively compared to learners with low reading motivation (Ahmadi, 2017). The fourth reason that adds to the significance of EFL reading motivation is its multidimensional nature and unique components to foreign learning (Day & Bamford, 1998). Learners' decision to read in the target language is determined by the four major components of materials, reading ability in the target language, attitudes towards reading, and sociocultural environment. Framed within the *expectancy-value* reading motivation model, these components are considered as the building blocks of an effective language reading — materials and attitudes suggested to be stronger determiners than the rest (Day & Bamford, 1998). Although each category needs further analysis to understand the complexity of EFL reading motivation, it seems essential at this stage to focus on the materials component.

As stated above, the selection and development of materials play a crucial role in foreign language reading motivation (Day & Bamford, 1998). First of all, one of the conditions for any reading materials to be motivating is being interesting or not for the reader (Day & Bamford, 1998; 2002). This sounds commonsensical considering

that readers seem to attach more importance to the text being interesting or not than what language it is written in (Pirih, 2015) and their likelihood of getting engaged in the texts is increased if they find them interesting enough (Eskey, 2005). When feeling involved in the texts, students may not consider reading as a boring job, give it a higher priority (McDonough et al., 2013), and they can even become dedicated readers (Cambria & Guthrie, 2010). The second property of motivating reading materials is related to whether it is understandable considering the learners' competence in the target language (Day & Bamford, 1998; 2002) as learners might become frustrated and demotivated when they encounter level-inappropriate texts and overwhelmed by the complex language (Kikuchi, 2013), worsening the situation for the already struggling readers (Cambria & Guthrie, 2010). Therefore, materials should be selected considering the learners' level to provide a manageable reading experience (Al-Nafisah & Al-Shorman, 2011) so that learners can maximize the benefits of reading and sustain their motivation to read (Young & Shishido, 2023a). Finally, in order for reading materials to be motivating for learners, a variety of reading should be accessible to learners, on a wide range of topics (Day & Bamford, 2002), which allows learners to find ones that are appropriate for their level, interest, and particular needs (Pirih, 2015). The opportunities to select materials provide not only an inspiration for learners to read more (Pachtman & Wilson, 2006), but also a flexible reading approach, encouraging them to read for different purposes in different ways (Day & Bamford, 2002). Considering all this, it becomes essential for EFL teachers to be always in search of better ways to provide their learners with well-designed motivating reading materials to facilitate their development because as Eskey (2005: 574) argues, "The reading teacher's job is not so much to teach a

specific skill or content as to get students reading and to keep them reading. — that is, to find a way to motivate them to read and facilitate their reading.” To this end, there is a need for today’s teachers and researchers to get a deep understanding of the potential benefits of recent educational technologies, especially AI-based ones, to improve language learners’ motivation for foreign language reading.

The booming of AI-based tools captivates great attention as they have unique properties that previous educational technologies did not have (Ofosu-Ampong et al., 2023). To begin with, one of such properties is their capability of generating texts to be utilized as reading materials. Thanks to the natural language processing capabilities of AI-based technologies to create diverse, authentic materials such as news articles, reading passages, and dialogues that are coherent and understandable (Baskara & Mukarto, 2023), they can enhance learners’ reading motivation (Gilmore, 2007; Marzban & Davaji, 2015; Namaziandost et al., 2022) because actual messages are conveyed through authentic texts (Namaziandost et al., 2022). Besides, authentic texts might also contribute to the learners’ comprehension skills and overall language proficiency (Baskara & Mukarto, 2023). In addition, at the user’s quick request, they can generate customized materials relevant to the learners’ interests (Koraishi, 2023). This may allow the teachers to support their learners by using engaging materials tailored to their learners’ special needs, hence keeping them motivated (Young & Shishido, 2023a). Another useful feature of certain AI-based tools that could enhance reading motivation is their capability to adjust the generated texts for different proficiency levels (Aljanabi et al., 2023) in line with the designated CEFR criterion (Young & Shishido, 2023b). Similarly, they can also adapt any text to a different proficiency level so that it becomes suitable for the needs of certain groups of

learners (Koraishi, 2023) and helps them maintain their motivation. Likewise, certain AI tools are also capable of summarizing and paraphrasing texts. The feature of text summarization could be of great help since long texts could be demotivating for learners, taking much time and effort to read. The summarized texts could be more accessible and manageable to the readers, helping them engage more with the materials and become more motivated to read (Young & Shishido, 2023a). On the other hand, by reading paraphrased versions of texts, readers can understand the meaning more easily improving their vocabulary (Young & Shishido, 2023a). Furthermore, AI tools can be used to design comprehension and vocabulary questions targeting certain parts of the generated texts, allowing for a broader reading experience (Koraishi, 2023). Moreover, utilizing AI-based tools in the context of EFL reading might also have several advantages for teachers. First, effective use of such technology might alleviate the burden of designing customized and differentiated materials, allowing for more capacity to concentrate on other domains of language teaching (Koraishi, 2023). Second, it might give them a chance to be more autonomous regarding the materials used, which is critically important for the efficiency of their teaching because, as Stenhouse (1975, as cited in Albedaiwi, 2011) states, teachers are the experts when it comes to maximizing learning in the classroom. Being able to produce customized reading materials might also give them the freedom to go beyond the textbooks, which are claimed (Al-Sadan, 2000; Albedaiwi, 2011) not to address the differences and individual needs among learners. After all, it is the teachers, not the textbook authors, who can understand the individual needs of the learners (Albedaiwi, 2011). Keeping all these potential

benefits in mind, it becomes essential at this stage to focus on one AI-based tool, ChatGPT, for practicality, and specify its potential for EFL reading motivation.

The above-mentioned potential benefits of AI in EFL reading could be realized by ChatGPT, the game-changing chatbot created by OpenAI, as it has great potential to contribute to the design of motivating reading materials. First, as a revolutionary tool that can produce natural content similar to human language (King, 2023; MacNeil et al., 2022), ChatGPT is a precious tool that can be used as a source of EFL reading materials (Young & Shishido, 2023a) since it might increase the chances of learners to be exposed to authentic and coherent texts. Given the potential power of text authenticity discussed above (Gilmore, 2007; Marzban & Davaji, 2015; Namaziandost et al., 2022), ChatGPT-generated reading materials could be advantageous. Second, ChatGPT can generate customized texts that are relevant to the learners' interests (Koraishi, 2023). Providing the learners with appealing texts that are adjusted to their needs and interests might foster their reading motivation (Young & Shishido, 2023a), which is in line with the idea that the materials being interesting or not is a strong determiner of reading motivation (Day & Bamford, 1998; 2002; Eskey, 2005; Pirih, 2015). Utilizing ChatGPT to create interesting materials might be a valuable opportunity because, as Dörnyei states (2020, as cited in Ali et al., 2023), motivation is directly connected with learner engagement, and the goal of any instructional design, no matter it is traditional or online learning, must be sustaining the learners' interest. Third, ChatGPT can produce various text forms and more importantly, can improve itself thanks to the input it receives from the users (Hong, 2023). This means that the teachers can generate various text forms and modify them with their feedback and alternative requests to better suit their learners'

needs and interests. What is more, ChatGPT can adjust these materials according to different difficulty levels (Aljanabi et al., 2023), and some findings already confirm the content it generates meets the CEFR criterion based on different readability metrics (Young & Shishido, 2023b). Fourth, benefiting from ChatGPT as a learning tool might increase the learners' motivation to read in the target language simply because technology integration could increase the learners' engagement, involvement and motivation in language learning (Wang & Guthrie, 2004). Finally, some findings already indicate that EFL learners consider ChatGPT as a motivational tool, particularly for their reading and writing skills (Ali et al., 2023). Considering all these, the use of AI-based educational tools and, specifically, ChatGPT might be a giant step in how we approach the EFL reading, the motivation for it, and the development of the materials, without which none is possible.

In conclusion, it is undeniable that effective reading is one of the core components of an effective foreign language learning process, acknowledged by researchers and practitioners (Kung, 2019). In addition to the learners' linguistic development, effective reading provides language learners with opportunities to develop metacognitive skills and a more advanced reading comprehension (Grabe, 2009). The development of reading skills also has direct contact with learners' academic success as it could help them function well in academic contexts (Day & Bamford, 1998; Krashen, 2004) and maintain their job competence in the future (Kirsch & Guthrie, 1984). On the other hand, motivation is one of the most important factors influencing the efficiency of the overall language learning process (Oroujlou & Vahedi, 2011), and hence determining foreign language reading development, too. Learners' will to read is so essential that if they lack it, they may not spend time

reading, even those with the strongest cognitive skills (Wigfield et al., 2004), and cannot become good readers (Cambria & Guthrie, 2010). Therefore, foreign language teachers need to apply proper strategies to foster their learners' motivation for a successful language learning experience with the help of relevant research (Oroujlou & Vahedi, 2011). Given the potential benefits of AI-powered ChatGPT for language learning and specifically for reading, it could provide teachers with such opportunities. The level-appropriate, natural, and coherent materials it can generate could facilitate the process of EFL reading development fostering the learners' motivation and easing the EFL teachers' job regarding the design of customized and level-appropriate texts. However, at this point, a deeper investigation is needed to gain a better insight into ChatGPT's role in language learning motivation, specifically in foreign language reading motivation.

1.2. Statement of the Problem

Reading is considered one of the most challenging skills a language learner must master. First of all, the lack of sufficient vocabulary constitutes a barrier to reading comprehension, hence the activity of reading itself, based on Grabe's (1991) idea that reading is comprehending. While this means, on the bright side, that vocabulary knowledge can boost the development of reading skills, which is acknowledged by both researchers and practitioners (Braze et al., 2016; Khan et al., 2020), the mastery of vocabulary to develop reading is a challenging task. Learners must know the meaning of the single-word forms and their other meanings depending on particular contexts (Goulden et al., 1990). Besides, as the difficulty of a text is mostly determined by the percentage of the known and unknown vocabulary in it, a language learner who does not have sufficient vocabulary to deal with a text ends up

with frustration (Schmitt & Schmitt, 2020). Second, especially in the early phases of language learning, EFL readers may have problems developing reading skills due to their lack of spelling skills (Ehri, 2014). To improve their reading efficiency and reading speed, they need expertise of correct spelling (Khan et al., 2020) and awareness of the sound and spelling system of the target language (Bryant & Goswami, 2016). Third, mastery of grammar is another important challenge influencing the development of foreign language reading. Grammatical knowledge is one of the two fundamental abilities the research has specifically focused on to discover the roots of reading comprehension, the other being vocabulary knowledge (Choi & Zhang, 2018). Although vocabulary and grammar knowledge are essential facilitators of complete comprehension, the lack of sufficient grammar knowledge might hinder reading comprehension relatively more (Nergis, 2013; Kim & Cho, 2013). Therefore, learners struggling with structural language knowledge are probably struggling with reading and the tasks around it, too. Another problematic area of reading development could relate to the learners' lack of strategy use as being strategic is a requirement to become a fluent reader, no matter if it is the first language or a foreign language. However, for foreign language readers, strategy use might have a more critical effect because, as Grabe (2009: 292) claims, being strategic helps readers compensate for their incapacabilities regarding the core components of being a fluent reader, which are "accuracy, automaticity, and pace and prosody". In addition, a higher level of reading comprehension can only be attained through using strategies (Kassem & Alqahtani, 2023; Usta & Gündoğdu, 2018) since comprehending a text is beyond absorbing what the author means (Green, 2007). Thus, the variance among EFL learners regarding strategy use can be

another reason for the existence of good and struggling readers (Usta & Gündoğdu, 2018). A further problem EFL readers might experience is the negative transfer from the L1 reading skills to foreign language reading. It is clear that first and foreign languages are in contact with each other during a reading event (Upton & Lee-Thompson, 2001); and to some extent, L1 can compensate for some of the learners' missing skills and unfamiliar vocabulary when they do not understand a sentence. However, the learners who are already not very strong readers in their L1 miss this opportunity (Usta & Gündoğdu, 2018). In addition to this, the differences in the language processing of L1 and English might result in difficulties for EFL readers, especially in the initial phases of the learning process (Grabe, 1991). To clarify, false cognates, variations in word order, noun clauses, and relative clause structures can create difficulties for novice readers (Grabe, 1991). The structural differences in L1 and English with regard to syntax and discourse organization can also create comprehension difficulties for learners because not every culture has the same logic and approach to organizing the information (Carrell, 1984). Additionally, a further problem for the development of EFL reading is related to the social background of the learners. If the learners have had limited opportunities to use, interpret, or value reading materials in their L1, they could also have limited interaction with EFL reading materials (Grabe, 1991). Likewise, the quality of the first exposure to reading is of critical importance for the future experiences in reading, which can be well expressed by Tracey and Morrow (2002: 220), as cited in Green (2007): "Children who are ultimately [the] most likely to be successful comprehenders of reading are those who acquire the strongest literacy foundations during the early childhood years". The disabilities regarding reading are claimed to be the most common

learning disability (Lyon, 1995, as cited in Yılmaz, 2012). That being said, it is no surprise that many Turkish EFL learners also have problems with reading skills (Yılmaz, 2012). Besides, although the mainstream approach to English instruction is reading-based in Turkish universities, the reading proficiency of many students is far from satisfactory, leaving them with a sense of low reading ability (Yılmaz, 2012). Finally, considering the challenges of EFL reading discussed so far, it goes without saying that the lack of sufficient motivation inevitably poses a barrier to its accomplishment (Jahan Khan et al., 2017), as motivation is equally important as the set of skills and strategies needed to accomplish reading in English.

As noted earlier, the lack of motivation poses a significant problem for EFL reading development, and several factors could negatively influence EFL learners' reading motivation. First, reading motivation can be negatively influenced by internal factors such as insufficient proficiency (Chen, 2019) and low self-confidence (Ghafournia & Farhadian, 2018). Language learners with low proficiency seem less motivated and more anxious to read in the target language, which poses a risk of demotivation in reading for low achievers (Chen, 2019). In addition, low self-confidence is reported to be the most significant predictor of demotivation in EFL reading (Ghafournia & Farhadian, 2018), as well as other domains of language learning (Fatemi & Vahidnia, 2013). Without confidence in oneself, no reader can be motivated to read more (Cambria & Guthrie, 2010), which means that language learners who already feel incapable of their overall language skills can hardly find the urge to read. Furthermore, motivation to read in a foreign language has a cyclical pattern; that is, as Day & Bamford (1998: 30) explains, "... positive beginning experiences feed back into subsequent extensive reading experiences and

assignments, resulting in greater gains in reading ability and positive attitudes, and increases in motivation and enjoyment”. Simply put, achievements in reading are expected to lead to achievements in motivation as well (Cambria & Guthrie, 2010). This means that struggling EFL readers who lack sufficient motivation to read have little chance to overcome the barrier to read more and hence cannot increase their motivation. Second, reading motivation can be negatively influenced by external factors such as textbooks and teachers’ competence and styles as they are reported to influence the overall language learning process (Kikuchi & Sakai, 2009). The influence of such factors on internal conditions may result in changes in the quality and quantity of learners’ motivation (Ghafournia & Farhadian, 2018) and may even lead to demotivation (Ghaith, 2019). Among these factors, the role of teachers is of preliminary importance since their actions in a reading class may create a giant difference in the learners’ reading motivation (Skinner & Belmont, 1993). This is in line with the fact that low achieving EFL readers seem to perceive teachers as one of the strongest demotivating factors (Ghafournia & Farhadian, 2018). Furthermore, textbooks can also be a part of the problem either by not motivating the learners to read or reducing their initial motivation. The texts and the tasks in the textbooks could risk the motivation of learners in different ways, either by being too challenging for low-performing learners, or too easy for high-performing ones, as suggested by Tuan (2012). Therefore, it is highly necessary for teachers to adapt the textbooks and provide supplementary materials to meet the unique needs of their learners (Albedaiwi, 2011) so that they can increase and maintain their learners’ motivation.

Having a critical role in reading motivation, developing related materials is also a problematic area. First, teachers may not be given autonomy in the choice of materials, and they may only be directed to use particular materials by a director or the ministry (McDonough et al., 2013). However, developing materials is very time-consuming, even if they can choose or write their materials (McDonough et al., 2013). Second, materials design requires the expertise and guidance of different disciplines (Gilmore, 2012), which teachers may not necessarily have. The idea that they can teach does not necessarily mean that they can write materials as well, since they need special training in materials development techniques (Hutchinson & Waters, 1987). Third, the materials should stimulate interest, and offer an optimal level of challenge to boost intrinsic motivation (Pintrich & Schunk, 2002, as cited in Dörnyei & Ushioda, 2011). Next, although authentic language materials are highly needed to keep learners' contact 'real' and increase their motivation (Dörnyei & Ushioda, 2011), it is not easy to find authentic but level-appropriate texts, especially for the lower proficiency levels. Finally, even though the materials should be relevant to the lives of the learners and give them a purpose to learn (Dörnyei & Ushioda, 2011), particular materials may not be relevant for each learner in a group as their realities and expectations might differ greatly. Therefore, there might also be a need to consider these individual differences while designing reading materials.

To conclude, the integration of AI into teaching reading in EFL may provide solutions to many of the problems stated so far. First, considering the AI's capabilities of developing level-appropriate texts and comprehension questions, simplifying, paraphrasing, and adjusting the texts upon the user's request (Aljanabi et al., 2023; Koraishi, 2023; Young & Shishido, 2023a), AI-generated materials can

potentially alleviate the problems associated with language proficiency and level-appropriateness. Second, the opportunity to create authentic and engaging texts that could be customized according to the learners' interests might improve their reading motivation and prevent them from becoming demotivated. Last but not least, AI could support the process of materials development thanks to the level-appropriate and engaging texts, possibly on any topic, with only a quick request by the user.

To recap, EFL reading motivation and the development of motivating reading materials are areas with their challenges. These challenges are also experienced to a great extent in the Turkish context. EFL teachers in schools and institutions in Türkiye are usually handed certain textbooks to use in reading classes, and they are mostly not autonomous in their material choice. Although this cannot be the only reason why many Turkish EFL learners struggle with reading and have low motivation to read, it can be one of the most important reasons. An overreliance on textbooks and traditional materials could lead to a monotonous teaching style, which Ghaith (2019) indicates to demotivate learners and can potentially cause lower reading achievement. Another problem is that although Turkish EFL learners seem to regard reading in English as important for their academic success, they seem not to enjoy it much; they have a neutral attitude towards it; their self-efficacy is relatively low; and as a result, they may not exert much effort into reading (Şentürk, 2015). To this end, it becomes obvious that the potential benefits of AI previously discussed could be of great importance for Turkish EFL learners.

1.3. Aims of the Study

It is obvious that reading makes a huge contribution to language learning, and the lack of reading motivation poses a risk to the development of reading skills and the

language learning process. To overcome this potential problem, AI tools can be implemented into teaching EFL reading as such a practice can positively influence learner motivation. Based on this premise, this study has been designed to investigate, first, the level of EFL reading motivation among preparatory school students in the Turkish context. Second, it aims to examine the effects, if any, of the integration of traditional materials development on learners' reading motivation. The third goal, being central to the purpose of this study, is to reveal the potential effects of AI-generated materials regarding reading motivation. Finally, it aims to compare the effects of the two interventions and potentially reveal the difference between them.

1.4. Significance of the Study

This study can be considered as significant for both EFL practitioners and researchers for several reasons. First and foremost, it can contribute to the scope of research in relation to EFL reading motivation among Turkish students. To broaden the related research is highly necessary as many Turkish students have motivational problems even though they consider reading in English as an important task (Şentürk, 2015). Second, using AI-based tools as a materials generator is a brand-new technique, which is hardly ever mentioned even in AI-centered studies on language learning. Although there are recently published studies on how AI is perceived by learners and teachers regarding LL motivation (e.g., Ali et al., 2023), and although some studies reveal findings regarding how AI can influence the process of EFL writing and the motivation for it (e.g., Nazari et al., 2021; Nguyen, 2023; Yan, 2023) it is yet hard to find any studies focusing on specifically EFL reading motivation in relation to the implementation of AI. Apart from this, although

there are studies providing insight into the potential of certain AI tools such as ChatGPT regarding their use as a materials generator (Baskara & Mukarto, 2023; Koraishi, 2023; Young & Shishido, 2023a; Young & Shishido, 2023b), there are hardly any studies investigating the influence of such materials on learner motivation quantitatively, specifically for reading. Third, this study can help all the stakeholders gain awareness of AI's potential benefits for language learning when used for particular purposes. This is especially important for language teachers as understanding AI-tools' capabilities can allow them to maximize the benefits and mitigate potential problems related to their use (Koraishi, 2023). Finally, this study could be one of the pioneering studies in the Turkish EFL context on the use of AI tools that have recently gained popularity. Therefore, it holds the potential to inspire other researchers from both Türkiye and different EFL contexts to create a deeper understanding and awareness of AI integration into language teaching.

1.5. Research Questions

Considering the problems regarding EFL reading motivation and the potential of AI as a tool for materials development, the research questions aimed to be answered by this study are as follows:

1. What is the reading motivation level among Turkish EFL learners?
2. Does the integration of the development of traditional materials affect EFL reading motivation?
3. Does the integration of AI as a tool for materials development affect EFL reading motivation?
4. Is there a difference between the effects of AI-generated materials and traditional materials on EFL reading motivation?

2. RELATED LITERATURE

This section includes two parts. The first part aims to provide the theoretical framework that underlies EFL reading, reading motivation, and materials development. To this end, in this section, the related definitions, approaches, and theories will be introduced to create a solid base for this study. The second part is assigned to the empirical findings from the related literature.

2.1. Theoretical Framework

2.1.1. Reading

Reading in the context of this study can be defined, in its most general sense, as “dealing with language messages in written or printed form” (Urquhart & Weir, 1998: 14). Regardless of whether it takes place in the native or another language, processing these language messages requires linguistic knowledge (Urquhart & Weir, 1998). Although this knowledge is seen by some (e.g., Perfetti, 1985) as “the skill of transforming printed words into spoken words”, this is quite a limited understanding as reading aloud even with the perfect pronunciation may not necessarily yield comprehension (Urquhart & Weir, 1998). Therefore, it seems more viable to grasp reading with a broader sense, considering it as “... a language activity, involving at some time or another all the cognitive processes related to language performance” (Urquhart & Weir, 1998: 15). Thus, not only decoding but other cognitive processes such as relating the message with the background knowledge, memory, making inferences, and using strategies are all included in the reading activity, as well as language aspects such as lexicon and syntax (Urquhart & Weir, 1998). Parallel to this understanding, Koda (2005: 4) explains that

“Comprehension occurs when the reader extracts and integrates various information from the text and combines it with what is already known”. However, considering the various purposes for reading and the different processes that might be required, Grabe (2009) states that reading needs a more elaborate definition that captures the tenets of *fluent readers*, addressing what exactly they do when they read and what processes they utilize. He further defines reading as the complex combination of certain processes and adds that the good and complex definition of reading can only be given by addressing the following processes: First, reading is *rapid* as the information can be comprehended only if the connections and inferences are seen as vital for a very short time. Reading is also *efficient* in the sense that fluent readers smoothly coordinate automatic word recognition, syntactic parsing, inferencing, and relating the text with prior knowledge. Next, reading aims for *comprehending* although they cannot be equal terms. All the cognitive processes related to reading are used for this significant goal. Also, reading is *purposeful*, which means the reader can be more motivated to read in the existence of a purpose such as reaching information or entertainment. Besides, reading is an *interactive* activity because it creates an interaction between the reader and the author; readers incorporate both their background knowledge and textual information in the process, and various skills operate at the same time. In addition, reading is defined as a *strategic process*, meaning that the reader needs to put effort into using certain skills and processes such as selecting the important information, organizing and summarizing it, and monitoring their comprehension among several others. What is more, it is also a *flexible* activity in which readers adjust the strategies for efficient reading such as skimming, anticipation, and rapid reading rate, considering text structure and

aligning to the reading purpose. Additionally, the development of reading is *gradual*, and fluency requires sustained effort. Also, reading is a constantly *evaluative* process both for readers' monitoring of their reading and their emotional responses to the particular text or the topic, making reading a *learning* process with almost any text. Finally, reading is defined as a *linguistic* process as it is only possible by recognizing words and graphemic-phonemic connections; thus, readers' linguistic limits determine their comprehension (Grabe, 2009; Perfetti et al., 2005). Finally, it should also be noted that these enriched definitions of reading, arising from the multifaceted nature of the reading process, inevitably create further questions and debates in the literature, especially in the EFL contexts, regarding whether the EFL reading problems are related to reading itself or the language (Urquhart & Weir, 1998).

To better understand the nature of reading in the context of EFL literature, it is essential to provide an insight into the three well-known reading models listed by Silberstein (1987): the bottom-up, top-down, and interactive models. Referred to as 'metaphorical models' of reading by Grabe (2009: 88), these three models are used to address the various processes and concepts reading comprehension involves. According to the bottom-up models, reading is seen as mostly related to decoding the text from the smallest linguistic components to larger meaning units, making connections between phonemes and graphemes — in other words, sounds and symbols (Silberstein, 1987). According to these models, the traditional depiction of reading is a constant decoding of the letters, words and sentences in the text, simply translating the textual information with almost no connection to readers' prior knowledge (Grabe, 2009). The roots of this approach go back to the ideas of structural linguists such as Leonard Bloomfield (Dubin & Bycina, 1991). Popular

within the Audio-Lingual Method, the bottom-up reading models regard readings as a passive activity (Cahyono & Widiati, 2006). Therefore, this purely mechanical approach is not internalized in the current models of reading (Grabe, 2009). On the other hand, in top-down models of reading, proposed by Kenneth Goodman and Frank Smith (Dubin & Bycina, 1991), reading is regarded as a meaning reconstruction process. Therefore, comprehension of meaning units that are larger than single words and phrases is emphasized (Dubin & Bycina, 1991). As opposed to the passive decoder role of the readers as proposed by the bottom-up models, top-down models approach them as very active since they need to plan, decide, and coordinate various skills and strategies to ease the process of comprehension (Cahyono & Widiati, 2006). According to this model, readers are assumed to have certain expectations, which play a vital and dominant role when processing a text (Urquhart & Weir, 1998); accordingly, they sample sufficient information from the text to confirm their expectations by finding the most relevant parts (Grabe, 2009). Additionally, making inferences as well as the readers' background knowledge are highlighted as vital for reading in this model (Grabe, 2009). However, the readers' expectations about any text create confusion regarding what they could possibly learn from it. Therefore, not many reading researchers strongly support this model (Grabe, 2009). Moreover, Urquhart and Weir (1998) also stress the fact that the term 'top-down' is also a deceptive one as it is not likely for any reader to be able to begin dealing with the whole text, proceeding to smaller units of paragraphs, sentences, and letters, respectively. Thus, to solve this deception, it is suggested to be replaced by 'reader-driven' and 'bottom-up' is suggested to be replaced by 'text/data-driven'. However, despite the problematic aspects, the implementation of this model is

evident today in the teaching strategies that highlight the learners' active role in reading (Cahyono & Widiati, 2006). Previewing a text to get the overall idea, predicting the next thing the text could mention, and trying to guess the meaning of unknown words from the context are only some examples of such strategies (Cahyono & Widiati, 2006). Finally, the interactive models combine the useful elements from the previous two models, meaning they are used in a substantially interactive set of processes (Grabe, 2009). Textual data is synthesized thanks to the information 'provided simultaneously from several sources' (Stanovich, 1980). More specifically, not only is the role of previous knowledge and predictions acknowledged but also the importance of rapid processing of the words in the text is reaffirmed (Dubin & Bycina, 1991). Grabe (2009) provides an exemplary interactive model as follows; the strategies of word recognition and syntactic parsing must be rapid and automatic; the context and background knowledge must support these lower-level processes, and predictions and inferences contribute to the quality of word recognition strategies. Such an approach to reading has attracted much attention and received much support, and it has allowed for an almost endless variety of models as top-down and bottom-up models could be possibly combined with different emphasis on certain elements (Urquhart & Weir, 1998).

The Text Structure Theory, the Schema Theory, and the Metacognitive Theory (Cahyono & Widiati, 2006) are, according to Mealey and Nist (1989), possibly the most dominant theories embedded in reading instruction. First, *text structure theory*, mostly signifying the role of the text in comprehension (Cahyono & Widiati, 2006) posits that a text possesses a hierarchical structure, which resembles a tree and holds the more general information in the root and large branches, and more specific

details and subordinate ideas in the leaves and smaller branches (Meyer, 1975). The location of information within this structure influences the ease of retaining it, with general information positioned in the upper levels of the hierarchy being remembered more easily compared to the specific information positioned in the lower levels (Meyer, 1975). Support for this theory comes from Goodman (1967), who suggests that readers are likely to pay attention to general information while reading because understanding the main idea clearly facilitates the comprehension of subordinate concepts in the text. Second, the *schema theory*, signifying the importance of the reader's role in comprehension (Cahyono & Widiati, 2006), holds the view that the reader's background knowledge is of primary importance when constructing the meaning of the text (Anderson & Pearson, 1984). To be more specific, when readers attempt to comprehend the textual information, only the schema – the mental framework of knowledge on a certain topic – relevant to the input is chosen and activated, and comprehension is determined by this connection between the activated schema and the new information (Anderson & Pearson, 1984). Therefore, the reader's contribution to the process of comprehension is greater than the text itself (Carrell & Eisterhold, 1988). As the significance of background knowledge in facilitating EFL reading comprehension becomes evident, there have been attempts in both research and teaching to increase the activation of the learners' background knowledge in reading practices (Jung, 2009). Third, the *metacognitive theory*, highlighting the importance of the interaction between the reader and the text (Cahyono & Widiati, 2006), is essentially related to the learners' set of behaviors such as predicting, paraphrasing, questioning, rereading, among others (Carnine et al., 1990). Therefore, metacognitive theory focuses on the necessity of pre-reading,

while reading and post-reading practices to ease comprehension (Jung, 2009). In addition, this theory posits that metacognitive awareness is key to developing effective reading strategies, and effective readers know the best way to approach a text before they read it, while reading it, and after they read it (Wade & Reynolds, 1989).

2.1.2. Motivation

Day and Bamford (1998) simply define motivation as “what makes people do (or not do) something”. The origin of the word *motivation* is traced back to the Latin verb *movere*, which simply means ‘to move’ (Dörnyei & Ushioda, 2011). However, motivation research and theories are scattered around the questions of what moves a person to decide on particular actions, engage in them, exert effort, and maintain actions (Dörnyei & Ushioda, 2011). Therefore, motivation is an essentially complicated construct and has been approached and defined in many different ways by researchers in psychology and other social disciplines (Zareian & Jodaei, 2015). Thus, as it is not easy to define the abstract notion of motivation on its own, it might be a more useful idea to consider it along with the motivated learner, who can be described as “one who is willing or even eager to invest effort in learning activities and to progress” (Oroujlou & Vahedi, 2011: 995). This is also supported by Dörnyei and Ushioda (2011), who explain that motivation is connected to the *direction* and *magnitude* of human behavior, and it is responsible for why individuals take a course of action for doing something, the duration for which they can maintain that activity, and the level of effort they can exert in its pursuit. Within the EFL context, the term motivation has critical importance because it creates a language acquisition process that is distinct from first language acquisition, considering the fact that the motivation of infants learning their native language is not really considered the same

way (Ushioda, 2010). The empirical inquiry into the relationship between motivation and successful language learning was initiated by Gardner and Lambert (1972: 130), who asked the famous question: “How is it that some people can learn a second or foreign language so easily and do so well while others, given what seem to be the same opportunities to learn, find it almost impossible?” Gardner (1985: 10) then defined LL motivation as “referring to the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity”. Gardner’s (1985) approach posits that motivation is an ‘energy-center’ incorporating *effort*, *want/will*, and *task-enjoyment*, which go hand in hand because a genuinely motivated learner displays them all (Dörnyei & Ushioda, 2011), and effort and will are surely required for a language learner to be called *motivated*. However, Dörnyei (1998) tries to go beyond the representation of motivation as a static state of mind or emotions, and capture its dynamic components by understanding it as a “*process* whereby a certain amount of instigation force arises, initiates action, and persists as long as no other force comes into play to weaken it and thereby terminate the action, or until the planned outcome has been reached’. Similarly, Dörnyei (2009: 117) also emphasizes that motivation provides the spark to initiate LL, and “later the driving force to sustain the long and often tedious learning process”. Moreover, it is important to note that LL motivation as a general construct has been categorized into several types. Gardner & Lambert (1972), who greatly contributed to the understanding of motivation in LL, categorized it into integrative and instrumental. Based on this longstanding classification, integrative motivation involves learners' interest and passion for language acquisition, while instrumental motivation pertains to external factors such

as exam success, improving social status, and increasing financial gains (Gardner, 1985). In other words, this discrimination means that learners' orientations might reflect either cultural and social purposes like establishing contact and friendship with the target language community or more pragmatic goals (Ushioda, 2014). However, based on the belief that this discrimination is not closely related to motivation in the classroom context, Dörnyei (1994) prefers the classification of motivation as intrinsic and extrinsic motivation, identified first by Deci and Ryan (1985). Mori (2002) also supports the view that Gardner's classification of LL motivation may not be readily applied to EFL contexts, where learners normally have limited contact with the target language community. According to this alternative understanding and identification of LL motivation, intrinsic motivation refers to finding an activity enjoyable, exciting, and fulfilling, and the learner's orientation to learn arises internally, without the manipulation of any external stimuli (Kost, 2003). Whether the three fundamental human needs are met when engaged in a task determines how intrinsically self-determined learners are; and they can be listed as *autonomy*, *competence*, and *relatedness* (Ryan & Deci, 2000b). Vallerand (1997) further differentiates among three subcategories of intrinsic motivation as *to learn* (enjoying grasping something new, satisfying curiosity), *to achieve* (the joy of surpassing one's limits, dealing with challenges), and *to experience* (encountering pleasant sensations). However, in its counterpart, extrinsic motivation, regulation arising from external sources is entailed, driven by the encouragement of receiving external rewards (Dörnyei et al., 2014). Furthermore, it is important to note that by regarding an activity as "inherently interesting or enjoyable" (Ryan & Deci, 2000a), it is possible that intrinsic motivation can result in long-term benefits (Niemi &

Ryan, 2009) while extrinsic motivation has a more temporary nature (Ryan & Deci, 2000a). In addition, while learners with intrinsic motivation could attach value to the effects and results of a particular activity (Ryan & Deci, 2000a), extrinsic motivation rather involves a separate outcome apart from language learning such as a higher profit and status, praise, and avoiding punishment (Savran Çelik & Aydın, 2021).

2.1.3. Reading Motivation

Among the complex attributes of the motivation construct lies its domain specificity. The relevant literature indicates that it is necessary to conceptualize motivation specific to the domain that one is interested in to understand how motivation affects learning and performance (Wigfield et al., 2004). Therefore, for the current study, it is important to define motivation for reading, specifically, because reading activity may require different psychological constructs in both L1 (Wigfield & Guthrie, 1997) and FL (Mori, 2002). Guthrie and Wigfield (1999), who contributed greatly to the understanding of the domain-specific nature of motivation define it simply as “the individual's goals and beliefs regarding reading” (Guthrie & Wigfield, 1999: 199). Similarly, reading motivation can be defined as “the driving force that enables individuals to engage in reading activities”, meaning language learners tend to participate actively in more meaningful and demanding reading encounters when they have positive beliefs and attitudes towards reading (Wei, 2023: 315). However, although the conceptualization of FL reading motivation is relatively new and therefore quite limited in the literature, as opposed to L1 reading motivation (Mori, 2002), it is important to acknowledge and note the distinction between the two (Grabe & Stoller, 2019) considering the varying contextual factors (Wei, 2023). Furthermore, although motivation to read is a rather limited area of research (Mori,

2002), Self-Determination Theory and Expectancy-Value Theory attract attention as L2 reading motivation usually revolves around these two, as explained by Mori (2002).

As stated, L2 reading motivation is a relatively limited area of research, and thus, it is usually approached within the framework of two already existing theories in motivation research. First, Self-Determination Theory (STD), originally proposed by Deci and Ryan (1985), provides one of the most general and renowned dichotomies of motivation as *intrinsic* versus *extrinsic*, holds that autonomy is a basic human need, meaning that one needs to have the desire to self-initiate and self-regulate their actions (Dörnyei, 1998). Autonomy, as well as perceived competence, are hypothesized as being the basic ‘nutriments’ underlying the growth of motivation (Ryan & Deci, 2002: 7) especially intrinsic motivation, to get involved in a skill-based activity in which the feeling of being in control and being effective result in enjoyment and fulfillment (Ushioda, 2014). Accordingly, being involved in an activity ‘with a full sense of wanting, choosing, and personal endorsement’ (Deci, 1992) is a must for any behavior to be seen as intrinsically rewarding. In addition to the great influence of this theory in mainstream psychology, it has also been very influential in language learning motivation research, Brown (1981; 1994), being one of its most important proponents. The underlying assumption is that LL motivation and learner autonomy have an inseparable relationship, and being an autonomous language learner naturally equals being a motivated one as well (Ushioda, 1996). Dickinson (1995: 173) also explains this close contact by stating that “enhanced motivation is conditional on learners taking responsibility for their own learning [...] and perceiving that their learning successes and failures are to be attributed to their

own efforts and strategies rather than to factors outside their control”. Furthermore, what should also be noted is that although intrinsic motivation is viewed in STD as the prerequisite for long-term achievements for any learning, including LL, van Lier (1996: 112) emphasizes that in such a complex activity as LL, intrinsic and extrinsic forms of motivation need to ‘work in concert’ to initiate and sustain learning. To clarify, while long-term goals provide the basis for a motivated involvement in LL, temporary goals help regulate and sustain motivation by nurturing the perceived competence and the feeling of autonomy, thus fostering intrinsic motivation in turn (Ushioda, 2014). In a similar vein, Deci et al. (1991) interpret extrinsic motivation as a continuum, as opposed to the counterpart of intrinsic motivation, and separated it into four forms that consist of more controlled forms of motivation and move towards the more self-determined forms, *integrated regulation* being the closest to the intrinsic motivation. When considered specifically in the context of reading development, SDT has also been proposed as a valuable framework for exploring the emergence of intrinsic motivation (Grabe, 2009), which many claim is more beneficial than extrinsic motivation in reading development (e.g. Mori, 2015). Consistently with this, STD can be revisited in the context of FL reading development in the well-known list of principles (Day & Bamford, 2002) developed with regard to extensive reading. Each of the ten principles identified by Day and Bamford (2002) (e.g., “*The reading material is easy; a variety of reading material on a wide range of topics must be available; learners choose what they want to read; the purpose of reading is usually related to pleasure, information and general understanding; reading is its own reward.*”) could either partially or fully reflect the fundamental three needs *competence, relatedness, and autonomy* underpinning STD,

as explained by Türkdoğan and Sivell (2016). Another theory that needs a close look in the context of FL reading motivation is, as mentioned previously, the Expectancy-Value Theory, as it is the foundation of probably the first attempt of creating a theoretical model of reading motivation in a non-native language, by Day and Bamford (1998). First outlined by Eccles, Wigfield and their colleagues (Eccles, 1983; Eccles & Midgley, 1989; Wigfield, 1994; Wigfield & Eccles, 1992; 2000) Expectancy-Value Theory is based on two main constituents of motivation (Rueda, 2011). *Expectancy* here refers to the extent to which learners expect themselves to perform well on a certain activity while *value* refers to how much they value that activity (Rueda, 2011). To be more specific, task value consists of four elements: interest, importance, utility, and cost, whereas expectancy consists of self-efficacy, perceived task difficulty, and causal attribution (Rueda, 2011). Day and Bamford (1998), attempting to reflect the complicated nature of motivation to read in a second language, categorized its components under the expectancy-value framework, and they identified the notions of *materials* and *reading ability* under the expectancy category, while *attitudes towards reading in the target language* and *socio-cultural environment* under the value category (Mori, 2002). This model posits the view that the constructs of materials and attitudes contribute the most to reading motivation, and thus could affect the learners' decision to read in the target language (Day & Bamford, 1998). The model specifically attaches great value to the materials in determining learners' motivation to read. It is emphasized that the reading materials, to be motivating, must be interesting, easily accessible, and easy to understand, considering their competence in the target language (Day & Bamford, 1998; 2002). Although this model lacks empirical evidence (Mori, 2002), the relationship between

Expectancy-Value Theory and reading motivation inherently goes beyond Day and Bamford's model, and it has its roots in L1 reading research. Wigfield and Guthrie (1997), two of the numerous researchers who define reading motivation as a domain-specific one including many goals and beliefs shaping one's attitude towards reading, based reading motivation on 11 dimensions, grounded on the expectancy-value framework, in line with the self-efficacy theory with an emphasis on intrinsic

Figure 1: *Components of motivation influencing learners' decision to read in L2* (Day and Bamford 1998: 28)

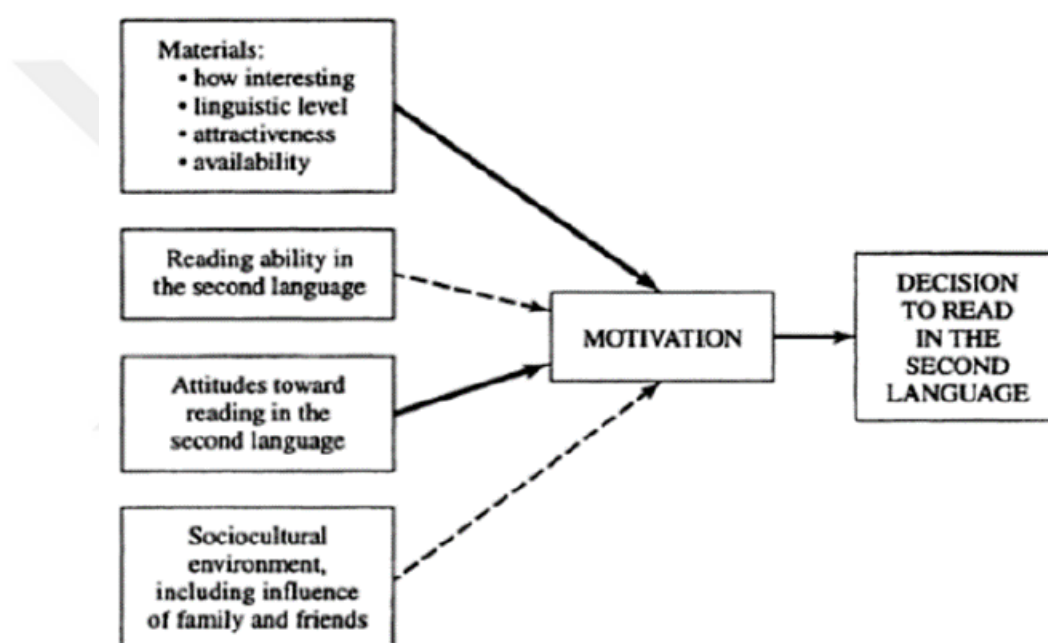
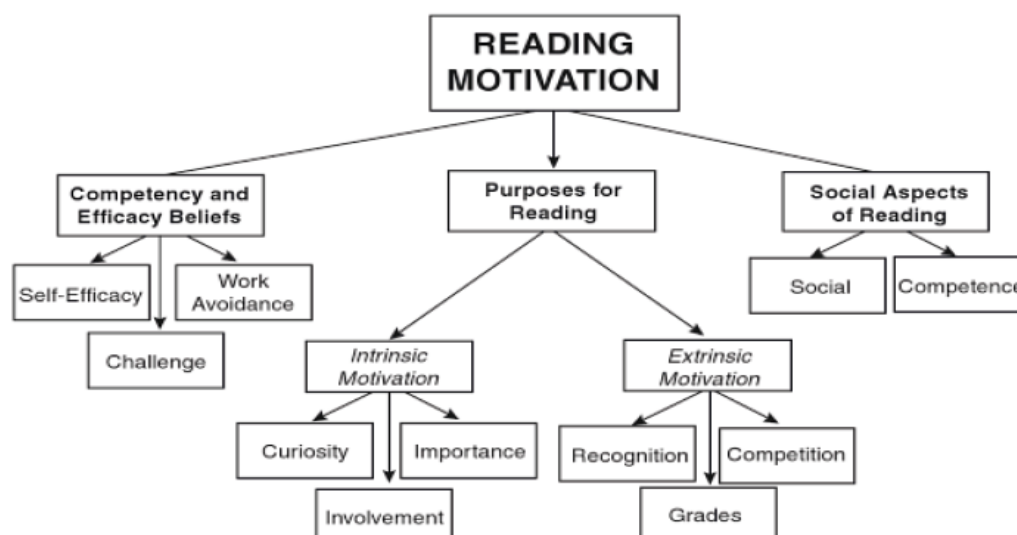


Figure 2: *Wigfield and Guthrie's taxonomy of reading motivation* (Dunston and Gambrell 2009: 272)



Despite the wide acceptance of reading motivation as one of the strongest factors in the development of a target language, arguably the strongest one after the learner needs (Lustantie & Aprilia, 2020) the relevant literature addressing reading motivation in the EFL context is quite limited compared to the numerous studies delving into L1 reading motivation and strategies (Pirih, 2015). Therefore, it is not surprising that most of the studies on EFL reading motivation have been guided by either the research on L2 learning motivation or L1 reading motivation (Jahan Khan et al., 2017), which are usually intertwined in the reviews such that it is difficult to separate them from each other in any discussion on EFL reading motivation. Mori (2002) also highlights this gap in the literature stating that hardly any theories or models exist with regard to L2/EFL reading motivation, except for Day and Bamford's (1998), which lacks empirical evidence. Moreover, Wang and Gan (2021) point to the fact that it is only in the last two decades that the research started to shed light on the significance of reading motivation on reading proficiency. One possible reason accounting for this scarcity of research on reading motivation and the turning point in research could be the shift in the educational approaches, deviating from the dominating cognitive approach regarding reading as a cognitive and linguistic activity, neglecting the affective factors (Styck et al., 2020). Lustantie and Aprilia (2020) state that the 1990s marked this shift and aroused interest in motivation in language classrooms, and points to Dörnyei's (1990) well-known study revealing that intermediate mastery over a foreign language is greatly influenced by the learners' Instrumental Motivational Subsystem along with their Need for Achievement; however, going beyond this level is only possible with integrative motives. Nevertheless, despite the notable work on L2 learning motivation (Dörnyei,

1990; 2000; 2009; Gardner, 1988; 2001), empirical findings on EFL reading motivation that aimed to classify and validate its components have remained influenced by L1 reading motivation theory and instruments due to the lack of a fully developed L2/FL model of motivation.

2.1.4. Materials Development

Materials in the context of language teaching can be defined as “anything” that teachers or learners use to facilitate the learning of a language (Tomlinson, 2011). “Anything” here refers to a wide range of options (e.g., readers, photocopied exercises, grammar books, emails, YouTube, newspapers, photographs, lectures, speeches by native speakers, instruction by the teacher, etc.), as long as they are utilized to facilitate the development of the learners and help them experience the language (Tomlinson, 2011). Additionally, according to Tomlinson (2016), materials development stands for a practical endeavor that involves the design, evaluation, and adaptation of materials aiming to promote language acquisition and development as well as the use of these materials. It can also be considered as “a field of academic study investigating the principles and procedures of the design, writing, implementation, evaluation and analysis of learning materials (Tomlinson, 2016). When materials development is considered specifically from the domain of reading, which (Mukundan et al., 2016) is referred to as one of “the most salient and dominant” elements of any LL initiative, it provides the primary tool to reach the literature in the target language (Nation, 2008), as students are exposed to varying reading materials to develop their reading skills (Albiladi, 2018).

Language teaching materials could be of several types. They could be “informative”, transmitting information to the LLs about the language itself; “instructional”, helping the LLs practice the language, “experiential”, allowing LLs to experience the language in use; “eliciting”, motivating LLs to exploit the language; and “exploratory”, guiding them to explore the language (Tomlinson, 2012). Although this categorization inherently applies to any materials including those for reading, it is also possible to classify reading materials being used today in EFL classes into two, as stated by Peacock (1997). The first type involves non-authentic texts that are created specifically for classroom teaching. Peacock (1997) clarifies that this type of text, constructed with learning purposes, might include a different language from real-life, with simplifications and artificial uses as well as a focus on the development of grammatical structures instead of reading skills. On the other hand, the second type of materials used in reading classes is associated with authentic texts, which Harmer (1991) describes as real texts created for native speakers of a language rather than learners of it. Likewise, Tomlinson (2011: ix) elaborates on the authentic materials pedagogically used by stating: “A text which is not written or spoken for language teaching purposes. A newspaper article, a rock song, a novel, a radio interview, and a traditional fairy story are examples of authentic texts. A story written to exemplify the use of reported speech, a dialogue scripted to exemplify ways of inviting and a linguistically simplified version of a novel would not be authentic texts.” The literature supports the view that this type of text, when used in teaching EFL reading, potentially renders the lessons more interesting and effective, and also boosts learners’ reading motivation, helping them relate to the real language (Albiladi, 2018), and captivate the learners’ interest to read

(Wu & Wu, 2008). In parallel with this, Nuttall (1996) highlights authentic texts could motivate learners to read as they prove that people use the language for real-life purposes. Although some internationally used ELT materials have texts relatable to this type, such as articles from magazines and newspapers, adverts, and materials on the internet as shown by Masuhara et al.'s (2008) review of eight well-known textbooks, the 'traditional' texts with longer stretches may dominate in some others, suggested by Tomlinson's (2008) evaluations of global coursebooks (McDonough et al., 2013). The reason for this diversity among the ELT materials could be mainly explained by the changes and possible confusion with regard to the approaches and objectives of teaching reading (McDonough et al., 2013). That is, the traditional arrangement of a teaching unit beginning with a constructed text to be 'read' with a focus on grammar and vocabulary does not match the aims of teaching reading and developing reading skills (McDonough et al., 2013). Saraceni (2022) explains that although this type of text is assumed to preserve the meaning even if there are manipulations concerning the structures, they cause a limited focus on the text as a whole, and different interpretations of the text, its pragmatic context, and the text-reader interaction are mostly disregarded. She also finds it problematic that the textbooks have a similar approach to different types of texts, which is inconsistent with real-life approaches varying according to the particular types. Furthermore, the categorization of authentic and constructed materials also applies to the tasks around the reading texts. Saraceni (2022) critically examines the most typically used reading activities in the classroom and lists them as reading comprehension activities, true/false exercises, and fill-in-the-gap or rephrasing (vocabulary or syntax)

exercises. She also touches upon their superficial and inauthentic nature, disregarding the readers' responses.

The schema theory (Carrell, 1987) stands as one of the most important theories usually integrated in discussions regarding materials development. In a general sense, it can be stated that there is a close relationship between the activation of mental schemata and reading comprehension (Semino, 1995). This activation involves the 'Content Schema', along with the Formal Schema (font, layout, and organization, among others) -both identified by Carrell et al. (1988)- as they both play a major role in the comprehension process when reading a text (McDonough et al., 2013). Derewianka (2014) states that when readers are familiar with the topic of a reading text and the sociocultural background of it, they can construct meaning more easily. On the contrary, the mismatch of shared assumptions and different schemata in the texts could cause problems for L2 readers (McDonough et al., 2013). In addition, activating mental schemata is considered a reading skill or strategy as readers are required to associate the text with previous concepts to establish a link between the text and their reading, interpreting, and understanding of the text (Saraceni, 2022). This close relationship between schematic knowledge and reading comprehension is also supported by Brown and Yule (1983), McCarthy and Carter (1994), and Nunan (1999). Another theory relatable to materials development in the context of this study, although not cited very often, is the Cognitive Load Theory. As an instructional theory evolved from cognitive science (Sweller, 1988), Cognitive Load Theory posits that the way instruction is designed places a cognitive burden on the limited working memory of learners, influencing the results of the learning process (Cierniak et al., 2009). The underlying assumption in this theory is that

working memory is the primary processor of new information, allowing it to be organized hierarchically in long-term memory (Leahy & Sweller, 2004). Therefore, the limited capacity of the working memory along with the overwhelming amount of information diminishes the efficacy of the learning outcomes (Paas et al., 2003). That being said, it becomes clear that the restriction of the working memory should be considered well in the process of materials development (Leahy & Sweller, 2004), the idea that several researchers have attempted to apply by designing activities and strategies to diminish the cognitive load (e.g., Al-Shehri & Gitsaki, 2010). A very common example of how this theory is considered in the framework of reading materials is the separation of the text and the comprehension questions usually presented at the end. Learners are usually expected to split their attention by switching up and down, keeping the questions in their memory to find the answer (Hung, 2009). Therefore, it seems clear that the design of reading materials can determine the cognitive load and quality of the reading process (Al-Shehri & Gitsaki, 2010; Hung, 2009).

2.1.5. Artificial Intelligence

AI is defined by the IEEE-USA (2017) as “the theory and development of computer systems that can perform tasks which normally require human intelligence such as visual perception, speech recognition, learning, decision-making, and natural language processing”, — a definition adopted in the recent report *Artificial Intelligence and Future of Teaching and Learning* published by the U.S. Department of Education (2023). In addition, AI is also identified by Baker et al. (2019) as a computer science technology combining computer activities with the activities of computerized tools operating with a system similar to the human brain. Integrated

consistently into all aspects of people's lives, AI in education (Aied) has substantially grown in recent years (Hwang et al., 2020) since its application in education paves the way for new opportunities and potentials (Ouyang & Jiao, 2021). When considered specifically as an educational tool that has the potential for “autonomous perception, understanding, prediction, and action”, AI is defined as “an unprecedented powerful learning technology, which enhances the flexibility and adaptability of computers as interactive subjects in the process of teaching and learning” (Zhu & Ren, 2022). Considering this great potential, it is not surprising that Aied has also started to be investigated in the context of language learning and teaching as well (e.g., Dewi et al., 2021; Fitria, 2021; Ghali et al., 2018; Karyuatry, 2018). Although the literature is quite limited for Aied in the EFL context (Jiang, 2022), and therefore, it is difficult to provide a context-specific definition, Jiang's (2022) classification of how AI is most widely utilized in language learning and teaching provides a very useful insight into what AI means in this context.

Based on a very elaborated content analysis for highly related terms searched for EFL and AI, Jiang (2022), identifies the six most common forms of AI used in the EFL context. The first category relates to Automatic Evaluation Systems (AESs), which can evaluate the information in the input and provide suggestions for automatic feedback primarily in the EFL writing and speaking domains. Although real assessors are considered by some as irreplaceable by the capabilities of AI in this sense because of several reasons such as the limitations with regard to comments on syntactic complexity (Qian et al., 2021) and errors in collocations (Gao, 2021) and rather low accuracy (Liu & Kunnan, 2016), the preliminary findings point to a facilitative role of AESs for both writing (e.g., (Gao, 2021; Mizumoto & Eguchi,

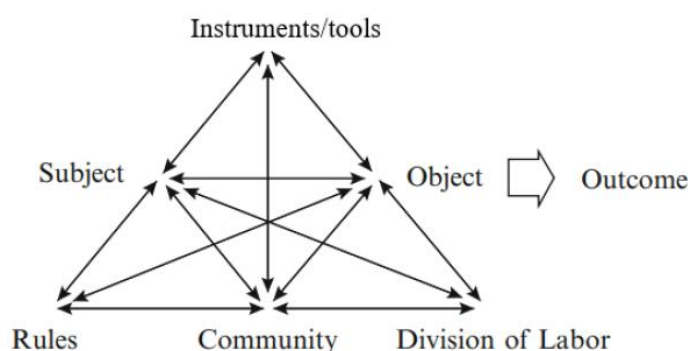
2023) and speaking (e.g., Zou et al., 2023). The second form of AI in the EFL context corresponds to Neural Machine Translation (NMT) tools. With a more advanced performance compared to the traditional systems (Wu et al., 2016), no matter the still existing problems with the discourse, word order, and broken expressions, indicated by Koh (2022), tools such as Google Translate, and Microsoft Translator (Bing) can be given as some of the most commonly used ones in language education. Despite the existence of some literature highlighting the handicaps of using NMTs, on the other side of the coin, they hold many cognitive and linguistic potential benefits for language learners (e.g., Godwin-Jones, 2015; Bahri & Mahadi, 2016), especially for the advanced group (Chen, 2019). The third form involves Intelligent Tutoring Systems (ITSs), which aim to provide personally designed tutoring based on neural networks and algorithms forming a learner model, and even attempt to identify the learners' affective state during the application of ITSs. The fourth form of AI involves Chatting Robots (Chatbots), which provide written and spoken intelligent interactions, revising themselves based on earlier conversations (Haristiani, 2019). Although these Chatbots are found to be useless for beginners, they are indicated to be effective for all levels by some others (Kim, 2016). On the other hand, it is necessary to note that they still lack certain capabilities such as creativity, shared knowledge, and spontaneity to be able to act as real-life language teachers (Lotze, 2018). Intelligent Virtual Environments (IVEs) form the fifth form of AI existing in the context of EFL. These environments combine the already adopted platforms with benefits for language learning such as Google Earth (Chen et al., 2020) and Google Expeditions (Xie et al., 2021) with AI technologies providing interaction in these virtual environments. To illustrate, the use of virtual agents,

namely, avatars, stands as a typical example of IVEs, potentially enhancing user presence and fostering collaboration (Yin, 2022) by diminishing foreign language anxiety and motivating learners to communicate (York et al., 2021). The last form of AI in EFL identified by Jiang (2022) is Affective Computing (AC) in ITSs. To put it simply, AC aims to “recognize and measure people's explicit affective appearances and link them to their implicit emotions” (Yadegaridehkordi et al., 2019: 2). That being said, such affective-aware systems incorporated into educational technologies such as ITSs have increasingly become a trend due to the potential they may have on the learning quality (Yadegaridehkordi et al., 2019) enhancing the comprehension of content, boosting the peers’ participation and evoking positive emotions (Wu et al., 2022). In addition to the six forms explained above, another use of AI in the context of EFL, arising from its capability to generate texts, is identified as Generative AI. Lee et al. (2023: 509) describe Generative AI as “a branch of artificial intelligence that surpasses simply using AI as a tool for big data analysis”. To illustrate, AI, as a text generation tool, can create images based on textual input (e.g., OpenAI’s DALL·E2), produce video content of a story (e.g., Meta’s Make-A-Video), and compose music with the instructions in a text (e.g., Google Music LM). In addition, tools such as OpenAI’s ChatGPT and CopyAI, also grab much attention, as they can generate different genres and forms of texts such as email, song lyrics, blogs, novels, and dialogues, including assessment items for each, all to be adjusted with further requests (Lee et al., 2023). Without surprise, such technology provided by AI has begun to attract the attention of both ESL and EFL communities (Shin, 2022; as cited in Lee et al., 2023).

AIed, specifically for the EFL context, can be closely associated with the Activity Theory (AT). Originating from Vygotsky's (1978) Socio-cognitive model of learning, consisting of *subject*, *object*, and *artifacts* (tools), AT was further elaborated with Engeström's (1987) addition of *rules*, *community*, and *division of labor*, other elements available in the context (see Figure 3 below), which result in a desired *outcome* when combined. According to Zheng et al. (2020), the subject within the AT framework refers to either the individual or the group who participates in the learning activity. The object corresponds to the incentive or the purpose urging the subject to engage in the activity. Tools, on the other hand, physical or psychological, that facilitate the subject-object relationships, and in the AIed context, they might consist of automatic writing evaluation systems, chatbots, intelligent tutorial systems, and voice-based apps among some others, as can be seen in the review by Yang and Kyun (2022). The rules can be explained by the standards the subject and the collaboration among participants are governed by, whereas the division of labor refers to how the activity is organized with regard to duty distribution. Finally, all this interaction between each constituent is mediated by the community (Zheng et al., 2020), whose typical members in an AI-supported learning context are teachers, learners, administrators, and developers of educational technologies (Lin et al., 2020). According to Yang and Kyun (2022), the core of the idea that CALL and AI-supported LL, as a sub-branch of it, fits well within the AT arises from the fact that it offers a framework to examine the dynamics of those learning environments. Additionally, Karanasios and Allen (2018: 439) underline the fact that AT "can address the challenge of studying the interaction between technology and actors". Furthermore, to better understand the learners' acceptance of

AI in educational contexts, Ofosu-Ampong et al. (2023) suggest a holistic and elaborated conceptual model in which they combine various elements, interacting with each other, from the *Technology Acceptance Model*, *Unified Theory of Acceptance* and *Use of Technology Innovation Diffusion Theory*, and *Self-Determination Theory*, and identified four main constructs related to the acceptance or use of AI by the learners. First, drawn from the Technology Acceptance Model, the construct, *perceived usefulness*, relates to the perceptions with regard to the ease and utility (Glikson & Woolley, 2020) of AIed. Second, by integrating notions from the Social Cognitive Theory and Unified Theory of Acceptance and Use of Technology, the construct, *social influence factors*, highlight the significance of social influences, learning by observing, and self-efficacy in the acceptance of AIed. The third construct, *innovation characteristics*, drawn from Innovation Diffusion Theory (Rogers, 2003), examines the dynamics influencing the escalation and embracement of AI as an innovation in the educational domain such as the influence of social networks and opinion leaders, communication channels, stages of technology adoption (Ofosu-Ampong et al., 2023). Finally, incorporating elements from the Self-Determination Theory (Ryan & Deci, 2013), the fourth construct *psychological needs* underscores the significance of learners' intrinsic motivation, autonomy, and competence as well as the support for teachers' and learners' needs for autonomy, relatedness, and competence to facilitate the adoption of AI.

Figure 3: Activity theory framework (Engeström, 1987)



2.2. Research Results

2.2.1. Reading Motivation

The current research consistently demonstrates that FL reading motivation is a multidimensional construct, and both intrinsic and extrinsic factors play major roles in determining learners' motivation to read. In a quantitative study conducted in a Slovenian EFL setting, Pirih (2015) found that EFL reading motivation was primarily predicted by strong intrinsic motivation for L1, extrinsic motivation for EFL reading, perceived ability for reading in the FL, and parents' effect and family attitudes towards reading. On a similar account, Dhanapala and Hirakawa (2016), in a quantitative study aiming to explore the motivational structure of reading in English among university students, concluded that FL reading motivation was influenced by intrinsic factors such as utility value, positive behavior of reading, curiosity, and involvement, and challenge for reading; and by the extrinsic factors, attitudes toward recognition, social sharing of reading and grades. The study also revealed a positive correlation between intrinsic and extrinsic sets of motivational factors. Similar findings were yielded by a mixed-method study (Salikin et al., 2017) which showed that the intrinsic reading motivation of FL learners could be affected by their interest in the given topic, and by experiences with the language, which means the lack of sufficient vocabulary and grammar knowledge could negatively influence their reading motivation. In addition, Salikin et al. (2017) specifically highlighted the teachers' role, among the extrinsic factors, due to their influence on learners' motivation through the atmosphere they create in the reading class and the frequent assignments they provide.

Current research also aims to reveal the relationship between FL reading motivation and text comprehension although the findings yield inconsistent results. For instance, in a quantitative study, Lin et al. (2012) found the motivational aspect of instrumentalism (i.e., extrinsic motivation), rather than intrinsic variables such as curiosity and involvement, was the strongest predictor of reading comprehension in English among Chinese EFL learners. Among other key motivational factors, self-efficacy beliefs were found to predict comprehension. In addition, Dhanapala and Hirakawa (2016), indicated that there was a significant relationship between learners' reading motivation and their text comprehension. However, their findings revealed that intrinsic and extrinsic motivations for reading influenced text comprehension differently. While intrinsic motivation was explored to have a positive influence, extrinsic motivation had a negative influence on text comprehension. Similar findings were presented by Han (2021) who concluded that Chinese EFL learners' reading proficiency had a positive correlation between intrinsic aspects of reading motivation, including self-efficacy and engagement, while no correlation was found with extrinsic aspects comprising academic and utility value. On the other hand, Fauzi et al.'s (2022) correlational study revealed a strong relationship between reading comprehension scores and reading motivation, including both intrinsic and extrinsic components. On a similar account, Kassem and Alqahtani (2023) found that learners who had high reading motivation in general also performed better in reading comprehension, and the most important predictor of comprehension was identified as extrinsic motivation, followed by reading efficacy, whereas intrinsic motivation was found to be a relatively weak predictor. Also, the researchers concluded that the mixed results with regard to the impact of reading motivation on reading

comprehension could be explained by the culture-bound differences with regard to the significance of extrinsic and intrinsic reasons for reading.

Current research reveals the positive effect of extensive reading practices and CLIL-based reading approach on enhancing EFL/ESL reading motivation. For example, regarding extensive reading, Ro (2013) discovered, in a case study of an unmotivated L2 learner, that engaging in extensive reading increased reading motivation as well as improved reading proficiency and language abilities. The key factors associated with the benefits provided by extensive reading regarding the motivation to read were identified as convenience/accessibility of various texts, satisfaction attained from completing books, comfort/ease, enjoyment, and usefulness. In a similar vein, Tanaka's (2017) experimental study showed that extensive reading practices increased intrinsic reading motivation and lowered amotivation among Japanese EFL learners, by allowing them to be autonomous in their reading. In addition, Permatasari and Wienanda (2023), in a phenomenology study, also found that extensive reading experiences could foster FL reading motivation and success, especially when offered in a structured program. Furthermore, regarding CLIL and FL reading motivation, Sardabi and Ojagh, (2022) compared the change in Iranian young learners' reading motivation for creative reading activities and found that the group in the CLIL context significantly outperformed the group in the EFL context in both reading performance and reading motivation. In addition, they were shown to have more positive attitudes towards reading in English, highlighting that reading for information, as well as reading for enjoyment, could increase the learner's interest in reading. The researchers, thus, conclude that increasing the variety of reading practices and involving

extracurricular tasks (e.g., short stories, songs, books) is of utmost importance for reading motivation. The findings by Etefa et al. (2023) conducted in the Ethiopian EFL setting, also showed the positive influence of a CLIL approach on learners' reading motivation as well as reading comprehension, supported by a significant increase in both.

Finally, another large part of the research demonstrates the positive influence of technology-integrated reading applications on FL reading motivation. In an experimental study aiming to explore the effect of the implementation of a smartboard in reading classes on Iranian EFL learners' reading motivation, Rajabi and Khodabakhshzadeh (2015) found that it significantly increased intrinsic reading motivation as well as improved their comprehension. In addition, Ali et al. (2018) found in their experimental study that a metacognition-based CALL program implemented in reading classes significantly increased EFL learners' motivation to read, improving their comprehension skills as well. Moreover, regarding the use of Learning Management Systems (LMSs), Tozlu Kılıç and Yıldız Çelebi (2018) investigated the influence of integrating Edmodo, a widely used online network platform, into reading assignments. They found that when Edmodo is used to assign books to learners and provide feedback for the given tasks on Edmodo, both their intrinsic and extrinsic aspects of FL reading motivation outperformed the learners who were assigned hard copies and provided with traditional feedback. Moreover, Liman Kaban and Sirin Karadeniz's (2021) quasi-experimental study revealed that another potentially beneficial technology that could increase FL reading motivation is the implementation of personalized/gamified/PDF electronic reading practices.

2.2.2. Materials and Reading Motivation

Current research regarding reading materials and their possible influence on reading motivation mainly indicates that reading texts that are authentic, interesting to the learners, readily available, and those with appropriate levels of difficulty contribute to FL reading motivation. First, text authenticity was shown by Marzban and Davaji (2015) to positively influence the reading motivation of FL learners, as well as their reading comprehension scores. In this experimental study, the researchers found that the use of authentic texts with appropriate readability increased learners' reading motivation in the domains of reading curiosity and social reasons for reading, and decreased their reading avoidance and their motivation for reading for grades, increasing their motivation for reading with real purposes. Similar findings were found by Namaziandost et al. (2022). In this experimental study, the results indicated that the exposure to authentic texts enhanced learners' motivation to read in English as well as their comprehension, alleviating their anxiety in the meantime. Overall, they promoted the use of authentic materials as they appear to be effective in increasing learner motivation, captivating their interest, and immersing them in the real language they must face in real-life situations. Second, the research evidence highlighting the advantages of providing the learners with texts that are readily available and suitable for their interests mostly comes from extensive reading studies. Fujita and Noro (2009), for instance, found in an experimental study that when EFL students are allowed to choose the reading material that interests them, both intrinsic and extrinsic forms of motivation appeared to be enhanced at the end of ten reading sessions. Their findings also demonstrated that students with higher abilities experienced a boost in their intrinsic motivation, whereas those with lower

abilities appeared to increase their class-related extrinsic motivation. On a similar account, Ro's (2013) case study presents useful findings with regard to the use of materials that learners find interesting. Although this study was conducted in the ESL setting, it presented promising findings for EFL, too, as the participant was an unmotivated English learner. The findings revealed that reading books that are suitable for the learner's interest appeared to enhance reading motivation. The researcher also concluded that in attempts to read beyond certain ability levels, it is of critical importance that the materials should be interesting and familiar to the readers so that their comfort level is increased, and their reading is facilitated. Additionally, Pirih's (2021) study confirmed that the availability of reading materials is one of the strongest variables determining reading motivation in L2/FL, considering the finding that the availability of reading materials had a major influence on the learners' choice of reading materials. She also found that the content of websites and/or films with English subtitles, both easily available with a wide range of topics and genres to choose from, are the most frequently read types of material, whereas English books (less available than online materials) were found to be the least preferred type of material. The researcher, therefore, concludes it is of critical importance to include online English reading materials and authentic texts in other formats so that the learners are provided with autonomy in their choice and become more motivated to read diverse materials. Similar findings were presented by Permatasari and Wienanda (2023), who supported the idea that the motivational dimension of reading was linked to the material's relevance to the learner's interests because such materials fostered the learners' engagement with the reading activities, which is why the researchers highlighted the role of the teachers with regard to

providing learners with a wide range of options to choose from based on their interests. Third, regarding text difficulty, it was seen that the findings produced by current studies had discrepancies. For example, Chiang (2016), found in an experimental study that the learners who were exposed to 'i - 1' texts, which are relatively easier compared to their current level, in an extensive reading program, have shown a significant increase in affective and behavioral attitudes towards EFL reading while there was no discernable improvement for the 'i + 1' group. The researcher grounded this finding on Day and Bamford's (1998) arguments with regard to text difficulty and interpreted that when learners feel comfortable with the text they are engaged in, they will gain confidence and reading fluency, which will result in a higher motivation to read more. On the other hand, Namaziandost et al. (2019), in a quasi-experimental study, found that learners' motivation to read English texts reported a noticeable increase when they were exposed to 'i + 1' material, with the support of a motivating context and positive guidance. Similarly, Yang et al.'s (2021) experimental study has yielded the findings that 'i + 1' texts improved overall reading motivation in an extensive reading program, and the self-efficacy component of reading motivation has been reported to be significantly higher in the 'i + 1' group. However, they also found that the reading avoidance component has decreased in the 'i - 1' group. The researchers, thus, suggest that 'i - 1' texts can initially help learners attain pleasure and lessen reading avoidance, whereas 'i + 1' texts can later be utilized to help them build self-efficacy value and deal with more challenging texts.

2.2.3. AI and Reading Motivation

Current studies, especially focusing on the emergence of the latest technologies in artificial intelligence and their use in language teaching contexts, although very limited and considered yet preliminary, mostly show the positive effects of artificial intelligence on language learning motivation. For example, Moybeka et al., (2023) concluded in a mixed-methods study that the integration of AI technologies such as AI-driven language learning tools and virtual language tutors/chatbots into language classes could enhance learners' motivation. Although several risks regarding the possibly negative effects of such technologies were underlined, numerous benefits were presented as to how they increase learner motivation, which were identified as the opportunities regarding personalization and adaptation, immediate feedback, incorporation of gamification elements, and accessibility. The researchers also emphasized a balancing act on the part of the teachers, who play a critical role in maximizing the benefits of AI tools and minimizing the risks to render the learning experiences motivating for the students. Similar findings were presented in another recent mixed-methods study conducted by Wei (2023). After a ten-week intervention program in which learners were involved in AI-mediated language instruction with Duolingo, a language learning tool which provided personalized instruction and immediate feedback, the participants significantly outperformed their non-AI counterparts not only in English learning motivation but also in achievement and self-regulated learning. The qualitative findings also reflected learners' positive experiences with the AI integration and revealed that the user-friendliness provided by the AI tool both lowered language learning anxiety and fostered intrinsic motivation. The researcher deduced that the personalized environment designed free

from restrictions such as time and place enhanced their sense of autonomy and enthusiasm, which led to a higher level of motivation.

Research aiming to explore the possible effects of AI tools on FL reading motivation is even more limited, which is predictable considering that it is a narrower domain of general language learning motivation. There is only one related study (Ali et al., 2023) to the researcher's current knowledge, providing insight into the learners' perceptions regarding the motivational effect of using AI on developing their reading skills. Designed as a quantitative study, the data was collected with a questionnaire aimed to reveal learners' views on whether ChatGPT motivates them to learn micro-skills of English such as vocabulary and grammar, and macro skills, reading, writing, listening, and speaking. It also aimed to determine if ChatGPT boosts learners' intrinsic motivation and autonomy. The findings indicated that most of the learners perceived using ChatGPT as motivating to develop their reading skills. In addition, reading surpassed all the other macro skills with the highest mean score, and the only other macro skill ChatGPT was mostly thought to be motivating for was shown to be writing, as learners had neutral attitudes towards listening and speaking. The findings also demonstrated that the use of ChatGPT increased all dimensions of motivation, and thus, it emerged as a motivational tool for learning English.

2.2.4. AI in Materials Development and Reading Motivation

Although the use of contemporary AI tools for developing materials for EFL reading classes has started to grab much attention, there are only a few studies yet, which are relatable to this function it. Aydın Yıldız (2023) conducted one such study

aiming to reveal the potential of AI integration in increasing EFL learners' overall motivation. In this quasi-experimental study, she attempted to explore whether ChatGPT-generated dialogues could boost learners' motivation in interacting with language teaching materials. These dialogues were utilized in the experimental group in several different ways including generating language exercises such as reading comprehension passages with a targeted word list, providing language input via reading aloud exercises and audio or video clips, and providing feedback on writing assignments. The results measured by the 'Motivational Strategies for Learning Questionnaire' revealed a statistical difference in certain motivational subcategories such as intrinsic values, self-regulation, and test anxiety, meaning that ChatGPT integration with the aforementioned practices created increased learners' motivation. In addition, the results also showed that the achievement test scores of the experimental group significantly improved more compared to their non-ChatGPT counterparts, rendering AI great potential with regard to both gaining knowledge and increasing motivation in LL. Although not specifically focusing on reading motivation and materials development, this study has provided some insight into the current topic. Another study useful for our purposes was carried out by Lee et al. (2023), aiming to explore the potential of content/activities generated by an AI-based content generator with regard to EFL learners' reading enjoyment. In this mixed-methods study, motivated by the observation that students are generally not motivated by the passages in textbooks, and the fact that teachers' workload does not permit them to create texts suitable for learners' interests, Lee et al. (2023) attempted to reveal the potential of the program 'Copy AI', which can create texts in diverse genres, in increasing reading enjoyment and interest in reading English books. While

the participants in the experimental group were trained in how to use the tool to create storybooks that suit their own interests and preferences based on guiding worksheets, the comparison group received traditional textbook-based reading lessons. The results indicated a significant contrast between the two groups with regard to both reading enjoyment and interest in reading English books. The findings also showed that most of the participants in the AI group found these personalized texts more engaging than traditional ones, they could focus more, and they were more willing to read English texts. The post-intervention interviews also demonstrated that EFL learners appreciated the use of AI in reading lessons due to its potential to create stories based on their preferences, they expressed positive attitudes towards the use of AI as a content generator for reading and reported feeling more engaged compared to traditional lessons. Although this study provides valuable findings for the present study, it is key to note that the study has some limitations in terms of the reliability of the data since no specific information was given regarding the scale used for collecting the data. Thus, even though the reliability of the scale was tested and verified, it was not made clear to the reader. Keeping this in mind, it is essential that further research is highly needed to address the question of how AI-generated materials influence learners' reading motivation and to what extent.

2.5. Conclusion

It is established by the related literature that EFL reading is a challenging skill for EFL learners for many reasons. It is also well clarified that reading skills and reading motivation, in both intrinsic and extrinsic aspects, are closely connected constructs. Despite the traditional view of reading as a cognitive activity, it is now recognized that motivated readers generally tend to read more, which boosts their motivation in

turn, allowing for a more rapid development in reading skills. Among the many factors that could influence EFL learners' reading motivation, the role of materials is of utmost importance as they have a great potential to influence learners' decision to read. Whether reading materials suit the learners' interests and level, whether they are authentic, semi-authentic, or fully simplified and manipulated, are significant predictors of learners' engagement with the texts and their motivation to sustain reading. As textbooks may not always serve learners' particular interests and needs, designing or adapting reading texts and activities arises as a need. At this point, the contemporary AI tools, which can create authentic language input in an almost endless list of topics and at any difficulty level, stand as a potentially great contributor both for teachers and students. The content generation function of such tools, which is the main inspiration and motivation of this study, is a novel but promising feature that can add much to the learners' motivation to read English texts and the quality of the reading development process. The fact that learners' perceptions and overall attitude towards such tools are also positive and embracing, revealed by current studies, is also promising as their acceptance may contribute to their involvement with such materials. However, as made clear before, the related research is fairly limited yet, and there is a fundamental need to reveal the real potential of AI in materials development with regard to reading motivation and to explore the ways it can be utilized most effectively.

3. METHODOLOGY

This section outlines the methods and steps undertaken in this study. Initially, the research design is specified, followed by the presentation of the participants. Subsequently, the data collection tools are delineated, which is followed by the research procedures. Finally, the methodology for data analysis is provided.

3.1. Research Context

The purpose of the current study is to examine the influence of AI-generated materials on EFL reading motivation. Based on the parameters identified by Seliger and Shohamy (1989), first, the study approaches the research question rather analytically, as a certain type of materials development, via an AI-based tool, is attempted to be investigated with regard to its effect on a certain domain of language learning motivation, foreign language reading motivation. Consistently with this, an analytical method has been developed to explain this possible effect of the independent variable of AI-generated reading materials through the comparison of empirical data collected from two participating groups. To this end, a quasi-experimental research design has been followed, which differs from a true experimental design in that the researcher does not control the selection of participants and does not randomly assign them into treatment and control groups, but rather chooses pre-assigned groups (Levy & J. Ellis, 2011). Although this might create a limitation to having full control over all the variables, quasi-experimental studies are still accepted to provide fruitful information for the development of related research (Leedy & Ormrod, 2010). Second, a deductive approach appears to prevail since the study started with the quest of whether such materials influence learners' reading motivation, based on the existing hypotheses suggesting that

technology integration into language teaching, and more specifically the use of AI tools, could potentially have a positive influence on learners. Third, although not as high as a true experimental study would be, the degree of control and manipulation of the research context appears to be relatively high. Finally, in line with the third parameter, the data collection procedure can be said to have high explicitness, as it includes a quantitative data collection tool, Motivation for Reading in English Questionnaire (MREQ), which has been conducted before and after a 5-week-intervention program involving five reading lessons, which could allow for less researcher interpretation and low subjectivity in the data analysis process.

3.2. Participants

Thirty students enrolled in a foundation university in Istanbul, Türkiye were selected as the participants of the study, and 15 participants were allocated for each of the experimental and control groups. The gender distribution within the whole sample was 21 female (70%) and nine male (30%) participants. The gender distribution of the control group was ten females and five males, while it was 11 females and four males for the experimental group. All the participants were learners of English as a foreign language. Their ages ranged from 18 to 24; and the mean age was 19,06 for the whole sample; 19,13 for the control group; and 19 for the experimental group. Participants were enrolled in an accredited English preparatory program offered by the university. All participants had completed the Intermediate level, corresponding to B1 according to the CEFR, and were studying in the Upper Intermediate level, corresponding to B2, during the period when the study was conducted. Due to availability, the participants, two pre-existing B2 classes, were selected through convenience sampling. At the beginning of the academic year, they

were placed into level classes, depending on their scores in the Placement Exam, testing students' listening, reading, and writing skills in separate sections. The students failing to achieve a score of 70, or above, out of 100, must enroll in the preparatory program. Regardless of their level, the program consists of four tracks (8-week periods) and 26 lessons per week. Out of 26, 20 lessons were allocated for main course lessons, and 2 lessons each for reading, writing, and listening/speaking skills development. This was a mandatory program for most of the students in the program, and successful completion, with a minimum cumulative score of 70 out of 100, is necessary to progress to departmental studies. The curriculum and textbooks used in the preparatory program are determined by the coordinators and the head of the department. However, students are also provided with supplementary instructional materials depending on their instructors' choices. They have one main instructor, who is also their advisor, and different instructors for the other skill lessons.

Furthermore, a focus group was formed to discover more about the obtained findings. Three participants from each group were selected randomly and 15-minute online meetings were held with each participant. Among these six participants, 5 of them were female and 1 was male, their ages ranging from 18 to 20. With an aim to understand and interpret the results further, and possibly see the reasons behind the changes in their reading motivation, predetermined questions were asked and their responses were recorded in written form, to be reported later.

3.3. Tools

The tools used to collect data in the present study consisted of a background questionnaire and the MREQ (see Appendix A), developed by Komiyama (2013), as

a revision of Wang and Guthrie's (2004) eight-dimension model of Motivation for Reading Questionnaire. The background questionnaire involved personal and demographic information such as the participants' names, classes, contact information, age, and gender. The MREQ, revised from 59 to 47 items, included a four-point Likert scale, ("4" referring to "a lot like me"; "3" to "a little like me"; "2" to a little different from me" and "1" to "very different from me") and the Cronbach's alpha for each item ranged from .77 to .88., suggesting an accepted internal reliability. Its final version, however, which is also the one adopted in this study, includes 44 items as the rest three items were indicated not to align strongly enough with one single factor identified by the questionnaire. The observed total variance of the five-factor model identified by the questionnaire is 44.1%, which is a positive indicator of the validity. The five factors regarding EFL reading motivation revealed in the study by Komiyama (2013) could be summarized as follows: Factor 1 (Intrinsic motivation) consisted of 16 items, with a shared variance of 23.30, and represents constructs such as Curiosity, Involvement, and Preference for Challenge, identified by Wang and Guthrie (2004). Factor 2 (Extrinsic drive to excel) with a shared variance of 9.47, comprised 15 items, seven of them representing the dimension of Competition and eight of them representing Recognition, both being related to participants' willingness to display excellence in reading in English. Factor 3 (Extrinsic academic compliance) involved eight items, with a shared variance of 4.88. Four items represented Compliance to complete English reading assignments and four items were related to the dimension of Grade, referring to receiving good grades in English courses and assignments. Factor 4 (Extrinsic test compliance) comprised four items, with a shared variance of 3.40. This set was a combination of

the dimensions of Competition, Recognition, and Compliance, and they were related to receiving good scores on standardized English tests and future success. Factor 5 (Extrinsic social sharing), with a shared variance of 3.04, involved four items, all of which represented Wang and Guthrie's (2004) construct of Social Sharing, and aimed to focus on participants' sharing of what they read with their peers.

3.4. Procedure

After obtaining the required ethical permissions from both the ethical committee in Medeniyet University Faculty of Educational Sciences and the foundation university the study would be conducted (see Appendix B), the participants and their instructors were informed about the goals, the design, and the procedure of the study. They were also informed that their participation was completely voluntary and that they could withdraw at any time. It was assured that all the information they shared would only be used for research purposes and would be kept confidential. Each participant was handed a consent form where the related information about the study was shared, and they were asked to sign it before the procedure started. Besides, in the questionnaire itself, which was shared online via Google Forms, an approval section was placed at the beginning so that they could not respond to the items without giving consent.

The study was conducted in the Spring Semester of the 2023-2024 academic year. Upon choosing two pre-existing classes, the experimental and control groups were randomly assigned. Then, after MREQ was administered to both groups as the pre-test, the reading practice sessions were started. For five weeks (one 45-minute reading lesson per week), the control group used materials taken from textbooks

while the experimental group used materials designed by ChatGPT. However, they were not informed about what type of material they were using for the reliability of the whole procedure and the data to be acquired. Also, any biased comments or questions that could lead participants in any way were avoided. For the control group, five texts from two upper-intermediate textbooks—*Concepts for Today* by Heinle & Heinle and *Life* by National Geographic— which their instructor had occasionally been using as sources for supplementary materials, were selected. In the meantime, the materials for the experimental group were developed via ChatGPT on a weekly basis. When designing these materials, it was aimed that the only difference between the two sets of materials would be their source, and all the other factors would be stabilized as much as possible. In this regard, certain steps were followed so that AI-generated materials were ensured to be similar to textbook materials in terms of length, subject, and activity format. At the end of the five-week treatment period, MREQ was administered to both groups as the post-test.

As the final step, the focus group interviews were held online with each participant. The interviews took approximately 90 minutes in total. The participants were expected to answer the following questions: “*What did you think about the materials in terms of clarity and relevance to your learning goals?*”, “*Thinking back on the materials you interacted with, did you feel engaged and interested in the content? Why or why not?*”, “*Considering your overall experience, do you feel that your motivation to read or learn was affected by the materials you interacted with during the study?*”, “*If you had the choice, would you prefer using the materials provided during the study in reading lessons and in your self-studies?*”. During the interviews, the responses of the participants were noted down for further analysis.

All the information the participants shared was kept confidential during and after the study.

3.4.1. Pre-test Administration

Initially, the background questionnaire and the MREQ were administered to both groups. In the background questionnaire, participants were expected to share personal information such as their age and gender. In the MREQ, the participants were expected to respond to 44 items, each of which was mandatory to be able to submit the questionnaire. The questionnaire was administered in English, as in the original study, since the current level of the participants was sufficient to understand the statements fully and respond properly. However, they were assured that in case of any confusion, they could seek help from their instructors for guidance or translation. It took them approximately 20 minutes to complete both questionnaires.

3.4.2. The Development of the Materials

As the first step, five sets of materials (texts and activities) were chosen from the pre-selected textbooks (see Appendix C for a sample text). When selecting these materials, first of all, it was made sure that their main objective was to develop reading skills rather than grammar or vocabulary. The vocabulary activities including decontextualized exercises (e.g. word forms) were excluded. The only type of vocabulary activities that were included were the ones focusing on the contextual meaning of given words or expressions from the text, finding their synonyms or rephrases. Second, as reading chapters in the textbooks were planned to be covered in more than one lesson, some questions were excluded both from pre and post-reading activities so that the material could be covered within 45 minutes. Third, the

texts and activities chosen from the textbooks were adapted to Microsoft Word documents so that they could be in a standard format in terms of font, layout, and organization when they are compared to the AI-generated equivalents. In addition, for standardization, the images in the textbook were excluded from the prepared documents as ChatGPT cannot create visuals along with reading materials, and such a difference would create a discrepancy between the two materials.

As the second step, five sets of materials (texts and activities) were developed via ChatGPT with detailed prompts (see Appendix C for sample texts). First of all, the current proficiency level of the students and their average age were specified to the chatbot, so that it could create level and age-appropriate materials. Second, it was prompted to design texts that could potentially attract the students' attention (e.g. including examples, anecdotes, and real people). Third, the topic and word count were specified to the chatbot so that it could create texts that are parallel to the traditional equivalents. If the word count of the generated text was not adequate, the chatbot was ordered to add some more content that would be in coherence with the original text. Finally, the types of pre and post-activities in the textbook were identified to the chatbot and some questions from the textbook were given as samples, and it was instructed to create similar activities. These activities included brainstorming/guiding open-ended questions in the pre-reading, and comprehension questions in the post-reading section (e.g. true/false statements, and multiple-choice questions including word reference, identifying the main idea, finding the synonym or contextual meaning of particular words or expressions, finding the correct paraphrase of a given sentence and finding specific information). The questions created by the chatbot were carefully checked for potential problems such as

repetitions, logical problems, and incorrect answers. When such problems occurred, it was asked to regenerate the problematic questions or sections. If the problem could not be resolved by regeneration, the chatbot was ordered to create that particular question or section from scratch with a revised instruction. For example, if two or more questions revolved around almost the same idea, it was emphasized in the revised instruction that repetitions should be avoided, and each question should be distinct from each other. Also, specifically in the true/false sections, the distribution of the true and false items was checked for test reliability so that they would be balanced in number. If either true or false items dominate the exercise, the section was regenerated. Finally, although no change was made in the created texts or questions so as not to distort their originality, a few adjustments regarding the scaffolding features included in the textbook materials had to be added manually due to the limitations of the chatbot (e.g. bold words, line numbers).

3.4.3. Post-test Administration

In the final stage of the study, after the five-week practice process was completed, MREQ was administered as the post-test with the aim of detecting any potential changes with regard to participants' motivation in reading English texts.

3.5. Data Analysis

The data was saved and analyzed via SPSS for Windows 22.0. Initially, the mean of the participants' ages and the gender distribution of the participants as percentages were calculated. Due to the number of participants in the study, a normal distribution was not expected to occur and, thus, non-parametric tests were chosen to test the hypotheses. In this regard, the Wilcoxon test was used for intra-group pre and post-

test comparisons, and the Mann-Whitney U test was used to compare the motivational levels of control and experimental groups after the treatment. In interpreting whether the obtained values were significant or not, a significance level of 0.05 was used as a criterion. To test the reliability of MREQ results, they were subjected to Cronbach's alpha coefficient, which is calculated between the values of 0 and 1 and used to predict the internal consistency of the items in the questionnaire. As shown in Table 1, it was determined that MREQ and its subscale scores for the five factors were between high-reliability levels.

Table 1: *Reliability Coefficients of the Pre and Post-tests and Shared Variance*

MREQ	Group	Cronbach's Alpha		%Variance
		Pre-test	Post-test	
Intrinsic motivation	Control	0.74	0.76	17.89
	Experimental	0.94	0.95	
Extrinsic drive to excel	Control	0.63	0.62	16.30
	Experimental	0.66	0.61	
Extrinsic academic compliance	Control	0.89	0.95	8.26
	Experimental	0.91	0.92	
Extrinsic test compliance	Control	0.63	0.61	7.07
	Experimental	0.86	0.87	
Extrinsic social sharing	Control	0.82	0.84	4.89
	Experimental	0.92	0.94	
MREQ Overall	Control	0.93	0.91	54.42
	Experimental	0.96	0.97	

The construct validity of MREQ was assessed through varimax rotation after an exploratory factor analysis for the overall data sample was performed. The percentage of variance value for the five factors was calculated as 54.42, which suggested an acceptable level of validity.

FINDINGS

In this section, the analysis of the obtained data is presented in line with the research questions. First, the initial and final reading motivation levels of the study groups were provided. Second, the influence of the AI-generated materials and textbook materials on reading motivation is explained, and the changes each group went through after the treatment was presented. Finally, the inter-group comparison of the pre-test and post-test results obtained from the control and experimental groups was presented.

3.6. Research Question 1: What is the reading motivation level among Turkish EFL learners?

3.6.1. The Reading Motivation Levels of the Control Group

Table 2 summarizes the mean scores, standard error mean, and standard deviation of the pre and post-test results of the control group, based on the descriptive analysis of the data. The results indicated that their average reading motivation before the treatment was 3.19, and it changed to 3.12 from the pre-test to the post-test, which means that there was a slight decrease of .07. The results also suggested that the pre-test results ($SD = 0.43$) were spread out slightly more than the post-test results ($SD = 0.39$), and there was an increase in the precision of the mean estimate from the pre-test to the post-test.

Table 2: *The Mean Scores of Reading Motivation Levels in the Control Group*

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Pre-test	15	3.19	.11	.43
Post-test	15	3.12	.10	.39

When the data was analyzed factor-wise (see Table 3), the results indicated that the participants in the control group had quite high reading motivation levels, as the mean scores of all five dimensions were found to be over 3.00. Among the five factors, however, *extrinsic test compliance* and *extrinsic academic compliance* were noticeably higher than the others. After the treatment, however, the *extrinsic social sharing* and *intrinsic motivation* were calculated to be greater than the others. Moreover, although *intrinsic motivation* initially had the lowest mean score, *extrinsic drive to excel* was shown to have the lowest mean score in the post-test.

Table 3: The Mean Scores of Reading Motivation Dimensions in the Control Group

		N	Mean		Std. Deviation
		Statistic	Statistic	Std. Error	Statistic
Factor 1	Intrinsic Motivation (Pre-test)	15	3.12	.09	.36
	Intrinsic Motivation (Post-test)	15	3.19	.16	.36
Factor 2	Extrinsic drive to excel (Pre-test)	15	3.16	.13	.62
	Extrinsic drive to excel (Post-test)	15	2.98	.17	.75
Factor 3	Extrinsic academic compliance (Pre-test)	15	3.29	.23	.51
	Extrinsic academic compliance (Post-test)	15	3.17	.09	.38
Factor 4	Extrinsic test compliance (Pre-test)	15	3.45	.19	.68
	Extrinsic test compliance (Post-test)	15	3.06	.09	.64
Factor 5	Extrinsic social sharing (Pre-test)	15	3.13	.16	.90
	Extrinsic social sharing (Post-test)	15	3.25	.19	.74

3.6.2. The Reading Motivation Levels of the Experimental Group

Based on the descriptive analysis of the data obtained from the experimental group, Table 4 shows the mean scores of their reading motivation, standard error mean, and standard deviation of the pre and post-test results. The results indicated that the average reading motivation level of the experimental group was found to be 2.76 in the pre-test and 2.98 in the post-test. The results also showed that the scores of the post-test were more spread out ($SD = 0.63$) than the scores of the pre-test ($SD = 0.58$). Besides, there was a slight decrease from the pre-test ($SE = 0.14$) to the post-test ($SE = 0.16$) in the precision of the mean estimate. It also became evident that the initial reading motivation level of the control group (3.19) was noticeably higher than the experimental group (2.76).

Table 4: *The Mean Scores of Reading Motivation Levels in the Experimental Group*

	N	Mean	Std. Deviation
	Statistic	Statistic	Statistic
Pre-test	15	2.76	.58
Post-test	15	2.98	.63

Table 5 presents the findings regarding the factor-wise analysis of the results obtained from the experimental group. It was shown that the factor with the highest mean score among the five factors, both in the pre-test and the post-test, was *extrinsic academic compliance* (3.00 in pre-test-3.14 in post-test), followed by *extrinsic drive to excel* (2.87 in pre-test-3.04 in post-test), and the lowest was *extrinsic social sharing* (2.40 in pre-test-2.75 in post-test).

Table 5: *The Mean Scores of Reading Motivation Dimensions in the Experimental Group*

		N	Mean		Std. Deviation
		Statistic	Statistic	Std. Error	Statistic
Factor 1	Intrinsic Motivation (Pre-test)	15	2.69	.18	.71
	Intrinsic Motivation (Post-test)	15	2.93	.16	.65
Factor 2	Extrinsic drive to excel (Pre-test)	15	2.87	.17	.67
	Extrinsic drive to excel (Post-test)	15	3.04	.17	.68
Factor 3	Extrinsic academic compliance (Pre-test)	15	3.00	.16	.65
	Extrinsic academic compliance (Post-test)	15	3.14	.18	.69
Factor 4	Extrinsic test compliance (Pre-test)	15	2.63	.23	.91
	Extrinsic test compliance (Post-test)	15	2.91	.26	1.01
Factor 5	Extrinsic social sharing (Pre-test)	15	2.40	.20	.81
	Extrinsic social sharing (Post-test)	15	2.75	.23	.92

3.7. Does the integration of the use of traditional materials affect EFL reading motivation?

The results obtained from the control group indicated that the mean score of the participants' reading motivation decreased from 3.19 to 3.12. As displayed by Table 6, the Wilcoxon Signed-Rank Test yielded the significance level as .29, which together indicated that this decrease in the overall results was not statistically significant. Therefore, there was not enough evidence showing that the differences in

the pre-test and the post-test results were meaningful. However, the fact that there was no improvement, either, suggested that the use of traditional reading materials did not have a positive influence on the students' reading motivation.

Furthermore, the factor-wise analysis of the data demonstrated small changes across all the dimensions of reading motivation, with minor increases in *intrinsic motivation* and *extrinsic social sharing*; and minor decreases in *extrinsic drive to excel*, *extrinsic academic compliance*, and *extrinsic test compliance* (see Table 6). However, as shown by Table 6, the only change that had statistical significance was shown to be *extrinsic test compliance* (see Appendix D for the Wilcoxon analysis report). Moreover, the increase in the standard deviations in Factors 2, 4, and 5 from the pre-test to the post-test indicated a greater variability in the participants' responses, which could be due to the effect of the implementation.

Table 6: *The Comparison of the Pre-test and the Post-test Results of the Control Group (Wilcoxon Signed Ranks Test)*

	Intrinsic Motivation	Extrinsic drive to excel	Extrinsic academic compliance	Extrinsic test compliance	Extrinsic social sharing	MREQ
Z	-1.23 ^b	-1.13 ^c	-.80 ^c	-2.51 ^c	-.62 ^b	-1.04 ^c
Asymp. Sig. (2-tailed)	.22	.26	.42	.01	.53	.30

In addition, the comparison of the pre-test and the post-test results on an item-by-item basis indicated a statistically significant decrease in the scores of the statements displayed in Table 7. First, the changes in the responses to item 19 indicated that the post-test scores were lower than the pre-test scores for most participants. Therefore, for some reason, most of the participants showed a tendency to attach less importance to the teacher's praise with regard to their reading skills. Second, nine

students gave the same responses to Item 35, and six students' scores were lower in the post-test, which suggested that reading with the motivation to improve their grades became less important for these students. Similar tendencies can be observed for item 37 and item 40, as can be seen in Table 7.

Table 7: *The Wilcoxon Signed Ranks Test for the Control Group*

Items	Ranks	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
19. I like my teacher to say that I read well in English.	Negative Ranks	8 ^{bd}	5.06	40.50	.02
	Positive Ranks	1 ^{be}	4.50	4.50	
	Ties	6 ^{bf}			
	Total	15			
35. I want to read in English to improve my grades.	Negative Ranks	6 ^{cz}	3.50	21.00	.02
	Positive Ranks	0 ^{da}	0.00	0.00	
	Ties	9 ^{db}			
	Total	15			
37. I try to read in English because I need a good score on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	9 ^{df}	5.06	45.50	.05
	Positive Ranks	1 ^{dg}	9.50	9.50	
	Ties	5 ^{dh}			
	Total	15			
40. I practice reading in English because I need to do well in my future classes.	Negative Ranks	7 ^{do}	4.64	32.50	.03
	Positive Ranks	1 ^{dp}	3.50	3.50	
	Ties	7 ^{dq}			
	Total	15			

3.8. Does the integration of AI as a tool for materials development affect EFL reading motivation?

When the results obtained from the pre-test and the post-test of the experimental group were analyzed, it was observed that the mean score of their reading motivation increased notably from 2.76 to 2.98, which meant an increase of 0.22. Although the experimental group initially fell behind the control group in both their pre-test and

post-test scores, the later increase in the overall score suggested that the use of AI-generated materials had a positive influence on their reading motivation. Moreover, as shown by Table 7, this change in the overall results was found to be statistically significant as the p-value was calculated as 0.01.

When the pre-test and the post-test results of the experimental group were analyzed with regards to the different dimensions of reading motivation (see Table 5; see Appendix D for the Wilcoxon analysis report), it was indicated that there were improvements in all five factors, which suggested a positive change in reading motivation of the participants in the experimental group. However, as shown by Table 8, although there was an increase in all dimensions of reading motivation from pre-test to post-test, a statistically significant increase was detected only in *extrinsic test compliance*. The increases in intrinsic motivation and extrinsic social sharing were just at the edge of statistical meaningfulness, as shown by the p values (.054 and .051, respectively). Furthermore, the changes in the standard deviations from the pre-test to the post-test (see Table 5) in *extrinsic academic compliance*, *extrinsic test compliance*, and *extrinsic social sharing* showed increased variability in the participants' responses, and more consistent responses in *intrinsic motivation* in the post-test, which could be due to the implementation effect.

Table 8: *The Comparison of the Pre-test and the Post-test results of the Experimental Group (Wilcoxon Signed Ranks Test)*

	Intrinsic motivation	Extrinsic drive to excel	Extrinsic academic compliance	Extrinsic test compliance	Extrinsic social sharing	MREQ
Z	-1.93 ^b	-1.37 ^b	-1.30 ^b	-2.15 ^b	-1.95 ^b	-2.67 ^b
Asymp. Sig. (2-tailed)	.05	.17	.20	.03	.05	.01

Table 9 presents the items that had a statistically significant change from the pre-test to the post-test. First, considering the items 6, 7, and 13, all of which represent *intrinsic motivation*, the results presented important findings. The positive ranks were notably more than the negative ranks for item 6, although the significance value was just at the threshold of statistical significance, it is evident that more students reported difficulty stopping when they read interesting texts. This could indicate an increase in their engagement and motivation when reading in English. Similar results accounted for item 7, which could posit that there were positive changes for 8 students in terms of enjoyment when reading new things in English. The changes for Item 13, however, provided even more remarkable findings. The positive ranks and the ties indicate together that the participants either found it more motivating to read interesting texts no matter the text difficulty or their opinions did not change, at worst. There was not a change in the negative direction for any students, which could posit that the intervention had a positive influence on their attitude towards reading in English. Second, significant findings also emerged for items 18 and 39, both corresponding to extrinsic motivation types. The responses to items 18 and 39 indicate that many of the students showed an increase in their scores, which could be interpreted as competition with peers inside or outside the classroom started to motivate them more to read in English.

Table 9: *The Wilcoxon Signed Ranks Test for the Experimental Group*

Items	Ranks	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
6. It is hard for me to stop reading in English when the topic is interesting.	Negative Ranks	1 ^q	2.50	2.50	.05
	Positive Ranks	6 ^r	4.25	25.50	
	Ties	8 ^s			
	Total	15			

7. I like reading about new things in English.	Negative Ranks	1 ^t	5.00	5.00	.02
	Positive Ranks	8 ^u	5.00	40.00	
	Ties	6 ^v			
	Total	15			
13. When an assignment is interesting, I can read difficult English materials more easily.	Negative Ranks	0 ^{al}	0.00	0.00	.00
	Positive Ranks	10 ^{am}	5.50	55.00	
	Ties	5 ^{an}			
	Total	15			
18. I like being the only student who knows an answer about something we read in English.	Negative Ranks	1 ^{ba}	3.50	3.50	.03
	Positive Ranks	7 ^{bb}	4.64	32.50	
	Ties	7 ^{bc}			
	Total	15			
39. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	1 ^{dl}	3.00	3.00	.05
	Positive Ranks	6 ^{dm}	4.17	25.00	
	Ties	8 ^{dn}			
	Total	15			

3.9. Is there a difference between the effects of AI-generated materials and traditional materials on EFL reading motivation?

3.9.1. Comparison of the pre-tests

The Mann-Whitney U-test was used to determine whether there was a statistically significant difference in the pre-tests of the two groups. Table 10 displays the test results as the mean rank, sum of ranks, and the significance values for the overall results of the pre-tests and their analysis depending on the five factors. The results indicated that the difference between the control group, with a mean rank of 18.90, and the experimental group, with a mean rank of 12.10, is statistically significant since the significance level was calculated as 0.03. Furthermore, the evaluation of the factors patterned within the questionnaire revealed that, initially, the control

group had higher scores in every factor than the experimental group. However, this difference is statistically significant for only *extrinsic test compliance* and *extrinsic social sharing*.

Table 10: *The Comparison of the Pre-test Results (Mann Whitney U-Test)*

	Group	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
Pre-tests (Overall)	Control	18.90	283.50	.03
	Experimental	12.10	181.50	
Factor 1: Intrinsic Motivation	Control	17.70	265.50	.17
	Experimental	13.30	199.50	
Factor 2: Extrinsic drive to excel	Control	17.90	268.50	.13
	Experimental	13.10	196.50	
Factor 3: Extrinsic academic compliance	Control	17.50	262.50	.21
	Experimental	13.50	202.50	
Factor 4: Extrinsic test compliance	Control	19.43	291.50	.01
	Experimental	11.57	173.50	
Factor 5: Extrinsic Social Sharing	Control	19.07	286.00	.03
	Experimental	11.93	179.00	

Moreover, the results obtained from the control and experimental groups were also compared on an item-by-item basis to evaluate the ones with a statistically significant difference. The Mann-Whitney U-Test results indicated statistically significant differences between the two groups in 12 of the items. Table 11 displays the items with the most significant differences as well as the mean rank, sum of ranks, and significance value between the results of the pre-tests of the groups.

Table 11: Comparison of the Pre-test Items for the Control and Experimental groups (Mann-Whitney U Test)

Items	Group	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
1. I like reading in English to learn something new about people and things that interest me.	Control	15	19,27	289,00	.01
	Experimental	15	11,73	176,00	
	Total	30			
7. I like reading about new things in English.	Control	15	19,20	288,00	.01
	Experimental	15	11,80	177,00	
	Total	30			
37. I try to read in English because I need a good score on tests like TOEFL, Michigan, IELTS, etc.	Control	15	19,33	290,00	.01
	Experimental	15	11,67	175,00	
	Total	30			
38. I try to read in English because I like seeing my reading score improve on tests like TOEFL, Michigan, IELTS, etc.	Control	15	19,50	292,50	.01
	Experimental	15	11,50	172,50	
	Total	30			
42. My friends and I like to share what we read in English.	Control	15	19,80	297,00	.01
	Experimental	15	11,20	168,00	
	Total	30			

Based on the mean ranks of items 1 and 7, both corresponding to intrinsic motivation, it can be observed that, initially, the control group was statistically superior to the experimental group before any treatments were provided. Based on this finding, it can be interpreted that it was more common for the participants in the control group, compared to the experimental group, to be involved in reading English

texts in line with their interests, enjoyment, and desires. Similarly, the control group had much higher mean ranks in items 37, 38, and 42, corresponding to extrinsic dimensions of reading motivation, compared to the experimental group. Therefore, it can be deduced that the control group could initially have been more motivated in reading in English both in extrinsic and intrinsic dimensions.

3.9.2. Comparison of the Post-tests

The Mann-Whitney U-test was also employed to identify whether there was a statistically significant difference in the post-tests of the two groups (see Appendix). Table 12 shows the post-test results as the mean rank, sum of ranks, and the significance values for the overall results and their analysis depending on the five factors. It was indicated that, unlike the pre-tests, in which the two groups differed notably in their overall scores as well as the individual factors, the post-test results indicated no significant disparities either in the overall scores or the specific factors. Therefore, although statistically significant differences existed in the pre-tests, it was determined that these differences disappeared in the post-tests. This finding could indicate that the treatment could have had an equalizing influence, thus leading to more comparable results between the two groups.

Table 12: The Comparison of the Post-test Results (Mann Whitney U-Test)

	Group	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
Post-tests (Overall)	Control	16.57	248.50	.50
	Experimental	14.43	216.50	
Factor 1: Intrinsic Motivation	Control	17.27	259.00	.27
	Experimental	13.73	206.00	
Factor 2: Extrinsic drive to excel	Control	14.87	223.00	.69
	Experimental	16.13	242.00	

Factor 3:	Control	15.17	227.50	.83
Extrinsic academic compliance	Experimental	15.83	237.50	
Factor 4:	Control	16.10	241.50	.70
Extrinsic test compliance	Experimental	14.90	223.50	
Factor 5:	Control	18.13	272.00	.98
Extrinsic Social Sharing	Experimental	12.87	193.00	

The post-tests of the control and experimental groups were also analysed on an item-by-item basis to see whether there are statistically significant differences in any of them. There was only 1 item that had a statistically significant difference between the two groups, which can be reviewed in Table 13. Although this item corresponds to the *intrinsic motivation* dimension, as no statistical difference between the groups was detected for this factor as a whole, it may not be very cautious to interpret one single item.

Table 13: Comparison of the Post-test Items for the Control and Experimental groups (Mann-Whitney U Test)

Items	Group	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
1. I like reading in English to learn something new about people and things that interest me.	Control	15	19,40	291,00	.01
	Experimental	15	11,60	174,00	
	Total	30			

4. CONCLUSIONS AND DISCUSSION

This section presents the conclusions drawn from the findings of the study and discusses the effect of AI-generated English reading materials on reading motivation. First, the conclusions of the study are explained. Then, the findings of the present study were discussed in relation to the findings of the previous studies. Next, practical recommendations were provided for teachers, learners, and curriculum developers. Finally, the limitations of the study were explained; and then, suggestions for further research were provided.

4.1. Conclusions

Based on the results of the present study, several conclusions can be drawn in relation to the influence of AI-generated reading materials in comparison to traditional textbook reading materials. First, although the students who used AI-generated materials initially started with a considerably lower motivation level, after the five-week treatment, there was a noticeable improvement. The consistent increase in all dimensions of reading motivation shows that using AI-generated materials enhances students' reading motivation. Although the significant increase only occurred in *extrinsic test compliance*, it is important to underline that the increases in *intrinsic motivation* and *extrinsic social sharing* are only at the edge of statistical meaningfulness. Therefore, it can be drawn that a long-term use of AI-generated materials could possibly enhance these areas more in time, by allowing learners to experience more enjoyment when reading and find the urge to initiate reading practice voluntarily, and also enjoy the experience of sharing text-related information with their peers. The significant increase in *extrinsic test compliance* suggests that the AI-generated materials have a positive impact in this dimension,

which might indicate that these materials are either better aligned with the learners' needs and expectations with respect to preparing for the exams or they are more relevant and engaging, thus more motivating. Second, the results indicate an increased variability in the AI group's responses, suggesting that the impact of AI-generated reading materials on reading motivation could be greater for some students than others. Overall, the results highlight that using AI-generated materials might not only enhance learners' overall reading motivation, but it could also support their commitment to the requirements of the exams and hence contribute to their academic achievement. On the other hand, the only change for the motivation level of the textbook group was a slight decrease. Therefore, the initial gap between the two groups almost closed. This might demonstrate that textbook materials do not enhance or maintain learners' reading motivation. The results indicating a significant decrease in *extrinsic test compliance* for the students who used textbook materials suggest that using traditional textbook materials might lead to a reduction in learners' reading motivation because they might place less value on reading practices in parallel with exams, or find it less motivating when they consider reading as an exam-related skill. It also suggests that the students might not find textbook materials engaging enough to maintain their motivation in terms of preparing for the exams. Although there are minor increases in the mean scores of *extrinsic motivation* and *extrinsic social sharing*, it is assumed that this could be a coincidental finding, and there is no statistically proven effect of textbook materials on either learners' intrinsic reading motivation or the value they attach to share their reading experiences with their peers.

Moreover, these findings are partly relevant to the findings from the focus groups. The students using textbook materials mainly expressed satisfaction with the materials' topic, by stating that they were relevant to their personal interests and academic fields, which they believed increased their motivation. On the other hand, the students using AI-generated materials highlighted the challenging nature of the texts, especially in terms of vocabulary, as a factor contributing to their reading motivation. However, two of them also stated that they did not always find the topics engaging enough. Therefore, considering the ultimate increase of motivation that occurred in the AI group, it seems that the authentic language and the challenge it brings could have played a more critical role, rather than whether they find them engaging, in enhancing students' motivation to read. Although some students from the textbook group mentioned the benefits of vocabulary, none of them expressed a connection between their motivation as relating to feeling challenged. In addition, the fact that none of the students in the textbook group expressed dissatisfaction with the topic of the texts, unlike the AI group, suggests that although there seems a need for AI-generated materials to be optimized for engagement and learners' interests, the sense of being challenged, perhaps by the language perceived to be 'real', could have been more influential in boosting motivation.

4.2. Pedagogical Implications

Based on the findings of the present study, several implications can be made and discussed in relation to the findings of the previous studies. First of all, the overall results suggest that AI-generated materials significantly enhance learners' English reading motivation. In this regard, the findings of the current study are compatible with some previous studies conducted within the general framework of the

integration of AI in language education, showing that AI has a positive influence on language learning motivation (Moybeka et al., 2023; Wei 2023). Second, when considered in a narrower framework, the findings largely support the previous research exploring the impact of AI on foreign language reading motivation. Ali et al. (2023), for example, found that using AI tools, specifically ChatGPT, for developing reading skills is perceived to be motivating by language learners and increases their intrinsic, extrinsic, and autonomous motivation. Although it is a study attempting to discover learner perceptions regarding the use of the chatbot, without intervention in the curriculum, the current study might support its findings with the additional finding that learners not only find it motivating to benefit from AI, but they indeed get more motivated when AI is involved in their learning process. Likewise, the results are compatible with Aydın Yıldız (2023), revealing the positive impact of ChatGPT-generated content on language learning motivation, specifically in self-regulation, intrinsic values, and test anxiety. This finding might result from certain features of AI as a tool for materials development, such as text authenticity and level-appropriateness. Authentic language materials are key elements of language teaching to maintain a ‘real’ contact with the target language and increase learners’ motivation (Dörnyei & Ushioda, 2011). AI might play a critical role as a tool to meet this need (Baskara & Mukarto, 2023), as authentic but level-appropriate texts are generally hard to find, especially for the lower proficiency levels. Additionally, considering that the texts being interesting or not plays a significant role in increasing motivation and reading engagement (Day & Bamford, 1998; 2002; Eskey, 2005; McDonough et al., 2013; Pirih, 2015), it could be interpreted that although topic selection was not made in an individualized fashion, suiting to

learners' interests, certain details in the texts such as the references to social media and popular culture or the mentions of famous people could have contributed to the way students got involved with the materials. Second, the results also indicate that the integration of traditional materials does not affect learners' reading motivation positively. The fact that there was a slight decrease in the learners' motivation after the implementation is also noteworthy although it was not statistically significant. These findings are consistent with Lee et al.'s (2023) findings that while AI integration as a tool for materials development significantly improves reading enjoyment and interest in reading in English, the use of textbook passages in reading lessons leads to a decrease in both areas. This might result from the fact that an overreliance on textbooks and traditional materials can demotivate learners by causing a monotonous teaching style (Ghaith, 2019). However, as the exercises in the materials provided during the implementation are designed traditionally and similarly (e.g. true/false, finding the specific information, word reference), the difference could also have arisen from the constructed versus authentic-like nature of the texts, highlighting the risks associated with the simplifications and artificial uses in constructed texts as well as a focus on language features (Peacock, 1997). Third, the post-test results indicate that the contrast between using textbook materials and AI-generated materials is not in favor of the latter with regard to its potential to increase reading motivation. However, this is considered to be a result of the very wide gap existing initially between the two groups. Therefore, the fact that the integration of AI as a tool for materials development enhanced learners' reading motivation in all five dimensions is pedagogically a more constructive inference. Also, the results show that among the five dimensions of motivation, the significant increase occurred

only in extrinsic test compliance. This can be explained by the more variable nature of extrinsic types of motivation compared to intrinsic motivation, which is more steady and self-sustaining (Ryan & Deci, 2000a). However, as the value given to a task increases, which is reading in this context, due to external factors, the learners can internalize it progressively, and gain a more self-determined and more autonomous form of extrinsic motivation, moving towards and functionally resembling the intrinsic motivation (Ryan & Deci, 2000a), and thus, nurturing the perceived competence and boosting intrinsic motivation in turn (Ushioda, 2014). Therefore, although a significant increase in intrinsic motivation can be accepted as more ideal, the changes in extrinsic motivation can be giving the signs of a more internalized task value which may result in a form close to intrinsic motivation, although not necessarily intrinsic motivation per se.

4.3. Practical Recommendations

Based on the findings of the present study, several recommendations can be made regarding teaching and learning practices, specifically in EFL reading. First of all, teachers should be aware of the potential AI tools hold in terms of materials development. Since the workload of teachers does not always allow for the freedom to prepare materials that are optimal for certain groups of students, AI tools such as ChatGPT can provide them with the opportunity to design new materials or adapt other ones, by modifying them according to their learners' needs, with only a few well-thought commands. Although the chatbot does not provide a wide range of exercise types yet, at least not without very specific and detailed commands, the fact that it can create texts about almost anything and it can also prepare thought-provoking questions that require analytical thinking skills highlights the advantages

both on the part of the teachers and students. Second, the findings also point to the extent to which authentic texts can provide benefits for the students, especially in terms of reading motivation. As language teachers are generally afraid of exposing their students to texts that are above their levels and hence could demotivate them, they might avoid providing them with authentic texts. However, ChatGPT, providing both authentic and level-appropriate texts at the same time, might serve teachers as a facilitator in this process. Third, because of the new era beginning with the appearance of the most recent AI tools, teachers should be able to update themselves in terms of their technological skills and use of AI tools so that they can make the most out of this opportunity. This is also a requirement because of the way chatbots such as ChatGPT work and the certain level of expertise they need. For example, when ChatGPT is asked to prepare a text including a certain number of words, it sometimes fails to do it and cannot produce sufficient content. However, when asked to adjust the word count according to the Microsoft Word criteria, the command gets more specified and so does the content. In addition, when asked to elaborate on a certain subtopic or an example and produce more content, it sometimes repeats the same ideas. However, when asked to avoid repetitions and provide coherent contributions, it modifies the content with a better output. Therefore, teachers should experience the different functions of such tools and develop certain strategies so that they can maximize the benefits. In addition, teachers should be knowledgeable enough to guide their learners about how to use the chatbots for what purposes (e.g. to create language teaching content for themselves, to receive feedback on a written work, to be instructed on a certain language subject). Finally, it should be noted that no matter how useful AI tools are both for materials development and other teaching

practices, human intervention is always required as it is the teachers who can identify their learners' levels, needs, and interests. Therefore, although chatbots such as ChatGPT can indeed be a precious opportunity to create content for both teachers and learners, it should be noted that an overreliance on such tools in and outside the classroom might make the learning process monotonous and jeopardize the learners' willingness to benefit from different resources and different learning methods, and may negatively affect their motivation in the long run.

4.4. Limitations

Although the present study presents useful findings, it should be noted that it also has some limitations. First of all, the number of participants was relatively small, which means that the diversity of the opinions and motivational attitudes discovered by the questionnaires regarding foreign language reading motivation can be considered low. Therefore, the generalizability of the findings needs careful consideration. Second, the five-week treatment process can be considered relatively short because motivation is a complex and unstable phenomenon and could require a long time for changes to occur. Third, since topic standardization of the materials was deemed necessary for research purposes, the AI materials were developed in line with the topics covered in the textbook materials, eliminating the chances of free topic selection offered by the chatbot. This was a disadvantage considering that ChatGPT can provide a very wide range of text topics, and thus, be tailored according to the learners' interests. In addition, as the free version of ChatGPT cannot provide images, the images in the textbook materials were also not provided in the worksheets, for standardization. The absence of images on the worksheets might have had a negative effect, especially for those learners with visual learning

styles. However, considering that the influence of text authenticity and level appropriateness are more important criteria in the context of this research, this was not considered a problem.

4.5. Recommendations for Further Research

While the findings obtained from the present study provided valuable insight into the impact of AI-generated materials on EFL learners' reading motivation, there are several areas to be further explored. First of all, to account for the variability among different learners, there should be more research focusing on the effects of AI integration on learner motivation for different genders, ages and proficiency levels. Additionally, to explore the different dynamics of AI-integrated reading practices with regard to learner motivation, research should also focus on different ways of utilizing these tools. For example, it would be very useful to explore the impact of students' self-use and self-discovery of AI tools such as ChatGPT to improve their reading skills, as well as other areas of their language development. Second, to ensure the reliability of the findings, the research should be extended to different universities and other educational institutions. In addition, to increase the reliability and the validity of the findings, and to gain a deeper understanding, there should be studies conducted with larger groups of participants and, ideally, on a longer-term basis. Furthermore, regarding the content generation function of chatbots, research can focus on the usefulness of certain types of materials and different genres (short stories, fairy tales, poems, newspaper articles, social media posts, etc.) and their possible impact on learner motivation. Moreover, as the research concerning the teachers' side regarding AI integration is limited as well, it would be very useful to study their perceptions as well as the long-term impact of the AI tools on their

teaching practices. Last but not least, considering the new era in education initiated by AI, it is also a crucial need to involve the curriculum developers and policy makers in the related research. Since the collaboration between researchers, teachers, curriculum developers and policy makers is required to establish a good standard in language education, it would also be beneficial to investigate their views concerning the solutions for language teaching.



REFERENCES

- Ahmadi, M. R. (2017). The impact of motivation on reading comprehension. *International Journal of Research in English Education*, 2(1), 1–7. <https://doi.org/10.18869/acadpub.ijree.2.1.1>
- Albedaiwi, A. A. (2011). *EFL Materials in public school classrooms in Saudi Arabia: An investigation of the extent to which teachers engage in materials/textbooks development in order to design learning experiences to meet the needs of their students as an indicator of teacher autonomy* [University of Glasgow]. <http://theses.gla.ac.uk/id/eprint/5502>
- Albiladi, W. S. (2018). Exploring the use of written authentic materials in ESL reading classes: Benefits and challenges. *English Language Teaching*, 12(1), 67. <https://doi.org/10.5539/elt.v12n1p67>
- Alexander, J. D., & Nygaard, L. C. (2008). Reading voices and hearing text: Talker-specific auditory imagery in reading. *Journal of Experimental Psychology: Human Perception and Performance*, 34(2), 446–459.
- Ali, J. K. M., Shamsan, M. A. A., Hezam, T. A., & Mohammed, A. A. Q. (2023). Impact of ChatGPT on learning motivation: *Journal of English Studies in Arabia Felix*, 2(1), 41–49. <https://doi.org/10.56540/jesaf.v2i1.51>
- Aljanabi, M., Ghazi, M., Ali, A. H., & Abed, S. A. (2023). ChatGPT: Open possibilities. *Iraqi Journal For Computer Science and Mathematics*, 4(1), 62–64.
- Al-Nafisah, K., & Al-Shorman, R. A. (2011). Saudi EFL students' reading interests. *Journal of King Saud University - Languages and Translation*, 23(1), 1–9. <https://doi.org/10.1016/J.JKSULT.2009.07.001>
- Al-Sadan, I. (2000). Educational assessment in Saudi Arabian schools. *Assessment in Education: Principles, Policy & Practice*, 7, 143–155.
- Al-Shehri, S., & Gitsaki, C. (2010). Online reading: a preliminary study of the impact of integrated and split-attention formats on L2 students' cognitive load. *ReCALL*, 22(3), 356–375. <https://doi.org/10.1017/S0958344010000212>
- Anderson, R. C., & Pearson, P. D. (1984). *Handbook of reading research*. Longman.
- Aydın, S. (2011). Does recreational reading in native language influence foreign language learning process? *Qualitative Report*, 16(6), 1554–1573. <https://doi.org/https://doi.org/10.46743/2160-3715/2011.1317>
- Aydın, S. (2013). The influences of recreational reading in a native language on foreign language learning. *Humanising Language Teaching*, 15(4).

- Aydın Yıldız, T. (2023). The impact of ChatGPT on language learners' motivation. *Journal of Teacher Education and Lifelong Learning*, 5(2), 582–597. <https://doi.org/10.51535/tell.1314355>
- Bahri, H., & Mahadi, T. S. T. (2016). Google Translate as a supplementary tool for learning Malay: A case study at Universiti Sains Malaysia. *Advances in Language and Literary Studies*, 7(3), 161–167. <https://doi.org/10.7575/aiac.all.v.7n.3p.161>
- Baker, T., Smith, L., & Anissa, N. (2019). *Educ-AI-tion rebooted? Exploring the future of artificial intelligence in schools and colleges*.
- Baskara, R., & Mukarto, M. (2023). Exploring the implications of ChatGPT for language learning in higher education. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 7(2), 343–358.
- Braze, D., Katz, L., Magnuson, J. S., Mencly, W. E., Tabor, W., Van Dyke, J. A., & Shankweiler, D. P. (2016). Vocabulary does not complicate the simple view of reading. *Reading and Writing*, 29(3), 435–451.
- Brown, G., & Yule, G. (1983). *Discourse analysis*. Cambridge University Press.
- Brown, H. D. (1981). Affective factors in second language learning. In J. E. Alatis, H. B. Altman, & P. M. Alatis (Eds.), *Vie second language classroom: directions for the eighties* (pp. 111–129). Oxford University Publishing.
- Brown, H. D. (1994). *Teaching by principles*. Prentice Hall.
- Bryant, P., & Goswami, U. (2016). *Phonological skills and learning to read*. Routledge.
- Cahyono, B. Y., & Widiati, U. (2006). The teaching of EFL reading in the Indonesian context: The state of the art. *TEFLIN Journal*, 17, 36–58.
- Cambria, J., & Guthrie, J. T. (2010). Motivating and engaging students in reading. *The NERA Journal*, 46(1), 16–29.
- Carnine, D., Silbert, J., & Kameenui, E. J. (1990). *Direct instruction reading*. Merrill.
- Carrell, P. L. (1984). The effects of rhetorical organization on ESL readers. *TESOL Quarterly*, 19(4), 441–469.
- Carrell, P. L. (1987). Content and formal schemata in ESL reading. *TESOL Quarterly*, 21(3), 461. <https://doi.org/10.2307/3586498>
- Carrell, P. L., Devine, J., & Eskey, D. E. (1988). *Interactive approaches to second language reading*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524513>
- Carrell, P. L., & Eisterhold, J. C. (1988). Schema theory and ESL reading pedagogy. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 73–92). Cambridge University Press.

- Chen, P. H. (2019). The joint effects of reading motivation and reading anxiety on English reading comprehension: A case of Taiwanese EFL university learners. *Taiwan Journal of TESOL*, 16(2), 1–39. [https://doi.org/https://doi.org/10.30397/TJTESOL.201910_16\(2\).0001](https://doi.org/https://doi.org/10.30397/TJTESOL.201910_16(2).0001)
- Chen, Y., Smith, T. J., York, C. S., & Mayall, H. J. (2020). Google Earth Virtual Reality and expository writing for young English Learners from a Funds of Knowledge perspective. *Computer Assisted Language Learning*, 33(1–2), 1–25. <https://doi.org/10.1080/09588221.2018.1544151>
- Chiang, M. (2016). Effects of varying text difficulty levels on second language (L2) reading attitudes and reading comprehension. *Journal of Research in Reading*, 39(4), 448–468. <https://doi.org/10.1111/1467-9817.12049>
- Choi, Y., & Zhang, D. (2018). The relative role of vocabulary and grammatical knowledge in L2 reading comprehension: A systematic review of literature. *IRAL - International Review of Applied Linguistics in Language Teaching*, 59(1), 1–30. <https://doi.org/10.1515/iral-2017-0033>
- Cierniak, G., Scheiter, K., & Gerjets, P. (2009). Explaining the split-attention effect: Is the reduction of extraneous cognitive load accompanied by an increase in germane cognitive load? *Computers in Human Behavior*, 25(2), 315–324. <https://doi.org/10.1016/j.chb.2008.12.020>
- Day, R. R., & Bamford, J. (1998). *Extensive reading in the second language classroom*. Cambridge University Press.
- Day, R. R., & Bamford, J. (2002). Top ten principles for teaching extensive reading. *Reading in a Foreign Language*, 14(2), 136–141.
- Deci, E. L. (1992). The relation of interest to the motivation of behavior: a self-determination theory perspective. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), *Wie role of interest in learning and developm* (pp. 43–70).
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer US. <https://doi.org/10.1007/978-1-4899-2271-7>
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26(3–4), 325–346. <https://doi.org/10.1080/00461520.1991.9653137>
- Derewianka, B. (2014). Developing electronic materials for language teaching. In *Developing materials for language teaching*, (pp. 199–220). Bloomsbury Publishing.
- Dewi, H. K., Putri, R. E., Rahim, N. A., Wardani, T. I., & Pandin, M. G. R. (2021). The use of AI (artificial intelligence) in English learning among university student: case study in English Department, Universitas Airlangga. *SOC ARXIV*.

- Dhanapala, K. V., & Hirakawa, Y. (2016). L2 reading motivation among Sri Lankan university students. *Reading Psychology*, 37(2), 202–229.
- Dickinson, L. (1995). Autonomy and motivation: a literature review. *System*, 23, 165–174.
- Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning*, 40(1), 45–78. <https://doi.org/10.1111/j.1467-1770.1990.tb00954.x>
- Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *The Modern Language Journal*, 78(3), 273–284. <https://doi.org/10.2307/330107>
- Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching*, 31(3), 117–135. <https://doi.org/10.1017/S026144480001315X>
- Dörnyei, Z. (2000). Motivation in action: Towards a process-oriented conceptualisation of student motivation. *British Journal of Educational Psychology*, 70(4), 519–538. <https://doi.org/10.1348/000709900158281>
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum Associates, Inc.
- Dörnyei, Z. (2006). Individual differences in second language acquisition. *AILA Review*, 19(1), 42–68.
- Dörnyei, Z. (2009). Individual differences: Interplay of learner characteristics and learning environment. *Language Learning*, 59(1), 230–248.
- Dörnyei, Z. (2020). *Innovations and challenges in language learning motivation*. Routledge.
- Dörnyei, Z., Muir, C., & Ibrahim, Z. (2014). Directed motivational currents: Energising language learning by creating intense motivational pathways. In D. Lasagabaster, A. Doiz, & J. M. Sierra (Eds.), *Motivation and foreign language learning: From theory to practice* (1st ed., pp. 7–30). John Benjamins Publishing Company.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (C. N. Candlin & D. R. Hall, Eds.; 2nd ed.). Pearson Education Limited. <https://www.taylorfrancis.com/books/9781317862826>
- Dubin, F., & Bycina, D. (1991). Academic reading and the ESL/EFL teacher. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (2nd ed., pp. 195–215). Heinle & Heinle.
- Eccles, J., & Midgley, C. (1989). Stage-environment fit: Developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 139–186). Academic Press.

- Eccles, J. S., Adler, T. F., Futterman, R., Susan, B. G., Kaezala, C. M., Meece, J. M., & Carol Midgley. (1983). Expectancies, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives* (pp. 75–146). Freeman.
- Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading*, 18(1), 5–21.
- Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research*. Orienta-Konsultit.
- Eskey, D. E. (2005). Reading in a second language. In E. Hinkel (Ed.), *Handbook of Research in Second Language Teaching and Learning* (pp. 563–579). Lawrence Erlbaum Associates.
- Etefa, F., Yigzaw, A., Shifere, K., & Tezera, M. (2023). *Effect of Content and Language Integrated Learning/ CLIL/ on EFL students' reading motivation and comprehension in Ethiopia*. 1–13. <https://www.researchsquare.com/article/rs-3223850/v1>
- Fatemi, A. H., & Vahidnia, F. (2013). Self-efficacy and motivation among Iranian EFL Learners: An Investigation into their Relationships. *International Journal of English Language Education*, 1(3). <https://doi.org/10.5296/ijele.v1i3.3771>
- Fauzi, I., Saman, T. N., Zannah, N., Octaviani, S., & Winey, B. G. (2022). The relationship between students' reading motivation and the success to comprehend the English texts. *Journal of English Teaching and Learning Issues*, 5(1), 31. <https://doi.org/10.21043/jetli.v5i1.14959>
- Fitria, T. N. (2021). Grammarly as AI-powered English writing assistant: students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 65–78. <https://doi.org/10.31002/metathesis.v5i1.3519>
- Fujita, K., & Noro, T. (2009). The effects of 10-minute extensive reading on the reading speed, comprehension and motivation of Japanese high school EFL learners. *Japan Society of English Language Education*, 20, 21–30.
- Gao, J. (2021). Exploring the feedback quality of an automated writing evaluation system Pigai. *International Journal of Emerging Technologies in Learning (IJET)*, 16(11), 322–330. <https://doi.org/10.3991/ijet.v16i11.19657>
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. Edward Arnold.
- Gardner, R. C. (1988). The socio-educational model of second-language learning: Assumptions, findings, and issues. *Language Learning*, 38, 101–126.

- Gardner, R. C. (2001). Integrative motivation and second language acquisition. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 1–19). University of Hawaii Press.
- Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Newbury House.
- Ghafournia, N., & Farhadian, Z. (2018). The relationship among demotivating factors, gender, educational fields, and reading proficiency: A study of Iranian EFL learners. *International Journal of Research in English Education*, 3(4), 36–49. <https://doi.org/10.29252/ijree.3.4.36>
- Ghaith, G. (2019). The interplay of selected demotivation determinants and achievement in EFL critical reading and writing. *The Electronic Journal for English as a Second Language*, 22(4), 1–16.
- Ghali, M. A., Ayyad, A. A., Abu-Naser, S. S., & Abu, M. (2018). An intelligent tutoring system for teaching English grammar. *International Journal of Academic Engineering Research*, 2(2), 1–6.
- Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language Teaching*, 40(2), 97–118. <https://doi.org/10.1017/S0261444807004144>
- Gilmore, A. (2012). Materials evaluation and design in language teaching. *Language Teaching*, 45(2), 250–262. <https://doi.org/https://doi.org/10.1017/S0261444811000607>
- Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research. *Academy of Management Annals*, 14(2), 627–660. <https://doi.org/10.5465/annals.2018.0057>
- Godwin-Jones, R. (2015). Contributing, creating, curating: Digital literacies for language learners. *Language Learning & Technology*, 19, 8–20.
- Goodman K. S. (1967). Reading: A psycholinguistic guessing game. *Literacy Research and Instruction*, 6(4), 126–135.
- Goulden, R., Nation, P., & Read, J. (1990). How large can a receptive vocabulary be? *Applied Linguistics*, 11, 341–363.
- Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, 25(3), 375. <https://doi.org/10.2307/3586977>
- Grabe, W. (2009). *Reading in a second language: Moving from theory to practice* (2nd ed.). Cambridge University Press.
- Grabe, W., & Stoller, F. L. (2019). *Teaching and researching reading*. Routledge. <https://doi.org/10.4324/9781315726274>

- Green H. H. (2007). *Reading Comprehension: Start it early and teach it often!*
<http://hdl.handle.net/1803/255>
- Gross, J., Millett, A. L., Bartek, B., Bredell, K. H., & Winegard, B. (2013). Evidence for prosody in silent reading. *Reading Research Quarterly*, 49, 189–208.
- Guthrie, J. T., & Wigfield, A. (1999). How motivation fits into a science of reading. *Scientific Studies of Reading*, 3(3), 199–205.
https://doi.org/10.1207/s1532799xssr0303_1
- Han, F. (2021). The Relations Between Motivation, Strategy Use, Frequency, and Proficiency in Foreign Language Reading: An Investigation With University English Language Learners in China. *SAGE Open*, 11(2), 215824402110084.
<https://doi.org/10.1177/21582440211008423>
- Haristiani, N. (2019). Artificial Intelligence (AI) Chatbot as Language Learning Medium: An inquiry. *Journal of Physics: Conference Series*, 1387(1), 012020.
<https://doi.org/10.1088/1742-6596/1387/1/012020>
- Harmer, J. (1991). *The practice of English language teaching*. Longman.
- Hong, W. C. H. (2023). The impact of ChatGPT on foreign language teaching and learning: Opportunities in education and research. *Journal of Educational Technology and Innovation*, 5(1), 37–45.
- Hung, H. C. M. (2009). Applying cognitive load theory in reading comprehension. *Proceedings of the 5th CamTESOL Conference on English Language “The Globalisation of ELT: Emerging Directions*, 184–196.
- Hutchinson, T., & Waters, A. (1987). *English for specific purposes*. Cambridge University Press.
- Hwang, G.-J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of Artificial Intelligence in Education. *Computers and Education: Artificial Intelligence*, 1, 100001.
<https://doi.org/10.1016/j.caeai.2020.100001>
- IEEE-USA. (2017). *IEEE-USA position statement: Artificial intelligence research, development and regulation*.
- Jahan Khan, T., Murad Sani, A., & Shaikh-Abdullah, S. (2017). Motivation to read in a second language: A review of literature. *International Journal of Research in English Education*, 2(4), 41–50. <https://doi.org/10.29252/ijree.2.4.41>
- Jiang, R. (2022). How does artificial intelligence empower EFL teaching and learning nowadays? A review on artificial intelligence in the EFL context. *Frontiers in Psychology*, 13, 1–8. <https://doi.org/10.3389/fpsyg.2022.1049401>
- Jung, J. (2009). Second language reading and the role of grammar. *Working Papers in TESOL & Applied Linguistics*, 9(2), 29–48.

- Karanasios, S., & Allen, D. (2018). Activity theory in information systems research. *Information Systems Journal*, 28(3), 439–441. <https://doi.org/10.1111/isj.12184>
- Karyuatry, L. (2018). Grammarly as a tool to improve students' writing quality: Free online-proofreader across the boundaries. *JSSH (Jurnal Sains Sosial Dan Humaniora)*, 2(1), 83–89. <https://doi.org/10.30595/jssh.v2i1.2297>
- Kassem, H. M., & Alqahtani, D. A. (2023). Motivation, strategy use, and comprehension in foreign language reading: The case of Saudi EFL learners at the preparatory year. *Journal of Language Teaching and Research*, 14(5), 1290–1301. <https://doi.org/10.17507/jltr.1405.17>
- Khan, R. M. I., Shahbaz, M., Kumar, T., & Khan, I. (2020). Investigating Reading Challenges Faced by EFL Learners at Elementary Level. *Register Journal*, 13(2), 277–292. <https://doi.org/10.18326/rjt.v13i2.277-292>
- Kikuchi, K. (2013). *Language learning motivation in Japan* (M. T. Apple, D. Da Silva, & T. Fellner, Eds.; pp. 206–224). Multilingual Matters. <https://doi.org/10.21832/9781783090518>
- Kikuchi, K., & Sakai, H. (2009). Japanese learners' demotivation to study English: A survey study. *JALT Journal*, 31(2), 183–204.
- Kim, J., & Cho, Y. (2013). Relative roles of vocabulary and grammar knowledge in second language reading. *Korean Journal of English Language and Linguistics*, 13(3), 497–520.
- Kim, N.-Y. (2016). Effects of voice chat on efl learners' speaking ability according to proficiency levels. *Multimedia Assisted Language Learning*, 19, 63–88.
- King, M. R. (2023). A conversation on artificial intelligence, chatbots, and plagiarism in higher education. *Cellular and Molecular Bioengineering*, 16, 1–2.
- Kirsch, I. S., & Guthrie, J. T. (1984). Adult reading practices for work and leisure. *Adult Education Quarterly*, 34(4), 213–232.
- Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. Cambridge University Press.
- Koh, S. (2022). A comparative error analysis of neural machine translation output: based on film corpus. *LAK Journal*, 30, 157–177.
- Komiyama, R. (2013). Factors underlying second language reading motivation of adult EAP students. *Reading in a Foreign Language*, 25(2), 149–169.
- Koraishi, O. (2023). Teaching English at the age of AI: Embracing ChatGPT to optimize EFL materials and assessment. *LET Linguistics Literature and English Teaching Journal*, 3(1), 55–72.

- Kost, S. (2003). *Motivation and foreign language teaching-strategies for motivation*. GRIN Verlag.
- Krashen, S. D. (2004). *The power of reading: insights from the research* (2nd ed.). Libraries Unlimited.
- Kung, F. W. (2019). Teaching second language reading comprehension: the effects of classroom materials and reading strategy use. *Innovation in Language Learning and Teaching*, 13(1), 93–104.
<https://doi.org/10.1080/17501229.2017.1364252>
- Leahy, W., & Sweller, J. (2004). Cognitive load and the imagination effect. *Applied Cognitive Psychology*, 18(7), 857–875. <https://doi.org/10.1002/acp.1061>
- Lee, J. H., Shin, D., & Noh, W. (2023). Artificial intelligence-based content generator technology for young English-as-a-foreign-language learners' reading enjoyment. *RELC Journal*, 54(2), 508–516.
<https://doi.org/10.1177/00336882231165060>
- Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design* (9th ed.). Prentice Hall.
- Levy, Y., & J. Ellis, T. (2011). A guide for novice researchers on experimental and quasi-experimental studies in information systems research. *Interdisciplinary Journal of Information, Knowledge, and Management*, 6, 151–161.
<https://doi.org/10.28945/1373>
- Liman Kaban, A., & Karadeniz, S. (2021). Children's reading comprehension and motivation on screen versus on paper. *SAGE Open*, 11(1), 215824402098884.
<https://doi.org/10.1177/2158244020988849>
- Lin, C.-C., Lin, V., Liu, G.-Z., Kou, X., Kulikova, A., & Lin, W. (2020). Mobile-assisted reading development: a review from the Activity Theory perspective. *Computer Assisted Language Learning*, 33(8), 833–864.
<https://doi.org/10.1080/09588221.2019.1594919>
- Lin, D., Wong, K. K., & McBride-Chang, C. (2012). Reading motivation and reading comprehension in Chinese and English among bilingual students. *Reading and Writing*, 25(3), 717–737. <https://doi.org/10.1007/s11145-011-9297-8>
- Liu, S., & Kunnan, A. J. (2016). Investigating the application of automated writing evaluation to Chinese undergraduate English majors: A case study of writeToLearn. *CALICO Journal*, 33(1), 71–91.
<https://doi.org/10.1558/cj.v33i1.26380>
- Lotze, N. (2018). Goodbye to classroom teaching: Artificial intelligence in language learning. *Magazin Sprache*.
- Lustantie, N., & Aprilia, F. (2020). Reading interest and achievement motivation: A study in an EFL context. *TESOL International Journal*, 15(4), 147–166.

- Lyon, G. R. (1995). Research initiatives in learning disabilities: Contributions from scientists supported by the National Institute of Child Health and Human Development. *Journal of Child Neurology*, 10, 120–126.
- MacNeil, S., Tran, A., Mogil, D., Bernstein, S., Ross, E., & Huang, Z. (2022). Generating diverse code explanations using the gpt-3 large language model. *Proceedings of the 2022 ACM Conference on International Computing Education Research-Volume 2*, 37–39.
- Marzban, A., & Davaji, S. (2015). The effect of authentic texts on motivation and reading comprehension of EFL students at intermediate level of proficiency. *Theory and Practice in Language Studies*, 5(1), 85–91.
<https://doi.org/10.17507/tpls.0501.11>
- McCarthy, M., & Carter, R. A. (1994). *Language as Discourse: Perspectives for Language Teaching*. Longman.
- McDonough, J., Shaw, C., & Masuhara, H. (2013). *Materials and methods in ELT: A teacher's guide* (3rd ed.). Wiley-Blackwell.
- Mealey, D. L., & Nist, S. L. (1989). Post secondary teacher directed comprehension strategies. *Journal of Reading*, 32(6), 484–493.
- Meyer, B. J. F. (1975). *The organization of prose and its effects on memory*. North-Holland.
- Mizumoto, A., & Eguchi, M. (2023). Exploring the potential of using an AI language model for automated essay scoring. *Research Methods in Applied Linguistics*, 2(2), 100050. <https://doi.org/10.1016/j.rmal.2023.100050>
- Mori, S. (2002). *Redefining motivation to read in a foreign language*. 14(2).
<http://nflrc.hawaii.edu/rfl>
- Moybeka, A. M. S., Syariatn, N., Tatipang, D. P., Mushthoza, D. A., Dewi, N. P. J. L., & Tineh, S. (2023). *Artificial intelligence and English classroom: The implications of AI toward EFL students' motivation*. 7(2), 2444–2454.
- Mukundan, J., Zarifi, A., & Kalajahi, S. A. R. (2016). Developing reading materials for ESL learners. In M. Azarnoosh, M. Zeraatpishe, A. Faravani, & H. R. Kargozari (Eds.), *Issues in materials development* (Vol. 4, pp. 65–74). Sense Publishers. <https://doi.org/10.1007/978-94-6300-432-9>
- Namaziandost, E., Esfahani, F. R., & Ahmadi, S. (2019). Varying levels of difficulty in L2 reading materials in the EFL classroom: Impact on comprehension and motivation. *Cogent Education*, 6(1), 1615740.
<https://doi.org/10.1080/2331186X.2019.1615740>
- Namaziandost, E., Razmi, M. H., Ahmad Tilwani, S., & Pourhosein Gilakjani, A. (2022). The impact of authentic materials on reading comprehension,

- motivation, and anxiety among Iranian male EFL learners. *Reading & Writing Quarterly*, 38(1), 1–18. <https://doi.org/10.1080/10573569.2021.1892001>
- Nation, I. S. (2008). *Teaching ESL/EFL reading and writing*. Routledge Publishing.
- Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence powered digital writing assistant in higher education: randomized controlled trial. *Heliyon*, 7(5), 1–9. <https://doi.org/10.1016/j.heliyon.2021.e07014>
- Nergis, A. (2013). Exploring the factors that affect reading comprehension of EAP learners. *Journal of English for Academic Purposes*, 12(1), 1–9.
- Nguyen, T. T. H. (2023). EFL Teachers' perspectives toward the use of ChatGPT in writing classes: A case study at Van Lang University. *International Journal of Language Instruction*, 2(3), 1–47. <https://doi.org/10.54855/ijli.23231>
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom. *Theory and Research in Education*, 7(2), 133–144. <https://doi.org/10.1177/1477878509104318>
- Nunan. (1999). *Second language teaching and learning*. Heinle and Heinle.
- Nuttall, C. (1996). *Teaching reading skills in a foreign language*. Heinemann.
- Ofosu-Ampong, K., Acheampong, B., & Kevor, M. O. (2023). Acceptance of artificial intelligence (ChatGPT) in education: Trust, innovativeness and psychological need of students. *Information and Knowledge Management*. <https://doi.org/10.7176/ikm/13-4-03>
- Oroujlou, N., & Vahedi, M. (2011). Motivation, attitude, and language learning. *Procedia - Social and Behavioral Sciences*, 29, 994–1000.
- Ouyang, F., & Jiao, P. (2021). Artificial intelligence in education: The three paradigms. *Computers and Education: Artificial Intelligence*, 2, 100020. <https://doi.org/10.1016/j.caeai.2021.100020>
- Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive Load Theory and Instructional Design: Recent Developments. *Educational Psychologist*, 38(1), 1–4. https://doi.org/10.1207/S15326985EP3801_1
- Pachtman, A. B., & Wilson, K. A. (2006). What do the kids think? *The Reading Teacher*, 59(7), 680–684. <https://doi.org/10.1598/RT.59.7.6>
- Peacock, M. (1997). The effect of authentic materials on the motivation of EFL learners. *ELT Journal*, 51(2), 144–156. <https://doi.org/10.1093/elt/51.2.144>
- Perfetti, C. A. (1985). *Reading ability*. Oxford University Press.
- Perfetti, C., Landi, N., & Oakhill, J. (2005). The acquisition of reading comprehension skill. In M. Snowling & C. Hulme (Eds.), *The science of reading* (pp. 227–247). Blackwell.

- Permatasari, A. N., & Wienanda, W. K. (2023). Extensive reading in improving reading motivation: A students' perspective. *Eralingua: Jurnal Pendidikan Bahasa Asing Dan Sastra*, 7(2), 220–232.
<https://doi.org/10.26858/eralingua.v7i2.45638>
- Pirih, A. (2015). Who says they don't read? Slovene elementary school students' reading motivation in EFL. *Journal of Elementary Education*, 8(1/2), 113–132.
- Pirih, A. (2021). They do read, after all: Slovene primary school students' reading motivation in EFL. In *Pathways to Plurilingual Education* (pp. 145–165). Založba Univerze na Primorskem. <https://doi.org/10.26493/978-961-7055-36-8.145-165>
- Qian, L., Yang, Y., & Zhao, Y. (2021). Syntactic complexity revisited: sensitivity of China's AES-generated scores to syntactic measures, effects of discourse-mode and topic. *Reading and Writing*, 34(3), 681–704.
<https://doi.org/10.1007/s11145-020-10087-5>
- Rajabi, A., & Khodabakhshzadeh, H. (2015). The effect of implementation of smart board on Iranian lower-intermediate EFL learners' reading comprehension and their intrinsic motivation in reading. *Mediterranean Journal of Social Sciences*, 6(4), 281–289. <https://doi.org/10.5901/mjss.2015.v6n4s1p281>
- Ro, E. (2013). A case study of extensive reading with an unmotivated L2 reader. *Reading in a Foreign Language*, 25(2), 213–233.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Rueda, R. (2011). Cultural Perspectives in Reading: Theory and Research. In M. L. Kamil, P. D. Pearson, E. B. Moje, & P. P. Afflerbach (Eds.), *Handbook of Reading Research* (Vol. 4, pp. 84–101). Routledge.
- Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). University of Rochester Press.
- Ryan, R. M., & Deci, E. L. (2013). Toward a social psychology of assimilation: Self-determination theory in cognitive development and education. In *Self-Regulation and Autonomy* (pp. 191–207). Cambridge University Press.
<https://doi.org/10.1017/CBO9781139152198.014>

- Salikin, H., Bin-Tahir, S. Z., Kusumaningputri, R., & Yuliandari, D. P. (2017). The Indonesian EFL learners' motivation in reading. *English Language Teaching*, 10(5), 81–90. <https://doi.org/10.5539/elt.v10n5p81>
- Saraceni, C. (2022). Materials for developing reading skills. In J. Norton & H. Buchanan (Eds.), *The Routledge Handbook of Materials Development for Language Teaching* (pp. 233–243). Routledge. <https://doi.org/10.4324/b22783-20>
- Sardabi, N., & Ojagh, P. (2022). The impact of creative literacy activities on the reading motivation and reading comprehension of young learners: Evidence from CLIL and EFL settings. *Journal of Foreign Language Teaching and Translation Studies*, 7(4), 1–16.
- Savran Çelik, S., & Aydın, S. (2021). Wiki effect on EFL writing motivation: An experimental study. *Language and Technology*, 3(1), 32–47.
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in language teaching*. Cambridge University Press.
- Seliger, H. W., & Shohamy, E. (1989). *Second Language Research Methods*. Oxford University Press.
- Semino, E. (1995). Schema theory and the analysis of text worlds in poetry. *Language and Literature: International Journal of Stylistics*, 4(2), 79–108. <https://doi.org/10.1177/096394709500400201>
- Şentürk, B. (2015). EFL Turkish university students' attitudes and motivation towards reading in English. *Procedia - Social and Behavioral Sciences*, 199, 704–712. <https://doi.org/10.1016/j.sbspro.2015.07.601>
- Shin, D. (2022). What is the limit for using AI in English education?: Feasibility of using automated text generation and automated item generation. *Journal of the Korea English Education Society*, 21(3), 147–163.
- Silberstein, S. (1987). Let's take another look at reading: Twenty-five years of reading instruction. *Language Teaching Forum*, 25(4), 18–35.
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85(4), 571–581.
- Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16(1), 32–71.
- Stenhouse, L. (1975). *An introduction to curriculum research and development*. Heinemann.
- Styck, K. M., Villarreal, V., & Watkins, M. W. (2020). Confirmatory factor analyses of the Baylor Revision of the Motivation to Read Survey (B-MRS) with middle

- school students. *School Psychology*, 35(1), 1–9.
<https://doi.org/10.1037/spq0000345>
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12, 257–285.
- Taguchi, E., Melhem, L., & Kawaguchi, T. (2016). Assisted reading: A flexible approach to L2 reading fluency building. In *The Reading Matrix: An International Online Journal* (Vol. 16, Issue 1).
- Tanaka, M. (2017). Factors affecting motivation for short in-class extensive reading. *The Journal of AsiaTEFL*, 14(1), 98–113.
<https://doi.org/10.18823/asiatefl.2017.14.1.7.98>
- Tercanlioglu, L. (2001). The nature of Turkish students' motivation for reading and its relation to their reading frequency. *The Reading Matrix*, 1(2), 1–33.
- Tomlinson, B. (2008). *English Language Learning Materials – A Critical Review*. Continuum.
- Tomlinson, B. (2011). Introduction: principles and procedures of materials development. In B. Tomlinson (Ed.), *Materials development in language teaching* (2nd ed., pp. 1–34). Cambridge University Press.
<https://doi.org/10.1017/9781139042789>
- Tomlinson, B. (2012). Materials development for language learning and teaching. *Language Teaching*, 45(2), 143–179.
<https://doi.org/10.1017/S0261444811000528>
- Tomlinson, B. (2016). The importance of materials development for language learning. In M. Azarnoosh, M. Zeraatpishe, A. Faravani, & H. R. Kargozari (Eds.), *Issues in materials development* (Vol. 4, pp. 1–10). Sense Publishers.
<https://doi.org/10.1007/978-94-6300-432-9>
- Tozlu Kılıç, E., & Yıldız Çelebi, Z. (2018). A comparative study on the possible effects of technology on students' L2 reading motivation. *International Journal of Language Academy*, 6(24), 362–375. <https://doi.org/10.18033/ijla.3982>
- Tracey, D. H., & Morrow, L. M. (2002). Preparing young learners for successful reading comprehension: Laying the foundation. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 219–233). The Guilford Press.
- Tuan, L. T. (2012). An Empirical Research into EFL Learners' Motivation. *Theory and Practice in Language Studies*, 2(3), 430–439.
<https://doi.org/10.4304/tpls.2.3.430-439>
- Türkdoğan, G., & Sivell, J. (2016). Self-determination theory and Day and Bamford's principles for extensive reading. *Novitas-ROYAL (Research on Youth and Language)*, 10(2), 159–179.

- Urquhart, A. H., & Weir, C. J. (1998). *Reading in a second language: Process, product, and practice*. Longman.
- U.S. Department of Education, O. of E. T. (2023). *Artificial intelligence and the future of teaching and learning: Insights and recommendations*.
- Ushioda, E. (1996). *Learner autonomy 5: the role of motivation*. Authentik.
- Ushioda, E. (2010). Motivation and SLA. *EUROSLA Yearbook*, 10, 5–20. <https://doi.org/10.1075/eurosla.10.03ush>
- Ushioda, E. (2014). Motivation, autonomy and metacognition: Exploring their interactions. In D. Lasagabaster, A. Doiz, & J. M. Sierra (Eds.), *Motivation and foreign language learning : From theory to practice* (1st ed.). John Benjamins Publishing Company.
- Usta, D. U., & Gündoğdu, B. (2018). Impact of reading strategy use on reading motivation in Turkish EFL context: A mixed method study. *The Literacy Trek*, 4(2), 15–30.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 271–360). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60019-2](https://doi.org/10.1016/S0065-2601(08)60019-2)
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. Longman.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wade, S. E., & Reynolds, R. E. (1989). Developing metacognitive awareness. *Journal of Reading*, 33(1), 6–13.
- Wang, J. H., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly*, 39(2), 162–186.
- Wang, W., & Gan, Z. (2021). Development and validation of the reading motivation questionnaire in an English as a foreign language context. *Psychology in the Schools*, 58(6), 1151–1168. <https://doi.org/10.1002/pits.22494>
- Wei, L. (2023). Artificial intelligence in language instruction: impact on English learning achievement, L2 motivation, and self-regulated learning. *Frontiers in Psychology*, 14, 1–14. <https://doi.org/10.3389/fpsyg.2023.1261955>
- Wei, P. I. (2023). Factors influencing reading motivation in ESL and EFL learners: A comprehensive review. *Research Journal of English Language and Literature (RJELAL) A Peer Reviewed (Refereed) International Journal Impact Factor*,

- 11(2), 314–322. <http://www.rjelal.com/11.2.23/314-322%20Peicheng%20Ina%20Wei.pdf>
- Wigfield, A. (1994). Expectancy-value theory of motivation and achievement: A developmental perspective. *Educational Psychology Review*, 6, 49–78.
- Wigfield, A. (1997). Reading motivation: A domain-specific approach to motivation. *Educational Psychologist*, 32(2), 59–68. https://doi.org/10.1207/s15326985ep3202_1
- Wigfield, A., & Eccles, J. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review*, 12, 265–310.
- Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25, 68–81.
- Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology*, 89(3), 420–432. <https://doi.org/10.1037/0022-0663.89.3.420>
- Wigfield, A., Guthrie, J. T., Tonks, S., & Perencevich, K. C. (2004). Children's motivation for reading: Domain specificity and instructional influences. *The Journal of Educational Research*, 97(6), 299–310. <https://doi.org/10.3200/JOER.97.6.299-310>
- Wu, C. H., Lin, H.-C. K., Wang, T.-H., Huang, T.-H., & Huang, Y.-M. (2022). Affective Mobile Language Tutoring System for Supporting Language Learning. *Frontiers in Psychology*, 13, 1–8. <https://doi.org/10.3389/fpsyg.2022.833327>
- Wu, Y., Schuster, M., Chen, Z., Le, Q. V., Norouzi, M., & et al. (2016). Google's neural machine translation system: bridging the gap between human and machine translation. *Arxiv Preprint*, 1–23.
- Xie, Y., Chen, Y., & Ryder, L. H. (2021). Effects of using mobile-based virtual reality on Chinese L2 students' oral proficiency. *Computer Assisted Language Learning*, 34(3), 225–245. <https://doi.org/10.1080/09588221.2019.1604551>
- Yadegaridehkordi, E., Noor, N. F. B. M., Ayub, M. N. Bin, Affal, H. B., & Hussin, N. B. (2019). Affective computing in education: A systematic review and future research. *Computers & Education*, 142, 103649. <https://doi.org/10.1016/j.compedu.2019.103649>
- Yakut, A. D., & Aydın, S. (2017). An experimental study on the effects of the use of blogs on EFL reading comprehension. *Innovation in Language Learning and Teaching*, 11(1), 1–16. <https://doi.org/10.1080/17501229.2015.1006634>
- Yan, D. (2023). How ChatGPT's automatic text generation impact on learners in a L2 writing practicum: an exploratory investigation. *HAL Open Science*, 1–39.

- Yang, H., & Kyun, S. (2022). The current research trend of artificial intelligence in language learning: A systematic empirical literature review from an activity theory perspective. *Australasian Journal of Educational Technology*, 38(5), 180–210. <https://doi.org/10.14742/ajet.7492>
- Yang, Y.-H., Chu, H.-C., & Tseng, W.-T. (2021). Text difficulty in extensive reading: Reading comprehension and reading motivation. *Reading in a Foreign Language*, 33(1), 78–102.
- Yin, W. (2022). An artificial intelligent virtual reality interactive model for distance education. *Journal of Mathematics*, 2022, 1–7. <https://doi.org/10.1155/2022/7099963>
- Yılmaz, C. (2012). An Investigation into Turkish EFL Students“. *Journal of Language Teaching and Research*, 3(5). <https://doi.org/10.4304/jltr.3.5.823-828>
- York, J., Shibata, K., Tokutake, H., & Nakayama, H. (2021). Effect of SCMC on foreign language anxiety and learning experience: A comparison of voice, video, and VR-based oral interaction. *ReCALL*, 33(1), 49–70. <https://doi.org/10.1017/S0958344020000154>
- Young, J. C., & Shishido, M. (2023a). *Evaluation of the potential usage of ChatGPT for providing easier reading materials for EFL students*.
- Young, J. C., & Shishido, M. (2023b). Investigating OpenAI's ChatGPT potentials in generating Chatbot's dialogue for English as a foreign language learning. In *IJACSA) International Journal of Advanced Computer Science and Applications* (Vol. 14, Issue 6). www.ijacsa.thesai.org
- Zareian, G., & Jodaei, H. (2015). Motivation in second language acquisition: A state of the art article. *International Journal of Social Sciences and Education*, 5(2), 295–308.
- Zheng, X., Kim, H., Lai, W., & Hwang, G. (2020). Cognitive regulations in ICT-supported flipped classroom interactions: An activity theory perspective. *British Journal of Educational Technology*, 51(1), 103–130. <https://doi.org/10.1111/bjet.12763>
- Zhu, J., & Ren, C. (2022). Analysis of the effect of artificial intelligence on role cognition in the education system. *Occupational Therapy International*, 2022, 1–11. <https://doi.org/10.1155/2022/1781662>
- Zou, B., Du, Y., Wang, Z., Chen, J., & Zhang, W. (2023). An Investigation Into Artificial Intelligence Speech Evaluation Programs With Automatic Feedback for Developing EFL Learners' Speaking Skills. *SAGE Open*, 13(3). <https://doi.org/10.1177/21582440231193818>

APPENDIX

APPENDIX A

Motivation for Reading in English Questionnaire (MREQ)

Dear students,

You are kindly invited to participate in an online questionnaire investigating learners' current motivation for reading in English. The information that you provide and your answers will be kept confidential and used only for the purposes of this study. You must be an English as a foreign language student to participate. It takes approximately 20 minutes to complete the survey. Thank you in advance for your valuable participation. If you have any questions, you can contact the researcher via email.

☐ I understand that my participation in this survey is voluntary, and by continuing, I am giving my consent to participate in this study.

Background Questionnaire

Your name:	
Your age:	
Your gender:	Male ☐ Female ☐
Your class name:	

MREQ

Statements	4	3	2	1
1. I like reading in English to learn something new about people and things that interest me.	4	3	2	1
2. I like reading a lot of interesting things in English.	4	3	2	1
3. I feel happy when I read about something interesting in English.	4	3	2	1
4. When the topic is interesting, I am willing to read difficult English materials.	4	3	2	1
5. It's fun for me to read about something I like in English.	4	3	2	1
6. It is hard for me to stop reading in English when the	4	3	2	1

topic is interesting.				
7. I like reading about new things in English.	4	3	2	1
8. I enjoy reading when I learn complex ideas from English materials.	4	3	2	1
9. I like it when the topic of an English reading makes me think a little more.	4	3	2	1
10. I like challenging myself while reading in English.	4	3	2	1
11. I enjoy reading good, long stories in English.	4	3	2	1
12. I like hard, challenging English readings.	4	3	2	1
13. When an assignment is interesting, I can read difficult English materials more easily.	4	3	2	1
14. When I am reading about an interesting topic in English, I sometimes lose track of time.	4	3	2	1
15. When my teacher or friends tell me something interesting, I might read more about it in English.	4	3	2	1
16. I enjoy reading in English to learn what is going on in the world.	4	3	2	1
17. I am willing to work hard to read better than my friends in English.	4	3	2	1
18. I like being the only student who knows an answer about something we read in English.	4	3	2	1
19. I like my teacher to say that I read well in English.	4	3	2	1
20. When I complete English reading assignments for class, I try to get more answers correct than my classmates	4	3	2	1
21. When I read in English, I like to finish my reading assignments before other students.	4	3	2	1
22. I like my friends to tell me that I am a good English reader.	4	3	2	1
23. I want to be the best at reading in English.	4	3	2	1
24. When some classmates read English better than me, I want to read more English materials.	4	3	2	1
25. I like it when my teacher asks me to read English aloud in class.	4	3	2	1
26. I like to get positive comments about my English reading.	4	3	2	1
27. When I read in English, I often think about how well I read compared to others.	4	3	2	1
28. I practice reading in English because I feel good when I answer teachers' questions correctly in class.	4	3	2	1
29. I feel happy when my friends ask me for help with their English reading assignments.	4	3	2	1
30. Finishing English reading assignments on time is very important for me.	4	3	2	1
31. I usually try to finish my English reading assignments on time.	4	3	2	1
32. It is important for me to receive a good grade in my English reading course.	4	3	2	1
33. I do my English reading assignments exactly as the teacher tells me to do them.	4	3	2	1
34. I look forward to finding out my grades in English	4	3	2	1

reading.				
35. I want to read in English to improve my grades.	4	3	2	1
36. I work harder on English reading assignments when they are graded.	4	3	2	1
37. I try to read in English because I need a good score on tests like TOEFL, Michigan, IELTS, etc.	4	3	2	1
38. I try to read in English because I like seeing my reading score improve on tests like TOEFL, Michigan, IELTS, etc.	4	3	2	1
39. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL, Michigan, IELTS, etc.	4	3	2	1
40. I practice reading in English because I need to do well in my future classes.	4	3	2	1
41. I enjoy telling my friends about the things I read in English materials.	4	3	2	1
42. My friends and I like to share what we read in English.	4	3	2	1
43. I like talking with my friends about what I read in English.	4	3	2	1
44. I like joining class discussions about what I read in English.	4	3	2	1

APPENDIX B



T.C.
İSTANBUL MEDENİYET ÜNİVERSİTESİ REKTÖRLÜĞÜ
Rektörlük



Sayı : E-38510686-050.04-2400022172
Konu : Özge Kübra Yılmaz'ın Başvurusu

05.04.2024

İlgili Makama,

İMÜ Sosyal ve Beşeri Bilimler Etik Kurulu'nun 2024/3 sayılı ve 26.03.2024 tarihli kararıyla, İMÜ Lisansüstü Eğitim Enstitüsü (İngilizce Öğretmenliği) yüksek lisans öğrencisi Özge Kübra Yılmaz'ın "Yapay Zeka ile Geliştirilmiş Materyal Kullanımının Yabancı Dil Olarak İngilizce Okuma Motivasyonu Üzerindeki Etkileri" başlıklı YL tezi kapsamında (dan. Selami Aydın) veri toplanmasına yönelik araştırma dosyası görüşülmüş, içerik bakımından etik bir sorun bulunmadığı sonucuna varılarak izin talebi uygun bulunmuştur.

Prof. Dr. Tuncay BAŞOĞLU
Kurul Başkanı

Belge Doğrulama Kodu: FMT734A

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Belge Takip Adresi:
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Adres:

Telefon No: (0 216) 2803333

e-Posta:

Kep Adresi: istanbulmedeniyetuni@hs01.kep.tr

Faks No:

İnternet Adresi: www.medeniyet.edu.tr

Bilgi için :

Telefon No:

Direkt Hat:

Tuncay Başoğlu

Öğretim Üyesi



APPENDIX C

(Control Group - Text Sample)

Is Time Travel Possible?

By Mark Davidson

USA Today

Prereading Preparation

1. What is **time travel**?
2. Do you think scientists should try to find a way to travel to the past? To the future? Why, or why not?
3. Would you like to travel to the future? If you would, where would you go?

1 Contrary to the old warning that time waits for no one, time slows down when you are on the
2 move. It also slows down more as you move faster, which means astronauts someday may
3 survive so long in space that they would return to an Earth of the distant future. If you could move
4 at the speed of light, 186,282 miles a second, your time would stand still. If you could move faster
5 than light, your time would move backward.

6 Although no form of matter yet discovered moves as fast or faster than light, scientific
7 experiments have confirmed that accelerated motion causes a voyager's, or traveler's, time to be
8 stretched. Albert Einstein predicted this in 1905, when he introduced the concept of relative time
9 as part of his Special Theory of Relativity. A search is now under way to confirm the suspected
10 existence of particles of matter that move faster than light and therefore possibly might serve as
11 our passports to the past.

12 An obsession with time—saving, gaining, wasting, losing, and mastering it—seems to have
13 been part of humanity for as long as humans have existed. Humanity also has been obsessed with
14 trying to capture the *meaning* of time. Einstein used a definition of time, for experimental
15 purposes, as that which is measured by a clock. Thus, time and time's relativity are measurable
16 by any sundial, hourglass, metronome, alarm clock, or an atomic clock that can measure a
17 billionth of a second.

18 Scientists have demonstrated that an ordinary airplane flight is like a brief visit to the Fountain
19 of Youth. In 1972, for example, scientists who took four atomic clocks on an airplane trip around
20 the world discovered that the moving clocks moved slightly slower than atomic clocks which had
21 remained on the ground. If you fly around the world, preferably going eastward, to gain the
22 advantage of the added motion of the Earth's rotation, the atomic clocks show that you'll return
23 younger than you would have been if you had stayed home. Frankly, you'll be younger by only 40
24 billionths of a second. Even such an infinitesimal saving of time proves that time can be stretched.
25 Moreover, atomic clocks have demonstrated that the stretching of time increases with speed.

26 Here is an example of what you can expect if tomorrow's space-flight technology enables you
27 to move at ultra-high speeds. Imagine you're an astronaut with a twin who stays home¹. If you
28 travel back and forth to the nearest star at about half the speed of light, you'll be gone for 18 Earth
29 years. When you return, your twin will be 18 years older, but you'll have aged only 16 years. Your
30 body will be two years younger than your twin's because time aboard the flying spaceship will

This hypothetical situation is known as the Twin Paradox.

31 have moved more slowly than time on Earth. You will have aged normally, but you have been in a
 32 slower time zone. If your spaceship moves at about 90% of lightspeed, you'll age only five percent
 33 as much. These examples of time-stretching, of course, cannot be based on mathematical
 34 projections of relativity science.

35 Speed is not the only factor that slows time; so does gravity. Einstein determined in his General
 36 Theory of relativity that the force of an object's gravity "curves" the space in the object's
 37 gravitational field. When gravity curves space, Einstein reasoned, gravity also must curve time,
 38 because space and time are linked.

39 Numerous atomic clock experiments have confirmed Einstein's calculation that, the closer
 40 you are to the Earth's center of gravity, which is the Earth's core, the slower you will age. In one of
 41 these experiments, an atomic clock was taken from the National Bureau of Standards in
 42 Washington, D.C., near sea level, and moved to mile-high Denver. The results demonstrated that
 43 people in Denver age more rapidly by a tiny amount than people in Washington.

44 If you would like gravity's space-time warp to extend your life, get a home at the beach and a
 45 job as a deep-sea diver. Avoid living in the mountains or working in a skyscraper. That advice, like
 46 the advice about flying around the world, will enable you to slow your aging by only a few billionths
 47 of a second. Nevertheless, those tiny fractions of a second add up to more proof that time-
 48 stretching is a reality.

49 **Time Reversal**

50 According to scientific skeptics, time reversal—travel to the past—for humans would mean an
 51 unthinkable reversal of cause and effect. This reversal would permit you to do something in the
 52 past that changes the present. The skeptics worry that you even might commit an act that
 53 prevents your own birth.

54 Some scientists believe we should keep an open mind about time reversal. Open-minders
 55 speculate that time travelers who change the past would be opening doors to *alternative*
 56 histories, rather than interfering with history as we know it. For example, if you prevented the
 57 assassination of Abraham Lincoln, then a new line of historical development would be created.
 58 The alternative history—the one without Lincoln's assassination— would have a completely
 59 separate, ongoing existence. Thus, no change would be made in anybody's existing history.
 60 Another possibility is that nature might have an unbreakable law preventing time travelers from
 61 changing the past.

62 **Journey to the Future**

63 If we did discover a source of energy that would enable us to travel beyond lightspeed, we
 64 might have access not only to the past, but also to the future. Suppose you went on a super-
 65 lightspeed trek to the Spiral Nebula in the Andromeda Galaxy. That location is separated from
 66 Earth by 1,500,000 lightyears, the distance light travels in 1,500,000 years. Suppose you make the
 67 round trip in just a few moments. If all goes well, you'll return to the Earth 3,000,000 years into its
 68 future, because that's how much Earth time will have elapsed.

69 Time is an abstraction. In other words, it cannot be seen, touched, smelled, or tasted. It seems
 70 to have no existence apart from the events it measures, but something tells us that time is out
 71 there, somewhere. "When we pursue the meaning of time," according to the time-obsessed
 72 English novelist-playwright J. B. Priestly, "we are like a knight on a quest, condemned to wander
 73 through innumerable forests, bewildered and baffled, because the magic beast he is looking for
 74 is the horse he is riding."

75 What about our quest for particles that travel faster than light? If we find them, will we be able
 76 to control their energy to tour the past? If we return to our past, will we be forced to repeat our
 77 mistakes and suffer the same consequences? Or will we be able to use our experience to make
 78 everything turn out better the second time around?

79 Will we ever be able to take instant trips to the distant future, the way people do in the movies,
 80 with a twist of a dial and a "zap!, zap!" of sound effects? One cannot resist the temptation to
 81 respond that only time will tell.

A. Fact-Finding Exercise

Read the passage once. Then read the following statements. Scan the article quickly to find out if each statement is true (T) or false (F). If a statement is false, change it so that it is true.

1. If you could move at the speed of light, your time would move backward. ()

2. Scientists have discovered a form of matter that moves as fast as light. ()

3. Scientists have done experiments which show that the stretching of time increases with speed.

4. Both speed and gravity slow time.

5. The closer you are to the Earth's core, the faster you will age.

6. Some people worry that if you could go back in time, you might change the present.

B. Reading Analysis

Read each question carefully. Circle the number or letter of the correct answer, or write your answer in the space provided.

1. Read lines 3-4.
 - a. What is the speed of light?

 - b. In the same lines, what does **your time would stand still** mean?
 1. Your time would speed up.
 2. Your time would reverse.
 3. Your time would stop.
2. Read lines 8-9: "Einstein predicted this in 1905." What does **this** refer to? In other words, what did Einstein predict?

3. Read lines 9-11.
 - a. **Under way** means that the search is
 1. being done now.
 2. finished.
 3. under a method.
 - b. **Suspected existence** means that
 1. people have found these particles.
 2. people believe these particles exist.
 3. people do not believe these particles exist.
 - c. What are **our passports to the past**?

4. Read lines 18-19. In this sentence, scientists mean that an airplane trip might
 - a. make you younger.
 - b. slow down the aging process.
 - c. make you older.
5. Read lines 21-24. **Frankly** means
 - a. actually
 - b. on the contrary
 - c. obviously
6. In lines 23-24, an **infinitesimal** saving of time is
 - a. a large amount
 - b. an average amount
 - c. a very small amount

7. Read lines 27-29.

a. What is this imaginary situation commonly known as?

b. How do you know?

c. **Back and forth** means

1. travel to the nearest star and then return to Earth.
2. travel to the nearest star two times.
3. travel back to the nearest star after you've been there.

8. Read lines 35-37. Why is "curves" in quotation marks?

9. In line 67, what does **round trip** mean?



(Experimental Group - Text Sample)

A Journey Through the Wonders of Time

by Amelia Carter

Time Traveler's Gazette

Prereading Preparation?

1. What does time mean to you, and how does it affect your life?
2. Have you seen or read any stories about time travel? If yes, which ones, and how do they show time travel?
3. Can you recall a time when time felt different than usual? What do you think caused this change in perception?

1 Time, the enigmatic force that governs our lives, is a concept deeply intertwined with the fabric
2 of the universe. In the realm of physics, time is not merely a linear progression of events, but a
3 dimension intricately connected with space, forming what scientists refer to as spacetime. Albert
4 Einstein's theory of relativity revolutionized our understanding of time, revealing its dynamic and
5 relative nature.

6 Einstein's theory introduced the concept of time dilation, which occurs when the passage of
7 time is experienced differently by observers in different gravitational fields or at different
8 velocities. For instance, imagine two astronauts: one stationed on Earth and another traveling
9 through space at close to the speed of light. According to Einstein's theory, time for the astronaut
10 in motion would appear to slow down relative to the observer on Earth. This phenomenon has
11 been experimentally verified and plays a crucial role in the functioning of GPS satellites, which
12 must account for time dilation to maintain accurate navigation.

13 To further grasp the relativity of time, let's consider the extraordinary environments near black
14 holes. These cosmic entities possess such immense gravitational pull that they warp the fabric
15 of spacetime around them. Near the event horizon of a black hole, time appears to slow down
16 significantly from the perspective of distant observers. This effect, known as *gravitational time*
17 *dilation*, is a testament to the profound influence of gravity on the passage of time.

18 Moreover, the realm of quantum mechanics introduces yet another layer of complexity to our
19 understanding of time. According to quantum theory, particles can exist in multiple states
20 simultaneously, challenging the notion of time as a linear progression. Concepts such as
21 superposition and quantum entanglement suggest that events may not unfold in a predetermined
22 sequence but exist in a state of probabilistic uncertainty.

23 In summary, the relativity of time underscores the intricate relationship between space, time,
24 and gravity. From the time dilation experienced by astronauts traveling at high speeds to the
25 gravitational time dilation near black holes, our understanding of time continues to evolve,
26 unveiling the fascinating intricacies of the universe.

27 Journeying to the Past

28 While time travel to the past remains a fantasy confined to the realms of science fiction, our
29 fascination with exploring history knows no bounds. Through literature, film, and television, we
30 are transported to bygone eras, allowing us to witness pivotal moments in time with vivid clarity.

31 Consider the iconic film "Back to the Future," where the eccentric scientist Dr. Emmett Brown
32 invents a time machine out of a DeLorean car. Alongside his teenage friend Marty McFly, they
33 embark on thrilling adventures to the past, altering the course of history in unexpected ways.
34 From the 1950s to the Wild West, Marty and Doc navigate the complexities of time travel while
35 grappling with the consequences of their actions.

36 Similarly, the television series "Outlander" follows the journey of Claire Randall, a World War
37 II nurse who finds herself transported from 1945 to 18th-century Scotland. Amidst the backdrop
38 of political intrigue and romance, Claire navigates the challenges of life in a different time while
39 struggling to find a way back to her own.

40 But time travel to the past is not without its paradoxes and ethical dilemmas. *The grandfather*
41 *paradox*, for instance, raises the question of what would happen if one were to travel back in time
42 and alter events in a way that prevents their own existence. Such paradoxes challenge our
43 understanding of causality and the potential consequences of meddling with the past.

44 Furthermore, the preservation of historical integrity is a significant concern when considering
 45 the implications of time travel. How do we ensure that interactions with the past do not disrupt
 46 the natural flow of events or distort our understanding of history? These ethical considerations
 47 underscore the complexities of time travel and its potential impact on the fabric of reality.

48 While time travel to the past remains a product of human imagination, it allows us to explore
 49 history in new and exciting ways. Whether through the lens of science fiction or historical fiction,
 50 our fascination with the past continues to inspire and captivate us, reminding us of the timeless
 51 allure of bygone eras.

52 A Glimpse into the Future

53 As we peer into the vast expanse of the future, we are met with boundless possibilities and
 54 endless potential. From technological advancements to societal transformations, the future
 55 holds the promise of innovation and discovery.

56 Consider the world of "Blade Runner," a dystopian vision of the future where artificial
 57 intelligence and biotechnology reign supreme. Set in a bleak, rain-soaked metropolis, the film
 58 explores themes of identity, humanity, and the ethical implications of advanced technology.
 59 Through the eyes of replicants and humans alike, we are confronted with the existential questions
 60 of what it means to be alive in a world shaped by progress and decay.

61 Conversely, the optimistic vision of "Star Trek" presents a future where humanity has
 62 transcended its petty conflicts and united to explore the cosmos. With starships like the USS
 63 Enterprise leading the way, humanity ventures forth to boldly go where no one has gone before,
 64 encountering new civilizations, ethical dilemmas, and the wonders of the universe.

A. Fact-Finding Exercise

Read the following passage carefully and determine whether the statements below are true or false based on the information provided in the text. Write "T" if the statement agrees with the text and "F" if the statement contradicts the text. If the statement is false, correct the information in the space provided.

1. Time is a concept intertwined with the fabric of the universe, according to the text. ()

2. Albert Einstein's theory of relativity introduced the concept of time dilation, which occurs when observers in different gravitational fields experience time at different rates. ()

3. Gravitational time dilation near black holes causes time to speed up significantly. ()

4. According to quantum theory, particles can only exist in one state at a time, challenging the notion of time as a linear progression. ()

5. "Back to the Future" depicts the journey of a scientist and his young apprentice to the past, altering historical events. ()

6. Preservation of historical integrity is not a significant concern when considering time travel to the past, as depicted in various science fiction narratives. ()

B. Reading Analysis

Read the text again. Decide on the correct option.

1. Read lines 2-3. What is the close meaning of **intricately** as used in the passage?
 - a. complicatedly
 - b. simply
 - c. smoothly
 - d. casually
2. Read lines 6-8. Describe the concept of **time dilation** as explained in the text.

3. Time dilation occurs when _____.
 - a. Observers experience time at the same rate.
 - b. Time speeds up in different gravitational fields.
 - c. Time slows down relative to observers in different conditions.
 - d. Time remains constant in all circumstances.
4. Read lines 6-12. Which phenomenon has been experimentally verified and plays a crucial role in the functioning of GPS satellites?
 - a. gravitational time dilation
 - a. time reversal
 - b. quantum entanglement
 - c. time travel
5. Read lines 18-22. What might the term **superposition** mean?

6. Read the same lines. Identify **quantum mechanics** based on its relevance in the text.
 - a. the study of large-scale phenomena
 - b. the study of microscopic particles and their behavior
 - c. the study of time travel
 - d. the study of historical events and their impact
7. Read lines 40-47. What ethical dilemmas are associated with time travel to the past, according to the passage?

8. Read lines 53-54. What is the meaning of the word **boundless**?
 - a. limited
 - b. unlimited
 - c. restricted
 - d. finite
9. Read lines 17 and 76. What is the close meaning of **profound** as used in the passage?
 - a. superficial
 - b. deep
 - c. shallow
 - d. basic
10. Which film explores themes of identity, humanity, and the ethical implications of advanced technology in a dystopian future?
 - a. "Back to the Future"
 - b. "Blade Runner"
 - c. "Star Trek"
 - d. "Outlander"
11. The television series "Outlander" follows the journey of Claire Randall, a World War II nurse who finds herself transported from 1945 to _____.

APPENDIX D

Descriptive Statistics the Control Group

	N	Mean	Std. Deviation	Minimum	Maximum
Factor 1 pre-test	15	3.12	.36	2.50	3.56
Factor 2 pre-test	15	3.16	.62	1.62	4.00
Factor 3 pre-test	15	3.29	.51	2.43	4.00
Factor 4 pre-test	15	3.45	.68	1.75	4.00
Factor 5 pre-test	15	3.13	.90	1.75	4.00
MREQ pre-test	15	3.19	.43	2.32	3.70
Factor 1 post-test	15	3.19	.36	2.63	3.63
Factor 2 post-test	15	2.98	.75	1.23	4.00
Factor 3 post-test	15	3.17	.38	2.43	3.86
Factor 4 post-test	15	3.06	.64	2.00	4.00
Factor 5 post-test	15	3.25	.74	1.50	4.00
MREQ post-test	15	3.12	.39	2.34	3.68

Wilcoxon Signed Ranks Test (Control Group)

		Ranks		
		N	Mean Rank	Sum of Ranks
Factor 1 post-test – Factor 1 pre-test	Negative Ranks	4 ^a	7.00	28.00
	Positive Ranks	9 ^b	7.00	63.00
	Ties	2 ^c		
	Total	15		
Factor 2 post-test – Factor 2 pre-test –	Negative Ranks	10 ^d	7.05	70.50
	Positive Ranks	4 ^e	8.63	34.50
	Ties	1 ^f		
	Total	15		
Factor 3 post-test – Factor 3 pre-test –	Negative Ranks	8 ^g	9.25	74.00
	Positive Ranks	7 ^h	6.57	46.00
	Ties	0 ⁱ		
	Total	15		
Factor 4 post-test – Factor 4 pre-test	Negative Ranks	9 ^j	6.78	61.00
	Positive Ranks	2 ^k	2.50	5.00
	Ties	4 ^l		

	Total	15		
Factor 5 post-test – Factor 5 pre-test	Negative Ranks	4 ^m	6.50	26.00
	Positive Ranks	7 ⁿ	5.71	40.00
	Ties	4 ^o		
	Total	15		
MREQ post-test – MREQ pre-test	Negative Ranks	9 ^p	7.67	69.00
	Positive Ranks	5 ^q	7.20	36.00
	Ties	1 ^r		
	Total	15		

Test Statistics^a

	Factor1_post - Factor1_pre	Factor2_post - Factor2_pre	Factor3_post - Factor3_pre	Factor4_post - Factor4_pre	Factor5_post - Factor5_pre	MREQ_post - MREQ_pre
Z	-1.23 ^b	-1.13 ^c	-.80 ^c	-2.51 ^c	-.62 ^b	-1.04 ^c
Asymp. Sig. (2-tailed)	.22	.26	.42	.01	.53	.30

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

		N	Mean Ranks	Sum of Ranks	z; p
1. I like reading in English to learn something new about people and things that interest me.	Negative Ranks	3 ^b	3.00	9.00	z:-0.45;0.65
	Positive Ranks	2 ^c	3.00	6.00	
	Ties	10 ^d			
	Total	15			
2. I like reading a lot of interesting things in English.	Negative Ranks	3 ^e	4.00	12.00	z:-0.33;0.74
	Positive Ranks	3 ^f	3.00	9.00	
	Ties	9 ^g			
	Total	15			
3. I feel happy when I read about something interesting in English.	Negative Ranks	4 ^h	3.00	12.00	z:-0.33;0.74
	Positive Ranks	2 ⁱ	4.50	9.00	
	Ties	9 ^j			
	Total	15			

4. When the topic is interesting, I am willing to read difficult English materials.	Negative Ranks	3 ^k	3.33	10.00	z:-0.71;0.48
	Positive Ranks	2 ^l	2.50	5.00	
	Ties	10 ^m			
	Total	15			
5. It's fun for me to read about something I like in English.	Negative Ranks	2 ⁿ	3.00	6.00	z:-0.45;0.65
	Positive Ranks	3 ^o	3.00	9.00	
	Ties	10 ^p			
	Total	15			
6. It is hard for me to stop reading in English when the topic is interesting.	Negative Ranks	3 ^q	5.00	15.00	z:-1.39;0.17
	Positive Ranks	7 ^r	5.71	40.00	
	Ties	5 ^s			
	Total	15			
7. I like reading about new things in English.	Negative Ranks	5 ^t	4.00	20.00	z:-1.13;0.26
	Positive Ranks	2 ^u	4.00	8.00	
	Ties	8 ^v			
	Total	15			
8. I enjoy reading when I learn complex ideas from English materials.	Negative Ranks	2 ^w	3.00	6.00	z:-0.38;0.71
	Positive Ranks	2 ^x	2.00	4.00	
	Ties	11 ^y			
	Total	15			
9. I like it when the topic of an English reading makes me think a little more.	Negative Ranks	5 ^z	4.00	20.00	z:-0.30;0.76
	Positive Ranks	3 ^{aa}	5.33	16.00	
	Ties	7 ^{ab}			
	Total	15			
10. I like challenging myself while reading in English.	Negative Ranks	4 ^{ac}	6.25	25.00	z:-0.31;0.75
	Positive Ranks	5 ^{ad}	4.00	20.00	
	Ties	6 ^{ae}			
	Total	15			
11. I enjoy reading good, long stories in English.	Negative Ranks	3 ^{af}	5.67	17.00	z:-0.14;0.89
	Positive Ranks				

	Positive Ranks	5 ^{ag}	3.80	19.00	
	Ties	7 ^{ah}			
	Total	15			
	Negative Ranks	3 ^{ai}	5.00	15.00	z:-1.71;0.09
12. I like hard, challenging English readings.	Positive Ranks	8 ^{aj}	6.38	51.00	
	Ties	4 ^{ak}			
	Total	15			
	Negative Ranks	1 ^{al}	3.50	3.50	z:-1.63;0.10
13. When an assignment is interesting, I can read difficult English materials more easily.	Positive Ranks	5 ^{am}	3.50	17.50	
	Ties	9 ^{an}			
	Total	15			
	Negative Ranks	5 ^{ao}	5.50	27.50	z:-0.54;0.59
14. When I am reading about an interesting topic in English, I sometimes lose track of time.	Positive Ranks	6 ^{ap}	6.42	38.50	
	Ties	4 ^{aq}			
	Total	15			
	Negative Ranks	5 ^{ar}	4.50	22.50	z:-0.98;0.33
15. When my teacher or friends tell me something interesting, I might read more about it in English.	Positive Ranks	6 ^{as}	7.25	43.50	
	Ties	4 ^{at}			
	Total	15			
	Negative Ranks	2 ^{au}	3.25	6.50	z:-0.28;0.78
16. I enjoy reading in English to learn what is going on in the world.	Positive Ranks	3 ^{av}	2.83	8.50	
	Ties	10 ^{aw}			
	Total	15			
	Negative Ranks	5 ^{ax}	4.20	21.00	z:-1.27;0.21
17. I am willing to work hard to read better than my friends in English.	Positive Ranks	2 ^{ay}	3.50	7.00	
	Ties	8 ^{az}			
	Total	15			
	Negative Ranks	5 ^{ba}	4.50	22.50	z:-0.65;0.52
18. I like being the only student who knows an answer about something we read in English.	Positive Ranks				
	Ties				
	Total				
	Negative Ranks				

	Positive Ranks	3 ^{bb}	4.50	13.50	
	Ties	7 ^{bc}			
	Total	15			
19. I like my teacher to say that I read well in English.	Negative Ranks	8 ^{bd}	5.06	40.50	z:-2.31;0.02
	Positive Ranks	1 ^{be}	4.50	4.50	
	Ties	6 ^{bf}			
	Total	15			
20. When I complete English reading assignments for class, I try to get more answers correct than my classmates	Negative Ranks	7 ^{bg}	5.29	37.00	z:-1.81;0.07
	Positive Ranks	2 ^{bh}	4.00	8.00	
	Ties	6 ^{bi}			
	Total	15			
21. When I read in English, I like to finish my reading assignments before other students.	Negative Ranks	3 ^{bj}	7.50	22.50	z:-0.53;0.60
	Positive Ranks	7 ^{bk}	4.64	32.50	
	Ties	5 ^{bl}			
	Total	15			
22. I like my friends to tell me that I am a good English reader.	Negative Ranks	3 ^{bm}	3.67	11.00	z:-0.52;0.60
	Positive Ranks	4 ^{bn}	4.25	17.00	
	Ties	8 ^{bo}			
	Total	15			
23. I want to be the best at reading in English.	Negative Ranks	5 ^{bp}	6.50	32.50	z:-0.05;0.96
	Positive Ranks	6 ^{bq}	5.58	33.50	
	Ties	4 ^{br}			
	Total	15			
24. When some classmates read English better than me, I want to read more English materials.	Negative Ranks	7 ^{bs}	5.14	36.00	z:-0.92;0.36
	Positive Ranks	3 ^{bt}	6.33	19.00	
	Ties	5 ^{bu}			
	Total	15			
25. I like it when my teacher asks me to read English aloud in class.	Negative Ranks	3 ^{bv}	4.00	12.00	z:-0.38;0.71

	Positive Ranks	4 ^{bw}	4.00	16.00	
	Ties	8 ^{bx}			
	Total	15			
	Negative Ranks	7 ^{by}	5.14	36.00	z:-1.73;0.08
26. I like to get positive comments about my English reading.	Positive Ranks	2 ^{bz}	4.50	9.00	
	Ties	6 ^{ca}			
	Total	15			
	Negative Ranks	3 ^{cb}	3.00	9.00	z:-0.33;0.74
27. When I read in English, I often think about how well I read compared to others.	Positive Ranks	3 ^{cc}	4.00	12.00	
	Ties	9 ^{cd}			
	Total	15			
	Negative Ranks	6 ^{ce}	4.33	26.00	z:-1.16;0.25
28. I practice reading in English because I feel good when I answer teachers' questions correctly in class.	Positive Ranks	2 ^{cf}	5.00	10.00	
	Ties	7 ^{cg}			
	Total	15			
	Negative Ranks	4 ^{ch}	3.00	12.00	z:-1.34;0.18
29. I feel happy when my friends ask me for help with their English reading assignments.	Positive Ranks	1 ^{ci}	3.00	3.00	
	Ties	10 ^{cj}			
	Total	15			
	Negative Ranks	4 ^{ck}	2.50	10.00	z:-0.11;0.91
30. Finishing English reading assignments on time is very important for me.	Positive Ranks	2 ^{cl}	5.50	11.00	
	Ties	9 ^{cm}			
	Total	15			
	Negative Ranks	2 ^{cn}	3.00	6.00	z:-0.45;0.65
31. I usually try to finish my English reading assignments on time.	Positive Ranks	3 ^{co}	3.00	9.00	
	Ties	10 ^{cp}			
	Total	15			
	Negative Ranks	6 ^{cq}	5.50	33.00	z:-0.63;0.53
32. It is important for me to receive a good grade in my English reading course.					

	Positive Ranks	4 ^{cr}	5.50	22.00	
	Ties	5 ^{cs}			
	Total	15			
33. I do my English reading assignments exactly as the teacher tells me to do them.	Negative Ranks	5 ^{ct}	3.80	19.00	z:-0.14;0.89
	Positive Ranks	3 ^{cu}	5.67	17.00	
	Ties	7 ^{cv}			
	Total	15			
34. I look forward to finding out my grades in English reading.	Negative Ranks	6 ^{cw}	4.33	26.00	z:-1.16;0.25
	Positive Ranks	2 ^{cx}	5.00	10.00	
	Ties	7 ^{cy}			
	Total	15			
35. I want to read in English to improve my grades.	Negative Ranks	6 ^{cz}	3.50	21.00	z:-2.27;0.02
	Positive Ranks	0 ^{da}	0.00	0.00	
	Ties	9 ^{db}			
	Total	15			
36. I work harder on English reading assignments when they are graded.	Negative Ranks	5 ^{dc}	3.20	16.00	z:-0.29;0.78
	Positive Ranks	3 ^{dd}	6.67	20.00	
	Ties	7 ^{de}			
	Total	15			
37. I try to read in English because I need a good score on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	9 ^{df}	5.06	45.50	z:-1.95;0.05
	Positive Ranks	1 ^{dg}	9.50	9.50	
	Ties	5 ^{dh}			
	Total	15			
38. I try to read in English because I like seeing my reading score improve on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	8 ^{di}	4.56	36.50	z:-1.75;0.08
	Positive Ranks	1 ^{dj}	8.50	8.50	
	Ties	6 ^{dk}			
	Total	15			

39. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	4 ^{dl}	3.50	14.00	z:0.00;1.00
	Positive Ranks	3 ^{dm}	4.67	14.00	
	Ties	8 ^{dn}			
	Total	15			
40. I practice reading in English because I need to do well in my future classes.	Negative Ranks	7 ^{do}	4.64	32.50	z:-2.12;0.03
	Positive Ranks	1 ^{dp}	3.50	3.50	
	Ties	7 ^{dq}			
	Total	15			
41. I enjoy telling my friends about the things I read in English materials.	Negative Ranks	4 ^{dr}	4.50	18.00	z:0.00;1.00
	Positive Ranks	4 ^{ds}	4.50	18.00	
	Ties	7 ^{dt}			
	Total	15			
42. My friends and I like to share what we read in English.	Negative Ranks	5 ^{du}	5.40	27.00	z:-0.58;0.56
	Positive Ranks	4 ^{dv}	4.50	18.00	
	Ties	6 ^{dw}			
	Total	15			
43. I like talking with my friends about what I read in English.	Negative Ranks	3 ^{dx}	5.17	15.50	z:-0.36;0.72
	Positive Ranks	5 ^{dy}	4.10	20.50	
	Ties	7 ^{dz}			
	Total	15			
44. I like joining class discussions about what I read in English.	Negative Ranks	1 ^{ea}	6.50	6.50	z:-1.65;0.10
	Positive Ranks	7 ^{eb}	4.21	29.50	
	Ties	7 ^{ec}			
	Total	15			

Descriptive Statistics for the Experimental Group

	N	Mean	Std. Deviation	Minimum	Maximum
Factor 1 pre-test	15	2.69	.71	1.50	3.69
Factor 2 pre-test	15	2.87	.67	1.23	3.77
Factor 3 pre-test	15	3.00	.65	1.57	4.00
Factor 4 pre-test	15	2.63	.91	1.00	4.00
Factor 5 pre-test	15	2.40	.81	1.00	3.75
MREQ pre-test	15	2.76	.58	1.43	3.52
Factor 1 post-test	15	2.93	.65	1.88	4.00
Factor 2 post-test	15	3.04	.68	1.54	4.00
Factor 3 post-test	15	3.14	.69	1.57	4.00
Factor 4 post-test	15	2.91	1.01	1.50	4.00
Factor 5 post-test	15	2.75	.92	1.00	4.00
MREQ post-test	15	2.98	.63	1.89	4.00

Wilcoxon Signed Ranks Test (Experimental Group)

		Ranks		
		N	Mean Rank	Sum of Ranks
Factor 1 post-test – Factor 1 pre-test	Negative Ranks	2 ^a	9.00	18.00
	Positive Ranks	11 ^b	6.64	73.00
	Ties	2 ^c		
	Total	15		
Factor 2 post-test – Factor 2 pre-test –	Negative Ranks	5 ^d	5.20	26.00
	Positive Ranks	8 ^e	8.13	65.00
	Ties	2 ^f		
	Total	15		
Factor 3 post-test – Factor 3 pre-test –	Negative Ranks	4 ^g	4.63	18.50
	Positive Ranks	7 ^h	6.79	47.50
	Ties	4 ⁱ		
	Total	15		
Factor 4 post-test – Factor 4 pre-test	Negative Ranks	1 ^j	4.50	4.50
	Positive Ranks	8 ^k	5.06	40.50
	Ties	6 ^l		

	Total	15		
Factor 5 post-test – Factor 5 pre-test	Negative Ranks	2 ^m	4.25	8.50
	Positive Ranks	8 ⁿ	5.81	46.50
	Ties	5 ^o		
	Total	15		
MREQ post-test – MREQ pre-test	Negative Ranks	3 ^p	4.33	13.00
	Positive Ranks	12 ^q	8.92	107.00
	Ties	0 ^r		
	Total	15		

Test Statistics^a

	Factor1_post - Factor1_pre	Factor2_post - Factor2_pre	Factor3_post - Factor3_pre	Factor4_post - Factor4_pre	Factor5_post - Factor5_pre	MREQ_post - MREQ_pre
Z	-1.93 ^b	-1.37 ^b	-1.30 ^b	-2.15 ^b	-1.95 ^b	-2.67 ^b
Asymp. Sig. (2-tailed)	.05	.17	.20	.03	.05	.01

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Wilcoxon Test Results (Experimental Group)

		N	Mean Ranks	Sum of Ranks	z; p
1. I like reading in English to learn something new about people and things that interest me.	Negative Ranks	1 ^b	1.50	1.50	z:0.00;1.00
	Positive Ranks	1 ^c	1.50	1.50	
	Ties	13 ^d			
	Total	15			
2. I like reading a lot of interesting things in English.	Negative Ranks	2 ^e	3.00	6.00	z:-0.45;0.65
	Positive Ranks	3 ^f	3.00	9.00	
	Ties	10 ^g			
	Total	15			
3. I feel happy when I read about something interesting in English.	Negative Ranks	1 ^h	3.00	3.00	z:-1.34;0.18
	Positive Ranks				

4. When the topic is interesting, I am willing to read difficult English materials.	Positive Ranks	4 ⁱ	3.00	12.00	
	Ties	10 ^j			
	Total	15			
	Negative Ranks	3 ^k	5.50	16.50	z:-1.27;0.21
	Positive Ranks	7 ^l	5.50	38.50	
5. It's fun for me to read about something I like in English.	Ties	5 ^m			
	Total	15			
	Negative Ranks	2 ⁿ	3.50	7.00	z:-0.82;0.41
	Positive Ranks	4 ^o	3.50	14.00	
	Ties	9 ^p			
6. It is hard for me to stop reading in English when the topic is interesting.	Total	15			
	Negative Ranks	1 ^q	2.50	2.50	z:-1.98;0.05
	Positive Ranks	6 ^r	4.25	25.50	
	Ties	8 ^s			
	Total	15			
7. I like reading about new things in English.	Negative Ranks	1 ^t	5.00	5.00	z:-2.33;0.02
	Positive Ranks	8 ^u	5.00	40.00	
	Ties	6 ^v			
	Total	15			
	Negative Ranks	3 ^w	4.00	12.00	z:-0.91;0.37
8. I enjoy reading when I learn complex ideas from English materials.	Positive Ranks	5 ^x	4.80	24.00	
	Ties	7 ^y			
	Total	15			
	Negative Ranks	1 ^z	2.50	2.50	z:-1.00;0.32
	Positive Ranks	3 ^{aa}	2.50	7.50	
9. I like it when the topic of an English reading makes me think a little more.	Ties	11 ^{ab}			
	Total	15			
	Negative Ranks	6 ^{ac}	5.50	33.00	z:-1.31;0.19
	Positive Ranks				
	Ties				
10. I like challenging myself while reading in English.	Total				
	Negative Ranks				
	Positive Ranks				
	Ties				
	Total				

11. I enjoy reading good, long stories in English.	Positive Ranks	3 ^{ad}	4.00	12.00	z:-0.30;0.76
	Ties	6 ^{ae}			
	Total	15			
	Negative Ranks	4 ^{af}	5.00	20.00	
	Positive Ranks	4 ^{ag}	4.00	16.00	
12. I like hard, challenging English readings.	Ties	7 ^{ah}			z:-0.69;0.49
	Total	15			
	Negative Ranks	1 ^{ai}	5.00	5.00	
	Positive Ranks	4 ^{aj}	2.50	10.00	
	Ties	10 ^{ak}			
13. When an assignment is interesting, I can read difficult English materials more easily.	Total	15			z:-2.89;0.00
	Negative Ranks	0 ^{al}	0.00	0.00	
	Positive Ranks	10 ^{am}	5.50	55.00	
	Ties	5 ^{an}			
	Total	15			
14. When I am reading about an interesting topic in English, I sometimes lose track of time.	Negative Ranks	3 ^{ao}	6.33	19.00	z:-1.30;0.19
	Positive Ranks	8 ^{ap}	5.88	47.00	
	Ties	4 ^{aq}			
	Total	15			
15. When my teacher or friends tell me something interesting, I might read more about it in English.	Negative Ranks	2 ^{ar}	4.00	8.00	z:-1.81;0.07
	Positive Ranks	7 ^{as}	5.29	37.00	
	Ties	6 ^{at}			
	Total	15			
16. I enjoy reading in English to learn what is going on in the world.	Negative Ranks	1 ^{au}	1.50	1.50	z:-0.82;0.41
	Positive Ranks	2 ^{av}	2.25	4.50	
	Ties	12 ^{aw}			

	Total	15			
17. I am willing to work hard to read better than my friends in English.	Negative Ranks	4 ^{ax}	4.00	16.00	z:-0.30;0.76
	Positive Ranks	4 ^{ay}	5.00	20.00	
	Ties	7 ^{az}			
	Total	15			
18. I like being the only student who knows an answer about something we read in English.	Negative Ranks	1 ^{ba}	3.50	3.50	z:-2.12;0.03
	Positive Ranks	7 ^{bb}	4.64	32.50	
	Ties	7 ^{bc}			
	Total	15			
19. I like my teacher to say that I read well in English.	Negative Ranks	1 ^{bd}	2.50	2.50	z:-1.00;0.32
	Positive Ranks	3 ^{be}	2.50	7.50	
	Ties	11 ^{bf}			
	Total	15			
20. When I complete English reading assignments for class, I try to get more answers correct than my classmates	Negative Ranks	2 ^{bg}	3.00	6.00	z:-0.45;0.65
	Positive Ranks	3 ^{bh}	3.00	9.00	
	Ties	10 ^{bi}			
	Total	15			
21. When I read in English, I like to finish my reading assignments before other students.	Negative Ranks	3 ^{bj}	3.00	9.00	z:-1.30;0.19
	Positive Ranks	5 ^{bk}	5.40	27.00	
	Ties	7 ^{bl}			
	Total	15			
22. I like my friends to tell me that I am a good English reader.	Negative Ranks	4 ^{bm}	3.75	15.00	z:-1.00;0.32
	Positive Ranks	2 ^{bn}	3.00	6.00	
	Ties	9 ^{bo}			
	Total	15			
23. I want to be the best at reading in English.	Negative Ranks	0 ^{bp}	0.00	0.00	z:-1.73;0.08
	Positive Ranks	3 ^{bq}	2.00	6.00	
	Ties	12 ^{br}			

	Total	15			
24. When some classmates read English better than me, I want to read more English materials.	Negative Ranks	1 ^{bs}	6.50	6.50	z:-1.32;0.19
	Positive Ranks	6 ^{bt}	3.58	21.50	
	Ties	8 ^{bu}			
	Total	15			
25. I like it when my teacher asks me to read English aloud in class.	Negative Ranks	3 ^{bv}	3.50	10.50	z:-0.63;0.53
	Positive Ranks	4 ^{bw}	4.38	17.50	
	Ties	8 ^{bx}			
	Total	15			
26. I like to get positive comments about my English reading.	Negative Ranks	2 ^{by}	3.00	6.00	z:-1.00;0.32
	Positive Ranks	4 ^{bz}	3.75	15.00	
	Ties	9 ^{ca}			
	Total	15			
27. When I read in English, I often think about how well I read compared to others.	Negative Ranks	4 ^{cb}	4.00	16.00	z:-0.30;0.76
	Positive Ranks	4 ^{cc}	5.00	20.00	
	Ties	7 ^{cd}			
	Total	15			
28. I practice reading in English because I feel good when I answer teachers' questions correctly in class.	Negative Ranks	4 ^{ce}	4.38	17.50	z:-0.63;0.53
	Positive Ranks	3 ^{cf}	3.50	10.50	
	Ties	8 ^{cg}			
	Total	15			
29. I feel happy when my friends ask me for help with their English reading assignments.	Negative Ranks	2 ^{ch}	5.00	10.00	z:-1.16;0.25
	Positive Ranks	6 ^{ci}	4.33	26.00	
	Ties	7 ^{cj}			
	Total	15			
30. Finishing English reading assignments on time is very important for me.	Negative Ranks	1 ^{ck}	3.50	3.50	z:-1.63;0.10
	Positive Ranks	5 ^{cl}	3.50	17.50	
	Ties	9 ^{cm}			

	Total	15			
31. I usually try to finish my English reading assignments on time.	Negative Ranks	3 ^{cn}	5.00	15.00	z:-1.00;0.32
	Positive Ranks	6 ^{co}	5.00	30.00	
	Ties	6 ^{cp}			
	Total	15			
32. It is important for me to receive a good grade in my English reading course.	Negative Ranks	2 ^{cq}	3.50	7.00	z:-0.82;0.41
	Positive Ranks	4 ^{cr}	3.50	14.00	
	Ties	9 ^{cs}			
	Total	15			
33. I do my English reading assignments exactly as the teacher tells me to do them.	Negative Ranks	3 ^{ct}	5.33	16.00	z:-0.30;0.76
	Positive Ranks	5 ^{cu}	4.00	20.00	
	Ties	7 ^{cv}			
	Total	15			
34. I look forward to finding out my grades in English reading.	Negative Ranks	4 ^{cw}	4.50	18.00	z:0.00;1.00
	Positive Ranks	4 ^{cx}	4.50	18.00	
	Ties	7 ^{cy}			
	Total	15			
35. I want to read in English to improve my grades.	Negative Ranks	3 ^{cz}	3.50	10.50	z:0.00;1.00
	Positive Ranks	3 ^{da}	3.50	10.50	
	Ties	9 ^{db}			
	Total	15			
36. I work harder on English reading assignments when they are graded.	Negative Ranks	3 ^{dc}	4.50	13.50	z:-1.16;0.25
	Positive Ranks	6 ^{dd}	5.25	31.50	
	Ties	6 ^{de}			
	Total	15			
37. I try to read in English because I need a good score on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	0 ^{df}	0.00	0.00	z:-1.89;0.06
	Positive Ranks	4 ^{dg}	2.50	10.00	

	Ties	11 ^{dh}			
	Total	15			
38. I try to read in English because I like seeing my reading score improve on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	3 ^{di}	5.00	15.00	z:-1.00;0.32
	Positive Ranks	6 ^{dj}	5.00	30.00	
	Ties	6 ^{dk}			
	Total	15			
39. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL, Michigan, IELTS, etc.	Negative Ranks	1 ^{dl}	3.00	3.00	z:-1.93;0.05
	Positive Ranks	6 ^{dm}	4.17	25.00	
	Ties	8 ^{dn}			
	Total	15			
40. I practice reading in English because I need to do well in my future classes.	Negative Ranks	1 ^{do}	1.50	1.50	z:-0.82;0.41
	Positive Ranks	2 ^{dp}	2.25	4.50	
	Ties	12 ^{dq}			
	Total	15			
41. I enjoy telling my friends about the things I read in English materials.	Negative Ranks	2 ^{dr}	6.00	12.00	z:-0.91;0.37
	Positive Ranks	6 ^{ds}	4.00	24.00	
	Ties	7 ^{dt}			
	Total	15			
42. My friends and I like to share what we read in English.	Negative Ranks	2 ^{du}	4.25	8.50	z:-1.35;0.18
	Positive Ranks	6 ^{dv}	4.58	27.50	
	Ties	7 ^{dw}			
	Total	15			
43. I like talking with my friends about what I read in English.	Negative Ranks	1 ^{dx}	3.50	3.50	z:-1.90;0.06
	Positive Ranks	6 ^{dy}	4.08	24.50	
	Ties	8 ^{dz}			
	Total	15			
44. I like joining class discussions about what I read in English.	Negative Ranks	3 ^{ea}	4.00	12.00	z:-1.31;0.19
	Positive Ranks	6 ^{eb}	5.50	33.00	
	Ties	6 ^{ec}			
	Total	15			

Mann Whitney U Test Results (Pre-tests Comparison)

Items	Group	N	Mean Rank	Sum of Ranks	z; p
1. I like reading in English to learn something new about people and things that interest me.	Control	15	19.27	289.00	z:-2.74;p:0.01
	Experimental	15	11.73	176.00	
	Total	30			
2. I like reading a lot of interesting things in English.	Control	15	18.70	280.50	z:-2.15;p:0.03
	Experimental	15	12.30	184.50	
	Total	30			
3. I feel happy when I read about something interesting in English.	Control	15	16.70	250.50	z:-0.82;p:0.41
	Experimental	15	14.30	214.50	
	Total	30			
4. It's fun for me to read about something I like in English.	Control	15	19.10	286.50	z:-2.42;p:0.02
	Experimental	15	11.90	178.50	
	Total	30			
5. It is hard for me to stop reading in English when the topic is interesting.	Control	15	16.30	244.50	z:-0.55;p:0.58
	Experimental	15	14.70	220.50	
	Total	30			
6. I like reading about new things in English.	Control	15	15.90	238.50	z:-0.26;p:0.80
	Experimental	15	15.10	226.50	
	Total	30			
7. I enjoy reading when I learn complex ideas from English materials.	Control	15	19.20	288.00	z:-2.47;p:0.01
	Experimental	15	11.80	177.00	
	Total	30			
8. I like it when the topic of an English reading makes me think a little more.	Control	15	17.20	258.00	z:-1.11;p:0.27
	Experimental	15	13.80	207.00	
	Total	30			
9. I like challenging myself while reading in English.	Control	15	17.53	263.00	z:-1.37;p:0.17
	Experimental	15	13.47	202.00	
	Total	30			
10. I enjoy reading good, long stories in English.	Control	15	16.60	249.00	z:-0.73;p:0.47
	Experimental	15	14.40	216.00	
	Total	30			
11. I like hard, challenging English readings.	Control	15	17.37	260.50	z:-1.22;p:0.22
	Experimental	15	13.63	204.50	
	Total	30			
12. When an assignment is interesting, I can read difficult English materials more easily.	Control	15	16.50	247.50	z:-0.66;p:0.51
	Experimental	15	14.50	217.50	
	Total	30			
13. When I am reading about an interesting topic in English, I sometimes lose track of time.	Control	15	18.27	274.00	z:-1.83;p:0.07
	Experimental	15	12.73	191.00	
	Total	30			
14. When my teacher or friends tell me something interesting, I might read more about it in English.	Control	15	15.87	238.00	z:-0.24;p:0.81
	Experimental	15	15.13	227.00	
	Total	30			
15. I enjoy reading in English to learn what is going on in the world.	Control	15	16.53	248.00	z:-0.67;p:0.50
	Experimental	15	14.47	217.00	
	Total	30			

16. I am willing to work hard to read better than my friends in English.	Control	15	16.97	254.50	z:-0.96;p:0.34
	Experimental	15	14.03	210.50	
	Total	30			
17. I like being the only student who knows an answer about something we read in English.	Control	15	17.53	263.00	z:-1.34;p:0.18
	Experimental	15	13.47	202.00	
	Total	30			
18. I like my teacher to say that I read well in English.	Control	15	17.47	262.00	z:-1.37;p:0.17
	Experimental	15	13.53	203.00	
	Total	30			
19. When I complete English reading assignments for class. I try to get more answers correct than my classmates.	Control	15	18.13	272.00	z:-2.04;p:0.04
	Experimental	15	12.87	193.00	
	Total	30			
20. When I read in English. I like to finish my reading assignments before other students.	Control	15	15.50	232.50	z:-0.00;p:1.00
	Experimental	15	15.50	232.50	
	Total	30			
21. I like my friends to tell me that I am a good English reader.	Control	15	13.90	208.50	z:-1.04;p:0.30
	Experimental	15	17.10	256.50	
	Total	30			
22. I want to be the best at reading in English.	Control	15	15.10	226.50	z:-0.27;p:0.79
	Experimental	15	15.90	238.50	
	Total	30			
23. When some classmates read English better than me. I want to read more English materials.	Control	15	16.90	253.50	z:-0.92;p:0.36
	Experimental	15	14.10	211.50	
	Total	30			
24. I like it when my teacher asks me to read English aloud in class.	Control	15	17.37	260.50	z:-1.21;p:0.23
	Experimental	15	13.63	204.50	
	Total	30			
25. I like to get positive comments about my English reading.	Control	15	17.67	265.00	z:-1.41;p:0.16
	Experimental	15	13.33	200.00	
	Total	30			
26. When I read in English. I often think about how well I read compared to others.	Control	15	18.90	283.50	z:-2.37;p:0.02
	Experimental	15	12.10	181.50	
	Total	30			
27. I practice reading in English because I feel good when I answer teachers' questions correctly in class.	Control	15	16.53	248.00	z:-0.69;p:0.49
	Experimental	15	14.47	217.00	
	Total	30			
28. I feel happy when my friends ask me for help with their English reading assignments.	Control	15	17.70	265.50	z:-1.49;p:0.14
	Experimental	15	13.30	199.50	
	Total	30			
29. Finishing English reading assignments on time is very important for me.	Control	15	17.43	261.50	z:-1.29;p:0.20
	Experimental	15	13.57	203.50	
	Total	30			
30. I usually try to finish my English reading assignments	Control	15	16.00	240.00	z:-0.33;p:0.74
	Experimental	15	15.00	225.00	
	Total	30			

on time.	Total	30			
31. It is important for me to receive a good grade in my English reading course.	Control	15	16.43	246.50	z:-0.64;p:0.52
	Experimental	15	14.57	218.50	
	Total	30			
32. I do my English reading assignments exactly as the teacher tells me to do them.	Control	15	16.87	253.00	z:-0.92;p:0.36
	Experimental	15	14.13	212.00	
	Total	30			
33. I look forward to finding out my grades in English reading.	Control	15	16.57	248.50	z:-0.72;p:0.47
	Experimental	15	14.43	216.50	
	Total	30			
34. I want to read in English to improve my grades.	Control	15	16.53	248.00	z:-0.70;p:0.49
	Experimental	15	14.47	217.00	
	Total	30			
35. I work harder on English reading assignments when they are graded.	Control	15	18.40	276.00	z:-2.02;p:0.04
	Experimental	15	12.60	189.00	
	Total	30			
36. I try to read in English because I need a good score on tests like TOEFL. Michigan. IELTS. etc.	Control	15	18.57	278.50	z:-1.99;p:0.05
	Experimental	15	12.43	186.50	
	Total	30			
37. I try to read in English because I like seeing my reading score improve on tests like TOEFL. Michigan. IELTS. etc.	Control	15	19.33	290.00	z:-2.57;p:0.01
	Experimental	15	11.67	175.00	
	Total	30			
38. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL. Michigan. IELTS. etc.	Control	15	19.50	292.50	z:-2.66;p:0.01
	Experimental	15	11.50	172.50	
	Total	30			
39. I practice reading in English because I need to do well in my future classes.	Control	15	18.30	274.50	z:-1.80;p:0.07
	Experimental	15	12.70	190.50	
	Total	30			
40. I enjoy telling my friends about the things I read in English materials.	Control	15	17.80	267.00	z:-1.72;p:0.09
	Experimental	15	13.20	198.00	
	Total	30			
41. My friends and I like to share what we read in English.	Control	15	18.57	278.50	z:-1.99;p:0.05
	Experimental	15	12.43	186.50	
	Total	30			
42. I like talking with my friends about what I read in English.	Control	15	19.80	297.00	z:-2.79;p:0.01
	Experimental	15	11.20	168.00	
	Total	30			
43. I like joining class discussions about what I read in English.	Control	15	18.10	271.50	z:-1.69;p:0.09
	Experimental	15	12.90	193.50	
	Total	30			
44. My friends and I like to share what we read in English.	Control	15	17.40	261.00	z:-1.24;p:0.22
	Experimental	15	13.60	204.00	
	Total	30			

Mann Whitney U Test Results (Post-tests Comparison)

Items	Group	N	Mean Rank	Sum of Ranks	z; p
1. I like reading in English to learn something new about people and things that interest me.	Control	15	19.40	291.00	z:-2.73;p:0.01
	Experimental	15	11.60	174.00	
	Total	30			
2. I like reading a lot of interesting things in English.	Control	15	18.17	272.50	z:-1.80;p:0.07
	Experimental	15	12.83	192.50	
	Total	30			
3. I feel happy when I read about something interesting in English.	Control	15	15.50	232.50	z:0.00;p:1.00
	Experimental	15	15.50	232.50	
	Total	30			
4. It's fun for me to read about something I like in English.	Control	15	17.77	266.50	z:-1.50;p:0.13
	Experimental	15	13.23	198.50	
	Total	30			
5. It is hard for me to stop reading in English when the topic is interesting.	Control	15	16.43	246.50	z:-0.66;p:0.51
	Experimental	15	14.57	218.50	
	Total	30			
6. I like reading about new things in English.	Control	15	14.00	210.00	z:-0.99;p:0.32
	Experimental	15	17.00	255.00	
	Total	30			
7. I enjoy reading when I learn complex ideas from English materials.	Control	15	16.20	243.00	z:-0.48;p:0.63
	Experimental	15	14.80	222.00	
	Total	30			
8. I like it when the topic of an English reading makes me think a little more.	Control	15	16.30	244.50	z:-0.53;p:0.60
	Experimental	15	14.70	220.50	
	Total	30			
9. I like challenging myself while reading in English.	Control	15	16.13	242.00	z:-0.43;p:0.67
	Experimental	15	14.87	223.00	
	Total	30			
10. I enjoy reading good, long stories in English.	Control	15	18.23	273.50	z:-1.78;p:0.08
	Experimental	15	12.77	191.50	
	Total	30			
11. I like hard, challenging English readings.	Control	15	17.93	269.00	z:-1.57;p:0.12
	Experimental	15	13.07	196.00	
	Total	30			
12. When an assignment is interesting. I can read difficult English materials more easily.	Control	15	18.17	272.50	z:-1.74;p:0.08
	Experimental	15	12.83	192.50	
	Total	30			
13. When I am reading about an interesting topic in English. I sometimes lose track of time.	Control	15	15.17	227.50	z:-0.23;p:0.82
	Experimental	15	15.83	237.50	
	Total	30			
14. When my teacher or friends tell me something interesting. I might read more about it in English.	Control	15	14.87	223.00	z:-0.41;p:0.68
	Experimental	15	16.13	242.00	
	Total	30			
15. I enjoy reading in English to learn what is going on in the	Control	15	15.50	232.50	z:0.00;p:1.00
	Experimental	15	15.50	232.50	

world.	Total	30			
16. I am willing to work hard to read better than my friends in English.	Control	15	16.80	252.00	z:-0.87;p:0.39
	Experimental	15	14.20	213.00	
	Total	30			
17. I like being the only student who knows an answer about something we read in English.	Control	15	16.60	249.00	z:-0.76;p:0.45
	Experimental	15	14.40	216.00	
	Total	30			
18. I like my teacher to say that I read well in English.	Control	15	13.77	206.50	z:-1.17;p:0.24
	Experimental	15	17.23	258.50	
	Total	30			
19. When I complete English reading assignments for class. I try to get more answers correct than my classmates.	Control	15	13.90	208.50	z:-1.11;p:0.27
	Experimental	15	17.10	256.50	
	Total	30			
20. When I read in English. I like to finish my reading assignments before other students.	Control	15	12.80	192.00	z:-1.77;p:0.08
	Experimental	15	18.20	273.00	
	Total	30			
21. I like my friends to tell me that I am a good English reader.	Control	15	13.17	197.50	z:-1.55;p:0.12
	Experimental	15	17.83	267.50	
	Total	30			
22. I want to be the best at reading in English.	Control	15	16.10	241.50	z:-0.40;p:0.69
	Experimental	15	14.90	223.50	
	Total	30			
23. When some classmates read English better than me. I want to read more English materials.	Control	15	15.47	232.00	z:-0.02;p:0.98
	Experimental	15	15.53	233.00	
	Total	30			
24. I like it when my teacher asks me to read English aloud in class.	Control	15	15.13	227.00	z:-0.24;p:0.81
	Experimental	15	15.87	238.00	
	Total	30			
25. I like to get positive comments about my English reading.	Control	15	17.13	257.00	z:-1.07;p:0.29
	Experimental	15	13.87	208.00	
	Total	30			
26. When I read in English. I often think about how well I read compared to others.	Control	15	15.77	236.50	z:-0.18;p:0.86
	Experimental	15	15.23	228.50	
	Total	30			
27. I practice reading in English because I feel good when I answer teachers' questions correctly in class.	Control	15	16.80	252.00	z:-0.86;p:0.39
	Experimental	15	14.20	213.00	
	Total	30			
28. I feel happy when my friends ask me for help with their English reading assignments.	Control	15	16.53	248.00	z:-0.67;p:0.50
	Experimental	15	14.47	217.00	
	Total	30			
29. Finishing English reading assignments on time is very	Control	15	14.13	212.00	z:-0.92;p:0.36
	Experimental	15	16.87	253.00	

important for me.	Total	30			
30. I usually try to finish my English reading assignments on time.	Control	15	14.90	223.50	z:-0.40;p:0.69
	Experimental	15	16.10	241.50	
	Total	30			
31. It is important for me to receive a good grade in my English reading course.	Control	15	15.37	230.50	z:-0.09;p:0.93
	Experimental	15	15.63	234.50	
	Total	30			
32. I do my English reading assignments exactly as the teacher tells me to do them.	Control	15	15.07	226.00	z:-0.30;p:0.77
	Experimental	15	15.93	239.00	
	Total	30			
33. I look forward to finding out my grades in English reading.	Control	15	15.57	233.50	z:-0.04;p:0.96
	Experimental	15	15.43	231.50	
	Total	30			
34. I want to read in English to improve my grades.	Control	15	14.17	212.50	z:-0.88;p:0.38
	Experimental	15	16.83	252.50	
	Total	30			
35. I work harder on English reading assignments when they are graded.	Control	15	15.30	229.50	z:-0.13;p:0.89
	Experimental	15	15.70	235.50	
	Total	30			
36. I try to read in English because I need a good score on tests like TOEFL. Michigan. IELTS. etc.	Control	15	17.57	263.50	z:-1.36;p:0.17
	Experimental	15	13.43	201.50	
	Total	30			
37. I try to read in English because I like seeing my reading score improve on tests like TOEFL. Michigan. IELTS. etc.	Control	15	15.60	234.00	z:-0.07;p:0.95
	Experimental	15	15.40	231.00	
	Total	30			
38. I practice reading in English because I want a higher reading score than my friends and classmates on tests like TOEFL. Michigan. IELTS. etc.	Control	15	16.20	243.00	z:-0.46;p:0.65
	Experimental	15	14.80	222.00	
	Total	30			
39. I practice reading in English because I need to do well in my future classes.	Control	15	16.47	247.00	z:-0.63;p:0.53
	Experimental	15	14.53	218.00	
	Total	30			
40. I enjoy telling my friends about the things I read in English materials.	Control	15	14.97	224.50	z:-0.37;p:0.71
	Experimental	15	16.03	240.50	
	Total	30			
41. My friends and I like to share what we read in English.	Control	15	18.23	273.50	z:-1.79;p:0.07
	Experimental	15	12.77	191.50	
	Total	30			
42. I like talking with my friends about what I read in English.	Control	15	17.50	262.50	z:-1.32;p:0.19
	Experimental	15	13.50	202.50	
	Total	30			
43. I like joining class discussions about what I read in English.	Control	15	17.07	256.00	z:-1.04;p:0.30
	Experimental	15	13.93	209.00	
	Total	30			

44. My friends and I like to share what we read in English.	Control	15	17.83	267.50	z:-1.53;p:0.13
	Experimental	15	13.17	197.50	
	Total	30			



ÖZGEÇMİŞ

KİŞİSEL BİLGİLER

Adı Soyadı: Özge Kübra Yılmaz

Uyruğu: T.C.

EĞİTİM

Derece	Kurum	Mezuniyet Yılı
Lisans	Boğaziçi Üniversitesi Eğitim Fakültesi Yabancı Dil Eğitimi Bölümü	2015
Yüksek Lisans	Medeniyet Üniversitesi Lisansüstü Eğitim Enstitüsü İngiliz Dili Eğitimi	Devam ediyor

İŞ TECRÜBESİ

Tarih	Kurum	Görev
2019-2021	İstanbul 29 Mayıs Üniversitesi Yabancı Diller Yüksekokulu İngilizce Hazırlık Birimi	Main Course Koordinatörü
2017-2021	İstanbul 29 Mayıs Üniversitesi Yabancı Diller Yüksekokulu İngilizce Hazırlık Birimi	Öğretim Görevlisi
Ekim 2016-Mart 2017	Süleymaniye Okulları	İngilizce Öğretmeni
Şubat 2016-Ağustos 2016	İsabet Okulları	İngilizce Öğretmeni

YABANCI DİLLER

İngilizce (ileri düzey)