

EXPLORING TOOLS FOR ENGLISH LANGUAGE VERB-NOUN COLLOCATION INSTRUCTION: DIGITAL AID VERSUS PAPER EXERCISES

Nursel Duransoy¹, Zeynep Koçoğlu²

Abstract

This study investigated the effectiveness of a specially designed online collocation assistant in comparison to traditional paper-based exercises for improving verb-noun collocation skills among Turkish university students learning English as a foreign language (EFL). Grounded in the lexical approach, which emphasizes the importance of learning word combinations in authentic contexts rather than isolated vocabulary items, a quasi-experimental research design was employed. The study included 24 participants who were randomly assigned to two equal groups: one using the online collocation tool and the other working with printed materials. To evaluate learners' collocational development, multiple data collection instruments were used, including pre-tests and post-tests measuring receptive knowledge of target verb-noun collocations, paragraph writing tasks to assess productive use, a quality review checklist to gather students' feedback on the digital tool, and a background information questionnaire to collect demographic data. Both groups studied the same target collocations over the same period, albeit through different instructional formats. Statistical analysis of the test scores indicated no significant difference between the online and paper-based groups in either receptive or productive collocational knowledge. Similarly, no notable variation was found in the frequency of errors related to the target collocations. However, a closer examination of the paragraph writing tasks revealed that non-target collocation errors differed depending on the instructional method. The online group tended to produce more systematic, form-based errors, while the paper group exhibited more varied but contextually influenced mistakes. These findings suggest that while both instructional methods can lead to comparable outcomes in learning target collocations, the type and pattern of errors may vary based on how learners engage with the materials. The results highlight the importance of exploring how instructional design influences incidental learning and underscore the need for further studies on integrating digital tools into collocation instruction in EFL contexts.

Keywords: Learning English as a foreign language; collocation learning; computer-assisted language learning.

¹ Dr., Yeditepe Üniversitesi, nursel.duransoy@yeditepe.edu.tr, orcid.org/0000-0001-8814-8250

² Dr., Yeditepe Üniversitesi, zbkocoglu@yeditepe.edu.tr, orcid.org/0000-0002-2508-6918

Legal Permissions: Yeditepe Üniversity Humanities and Social Research Ethics Committee,
Date: 30.03.2021, Number: E.21568116-302.14.01-772.

İNGİLİZCE DİLİNDE FİİL-İSİM TAMLAMASI ÖĞRETİMİNDE ARAÇLARIN KEŞFİ: DİJİTAL ARAÇ MI, KAĞIT TEMELLİ ARAÇLAR MI?

Öz

Bu çalışma, üniversite düzeyinde İngilizce öğrenen öğrencilerin fiil-isim tamlamalarını öğrenme süreçlerinde özel olarak geliştirilen bir çevrimiçi tamlama asistanının etkililiğini değerlendirmeyi amaçlamaktadır. Araştırma, sözcüksel yaklaşıma dayalı olarak tasarlanmış ve yarı-deneyssel bir desen çerçevesinde yürütülmüştür. Katılımcılar, İngilizce seviyeleri benzer olan 24 Türk üniversite öğrencisinden oluşmuş ve rastgele olarak iki gruba ayrılmıştır: çevrimiçi araç kullanan grup ve kağıt temelli alıştırmalarla çalışan geleneksel grup. Her iki grup da aynı hedef fiil-isim tamlamalarını öğrenmiş; ancak farklı öğretim materyalleriyle desteklenmiştir. Veri toplama sürecinde ön test ve son testler, paragraf yazma görevleri ve kalite değerlendirme kontrol listesi kullanılmıştır. Ön ve son testler, öğrencilerin fiil-isim tamlamalarına yönelik alıcı bilgi düzeylerini ölçerken; paragraf yazma görevleri, üretici bilgiyi değerlendirmeye yönelik tasarlanmıştır. Kalite değerlendirme listesi ise çevrimiçi aracın kullanım kolaylığı ve öğrenmeye katkısına ilişkin öğrenci görüşlerini toplamayı amaçlamıştır. Bulgular, her iki öğretim yöntemiyle de öğrencilerin hedef tamlamalar konusunda hem alıcı hem de üretici bilgi düzeylerinde gelişim sağladığını, ancak gruplar arasında anlamlı bir fark bulunmadığını ortaya koymuştur. Buna karşın, hedef dışı yapılan tamlama hatalarının türleri öğretim yöntemine göre farklılık göstermiştir. Çevrimiçi grup daha çok kalıp temelli, sistematik hatalar yaparken; kağıt grubu daha çeşitli ancak bağlama bağlı hatalar üretmiştir. Bu sonuçlar, öğretim yöntemlerinin öğrenme süreci ve hata türleri üzerinde farklı etkiler yaratabileceğini göstermektedir. Elde edilen bulgular, EFL bağlamında tamlama öğretimine yönelik pedagojik araçların etkisini değerlendiren daha fazla araştırmaya ihtiyaç olduğunu ortaya koymaktadır.

Anahtar Kelimeler: İngilizce'nin yabancı dil olarak öğrenilmesi; tamlama öğrenimi; bilgisayar destekli dil öğrenimi.

Yasal İzinler: Yeditepe Üniversitesi Beşeri ve Sosyal Araştırmalar Etik Kurulu, Tarih: 30.03.2021, Sayı: E.21568116-302.14.01-772.

Geniş Özet

Fiil-isim tamlamaları başta olmak üzere tamlamalara hâkimiyet, İngilizcenin yabancı dil olarak öğrenilmesinde (EFL) dil yeterliğinin temel bir unsurudur ve hem akıcılık hem de doğruluk gelişimi açısından büyük önem taşır. Yabancı dil öğrencileri için bu tür dilsel birimler, akıcı ve doğal bir konuşma ya da yazı dili oluşturabilmenin anahtar öğelerindendir. Ancak EFL öğrencileri için bu temel dil öğelerini edinmek oldukça zorlu bir süreçtir; çünkü çoğunlukla İngilizce konuşulmayan toplumlarda öğrenim görmekte ve doğal dil girdisine sınırlı biçimde maruz kalmaktadırlar. Bu durum, dilin sözcüksel boyutuna hâkimiyetin gelişimini doğrudan olumsuz etkileyen bir unsur olarak değerlendirilmektedir.

Geleneksel olarak, fiil-isim tamlamalarının öğretimi çoğunlukla ezberleme, eşleştirme veya bağlamdan bağımsız alıştırmalarla yürütülmüştür. Bu yaklaşım, temel düzeyde bazı kazanımlar sağlasa da, öğrencinin tamlamaları anlamlı ve iletişimsel bir bağlamda öğrenmesini engelleyebilir. Dildeki dinamik ve bağlama bağlı kullanım özellikleri göz önünde bulundurulduğunda, bu tarz öğretim yöntemlerinin sınırlı etkililiğe sahip olduğu ifade edilebilir.

Son yıllarda, ikinci/yabancı dil (L2) eğitimine dijital teknolojilerin entegrasyonu, bu geleneksel yaklaşımın ötesine geçen daha etkileşimli ve bireyselleştirilmiş öğrenme ortamlarının oluşmasına zemin hazırlamıştır. Özellikle çevrimiçi uygulamalar, yapay zekâ tabanlı dil işleme araçları ve büyük veri tabanlarına erişim imkânı sunan dijital platformlar, öğrencilerin dil girdisine aktif biçimde katılım göstermelerini sağlamakta, bu da daha kalıcı ve anlamlı öğrenme deneyimlerinin önünü açmaktadır. Bu bağlamda geliştirilen dijital araçlar genellikle kullanıcı dostu arayüzlere sahip olup öğrencinin bireysel öğrenme hızına ve stiline göre uyarlanabilir niteliktedir. Böylece klasik “herkese aynı içerik” modelinin dışına çıkılarak, öğrencinin bilişsel yükünü azaltan ve dikkatini hedef yapıya odaklamasına olanak sağlayan bir yapı ortaya çıkmaktadır.

Bu ihtiyaçlardan hareketle yürütülen bu çalışma, İngilizceyi yabancı dil olarak öğrenen Türk öğrencilerin fiil-isim tamlamalarını öğrenme süreçlerinde dijital teknolojinin etkisini inceleyen deneysel bir araştırmadır. Özellikle bilgisayar destekli dil öğrenimi çerçevesinde geliştirilen özel bir çevrimiçi tamlama asistanının, geleneksel kağıt temelli etkinliklerle karşılaştırıldığında ne derece etkili olduğu değerlendirilmiştir.

Bu bağlamda araştırma, hem eğitim teknolojilerinin kullanım alanlarını genişletmeye hem de tamlama öğrenimine dair uygulamalı kanıt sunmaya yönelik katkı sağlamaktadır. Araştırmanın temelini şu sorular oluşturur:

1. Özel olarak geliştirilen çevrimiçi bir tamlama aracının (www.collocationassistant.com) kullanımı, kağıt temelli alıştırmalara kıyasla fiil-isim tamlamalarına dair bilgi düzeyinde anlamlı bir gelişme sağlar mı?
2. Web grubunun yaptığı fiil-isim tamlaması hatalarının türleri ile kağıt grubunun yaptığı hataların türleri arasında anlamlı bir fark var mıdır?
3. Hedef fiil-isim tamlamaları ile hedef dışı fiil-isim tamlamaları arasında yapılan hata türleri açısından anlamlı bir fark var mıdır?

Araştırmanın kuramsal temeli sözcüksel yaklaşıma dayanmaktadır. Bu yaklaşım, dil öğreniminde yalnızca gramer kurallarının değil, kelimeler arasındaki doğal birlikteliklerin – yani collocation’ların – öğrenilmesini esas alır. Özellikle fiil-isim tamlamaları gibi sık kullanılan yapıların dilin doğal akışı içinde öğrenilmesi, hem anlama hem de üretme becerileri açısından büyük avantajlar sağlar.

Sözcüksel yaklaşıma göre, öğrencilerin kelimeleri tek başlarına değil, bağlam içinde ve sık görülen kalıplar halinde öğrenmeleri kalıcı ve etkili dil gelişimi için gereklidir. Bu bağlamda, fiil-isim tamlamalarının öğretimi yalnızca bir dil bilgisi stratejisi olarak değil, aynı zamanda anlam üretiminde temel bir yapı taşı olarak değerlendirilmelidir.

Çalışmada kullanılan yöntem yarı-deneysel olarak belirlenmiştir. Katılımcılar, İstanbul’daki bir üniversitenin hazırlık programında öğrenim gören ve İngilizce seviyeleri benzer olan 24 Türk öğrenciden oluşmaktadır. Bu öğrenciler rastgele olarak iki gruba ayrılmıştır: çevrimiçi grup (n=12) ve geleneksel kağıt tabanlı grup (n=12). Her iki grup da aynı hedef fiil-isim tamlamalarını öğrenmek üzere eşit sürede ders almış; ancak kullanılan öğretim araçları farklılaştırılmıştır. Çevrimiçi grup, araştırmacılar tarafından özel olarak tasarlanmış olan dijital bir tamlama asistanı üzerinden eğitime tabi tutulmuş, geleneksel grup ise basılı materyallerle ve sınıf içi öğretmen yönlendirmesiyle çalışmıştır. Bu sayede, teknolojik destekli öğrenim ile klasik öğretim yöntemlerinin karşılaştırmalı bir değerlendirmesi mümkün kılınmıştır.

Veri toplama süreci çok boyutlu şekilde yürütülmüştür:

- Ön test/son test: 20 çoktan seçmeli sorudan oluşan bu test, hedef fiil-isim tamlamalarına dair alıcı bilgiyi ölçmüştür.
- Paragraf yazma görevleri: Öğrenciler üç farklı konuda, her biri 130 kelimelik paragraflar yazarak üretici bilgi düzeylerini sergilemişlerdir.
- Kalite değerlendirme kontrol listesi: Web grubundaki öğrencilerin dijital araca yönelik tutumlarını değerlendirmek amacıyla oluşturulmuştur.
- Katılımcı bilgi formu: Öğrencilerin yaş, cinsiyet, eğitim geçmişi ve dijital okuryazarlık düzeyleri gibi bilgiler toplanmıştır.

Elde edilen veriler hem istatistiksel analizlerle hem de içerik çözümlemeleriyle değerlendirilmiştir. Ön test ve son test sonuçları, her iki grubun da fiil-isim tamlamalarına yönelik alıcı bilgisinde gelişme gösterdiğini ortaya koymuştur. Ancak, gruplar arasında anlamlı bir fark bulunmamıştır.

Paragraf yazma görevlerine ilişkin analizler ise daha belirgin farklılıklar göstermiştir. Web grubu daha çok kalıp temelli, tekrar eden hatalar yaparken; kağıt grubu ise bağlam odaklı fakat daha çeşitli hatalar sergilemiştir. Bu fark, öğretim materyalinin öğrenci üzerindeki bilişsel etkisini yansıtmaktadır.

Çevrimiçi araçların sunduğu görselleştirme, anında geri bildirim ve bireysel uyarlanabilirlik gibi avantajlar, öğrenme sürecini yapılandırırken öğrencinin dikkatini hedef yapıya odaklamayı kolaylaştırmaktadır. Ayrıca, bu araçlar aracılığıyla öğrenciler büyük veri yığınlarıyla uğraşmadan, doğrudan anlamlı örnekler ve kısa açıklamalarla hedef yapı üzerinde yoğunlaşabilir.

Bununla birlikte, dijital araçların etkili olabilmesi için sadece teknik değil, pedagojik olarak da iyi tasarlanmış olmaları gerekir. Bu bağlamda geliştirilen çevrimiçi tamlama asistanı, İngilizce ve Türkçe açıklamalar, örnek cümleler ve yapılandırılmış alıştırmalar sunarak öğrencilerin hem anlama hem de üretme süreçlerine destek olmuştur.

Çalışmanın önemli katkısı, eğitim teknolojilerinin pedagojik çerçevede nasıl daha etkili kullanılabileceğine dair öneriler geliştirmesidir. Araştırmacılar, dijital araçların yalnızca bilgi sunmakla kalmayıp, üretime yönelik, etkileşimli ve hata geri bildirimine dayalı içerikler barındırması gerektiğini vurgulamaktadır. Bu doğrultuda geliştirilen dijital tamlama asistanının öğrenci merkezli öğrenmeyi ne ölçüde desteklediği ve bunun üretim temelli becerilere etkisi özellikle değerlendirilmiştir. Aynı zamanda, öğrencilerin bireysel özellikleri - öğrenme stilleri, motivasyon düzeyleri ve teknolojiye aşinalıkları - dijital araçlardan elde edilen verimi doğrudan etkileyen faktörler olarak öne çıkmıştır.

Çalışmada dikkat çeken bir diğer öneri ise dijital ve geleneksel yöntemlerin birbirini tamamlayacak şekilde entegre edilmesidir. Karma öğretim modelleri (blended learning), öğrencilerin hem teknoloji destekli öğrenme avantajlarından hem de sınıf içi etkileşim ve öğretmen rehberliğinden faydalanmasını sağlamaktadır. Bu kapsamda, öğretim tasarımcılarının ve öğretmenlerin yalnızca araç kullanımını değil, bu araçların pedagojik bütünlük içerisinde nasıl yapılandırılacağını bilmeleri gerektiği belirtilmektedir. Özellikle öğretmenlerin dijital araçlara yönelik mesleki gelişim programlarına dahil edilmeleri önerilmektedir.

Bu çalışmada geliştirilen çevrimiçi aracın, özellikle İngilizce seviyesi düşük olan öğrenciler için konuya özgü üretici fiil-isim tamlama bilgisine katkı sağlayabileceği ve bunu öğrencileri zorlamadan gerçekleştirebileceği söylenebilir. Çünkü öğrenciler bu araç sayesinde büyük veri yığınlarıyla uğraşmak ya da uzun sözlük girişlerini okumak zorunda kalmamaktadır. Ayrıca, İngilizce ve Türkçe tanımlar içeren açıklamalar, örnek cümleler ve alıştırmaların bulunması, öğrencinin çalışma belleği üzerindeki dışsal bilişsel yükü azaltmakta ve fiil-isim tamlamalarını kolayca akılda tutup yazılı görevlerine aktarmasını kolaylaştırmaktadır.

Bu çalışmanın kısıtlı örneklem ile yürütülmesi, genel geçer çıkarımlar yapılmasını sınırlandırır; elde edilen bulgular, daha geniş çaplı ve uzun vadeli çalışmalar için temel teşkil edebilecek niteliktedir. Gelecekte yapılacak araştırmalarda farklı yaş grupları, eğitim düzeyleri ve kültürel bağlamlar içinde dijital ve geleneksel yöntemlerin etkisi karşılaştırmalı olarak ele alınabilir. Ayrıca, öğrenme çıktılarına ek olarak öğrencilerin motivasyon düzeyi, dijital tutumları ve öğretim sürecine ilişkin görüşleri de analiz edilerek daha kapsamlı bir değerlendirme yapılabilir.

Sonuç olarak, bu araştırma, EFL bağlamında fiil-isim tamlamalarının öğretime yönelik dijital ve geleneksel yöntemlerin etkililiğini karşılaştırmalı olarak ortaya koyan, aynı zamanda eğitim teknolojilerinin pedagojik kullanımına dair kapsamlı çıkarımlar sunan bir çalışmadır. Araştırma, yalnızca öğretim yöntemi tercihi değil, aynı zamanda bu yöntemlerin öğrencilerin öğrenme tarzı, hata yapma biçimi ve dil üretim sürecine etkileri üzerinden değerlendirilmesi gerektiğini göstermektedir. Dijital çağın sunduğu olanaklarla birlikte, bu tür araştırmaların artması ve öğretim sürecine dair veri temelli kararların alınması büyük önem taşımaktadır.

Bu çalışmanın bulguları, hem dijital hem de geleneksel yöntemlerin tamlama öğretiminde etkili olabileceğini göstermektedir. Çevrimiçi araçlar, kişiselleştirilmiş öğrenme imkânı ve gerçek zamanlı geri bildirim gibi avantajlar sunsa da, bu araçların geleneksel öğretimi tamamen ikame etmek yerine onu tamamlayıcı biçimde kullanılması önerilmektedir. Farklı öğretim tasarımlarının tamlama edinimini nasıl etkilediğini, özellikle öğrencilerin öğrenme tercihleri ve ön bilgi düzeyleriyle ilişkilendirerek inceleyen yeni araştırmalara ihtiyaç vardır. Ayrıca, çevrimiçi ve kağıt temelli alıştırmaların birlikte kullanıldığı hibrit modellerin uzun vadeli kelime bilgisi edinimi ve kalıcılığı üzerindeki etkilerini incelemek, önemli katkılar sağlayabilir.

Pedagojik açıdan, bu çalışma, tamlama öğretiminin EFL müfredatlarına entegre edilmesinin hem akıcılık hem de doğruluk açısından önemini vurgulamaktadır. Özgün metinler ve etkileşimli araçlar kullanılarak oluşturulacak anlamlı öğrenme deneyimleri, öğrencilerin tamlamaları doğal bağlamlarda içselleştirmesini destekleyebilir. Öğretmenlerin, tamlamaların özgünlük ve kalıpsallık özelliklerini vurgulaması ve öğrencileri hem sınıf içinde hem de dışında dile aktif olarak maruz bırakması teşvik edilmelidir. Sonuç olarak, teknolojiyi pedagojik yapılandırmayla bütünleştirmek, öğrenen özerkliğini ve motivasyonunu artırarak etkili dil kullanımını destekleyen becerilerin gelişmesini sağlayabilir.

Introduction

The mastery of collocations, particularly verb-noun pairs, is a fundamental aspect of language proficiency in English as a Foreign Language (EFL) learning (Biber et al., 1999; Ebrahimi-Bazzaz et al., 2014; Nesselhauf, 2013; Wray, 2008; Webb & Kagimoto, 2009) and crucial for the development of both fluency and accuracy (Candarlı, 2021). For EFL learners, acquiring these essential language elements poses significant challenges, largely due to limited exposure to natural language use in non-English-speaking environments (Boers et al.,

2014; Durrant & Schmitt, 2009). Traditionally, teaching these collocations has relied on methods like memorization and context-free exercises, which, while foundational, may not fully capture the dynamic and contextual nature of language (Lewis, 2000; Nesselhauf, 2003).

The integration of digital technology into second/foreign language (L2) educational settings has opened new avenues in language learning. Digital tools, characterized by their interactivity and access to vast linguistic databases, present innovative ways for learners to engage with language. These tools, often user-friendly and adaptable, represent a shift in educational paradigms, aligning with contemporary needs and pedagogical approaches (Daskalovska, 2015; Kukulska-Hulme & Viberg, 2018).

This present study emerges from the need to evaluate the effectiveness of digital versus traditional teaching methodologies in enhancing verb-noun collocation proficiency among Turkish EFL learners. While traditional paper-based exercises offer structured and controlled collocation practice, they often lack interactivity, immediate feedback, and contextual adaptability. The online collocation assistant used in this study was developed to address these limitations by providing real-time engagement, multimodal input, and customized scaffolding for verb-noun collocations. Research in language learning emphasizes that digital tools, when designed with pedagogical intent, can facilitate better noticing of form-meaning connections, increase learner autonomy, and support repetitive exposure in meaningful contexts (Daskalovska, 2015; Fang & Yan, 2021). Unlike printed materials, the tool allows learners to interact with collocations through bilingual definitions, sample sentences, and contextualized tasks, supporting both receptive and productive use. Moreover, by integrating writing tasks within the same environment, the tool helps bridge the gap between controlled practice and communicative output. Thus, this study does not assume the inherent superiority of digital instruction but investigates whether these affordances can translate into more effective collocational development compared to conventional methods. Therefore, by comparing an online collocation tool with traditional paper-based exercises, this research aims to contribute valuable insights into effective vocabulary teaching strategies, particularly in terms of collocations.

Literature Review

The role of vocabulary in language acquisition, particularly in EFL contexts, becomes increasingly significant. Vocabulary knowledge is not merely about the accumulation of words but includes a deeper understanding of how these words combine to form meaningful expressions. Nation (2001) outlined eight kinds of word knowledge that help native speakers perform tasks related to understanding or producing language. These include the word's meaning, its written and spoken forms, its grammatical usage, the word combinations it typically appears in (collocations), the contexts or levels of formality it is used in (register), related words (associations), and how often it is used (frequency). Among these, collocations have drawn much attention in L2 writing research (Chen, 2019; Durrant & Schmitt, 2009; Fang, Ma & Yan, 2021; Garner 2020; Granger & Bestgen, 2014; Vedder & Benigno, 2016; Xia et al., 2022).

There are two major approaches to examining collocations, the frequency-based approach and the phraseological approach and (Laufer & Waldman, 2011). The frequency-based approach identifies collocations through an inductive method, focusing on how often words appear together. This perspective has highlighted numerous multi-word expressions,

including lexical bundles (high-frequency word sequences), phrase frames (sequences with one variable word), and n-grams (sequences of adjacent words). Research in the frequency-based approach uses statistical analysis to explore word co-occurrences, employing criteria like minimum frequency and association measures to look into collocational knowledge (Candarlı, 2021; Ellis & Ferreira-Junior, 2009).

The phraseological approach, on the other hand, focuses on identifying collocations through their syntactic structure, semantic clarity, and the possibility of substituting their components (Bestgen and Granger, 2014). According to this approach, collocations are grouped into lexical and grammatical types. Lexical collocations are combinations of words such as nouns, adjectives, verbs, and adverbs, forming units like verb-noun and adjective-noun pairs. Grammatical collocations combine a main word with a preposition or grammatical structure, like noun-preposition or adjective-preposition pairs, and include collocations that are consistent, recognizable, and not idiomatic, posing challenges for learners (Bestgen & Granger, 2014) and different from free combinations, where elements can be freely replaced following grammatical rules, like "want a car" or "at three o'clock" (Nesselhauf, 2003). However, distinguishing between collocations and free combinations often depends on the intuition of native speakers (Xia et al., 2022). For the present study, the phraseological approach was chosen to analyze collocations, specifically lexical collocations, because of its capability to distinguish between different types of collocations, and its potential to provide insights into the specific challenges EFL learners face. This approach not only enhances our understanding of how different writing mediums can affect the acquisition and use of collocations but also offers valuable guidelines for language teaching and curriculum development focused on improving learners' proficiency in using collocations accurately and effectively.

Like the phraseological approach mentioned earlier, the lexical approach also forms a key part of the theoretical foundation of this study, offering valuable insights into language acquisition, particularly in the collocation use and errors among EFL learners. The Lexical Approach, first proposed by Lewis (1993), forms a central pillar of the theoretical foundation of this study. It posits that language learning is most effective when learners are exposed to and internalize lexical chunks, fixed or semi-fixed combinations of words such as collocations, idioms, and formulaic sequences, rather than focusing exclusively on isolated words or grammatical structures. According to Lewis (1997), the Lexical Approach suggests that fluency in a foreign language arises not primarily from grammatical mastery, but from the learner's ability to recognize and produce frequently occurring patterns of lexical combinations in authentic contexts. This perspective aligns with Willis (1990) further emphasizes that a lexical syllabus, rather than a traditional grammar-based one, better reflects how language is naturally acquired and used.

Building on this theoretical orientation, the current study explores the role of verb-noun collocations, a prominent type of lexical chunk, in EFL learners' writing. The use and misuse of such collocations can significantly influence the fluency, coherence, and authenticity of learner output. As Lewis (1997) notes, teaching should reflect the reality of language as "grammaticalised lexis," where vocabulary and structure are inseparable in meaningful communication. By grounding this research in the Lexical Approach, the study recognizes that effective language instruction, particularly in Expanding Circle contexts such as Türkiye, requires explicit attention to collocation knowledge. This is especially relevant in the EFL writing classroom, where mastery of verb-noun collocations may help learners avoid awkward

or unnatural constructions and better approximate native-like fluency. Given the recognized challenges EFL learners face in acquiring collocations (Crossley et al., 2011), further investigation into instructional strategies that support collocational development is warranted.

The Role of Collocations in Language Learning

The importance of collocations in language learning cannot be overstated. Studies have shown that a good command of collocations is crucial for achieving fluency and accuracy in a foreign language (Ebrahimi-Bazzaz et al., 2014; Nesselhauf, 2003; Wray, 2008; Webb & Kagimoto, 2009). EFL learners often face challenges in acquiring collocations due to limited exposure to native language patterns and a tendency to focus on individual words rather than phraseological units (Wu et al., 2021). This gap in learning can lead to non-native-like language use, which can be particularly evident in writing.

The acquisition of collocations in EFL contexts also poses unique challenges (Boers et al., 2014; Do & Le, 2023; Durrant & Schmitt, 2009). Learners often struggle to grasp the nuances of collocations, leading to errors and unnatural language use. This difficulty is intensified by the fact that collocations do not always follow logical or grammatical rules, making them hard to predict or infer for non-native speakers. Furthermore, the vast number of collocations in the English language adds to the complexity of their learning and retention. In summary, understanding collocations involves dealing with their various definitions and approaches, acknowledging their central role in language proficiency, and recognizing the challenges they pose to EFL learners.

Addressing the Challenges in Learning Collocations

The challenges in learning collocations, as highlighted in the previous sections, necessitate innovative teaching approaches. Educators must develop materials and exercises that specifically target the common difficulties learners face with collocations. This could include contextualized practice, corpus-informed examples, and interactive exercises that allow for active engagement with collocational patterns. Therefore, the development of EFL curricula should be informed by ongoing research in the field. As our understanding of how learners acquire collocations evolves, so too should the methods and materials we use to teach them.

Focusing on verb-noun collocations is particularly challenging for EFL learners. These challenges are influenced by various factors, including the learners' native language. For instance, Turkish learners of English find certain verb-noun combinations counterintuitive, as these combinations might not directly translate from their mother tongue. The lack of teaching materials that effectively target verb-noun collocations further complicates this issue. Without appropriate instructional strategies and resources, learners often struggle with the accurate and natural use of these collocations in writing and speech (Daskalovska, 2015; Do & Le, 2023; Ebrahimi-Bazzaz et al., 2014; Laufer & Waldman, 2011; Vedder & Benigno, 2016).

The connection between vocabulary knowledge and collocational proficiency is thus a critical area of focus in EFL teaching. As highlighted previously, understanding collocations involves dealing with their various definitions and approaches, acknowledging their central role in language proficiency, and recognizing the challenges they pose to EFL learners. This expanded understanding sets a firm foundation for exploring effective teaching

methodologies. Enhancing vocabulary knowledge in EFL learners, therefore, is not just about expanding their word bank but also about deepening their understanding of how these words function together as collocations. Therefore, implications of this expanded understanding of vocabulary and collocations are profound for EFL instruction. It necessitates a shift in teaching strategies from mere word list memorization to a more integrated approach that includes explicit instruction of collocations (Kukulska-Hulme & Viberg, 2018; Wu et al., 2010).

Digital Tools in Collocation Instruction

Recent research in language education has increasingly focused on the use of digital tools to support collocation learning, particularly in EFL settings. Several studies have explored the effectiveness of online dictionaries, concordancers, corpora, and mobile apps in improving learners' awareness and use of collocations (Chan & Liou, 2005; Daskalovska, 2015; Fang & Yan, 2021; Shei & Pain, 2010). For example, concordancing tools have been shown to raise learners' metalinguistic awareness by allowing them to explore authentic collocational patterns in large corpora. However, such tools often require advanced digital literacy and may overwhelm learners with excessive data (Chan & Liou, 2005). Other studies have examined mobile-assisted learning, where apps or platforms provide spaced repetition or gamified collocation practice (Garner, 2020), though these are usually not customized to specific instructional content.

In contrast, the present study builds on this work by using a specifically designed online collocation assistant, discussed in detail in methodology, that provides topic-specific verb-noun collocations, bilingual definitions, model sentences, and interactive exercises (e.g., matching, cloze, paragraph writing). Unlike generic tools, this platform is tailored to learners' level and course content, integrating both receptive and productive tasks with focused scaffolding. By comparing this digital intervention to traditional paper-based instruction, the study aims to offer new insights into how structured, accessible, and learner-friendly digital design can enhance collocational development in EFL contexts.

In summary, the implications for EFL teaching and curriculum design stemming from the understanding of collocations and comparative studies are significant. They call for an adaptable approach to language teaching, one that is responsive to learner needs and informed by ongoing research. The ultimate goal is to enhance the overall language proficiency of EFL learners, equipping them with the skills necessary to use English accurately and fluently. This expanded understanding sets a firm foundation for exploring the effectiveness of different teaching methodologies in enhancing collocational knowledge. This foundation paves the way for examining how different instructional approaches, particularly digital and traditional methods, affects the development of collocational knowledge in EFL learners.

Digital vs. Traditional Teaching Methods

The debate between digital and traditional teaching methods used for teaching collocation has been central in language education research (Basal, 2017; Chan & Liou, 2005; Chen, 2011; Chen et al., 2021; Daskalovska, 2015; Foroutan Far & Taghizadeh, 2022; Garner, 2020; Granger & Bestgen, 2014; Nesselhauf & Tschichold, 2002; Shen et al., 2023; Shei & Pain, 2010). Therefore, given the challenges and importance of verb-noun collocations outlined in the previous sections, understanding which teaching methods more effectively help their acquisition is important. Studies have shown that both digital and traditional methods can be

effective, but their success often depends on how they are integrated into the overall teaching strategy and the specific context in which they are used (Fang et al., 2021).

Recent studies have increasingly explored the use of digital tools in language instruction, particularly in vocabulary learning and collocation acquisition. For instance, Chan and Liou (2005) found that concordancing tools enhanced learners' awareness of collocational patterns, although they required a high level of learner autonomy and digital literacy. Daskalovska (2015) reported that corpus-based approaches contributed to improved collocation use, but also noted that learners struggled to interpret large volumes of data without guidance. Similarly, Shei and Pain (2010) developed a system that generated context-specific collocational feedback, demonstrating the potential of digital platforms for individualized instruction. However, many of these tools are either generic, complex to navigate, or not well integrated into classroom practice.

On the other hand, traditional methods such as paper-based matching or fill-in-the-blank exercises remain widely used and accessible, but they often lack the interactivity, feedback, and contextual richness that digital tools can provide (Fang & Yan, 2021; Foroutan Far & Taghizadeh, 2022). While these methods can support controlled practice, they may not promote deep engagement with collocations in meaningful contexts.

Despite growing interest in digital-assisted learning, relatively few studies have directly compared structured, curriculum-aligned digital tools with traditional classroom methods for specific collocation types, such as verb-noun collocations. The current study addresses this gap by examining a digital tool designed specifically for integration into the EFL curriculum and comparing its effectiveness against paper-based practice. Moreover, it adds to the literature by analyzing not just performance outcomes but also error types, providing a deeper understanding of how instructional mode influences collocational development.

While a growing number of studies have compared digital and traditional methods in vocabulary instruction, the current study makes a unique contribution by focusing specifically on verb-noun collocation acquisition, a key yet underexplored area in EFL contexts. The integration of a designed online collocation assistant, created specifically for this study, provides pedagogical features not commonly found in standard digital tools such as online dictionaries or concordancers. These include topic-specific collocation input, bilingual sample sentences, interactive tasks, and immediate feedback, all designed to scaffold learner engagement while minimizing cognitive overload. In contrast to paper-based activities, this digital tool allows learners to interact with collocations in structured, contextualized ways, promoting both recall and productive use. By comparing this tailored digital intervention with traditional exercises, the study aims to reveal not only differences in learning outcomes but also variations in learner error types and instructional effectiveness, offering practical insights into the pedagogical value of digital tools in collocation instruction.

Therefore, the present study seeks to answer the following research questions:

1. Does the use of an online collocation tool (www.collocationassistant.com) result in a significant improvement in the knowledge of verb-noun collocations compared to paper-based exercises?
2. Is there a significant difference in the types of verb-noun collocation errors made by the web group compared to the paper group?

3. Is there a significant difference in the types of errors between target verb-noun collocations and non-target verb-noun collocations?

Methodology

This study employed a quasi-experimental design with a pre-test/post-test structure to examine the effectiveness of an online collocation assistant compared to paper-based exercises in teaching verb-noun collocations to Turkish EFL learners. The study involved two groups, an experimental group using the digital tool and a control group receiving traditional instruction, both exposed to the same instructional content. The data collection procedures conducted within the scope of this research were approved by the Yeditepe University Humanities and Social Research Ethics Committee, with the approval dated 30.03.2021 and numbered E.21568116-302.14.01-772.

Research Setting and Participants

The research was conducted at a preparatory school of a foundation university in Istanbul, Turkey. The school's curriculum is specifically designed to enhance English language skills, focusing on reading and writing, which aligns with the study's objectives.

The convenience sampling was used, involving the selection of intact foreign language classes. The researcher had access to two intact classes that had been assigned by the university administration. The sample for this quasi-experimental study consisted of 24 A2 level Turkish EFL learners. Sixteen participants were graduates of private high schools, while eight were graduates of state high schools. The duration of prior English education varied from 2 to 12 years. The web group consisted of 12 students, with five female and seven male students, all aged between 17 and 19 years. Out of the 12 students in the paper group, six were female and six were male.

Data Collection Tools

The data collection tools comprised a pre-test/post-test to evaluate changes in collocational knowledge, paragraph writing tasks to assess productive use of collocations, a quality review checklist to analyze students' opinions on using the online collocation assistant, and a background information form to gather demographic and educational data.

Pre- and Post-Tests

The pre- and post-test consisted of 20 multiple-choice questions about verb-noun collocations selected from the reading texts in the course book. A sample item is as follows:

If you _____ eye contact, you can easily build trust.

- a) Communicate b) Maintain c) Ignore d) Succeed

Two researchers who taught evaluation and assessment courses at a university, as well as two practitioners with five years of experience in the testing office of the preparatory school of English where this study was conducted, provided expert feedback on the questions in the pre-test/post-test. The questions were revised based on this feedback. In the fall term of the 2021-2022 academic year, the test was piloted on 22 students (Cronbach's alpha 0.80) and then with the target group (Cronbach's alpha 0.79).

Paragraph Writing Tasks

The students in both the web and paper groups were instructed to write three paragraphs throughout the term to demonstrate their productive verb-noun collocation knowledge. The web group received a 45-minute training session on how to use the online collocation assistant, www.collocationassistant.com. The pre-selected, topic-specific verb-noun collocations with their definitions and sample sentences were made available to the web group through the online collocation assistant, after which the students were asked to do exercises (matching, fill-in the blanks, and cloze test). They wrote a paragraph each time when they were exposed to the online collocation tool in the classroom and were asked to use the practiced verb-noun collocations in 130-word paragraphs. The topics for the paragraphs were how to impress an employer in the 5th week, advantages of using a driverless car in the 9th week, and why we need advertisements in the 11th week. The students in the paper group were given the same target verb-noun collocations derived from the reading texts covered during the term through paper-based exercises. They were asked to use these collocations in three 130-word paragraphs about the same topics. The paper-based exercises included a concept map of the verb-noun collocations, followed by matching, fill-in-the-blanks, and cloze tests. The exercises were designed based on the same target verb-noun collocations as those offered to the web group through the online collocation tool.

A Quality Review Checklist

The quality review checklist used in this study was created by the researcher based on the relevant literature (Nurmukhamedov, 2015) and aimed to assess whether the online collocation assistant helped students recall and use verb-noun collocations in their writing. The checklist also evaluated how easy or difficult the tool was to use and whether the students were satisfied with it. The checklist included one open-ended question about reasons for using the online tool in the future and six questions, which were evaluated on a four-point scale ranging from helpful/sure/easy to unhelpful/unsure/difficult. The questions asked students to rate the helpfulness of the activities offered by the tool in teaching verb-noun collocations, whether the verb-noun collocations categorized by topics helped them write paragraphs, if the tool was helpful in recalling verb-noun collocations automatically, if the tool was easy to use, and if they were sure they would use the online collocation assistant in the future. Additionally, students were asked to provide their reasons for their response to question six in one to three sentences. The reliability of the checklist, Cronbach's alpha coefficient was calculated and found to be 0.68, which indicates moderate internal consistency.

The Background Information Questionnaire

The background information questionnaire was designed to collect important demographic data about the participants. It consists of six questions that ask about age, gender, type of high school the students graduated from, total duration of studying English (years/months), and how comfortable the students are in writing their English assignments on the computer. Collecting this information allowed researchers to account for any potential differences between groups and ensure that the results are not biased due to these factors.

Instructional Materials

The present study used two types of instructional materials: online collocation assistant and paper-based exercises. The following subsections will provide a detailed explanation of each of these materials.

Online Collocation Assistant

In this study, an online collocation tool was specifically developed by the researchers to support the teaching of verb-noun collocations aligned with course content. Unlike generic tools such as concordancers or dictionaries, this tool offers topic-specific collocations, bilingual definitions, model sentences, and interactive tasks (e.g., matching, cloze, paragraph writing). It is specifically designed in that it was created to match the learners' proficiency level, reduce cognitive load, and integrate directly into classroom instruction. Its simple and structured interface provides explicit support for both receptive and productive practice, making it a guided learning environment tailored to EFL students' needs.

This online collocation assistant was designed by using the website builder WordPress.com. The content of the website for the collocation assistant was created in six stages:

- selection and collection of topic-specific verb-noun collocations from several texts in the course book,
- searching for and writing their definitions, translations into Turkish and model sentences containing the selected collocations,
- developing exercises including matching, sentence-based fill in the blanks exercises and cloze tests,
- obtaining expert opinion about definitions, translations, model sentences and exercises,
- recording the content on the website and
- piloting the online collocation assistant.

In the 1st stage, two books, i.e. Ready to Write 2 (Blanchard & Root, 2017), Q: Skills for Success 3 Reading and Writing (Ward & Gramer, 2014) and the syllabus for the course of Reading and Writing prepared by the school administration were examined. The syllabus required covering an order of importance, cause/effect and similarity/difference paragraphs in the course book throughout the term, and also the topics addressed in the reading texts were examined. Three units titled “How do you make a good first impression”, “How has technology affected our lives?” and “Does advertising help or harm us?” were selected since they were considered to contain ideas and verb-noun collocations to use in paragraph writing. Verb-noun collocations in the reading texts in these units were screened and each potential verb-noun collocation was examined by using BNC and COCA. A list of 14 target verb-noun collocations about how to impress your employer, another list of nine target verb-noun collocations about advantages of using driverless cars and one more list of nine target verb-noun collocations about the reasons why we need advertisements were made. The website www.collocationassistant.com offers users the ability to view verb-noun collocations related to specific topics displayed in boxes and easily search for verb-noun collocations related to a specific topic of their interest. By simply clicking on the topic they want to write about, users can visualize a list of verb-noun collocations that they can use to construct a coherent paragraph (Figure 1).



Figure 1. Verb-Noun Collocations about a Topic

The collocation assistant offers a unique feature that allows users to view topic-specific verb-noun collocations in the form of collocation webs (Figure 2). These webs are accompanied by their definitions in English as well as translations and sample sentences.

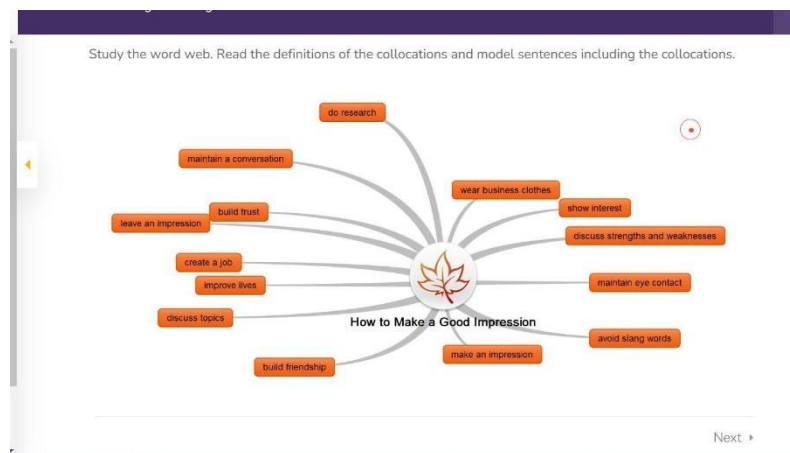


Figure 2. Collocation Web

To further enhance users' understanding of the collocations, the collocation assistant provides definitions and translations for each of the collocations. This ensures that users have a clear understanding of the meaning and context of each collocation, which can help them to choose the most appropriate words for their writing. In addition, sample sentences are also included with each collocation, which can give users a better idea of how the collocations are used in practice. By providing these examples, users can see how the collocations can be used in context and get a sense of how they can be integrated into their own writing.

In the 2nd stage, definitions of the selected and derived verb-noun collocations were made according toBNC and COCA and they were translated into Turkish (Figure 3).

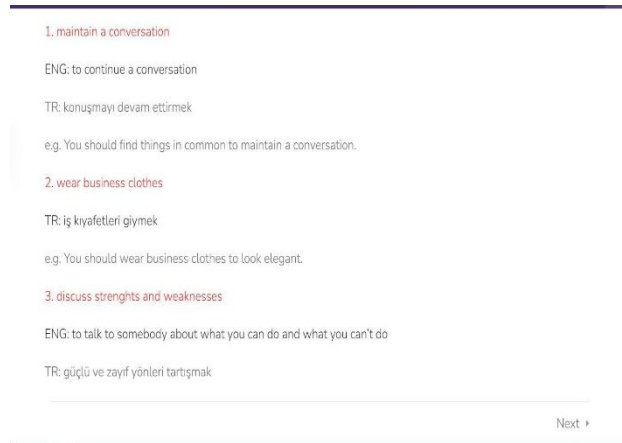


Figure 3. Entries for Verb-Noun Collocations

Each collocation was also exemplified with a model sentence. When students click on a collocation, they can access its definition in English, its Turkish equivalent, and sentence(s) in which it is used (Figure 4).

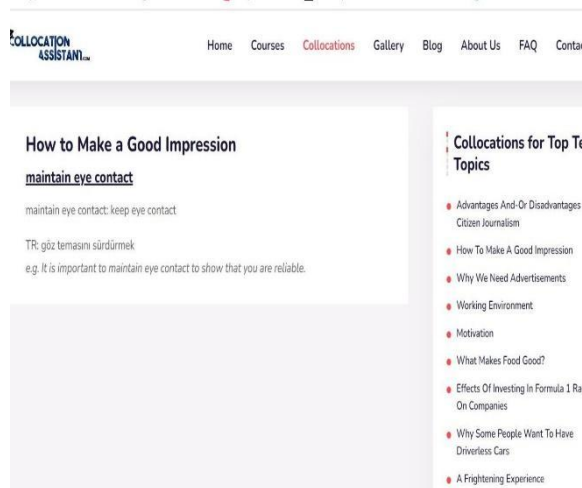


Figure 4. An Entry for a Verb-Noun Collocation

In the 3rd stage, various exercises such as matching, fill-in-the-blanks, and cloze tests, which allow explicit teaching of collocations, were created to increase awareness and understanding of verb-noun collocations. Below are examples of each type of exercise (Figures 5, 6, 7):

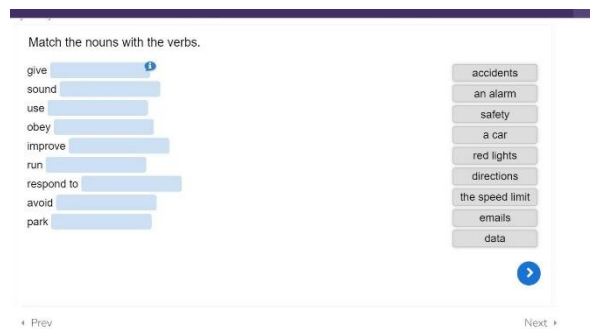


Figure 5. Matching Exercise

Fill in the missing words

You should adopt a few strategies to _____ the interviewer.

One way is to _____ eye contact.

You should _____ trust to get the job.

Another strategy is to _____ interest in the company.

If you _____ some research, you can get enough information about the company.

You should _____ topics which the interviewer can be interested in.

Finding common ground helps you _____ eye contact.

When you get prepared, it is easy to _____ a good impression on the interviewer.

Back Next

Figure 6. Sentenced-Based Fill in the Blanks Exercises

Fill in the missing words

There are several ways to impress an interviewer. First, you should _____ eye contact. Looking in the eyes demonstrates that you are confident. In addition, it helps you _____ trust. The second way to impress the interviewer is to _____ interest in the company which you want to work for. You should _____ some research about the company and ask questions about it at the interviewer. Most importantly, you should _____ topics which the interviewer can be interested in. To achieve this, you should _____ common ground. You should look around and find something about the interviewer such as a photograph of the interviewer and his/her family. In conclusion, if you adopt abovementioned strategies, it can be easy to _____ a good impression on the interviewer.

Check

Reuse Embed Help

Figure 7. Cloze Test

After being exposed to a reading text, students used the online collocation assistant to view the appropriate verb-noun collocations covered in the text. They could see their definitions and translations, sentences containing them, and access exercises to practice, which can help to record them in their long-term memory. It is expected that this will enable them to easily recall the verb-noun collocations when writing a paragraph about a certain topic.

In the 4th stage, expert opinion about the definitions and translations of the verb-noun collocations, model sentences and exercises was obtained from two faculty members who specialized in English language teaching. In accordance with their suggestions, necessary revisions were made.

In the 5th stage, the definitions and translations of the collocations, model sentences and exercises were recorded in the web tool. Finally, in the 6th stage, the web tool was piloted with a group of students who shared similar characteristics to the study sample. Feedback from the students indicated that the website was slow and difficult to navigate. As a result, the website was redesigned and WordPress was used to make it easier for students to quickly access the library of collocations and exercises. Additionally, the students expressed discomfort with the website tracking their performance, which hindered their use of the website. Therefore, the latest version of the website does not include this feature. The website www.collocationassistant.com was used by the web group during classes and they were also given the opportunity to access it from their mobile phones and personal internet

connections at home. Six students in the web group utilized the tool outside of class and had more exposure to the verb-noun collocations. In contrast, the paper group received the same content as the web group but through paper-based exercises.

Paper-Based Exercises

The paper-based exercises comprised of a concept map illustrating the verb-noun collocations extracted from the course book, followed by definitions and translations of the verb-noun collocations and various exercises such as matching, fill-in-the-blanks, and cloze tests. Before commencing the study, these tasks were pilot-tested on a group of students who shared similar characteristics to the study sample. The students reported that the exercises were clear, comprehensible, and useful.

Data Collection Procedure

Before the administration of the pre-test, a background information questionnaire was given to students in both the web and paper groups. Afterwards, the pre-test consisting of 20 questions was administered to the students assigned to both the web and paper groups in the classroom, on the first day of school. The students were allotted 20 minutes to complete the test, and their responses were manually checked to determine the number of correct answers for each student. Both the web group and paper group students were asked to write a paragraph on a given topic each time they were exposed to the online collocation tool and paper-based exercises in the sixth, ninth, and eleventh weeks of the semester. The topics of the paragraphs were "how to impress an employer," "advantages of using a driverless car," and "why we need advertisements."

The study was conducted over a period of five weeks during the fall term of the academic year. Each group (online and paper-based) received instruction on verb-noun collocations once a week for 90 minutes, as part of their regularly scheduled integrated skills course. During these sessions, the web group used the online collocation assistant in class under the guidance of the instructor, while the paper group completed parallel paper-based tasks using printed materials containing the same target collocations and activities.

On the last day of school, the post-test and the quality review checklist were given to the students in the web group. The students were asked to provide feedback on their satisfaction with the online collocation tool. The responses to the questions in the checklist were manually derived to determine the extent to which the students were satisfied with the tool's effectiveness.

Participants were not required to engage with the materials outside of class time. However, students in the web group were given access to the online collocation assistant after class in case they wished to review the content voluntarily. No follow-up or homework assignments were assigned for either group during the intervention period. All instructional tasks, practice activities, and assessments (including paragraph writing tasks) were completed within the allocated classroom hours.

Data Analysis

To evaluate students' mastery of verb-noun collocations, both the multiple-choice test and the paragraph writing tasks were systematically scored and analyzed.

Pre/post-Test Scoring

The multiple-choice pre- and post-tests consisted of 20 items targeting receptive knowledge of verb-noun collocations. Each correct answer was awarded one point, resulting in a maximum possible score of 20. No partial credit was given.

Paragraph Writing Scoring and Analysis

The students were instructed to incorporate target verb-noun collocations into three topic-specific paragraphs. The paragraphs were manually analyzed by the researcher and a second rater—another Reading-Writing instructor—following the framework proposed by Nesselhauf (2003). The researchers photographed and digitally stored all student submissions. All verb-noun collocations were first highlighted, then categorized as:

- Target collocations (selected by the researcher from course reading texts; see Appendix 1), or
- Non-target collocations (student-generated collocations; see Appendix 2).

Each correctly used target collocation was awarded one point. Incorrect or missing usage received no points.

The analysis employed a two-step procedure to determine collocational correctness. First, each collocation was checked in English learner dictionaries. If it was found and matched the intended meaning in the student's writing, it was considered correct. If not found in dictionaries, it was searched in language databases. If the collocation appeared in at least five different sources and matched the intended meaning, it was accepted. Otherwise, it was classified as a usage 2 error (nonexistent combination).

Error Classification

All collocations, target and non-target, were examined for errors using Nesselhauf's (2003) taxonomy, which includes:

- Determiner errors: incorrect or missing use of articles, demonstratives, possessives, or quantifiers
- Preposition errors: incorrect or missing prepositions in the collocation
- Verb errors: incorrect or missing verb
- Noun errors: incorrect or missing noun
- Usage 1 errors: semantically inappropriate but existing combinations
- Usage 2 errors: completely invalid combinations not found in reference materials
- Number errors: incorrect singular/plural usage of the noun
- Structure errors: incorrect syntactic construction of the collocation

Reliability and Quantification

Two raters independently scored 25% of the paragraph data. Cohen's kappa coefficient was .84, indicating strong inter-rater reliability. Disagreements were resolved through discussion. Once correct and incorrect collocations and error types were identified, they were quantified, including total correct uses of both target and non-target collocations, and the frequency of each error type. This allowed for statistical comparisons across groups and identification of performance patterns.

Following a normality check, non-parametric tests were applied: the Mann-Whitney U test for between-group comparisons, and the Wilcoxon signed-rank test for within-group comparisons. Descriptive statistics (percentages, minimum–maximum values, and means) were also calculated to summarize the results.

Results

This section presents a detailed description of the findings related to the effectiveness of the online collocation tool compared to traditional paper-based exercises in teaching verb-noun collocations. The focus is on assessing the impact of the tool on students' knowledge and use of collocations, and a thorough analysis of error types made by students in both groups.

Knowledge of Verb-Noun Collocations

The first research question asked whether the web tool results in a significant improvement in the knowledge of verb-noun collocations compared to paper-based exercises. According to the Mann-Whitney U test results, there was no significant difference between the groups in their pre-test ($p=0.831$) and post-test scores ($p=0.2327$).

Additionally, there was no significant difference between the groups in the correct production of target verb-noun collocations in their paragraphs ($p=0.155$). However, Wilcoxon signed rank test revealed a significant improvement in collocation knowledge from pre-test to post-test for both groups ($p=0.0005$ for both groups).

Table 1 shows a detailed analysis of two groups' performances in using target verb-noun collocations correctly across three different tasks. The web group made 65 attempts in the first task, with a success rate of 73.85%, slightly decreasing in the second task to 68.42% with 19 attempts, but significantly improved in the third task with an 88.10% success rate from 42 attempts.

Table 1. The Distribution of Correctly Used Target Verb-Noun Collocations

Tasks	Task 1		Task 2		Task 3		Total	
	attempts (n)	correct (n/%)	attempts (n)	correct (n/%)	attempts (n)	correct (n/%)	attempts (n)	correct (n/%)
web group	65	48/ 73.85%	19	13/ 68.42%	42	37/ 88.10%	126	98/ 77.78%
paper group	68	58/ 85.29%	10	9/ 90%	46	39/ 84.78%	124	106/ 85.48%

Overall, their total performance across all tasks was marked by 126 attempts and a 77.78% success rate. In contrast, the paper group started with an 85.29% success rate in their first task from 68 attempts, improved to a 90% success rate with 10 attempts in the second task, and maintained a high success rate of 84.78% in the third task with 46 attempts. Their overall performance was consistently high, with 124 attempts resulting in an 85.48% success rate. This analysis illustrates both groups' proficiency and learning curves in using target verb-noun collocations, with the paper group showing a slightly higher overall success rate.

The web group attempted 126 verb-noun collocations across three writing tasks, correctly using them 77.78% of the time. The paper group attempted 124 verb-noun collocations, for an 85.48% correct usage rate. These data suggest that while both groups improved, the paper group demonstrated a slightly greater proficiency in correctly using verb-noun collocations.

Verb-Noun Collocation Errors

This study examined whether there are significant differences in the types of verb-noun collocation errors made by the web group compared to the paper group, as well as differences between errors in target and non-target verb-noun collocations. Using the Mann-Whitney U test, it was found that in target verb-noun collocations, there were no significant differences in errors related to determiner ($p=0.172$), preposition ($p=2384$), verb ($p=1$), noun ($p=1$), usage 1 ($p=7465$), numbers ($p=6737$), and structure ($p=1$). Neither group made errors in usage 2 for target collocations. However, a different scenario emerged with non-target verb-noun collocations. Here, the web group exhibited a higher frequency of errors in determiners, nouns, and usage 2 compared to the paper group, indicating significant differences in determiner ($p=0.0458$), noun ($p=0.045$), and usage 2 errors ($p=0.002$) between the groups. The web group made significantly more determiner, noun, and usage 2 errors than the paper group.

Investigating the differences in error types between target and non-target verb-noun collocations, significant discrepancies were observed within the web and paper groups. The Wilcoxon signed rank test results in the web group indicated significant differences in determiner ($p= 0.0072$), verb ($p= 0.0225$), noun ($p= 0.0078$), and particularly usage 2 errors ($p= 0$) between target and non-target verb-noun collocations. Determiner, verb, noun, and usage 2 errors in the web group were significantly higher in non-target than in target verb-noun collocations. Furthermore, the Wilcoxon signed rank test results in the paper group showed significant differences in determiner ($p= 0.0309$), verb ($p= 0.0018$), and usage 2 errors ($p= 0.0313$) between the target and non-target collocations. The determiner, verb and usage 2 errors of the paper group were significantly higher in non-target than in target verb-noun collocations.

Regarding the findings from the analysis of the data from the quality review checklist, the collocation assistant was found to be helpful and practical for using verb-noun collocations, writing paragraphs, and expressing ideas based on the students' scores of over 3 on a four-point scale. Moreover, the students were willing to use the tool in the future based on their score of over 2 on a four-point scale, with one corresponding to "not sure" and four to "sure".

Consistent with the mean score on the responses to the 6th item, five students had a positive attitude towards using the tool in the future. One of them reported benefitting from the web tool while learning vocabulary, retrieving new words in the long term thanks to the exercises and achieving fluency in paragraph writing. The student requested addition of games and more vocabulary to the web tool. Another student commented that the web tool facilitated paragraph writing and showed how to use new words. The rest of the students with a positive attitude to the web tool agreed that it would be useful later in their lives or when they needed. Three students made some recommendations about modifications in the tool although they admitted that the tool was useful. One of them said that the web tool would be useful to recall collocations without difficulty. The students also added that the tool should

evolve into a more comprehensive website allowing practices and revisions of the language. Another student asked for addition of more collocations and exercises although she found it beneficial. Another student reported that she could use the tool in the future since she would always need English. Unlike eight students, the remaining four students were not in favor of the idea of using the tool in the future since they believed they might not need it or find the things they needed.

Discussion and Conclusion

In the present study, receptive knowledge of verb-noun collocations was assessed by a test of 20 multiple-choice questions and productive knowledge of collocations was assessed by paragraph writing requiring the participants to employ topic-specific target verb-noun collocations. Both the online verb-noun collocation aid www.collocationassistant.com and paper-based exercises offering the same content as the online tool were found to improve receptive knowledge of target verb-noun collocations in the post-test. In fact, Wilcoxon signed rank test showed a significant change in the post-test results compared to the pretest results in both groups. However, there was no significant difference between the online aid and paper-based exercises with respect to enhancement of receptive verb-noun collocational knowledge, contrasts with several previous studies that reported superior outcomes for digital interventions (e.g., Chan & Liou, 2005; Daskalovska, 2015; Fang & Yan, 2021). This inconsistency may be attributed to several factors. First, the duration of exposure—limited to five 90-minute sessions—may not have been sufficient for the digital tool’s advantages (e.g., repetition, interactivity, learner autonomy) to fully take effect. Second, although students in the web group received a brief training on using the online collocation assistant, the time may have been insufficient for them to develop full comfort and fluency with the tool. Learners unfamiliar with digital resources may not have been able to take full advantage of its features within the short timeframe. Third, learner preferences and familiarity with traditional learning methods could have played a role; many participants may have been more comfortable with printed materials and thus more focused or confident during those tasks. Lastly, since both groups received explicit instruction using the same collocations, the teaching content rather than the delivery format may have been the primary driver of improvement in receptive knowledge. These factors suggest that further research is needed to examine the long-term effects of digital interventions, especially when integrated over extended periods or used with learners more experienced with digital tools.

Another noteworthy finding of the study was the difference in the types of collocation errors observed across groups. The online group exhibited more form-based errors—such as incorrect verb or noun selection—while the paper-based group made more context-related errors, including semantic mismatches and inappropriate usage. This suggests that the structured and repetitive nature of the online tool, which emphasized recognition and form, may have led learners to memorize collocational patterns without fully grasping their contextual use. Conversely, the paper-based tasks, which were carried out under teacher guidance and involved more open-ended activities, may have encouraged experimentation with collocations, resulting in a wider range of contextually inappropriate uses.

These findings have important pedagogical implications. They indicate that while digital tools can effectively support the formal acquisition of collocations, they should also incorporate contextualized practice, such as model texts, sentence construction exercises, or meaning-based feedback, to strengthen learners’ semantic and pragmatic awareness.

Likewise, traditional methods may benefit from the integration of more explicit corrective feedback or consciousness-raising tasks to help learners refine their understanding of collocational appropriacy. Overall, these distinctions suggest that effective instructional design should aim to balance formal accuracy with contextual competence, regardless of the instructional medium.

In addition, the analysis showed no significant difference between the groups in terms of productive knowledge of target verb-noun collocations in paragraph writing. The Mann-Whitney U test confirmed that both groups produced a similar number of correct collocations, and both made very few errors, including those related to verb and noun choice, structure, number, and usage. This result implies that when supported by explicit instruction, reduced cognitive load, and lexical-focused teaching, learners can improve productive collocational knowledge regardless of whether a digital or traditional format is used. However, this outcome contrasts with previous findings reporting greater gains in productive use through digital tools (e.g., Daskalovska, 2015; Nesselhauf & Tschichold, 2002; Shen et al., 2023; Shei & Pain, 2010), which may be due to differences in tool design, learner profiles, or the duration of exposure.

In light of this evidence, it is clear that the web tool created for the present study may contribute to productive topic-specific verb-noun collocation knowledge of learners, especially those with a low level of English, without causing difficulty for them since they do not have to deal with a large quantity of data or read long entries. Besides, the pertinent nature of the entries including definitions in English and Turkish, model sentences and exercises eliminates high extraneous load on the working memory and helps learners keep the verb-noun collocations in mind easily and transfer them into their writing tasks.

The evidence from the current investigation revealed that the students were generally satisfied with the online collocation assistant, as they found the tool helpful and easy to navigate. This evidence is compatible with prior studies on the usage of online collocational aids, where students expressed contentment with their experience (Fang & Yan, 2021). However, it is noteworthy that some learners may find using concordances challenging (Chan & Liou, 2005), which can affect their satisfaction with the online tool.

This study examined the effectiveness of an online collocation assistant compared to traditional paper-based exercises in teaching verb-noun collocations to Turkish EFL learners. While both instructional methods were found to enhance receptive and productive collocation knowledge, the findings did not reveal significant differences between the two in terms of overall improvement. However, analysis of non-target collocations indicated distinct error patterns, suggesting that instructional methods influence incidental collocation acquisition differently. Despite its contributions, the study has limitations, including the use of convenience sampling, which restricts the generalizability of the findings. Moreover, the focus on a limited set of verb-noun collocations and the short-term scope of the study highlight the need for future research to explore a wider range of collocation types and examine long-term retention effects.

Limitations

While this study provides useful insights into the effectiveness of digital and traditional methods in teaching verb-noun collocations, several limitations should be acknowledged. First, the small sample size ($n = 24$) limits the generalizability of the findings. Although the

groups were balanced and the study used a controlled quasi-experimental design, the results should be interpreted with caution when applied to broader EFL populations.

Second, the scope of the study was restricted to a specific set of verb-noun collocations derived from course materials. As such, the findings may not reflect how learners would perform with other types of collocations (e.g., adjective-noun or adverb-verb) or with unfamiliar vocabulary outside the classroom context.

Third, the short duration of the intervention (five weeks) may have influenced the outcomes, especially in terms of long-term retention or deeper contextual understanding of collocational use. A longer-term study might yield more conclusive evidence regarding the effectiveness of digital tools in supporting lasting learning gains.

Finally, the study was conducted within a single institutional context, with learners sharing similar language backgrounds and educational experiences. Future studies should include more diverse learner populations and settings to strengthen the external validity of the results.

Acknowledging these limitations enhances the transparency of the research and highlights important directions for future studies in digital language learning and collocation instruction.

Implications

The findings of this study indicate that both digital and traditional methods can support the development of verb-noun collocational knowledge among EFL learners when paired with explicit instruction and a lexical approach. However, the absence of significant differences between the two groups in both receptive and productive knowledge suggests that instructional design and content, rather than delivery mode alone, are critical to effective learning outcomes. This highlights the importance of integrating carefully selected collocations into structured classroom activities, regardless of format.

The observed differences in error patterns, form-based errors in the online group and context-related errors in the paper-based group, suggest that each modality offers distinct advantages and limitations. Therefore, instructional tools should be selected or designed based on the specific linguistic focus and learner needs. For example, digital tools may benefit from enhancements that promote contextualized usage, such as sentence-generation tasks or contextual feedback, while traditional formats may be improved through the incorporation of more structured guidance and targeted error correction.

From a curriculum design perspective, these findings support the integration of blended approaches that combine digital scaffolding with teacher-led instruction. Doing so may help learners benefit from both the structured input of online tools and the contextual flexibility and interaction provided by in-class activities. Furthermore, future research should consider the role of exposure duration, learner familiarity with digital tools, and instructional intensity, all of which may influence the impact of different teaching formats on collocational development.

Ultimately, this study emphasizes that technology-enhanced instruction should be viewed not as a replacement for traditional methods, but as a complementary resource that, when thoughtfully implemented, can enrich EFL learners' lexical competence—particularly in underemphasized areas such as verb-noun collocations.

References

- Basal, A. (2017). Learning collocations: Effects of online tools on teaching English adjective-noun collocations. *British Journal of Educational Technology*, 50(1), 342-356. <https://doi.org/10.1111/bjet.12562>
- Bestgen, Y. & Granger, S. (2014). Quantifying the development of phraseological competence in L2 English writing: An automated approach. *Journal of Second Language Writing*, 26, 28–41. <https://doi.org/10.1016/j.jslw.2014.09.004>
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. Harlow: Pearson Education.
- Blanchard K., & Root C. (2017). *Ready to Write 2* (5th ed.). Pearson.
- Boers, F., Lindstromberg, S., & Eyckmans, J. (2014). Some explanations for the slow acquisition of L2 collocations. *VIAL-Vigo International Journal of Applied Linguistics*, 11, 41–62.
- Candarlı, D. (2021). A longitudinal study of multi-word constructions in L2 academic writing: the effects of frequency and dispersion. *Read Writ*, 34, 1191–1223. <https://doi.org/10.1007/s11145-020-10108-3>
- Chan, T. Pei, & Liou, H. C. (2005). Effects of Web-based Concordancing Instruction on EFL Students' Learning of Verb – Noun Collocations. *Computer Assisted Language Learning*, 18(3), 231–251. <https://doi.org/10.1080/09588220500185769>
- Chang, Y. C., Chang, J. S., Chen, H. J., & Liou, H. C. (2008). An automatic collocation writing assistant for Taiwanese EFL learners: A case of corpus-based NLP technology. *Computer Assisted Language Learning*, 21(3), 283–299.
- Chen, H. H. (2011). Developing and evaluating a web-based collocation retrieval tool for EFL students and teachers. *Computer Assisted Language Learning*, 24(1), 59-76.
- Chen, H. J. H., Lai, S. L., Lee, K. Y., & Yang, C. T. Y. (2021). Developing and evaluating an academic collocations and phrases search engine for academic writers. *Computer Assisted Language Learning*, 36(4), 641–668.
- Chen, W. (2019). Profiling collocations in EFL writing of Chinese tertiary learners. *RELC Journal*, 50(1), 53-70. <https://doi.org/10.1177/0033688217716507>
- Creswell J. W. (2014). *A Concise Introduction to Mixed Methods Research*. SAGE Publications.
- Crossley, S. A., Salsbury, T., McNamara, D. S., & Jarvis, S. (2011). Predicting lexical proficiency in language learner texts using computational indices. *Language Testing*, 28(4), 561-580. <https://doi.org/10.1177/0265532210378031>
- Daskalovska, N. (2015). Corpus-based versus traditional learning of collocations. *Computer Assisted Language Learning*, 28(2), 130-144. <https://doi.org/10.1080/09588221.2013.803982>
- Do, N. H. M., & Le, Q. T. (2023). Lexical collocation errors in essay writing: A study into Vietnamese EFL students and their perceptions. *International Journal of Language Instruction*, 2(2), 1–20. <https://doi.org/10.54855/ijli.23221>

- Durrant, P. & Schmitt, N. (2009). To what extent do native and non-native writers make use of collocations? *International Review of Applied Linguistics*, 47, 157–177.
<https://doi.org/10.1515/iral.2009.007>
- Ebrahimi-Bazzaz, F., Arshad, A. S., Ismi, I., & Nooreen, N. (2014). Verb-noun collocation proficiency and academic years. *International Journal of Applied Linguistics and English Literature*, 3(1), 152-162.
- Ellis, N. C., & Ferreira-Junior, F. (2009). Construction learning as a function of frequency, frequency distribution, and function. *Modern Language Journal*, 93, 370-386.
- Fang, L., Ma, Q., & Yan, J. (2021). The effectiveness of corpus-based training on collocation use in L2 writing for Chinese senior secondary school students. *Journal of Computer-Assisted Language Learning*, 31(4), 365-387.
- Foroutan Far, F., & Taghizadeh, M. (2022). Comparing the effects of digital and non-digital gamification on EFL learners' collocation knowledge, perceptions, and sense of flow. *Computer Assisted Language Learning*, 37(7), 2083–2115.
- Garner, J. (2020). The cross-sectional development of verb-noun collocations as constructions in L2 writing. *International Review of Applied Linguistics in Language Teaching*, 60(3), 1-20. <https://doi.org/10.1515/iral-2019-0169>
- Granger, S., & Bestgen, Y. (2014). The use of collocations by intermediate versus advanced non-native writers: A bigram-based study. *International Review of Applied Linguistics in Language Teaching* 52(3), 229–252. <https://doi.org/10.1515/iral-2014-0011>
- Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, 49(2), 207-218.
<https://doi.org/10.1111/bjet.12580>
- Laufer, B., & Waldman, T. (2011). Verb-noun collocations in second language writing: A corpus analysis of learners' English. *Language Learning*, 61, 647-672.
<https://doi.org/10.1111/j.1467-9922.2010.00621.x>
- Lewis, M. (1997). *Implementing the Lexical Approach: Putting Theory Into Practice*. Hove: Language Teaching Publications.
- Lewis, M. (2000). *Teaching Collocation: Further Developments in the Lexical approach*. London: Language Teaching Publications.
- Nation, P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- Nesselhauf, N. (2003). The use of collocations by advanced learners of English and some implications for teaching. *Applied Linguistics*, 24(2), 223-242.
<https://doi.org/10.1093/applin/24.2.223>
- Nesselhauf, N., & Tschichold, C. (2002). Collocations in CALL: An investigation of vocabulary-building software for EFL. *Computer Assisted Language Learning*, 15, 251–279.
- Shei, C. C., & Pain, H. (2010). An ESL Writer's Collocational Aid. *Computer Assisted Language Learning*, 13(2), 167-182.

- Shen, W. W., Lin, J.M., Cheng, W. K., & Hong, Z. W. (2023). Developing and evaluating an online video-assisted collocation learning system for EFL students. *Interactive Learning Environments*, 31(8), 5292-5306.
- Vedder, I., & Benigno, V. (2016). Lexical richness and collocational competence in second-language writing. *International Review of Applied Linguistics in Language Teaching*, 54(1), 23–42. <https://doi.org/10.1515/iral-2016-0015>
- Ward, C. S., & Gramer, M. F. (2014). *Q: Skills for Success 3 Reading and Writing* (2nd ed.). Oxford University Press.
- Webb, S., & Kagimoto, E. (2009). The effects of vocabulary learning on collocation and meaning. *TESOL Quarterly*, 43(1), 55-77. <https://doi.org/10.1002/j.1545-7249.2009.tb00227.x>
- Willis, D. (1990). *The Lexical Syllabus: A New Approach To Language Learning*. London: Collins ELT.
- Wray, A. (2008). *Formulaic Language: Pushing the Boundaries*. Oxford University Press.
- Wu, S., Fitzgerald, A., Yu, A., & Chen, Z. (2021). What are language learners looking for in a collocation consultation system? Identifying collocation look-up patterns with user query data. *ReCALL*, 33(3), 229-247. <https://doi.org/10.1017/S0958344021000057>
- Wu, S., Franken, M., & Witten, I. H. (2010). Supporting collocation learning with a digital library. *Computer Assisted Language Learning*, 23, 87–110. <https://doi.org/10.1080/09588220903532971>
- Xia, D. Chen, Y., & Pae, H. K. (2022). Lexical and grammatical collocations in beginning and intermediate L2 argumentative essays: A bigram study. *IRAL* 61(4), 1-33.

Appendices

Appendix 1: Target Collocations Derived from the Course Book

How to impress your employer	Advantages of using driverless cars	Reasons why we need advertisements
Do research	Avoid accidents	Provide information
Show interest	Give people directions	Get the best price
Make an impression	Obey the speed limit	Access newspapers
Leave an impression	Run red lights	Access news
Maintain eye contact	Respond to email	Support the entertainment industry
Build trust	Park your car	Watch our favorite TV shows
Build friendship	Improve safety	Pay salaries
Create a job	Sound an alarm	Pay the TV crew
Maintain conversation	Use data	Access information
Wear business clothes		
Discuss topics		
Avoid slang		
Discuss strengths and weaknesses		
Improve lives of people		

Appendix 2: Non-Target Collocations Extracted from the Students' Paragraphs

How to impress an employer	Advantages of a driverless car	Why we need advertisements
upgrade your skills	use many technologies	buy products
establish partnership	provide control	give information about products
expand your company	look at a map	watch advertisements/adds
obey rules	use their cameras and sensors	get information about
tell a lie	harm the environment	pay entertainment industry
tell sb business secrets	use their cars	gain experience
give attention	lose control	provide financial support
make friends	obey traffic rules	earn money
give importance	make mistakes	share news
take a sample	get rid of stress	access information
follow these ways	exceed the speed limit	read newspapers
apply for a job	have sensors and cameras	watch the news
create a good impression	say the address	share information
create your company	read a newspaper	buy a new car
earn money	hit another car	offer campaigns
spend time	protect the environment	benefit from sales
find a job	use less fuel	do the shopping
use bad words	spend less money	find sales