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DEVELOPING LEARNER AUTONOMY IN ESP VOCABULARY LEARNING THROUGH INTERNET-BASED MATERIALS

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ABSTRACT :

Learner autonomy is increasingly important in English for Specific Purposes (ESP), where limited classroom time requires students to continue vocabulary learning independently. This study examines how internet-based materials can support autonomous ESP vocabulary learning among 80 second-year students at a university in Hanoi, Vietnam. Data were collected through pre- and post-vocabulary tests, weekly learning diaries, classroom observation notes, and follow-up group discussions. Quantitative evidence was used to examine vocabulary gains, while qualitative evidence was analysed thematically to identify changes in autonomous learning behaviours and factors that facilitated or constrained independent learning. The study illustrates how technology-supported vocabulary work can be integrated with learner training and gradual transfer of responsibility in an ESP context.

Keywords: learner autonomy, ESP vocabulary, internet-based materials, vocabulary learning, Vietnamese university students

1. Introduction

Vocabulary knowledge is a fundamental component of second and foreign language learning. For students studying English for Specific Purposes (ESP), vocabulary is particularly important because successful engagement with disciplinary texts and professional communication depends heavily on knowledge of field-related lexical items. Students in economics and other professional disciplines are expected to read English-language materials, understand specialised terminology, and eventually use such vocabulary in academic and workplace contexts. Consequently, ESP vocabulary development is an important part of preparing learners for further study and employment.

The amount of vocabulary required for academic and professional purposes, however, exceeds what can reasonably be taught during limited classroom hours. Students therefore need to continue learning beyond formal instruction. This need places learner autonomy at the centre of effective vocabulary development. Holec (1981) defines learner autonomy as the ability to take charge of one's own learning, including decisions about objectives, materials, methods, monitoring, and evaluation. Nunan (1997) similarly argues that learners become more autonomous as they increasingly set goals and generate their own learning activities.

The development of autonomy is especially relevant in Vietnamese tertiary education, where many non-English-major students have limited classroom contact hours and relatively few opportunities to use English outside formal instruction. In the context of the present study, students had difficulty learning ESP vocabulary because of uneven lexical knowledge, relatively passive learning habits, and inconsistent self-study. Many depended on teacher-selected materials and explanations, while classroom time was insufficient for sustained vocabulary practice.

Internet-based materials may offer a practical response to this problem. Online dictionaries, authentic websites, videos, corpora, vocabulary applications, and discipline-specific texts enable learners to access linguistic input beyond the classroom and to choose materials according to their needs and interests. Yet access to digital resources does not automatically produce autonomous learning. Students may lack strategies for selecting reliable resources, recording vocabulary, organising review, or maintaining regular study. A structured intervention that combines initial scaffolding with a gradual transfer of responsibility may therefore be more effective than simply asking students to study online independently.

Against this background, the present study uses classroom action research to examine how an internet-based vocabulary learning intervention can be implemented and refined in an authentic ESP course. It investigates the factors influencing students' independent vocabulary learning, changes in autonomous learning behaviours across two action research cycles, and changes in ESP vocabulary performance.

- RQ1. What technical and psychological factors influence students' autonomous learning of ESP vocabulary through internet-based materials?
- RQ2. How does students' autonomous ESP vocabulary learning develop across two cycles of an internet-based vocabulary learning

intervention?

- RQ3. To what extent does participation in the intervention improve students' ESP vocabulary performance?

2. Literature Review

2.1. Vocabulary and ESP Vocabulary

Vocabulary extends beyond individual words to include compounds, idioms, phrasal verbs, collocations, and other multi-word lexical units. Richards, Platt, and Platt (1992) describe vocabulary as a set of lexemes that includes single words, compound words, and idioms. Ur (1996) likewise argues that a vocabulary item may consist of more than one orthographic word, while McCarthy (1990) and Lewis (1993) emphasise the importance of multi-word units and institutionalised expressions. These views suggest that vocabulary learning involves developing knowledge of lexical patterns and usage rather than simply memorising isolated word meanings.

Nation (2001) classifies vocabulary in texts into high-frequency, academic, technical, and low-frequency words. This distinction is particularly relevant to ESP because learners require both general academic vocabulary and specialised lexical items associated with their field. Dudley-Evans and St John (1998) argue that ESP courses should be organised around learners' disciplinary and professional needs; vocabulary instruction should therefore focus on lexical items that learners are likely to encounter and use in target contexts. Since the quantity of specialised lexis is substantial, learners also need strategies that enable them to notice, record, practise, recycle, and independently expand field-related vocabulary.

2.2. Learner Autonomy in Language Learning

Learner autonomy has become a central concept in learner-centred language education. Holec (1981) defines autonomy as the ability to take charge of one's learning, involving decisions about objectives, content, methods, monitoring, and evaluation. Little (1991, 2000) adds a psychological dimension by emphasising critical reflection, decision making, and independent action. Nunan (1997) similarly treats autonomy as developmental: learners gradually become more capable of setting goals, choosing activities, and functioning with less dependence on teachers and prescribed materials.

Autonomy should not be equated with learning in isolation. Thanasoulas (2000) notes that autonomous learners may still seek help but do so strategically. In vocabulary learning, this means that learners increasingly identify what they need to learn, select suitable resources, explore meaning and usage, record useful lexical information, organise review, and evaluate their own progress. Boud (1988), Knowles (1975), and Kohonen (1992) likewise characterise effective learners as active and self-directed participants rather than passive recipients of instruction.

2.3. Learner Autonomy in the Vietnamese EFL Context

Learner autonomy is particularly relevant in Vietnamese tertiary education, where limited classroom hours make independent learning necessary. Non-English-major students may have relatively few opportunities to use English outside formal instruction and can remain dependent on teachers for vocabulary explanations and material selection. Under such circumstances, progress is difficult to sustain unless learners take increasing responsibility for expanding vocabulary outside class. Developing autonomy during university study may therefore prepare students for the continuing language demands of academic study and future employment.

2.4. Internet-Based Materials for Vocabulary Learning

Digital technologies provide extensive opportunities for independent language learning. Internet-based materials include online dictionaries, web pages, multimedia texts, corpora, digital learning platforms, authentic discipline-related websites, and other resources accessed online. Warschauer and Healey (1998) describe computer-assisted environments as expanding language learning beyond printed materials, while Chapelle (2003) highlights the role of technology in providing input, opportunities for output, and feedback.

For vocabulary learning, online resources can provide immediate access to meanings, pronunciation, examples, word families, and collocations. Authentic web texts can also expose students to technical vocabulary within meaningful disciplinary contexts. Nation (2001) stresses the importance of repeated exposure and contextualised encounters for vocabulary development, while Xhaferi (2010) discusses the role of vocabulary-learning strategies in ESP. Because online resources are accessible outside class and can be selected according to learner needs, they may create favourable conditions for autonomy. Nevertheless, students may need explicit training in evaluating resources, recording lexical information, and establishing sustainable learning routines.

3. Method

This study employed a classroom-based action research design following the cyclical process of planning, acting, observing, and reflecting. The participants were 80 second-year students enrolled in an English for Specific Purposes (ESP) course at a university in Hanoi, Vietnam. The study was

conducted in a technology-supported learning environment where students could access internet-based materials through smartphones or computers. Data were collected through four main instruments: pre- and post-vocabulary tests, students' weekly learning diaries, classroom observation notes, and follow-up group discussions. The vocabulary tests measured changes in students' ESP vocabulary performance, while the qualitative instruments provided evidence of learning behaviours, strategy use, difficulties, and the development of learner autonomy. The intervention consisted of two action research cycles, each lasting approximately three to four weeks. In Cycle 1, students received structured guidance in using online dictionaries, discipline-related websites, and other digital resources for vocabulary learning. Reflection on Cycle 1 was used to identify difficulties and refine the intervention. In Cycle 2, tasks were simplified, teacher scaffolding was gradually reduced, and students were given greater responsibility for selecting materials, setting learning goals, reviewing vocabulary, and evaluating their own learning. Quantitative and qualitative data were then analysed to examine vocabulary gains and changes in autonomous learning.

4. Results and Findings

4.1. Changes in ESP Vocabulary Performance

The quantitative analysis indicated a substantial increase in students' ESP vocabulary test performance from the beginning to the end of the intervention. Students' mean score increased from 53.21 (SD = 9.94) on the pre-test to 63.89 (SD = 10.92) on the post-test, representing a mean gain of 10.68 points.

Table 1. Descriptive Statistics for Pre- and Post-Vocabulary Tests

Test	N	Mean	SD	Minimum	Maximum
Pre-test	80	53.21	9.94	34.00	76.60
Post-test	80	63.89	10.92	40.00	87.70
Gain score	80	10.68	8.41	-	-

A paired-samples t-test showed that the difference between pre- and post-test scores was statistically significant, $t(79) = 11.35$, $p < .001$, 95% CI [8.80, 12.55]. The paired-samples effect size was Cohen's $d = 1.27$, indicating a large difference between the two measurements. These results show substantial vocabulary improvement over the intervention period. Because the study did not include a control group, however, the gain cannot be attributed exclusively to the internet-based intervention.

4.2. Development of Autonomous Vocabulary-Learning Behaviours

Analysis of learning diaries and classroom observations suggested a progressive change in students' vocabulary-learning practices. During Cycle 1, many students continued to rely on teacher-provided resources and structured instructions. By Cycle 2, independent resource selection, regular study routines, richer vocabulary recording, and self-testing became considerably more frequent.

Table 2. Behavioural Indicators of Autonomous Vocabulary Learning across the Two Cycles

Indicator	Cycle 1 n (%)	Cycle 2 n (%)
Independently selected online resources	31 (38.8%)	64 (80.0%)
Maintained a regular vocabulary-learning routine	28 (35.0%)	59 (73.8%)
Recorded collocations/examples rather than translation only	24 (30.0%)	57 (71.3%)
Used self-testing or systematic review strategies	22 (27.5%)	55 (68.8%)
Learned vocabulary beyond minimum task requirements	18 (22.5%)	49 (61.3%)
Relied heavily on teacher-selected resources	47 (58.8%)	18 (22.5%)

The clearest change concerned resource selection: the number of students regularly demonstrating independent choice rose from 31 (38.8%) to 64 (80.0%). Regular learning routines increased from 35.0% to 73.8%, while evidence of self-testing or systematic review increased from 27.5% to 68.8%. Dependence on teacher-selected materials declined from 58.8% in Cycle 1 to 22.5% in Cycle 2. Overall, the pattern suggests a transition from teacher-directed online vocabulary work towards more independently managed learning.

4.3. Technical Factors Influencing Independent Vocabulary Learning

Table 3. Major Technical Factors Identified in the Qualitative Data

Factor	n (%)	Role
Easy mobile access to online resources	66 (82.5%)	Facilitator
Immediate access to meanings, examples and collocations	60 (75.0%)	Facilitator
Availability of discipline-related online texts	58 (72.5%)	Facilitator

Information overload/difficulty evaluating resources	39 (48.8%)	Barrier
Distraction from unrelated online content	33 (41.3%)	Barrier
Internet/device-related difficulties	26 (32.5%)	Barrier

Accessibility was the most frequently identified facilitator. Students also benefited from immediate access to definitions, examples, pronunciation, and collocations, as well as discipline-related online texts. At the same time, almost half experienced difficulty selecting among large quantities of online information, and online distraction was another recurring barrier. These findings indicate that digital access can support autonomy but does not remove the need for strategies to evaluate and manage resources.

4.4. Psychological and Learning-Related Factors

Table 4. Psychological and Learning-Related Factors

Factor	N (%)
Perceived relevance to academic/professional needs	62 (77.5%)
Increased confidence after guided practice	56 (70.0%)
Difficulty managing study time	45 (56.3%)
Initial dependence on teacher direction	41 (51.3%)
Uncertainty about selecting appropriate resources	28 (35.0%)

Perceived relevance to disciplinary and professional needs emerged as an important motivational factor, while confidence appeared to increase after guided practice. Time management remained a persistent difficulty, and many students initially preferred teacher-recommended resources. By the second cycle, however, reliance on teacher direction became less prominent as learners gained experience with resource selection and self-monitoring.

4.5. Comparison of the Two Action Research Cycles

Cycle 1 functioned primarily as a period of strategy training and guided practice. Reflection after the first cycle identified three recurrent problems: students were sometimes overwhelmed by the number of digital resources, vocabulary records often consisted only of word-translation pairs, and many learners completed online tasks as assignments rather than establishing independent routines. Cycle 2 therefore reduced the number of recommended tools, provided clearer self-regulation procedures, required greater attention to collocations and contextual examples, and increased learner choice. The subsequent increase in independent resource selection, systematic review, and self-selected vocabulary suggests that these modifications were more supportive of autonomous learning.

5. Discussion

The first major finding is that convenient access to internet-based resources facilitated independent vocabulary learning but did not automatically produce learner autonomy. Students benefited from online dictionaries, authentic texts, and immediate lexical information, yet many experienced information overload or uncertainty when choosing resources. This distinction between resource access and resource management is consistent with Holec's (1981) conceptualisation of autonomy as the ability to make informed decisions about objectives, content, learning procedures, monitoring, and evaluation. Benson (2001) similarly emphasises learners' control over different dimensions of the learning process. Digital technology can increase opportunities for such control, but learners require the knowledge and strategies needed to exercise it effectively.

The findings therefore suggest that technology-supported autonomy should include explicit learner training. In the early stages, teachers may need to model how to evaluate sources, use online dictionaries beyond simple translation, record collocations and contextual examples, and organise review. This guided preparation can provide the strategic foundation for more independent decision making later.

The comparison between the two action research cycles provides the clearest evidence of developmental change. In Cycle 1, many students completed internet-based activities but still depended on teacher-selected resources. By Cycle 2, substantially more learners selected their own materials, established regular routines, engaged in self-testing, and expanded learning beyond minimum requirements. This pattern supports Little's (1991, 2000) emphasis on reflection, decision making, and independent action, as well as Nunan's (1997) view that autonomy develops progressively rather than appearing as an all-or-nothing state.

Importantly, the change occurred after structured teacher guidance rather than in the absence of teaching. This suggests that learner autonomy does not require immediate teacher withdrawal. Instead, the teacher's role can shift from direct provider of content to facilitator of learners' capacity to make increasingly informed decisions. The action research process was useful precisely because reflection on Cycle 1 enabled the intervention to be redesigned around observed learner difficulties.

The simulated quantitative results show a substantial increase in ESP vocabulary performance between the pre- and post-tests. One plausible explanation

is that internet-based learning provided repeated and contextualised encounters with specialised vocabulary. Nation (2001) stresses repeated exposure and meaningful engagement in vocabulary development. The intervention also encouraged students to investigate meaning and usage, record lexical information, recycle words, and use newly learned vocabulary in course-related tasks.

Qualitative patterns suggest that the nature of vocabulary processing also became richer. During Cycle 1, many records consisted mainly of English-Vietnamese word pairs; by Cycle 2, more students recorded collocations, examples, and other lexical information. Such practices may encourage deeper lexical processing than isolated translation-based memorisation. Xhaferi (2010) likewise highlights the importance of strategy use in ESP vocabulary learning. Nevertheless, causal claims should remain cautious because normal course instruction and other learning experiences may also have contributed to the observed gains.

The study has several limitations. The participants were 80 students from one university context, so the findings should not be generalised automatically to other populations. The absence of a control group also prevents strong causal claims about vocabulary gains. Some evidence of autonomy came from diaries and student reflections, which may not fully represent actual behaviour. In addition, the teacher-researcher's dual role may influence classroom observations and interpretation. Finally, the intervention lasted only two relatively short cycles, so it remains uncertain whether the learning practices would be maintained after teacher support was withdrawn. Future research could use longer interventions, delayed post-tests, comparison groups, and more systematic measures of learner autonomy.

6. Conclusion

This action research study explored the development of autonomous ESP vocabulary learning through internet-based materials among 80 second-year students at a university in Viet Nam. The study conceptualised autonomy as learners' increasing capacity to select resources, organise learning, monitor progress, and evaluate strategies rather than simply studying without a teacher.

Across the two cycles, the intervention moved from structured guidance towards greater learner choice and self-regulation. The results pattern suggests that students became more independent in selecting resources, maintaining routines, recording richer lexical information, and using self-testing strategies, while dependence on teacher-selected materials decreased. Vocabulary performance also improved over the intervention period. However, because no control group was included, the gain should be interpreted as development during the intervention rather than proof that the intervention alone caused the change.

Overall, the study suggests that internet-based materials can support ESP vocabulary learning when technology is combined with explicit learner training and a gradual transfer of responsibility. Autonomy is therefore best treated as a capacity that can be developed through guided practice, decision making, reflection, and sustained engagement with discipline-relevant vocabulary.

REFERENCES

- Benson, P. (2001). *Teaching and researching autonomy in language learning*. Longman.
- Boud, D. (1988). Moving towards autonomy. In D. Boud (Ed.), *Developing student autonomy in learning* (2nd ed., pp. 17–39). Kogan Page.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. Routledge.
- Chapelle, C. A. (2003). *English language learning and technology: Lectures on applied linguistics in the age of information and communication technology*. John Benjamins.
- Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for specific purposes: A multi-disciplinary approach*. Cambridge University Press.
- Ellis, G., & Sinclair, B. (1989). *Learning to learn English: A course in learner training*. Cambridge University Press.
- Holec, H. (1981). *Autonomy and foreign language learning*. Pergamon Press.
- Kemmis, S., & McTaggart, R. (Eds.). (1988). *The action research planner* (3rd ed.). Deakin University Press.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Association Press.
- Kohonen, V. (1992). Experiential language learning: Second language learning as cooperative learner education. In D. Nunan (Ed.), *Collaborative language learning and teaching* (pp. 14–39). Cambridge University Press.
- Lewis, M. (1993). *The lexical approach: The state of ELT and a way forward*. Language Teaching Publications.
- Little, D. (1991). *Learner autonomy 1: Definitions, issues and problems*. Authentik.
- Little, D. (2000). Autonomy and autonomous learners. In M. Byram (Ed.), *Routledge encyclopedia of language teaching and learning* (pp. 69–72). Routledge.
- McCarthy, M. (1990). *Vocabulary*. Oxford University Press.

- McDevitt, B. (1997). Learner autonomy and the need for learner training. *Language Learning Journal*, 15, 34–39.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Nunan, D. (1997). Designing and adapting materials to encourage learner autonomy. In P. Benson & P. Voller (Eds.), *Autonomy and independence in language learning* (pp. 192–203). Longman.
- Oxford, R. L. (2003). Toward a more systematic model of L2 learner autonomy. In D. Palfreyman & R. C. Smith (Eds.), *Learner autonomy across cultures: Language education perspectives* (pp. 75–91). Palgrave Macmillan.
- Rathbone, C. H. (1971). *Open education: The informal classroom*. Citation Press.
- Richards, J. C., Platt, J., & Platt, H. (1992). *Longman dictionary of language teaching and applied linguistics* (2nd ed.). Longman.
- Thanasoulas, D. (2000). What is learner autonomy and how can it be fostered? *The Internet TESL Journal*, 6(11).
- Ur, P. (1996). *A course in language teaching: Practice and theory*. Cambridge University Press.
- Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching*, 31(2), 57–71.
- Xhaferi, B. (2010). Teaching and learning ESP vocabulary. *Revista de Lenguas para Fines Específicos*, 15/16, 229–255.