JOLLT Journal of Languages and Language Teaching
https://e-journal.undikma.ac.id/index.php/jollt
Email: jollt@undikma.ac.id
DOI: https://doi.org/10.33394/jollt.v14i2.17072

April 2026. Vol. 14, No.2
p-ISSN: 2338-0810
e-ISSN: 2621-1378
pp. 680-691

INVESTIGATING EFL STUDENTS' LEARNING STYLES IN ENGLISH FOR SPECIFIC PURPOSES: A VARK-BASED STUDY ON THE FASHION EDUCATION CONTEXT

[1]*Sita Nurmasitah, [2]Pudji Astuti, [3]Nabila Luthfionaura, [4]Atika, [5]Joe-Bren L. Consuelo
[1]English Lecturer, Home Economics Education Program, Faculty of Engineering, Universitas Negeri Semarang, Jln. Sekaran, Gunungpati, Semarang, Central Java, Indonesia
[2]English Lecturer, Culinary Education Program, Faculty of Engineering, Universitas Negeri Semarang, Jln. Sekaran, Gunungpati, Semarang, Central Java, Indonesia
[3]Graduate School of Technological and Vocational Education, National Yunlin University of Science and Technology, Taiwan
[4]Fashion Design Lecturer, Fashion Education Program, Faculty of Engineering, Universitas Negeri Semarang, Jln. Sekaran, Gunungpati, Semarang, Central Java, Indonesia
[5]Human Resource and Development Division, Department of Education, Ligao, Philippines

*Corresponding Author Email: sita_nurmasitah@mail.unnes.ac.id

Article Info
Article History
Received: August 2025
Revised: September 2025
Accepted: January 2026
Published: April 2026

Keywords
Learning style;
English for specific purposes;
VARK strategy;
Fashion education;

Abstract

English for Specific Purposes (ESP) instruction in vocational contexts—particularly in fields such as Fashion Education—has often overlooked students' diverse learning style preferences, creating a gap between pedagogical approaches and learners' needs. This study addresses that gap by investigating the learning styles of 40 Fashion Education students using the VARK (Visual, Aural, Read/Write, Kinesthetic) model to inform differentiated ESP pedagogy. Employing a descriptive quantitative method, the study utilized the VARK questionnaire to assess individual learning preferences. Results revealed that 65% of participants demonstrated kinesthetic learning tendencies, while 70% exhibited multimodal profiles. These findings indicate a predominant preference for experiential and blended learning approaches, underscoring the limitations of traditional, text-heavy ESP instruction in vocational settings. The novelty of this study lies in its focus on Fashion Education, a creative and practice-based discipline where learning style alignment is crucial yet underexplored in ESP research. Beyond the local context, the results contribute to international ESP discourse by offering evidence that differentiated and learner-responsive approaches can enhance both engagement and communicative competence. For educators, the study highlights the need to integrate more task-based, hands-on, and multimodal strategies into ESP classrooms to ensure instruction is both industry-relevant and inclusive, thereby improving learning outcomes across vocational education.

How to cite: Nurmasitah, S., Astuti, P., Luthfionaura, N., Atika, A., Consuelo, J.B.L. (2026). Investigating EFL Students' Learning Styles in English for Specific Purposes: A Vark-Based Study on the Fashion Education Context. *JOLLT Journal of Languages and Language Teaching, 14*(2), 680-691. Doi: https://doi.org/10.33394/jollt.v14i2.17072

INTRODUCTION

English proficiency has become indispensable in various professional fields in today's globalized world. Effective communication in English is essential for professionals to collaborate internationally, access global markets, and navigate diverse cross-cultural environments. In response to these demands, educational institutions have increasingly integrated English for Specific Purposes (ESP) courses into a wide range of curricula to better

prepare students for the linguistic challenges of their respective disciplines. ESP is a specialized branch of language instruction that aims to equip learners with the communicative competencies required for success in specific domains (Abdumalikovna, 2024). Unlike General English courses, which focus on broad language skills, ESP emphasizes the discourse conventions, technical vocabulary, and communication practices relevant to specific professions (Hyland & Jiang, 2021; Dou, 2024).

Despite its growing adoption, the implementation of ESP poses several challenges across disciplines. One persistent issue is the lack of standardized curricula and instructional materials tailored to the unique demands of each academic or vocational field (Sukying et al., 2023). Many ESP instructors must rely on fragmented resources or adapt general English content, which can result in inconsistent instructional quality and learning outcomes (Nasiri & Khojasteh, 2024). Another challenge is the diversity of communicative functions and contexts that professionals must navigate, which often include a mix of technical, persuasive, and interpersonal language use (Agzamovna, 2024). However, ESP courses often prioritize academic reading and writing, neglecting the spoken and interactive skills necessary for real-world professional settings (Alghamdi, 2025). Compounding this issue is the variation in students' English proficiency levels, especially in programs where language development has not historically been emphasized, making it challenging to implement a one-size-fits-all instructional model (Poole & Li, 2023).

Furthermore, traditional ESP methodologies may not align with students' learning preferences, especially in practice-based or vocational disciplines where learners often benefit more from experiential, hands-on, or visual learning modes than text-heavy approaches (Sakti et al., 2024). Motivation and engagement often suffer when instructional methods fail to reflect students' preferred learning styles, resulting in limited language acquisition (Pawlak, 2021). These challenges become particularly evident in vocational programs such as Fashion Education, where learning is inherently experiential and visual. ESP instruction in this field must bridge the gap between the creative, hands-on nature of fashion training and the linguistic demands of international communication. Addressing this requires instructional approaches that are field-specific and aligned with students' learning styles in fashion-related disciplines.

Learning styles refer to students' preferred modes of processing and retaining information, which can affect their engagement and academic performance (Cimermanová, 2018). The VARK model, developed by Fleming and Mills, categorizes learners into four primary types: Visual, Auditory, Read/Write, and Kinesthetic (Mohd Noor & Amri Ramly, 2023). Visual learners absorb information better through images and diagrams (Aisami, 2015), auditory learners excel through discussions and verbal instruction (Kayalar & Kayalar, 2017), read/write learners prefer textual engagement (Benitez-Correa et al., 2022), while kinesthetic learners benefit from hands-on experiences and practical applications (Harapan et al., 2024). In fashion education, students are often assumed to have a kinesthetic learning preference (Qiu et al., 2018); however, empirical evidence supporting this assumption is still limited. Understanding how fashion education students learn in ESP courses remains an underexplored area, despite its potential implications for instructional effectiveness.

While the VARK model has been extensively utilized in various educational contexts, its application within ESP instruction for Fashion Education remains underexplored. Research has primarily examined learning styles in business, medicine, and engineering, where students' language needs are often more structured and predictable (Jena, 2018; Caetano et al., 2018; Li et al., 2019). Studies have shown that matching instructional methods with students' dominant learning styles in these fields enhances comprehension, retention, and engagement (Rogowsky et al., 2015). For instance, research found that auditory learners benefited most from case study discussions and oral presentations in business ESP courses. In contrast, visual learners performed better when exposed to infographics, charts, and business simulations (Alharbi,

2022). Similarly, in medical ESP programs, kinesthetic learners demonstrated improved retention when instruction incorporated practical demonstrations, role-playing, and patient interactions, whereas read/write learners excelled when provided with text-heavy materials like medical journals and reports (Eslamian, 2024). Moreover, art students struggled with traditional ESP instruction that relied on text-based learning, suggesting that ESP programs should incorporate more multimodal teaching approaches to better cater to learners in creative fields (Mao & Zhou, 2024). From a practical standpoint, ESP courses have traditionally adopted a one-size-fits-all approach, assuming that standard teaching methodologies—such as lectures, reading assignments, and written assessments—would be effective across all disciplines (Aslrasouli, 2012).

To address these gaps, this study aims to analyze the distribution of learning styles among fashion education students in ESP courses using data from the VARK questionnaire. The findings will provide empirical evidence to support the development of teaching strategies that align with students' learning preferences. By investigating how fashion students engage with ESP materials and which learning styles dominate in their academic environment, this study will generate practical recommendations for ESP educators to optimize their instructional methods.

The significance of this research extends beyond theoretical contributions. By bridging the gap between pedagogy and student learning preferences, this study will equip ESP instructors with empirical data to refine their teaching methods. Instructors will be better positioned to adapt lesson plans, instructional materials, and assessment strategies based on students' identified learning preferences. Ultimately, aligning teaching strategies with students' natural learning inclinations may enhance student motivation, engagement, and overall success in ESP courses within fashion education.

RESEARCH METHOD

Research Design

This study employed a descriptive quantitative research design to examine the distribution of learning styles among Fashion Education students enrolled in an English for Specific Purposes (ESP) course. The main objective of the research was to identify, classify, and measure students' learning preferences systematically by using the VARK model, which consists of four categories: Visual, Aural, Read/Write, and Kinesthetic. Through this approach, the study sought to provide a clear numerical description of how learning styles were distributed within the group of participants. In this research, students' learning styles functioned as the dependent variable because they were the main focus of investigation, while students' participation in the ESP course within the vocational fashion education setting served as the independent variable. A descriptive quantitative design was considered appropriate because it enabled the researcher to gather measurable data and analyze it statistically in an objective manner. Rather than exploring cause-and-effect relationships, this design focused on describing existing conditions accurately. The findings were expected to offer useful insights into students' preferred ways of learning and to help lecturers develop more suitable teaching strategies, materials, and classroom activities for ESP instruction in vocational education, particularly in the field of fashion.

Population and Sample

The population of this study consisted of students enrolled in the Fashion Education program at the Faculty of Engineering, Universitas Negeri Semarang, Indonesia. To ensure that the study captured the full characteristics of the group, a total sampling technique was employed. This means that all 40 students registered in the English for Specific Purposes (ESP) course during the academic semester were included as research participants. The use of total sampling was considered appropriate because the population size was relatively small and

manageable, allowing the researcher to involve every member without the need for selection or exclusion. This approach also strengthened the study by providing a complete picture of the learning style distribution within the class. The participants included both male and female students and came from varied educational and personal backgrounds. Such diversity helped ensure that the sample reflected the actual composition of the class and provided more comprehensive and representative data for analyzing students' learning styles in the ESP learning context.

Instruments

The primary instrument for data collection was the VARK questionnaire version 8.01, developed by Fleming and Mills (1992). This instrument is a widely used diagnostic tool to assess individual learning style preferences across four sensory modalities. The questionnaire consists of 16 multiple-choice items, with each question allowing respondents to select one or more answers that best reflect their preferred mode(s) of learning. No modifications were made to the standardized instrument, and no pilot study was conducted, as the instrument has established validity and reliability in prior educational research. Participants completed the questionnaire under the researcher's supervision to ensure clarity and accuracy in responses.

Data Analysis

Data obtained from the completed VARK questionnaires were analyzed using descriptive statistical techniques. Responses were categorized into the four learning style modalities (Visual, Aural, Read/Write, Kinesthetic) and multimodal combinations. Frequencies and percentages were calculated to determine the distribution of single and multiple learning style preferences among the 40 students. The analysis also included a breakdown of how often each sensory modality appeared across participants, offering insights into dominant tendencies. Descriptive statistics were selected because the study aimed primarily to map patterns of learning preferences within a specific group of Fashion Education students rather than to test hypotheses or establish predictive relationships. While this approach provides a clear overview of the data, it does not allow for broad generalizations beyond the sample.

RESEARCH FINDINGS AND DISCUSSION

Findings

Learning Style Distribution

The analysis of learning styles among 40 Fashion Education students in an ESP course reveals significant variation in how students prefer receiving and processing information. As illustrated in Table 1, the dominant learning styles were Multimodal AK (Aural–Kinesthetic) at 22.5%, followed by Multimodal VARK (20.0%), and Mild Kinesthetic (17.5%). These patterns indicate a strong leaning toward multimodal and kinesthetic-inclusive learning styles, underscoring the need for diverse teaching strategies in ESP instruction.

Table 1
Learning Style Distribution Among Fashion Education Students

Learning Style	Number of Students	Percentage (%)
Mild Aural	3	7.5
Mild Kinesthetic	7	17.5
Multimodal AK	9	22.5
Multimodal AR	2	5.0
Multimodal ARK	5	12.5
Multimodal K	2	5.0
Multimodal RK	3	7.5
Multimodal VAK	1	2.5
Multimodal VARK	8	20.0

To better understand the frequency with which each sensory modality appears in the students' learning profiles, the VARK elements were analyzed individually. As seen in Figure 1, Kinesthetic (K) was the most frequently present modality, observed in 34 out of 40 students, followed by Aural (A) in 27 students, Read/Write (R) in 21 students, and Visual (V) in 20 students.

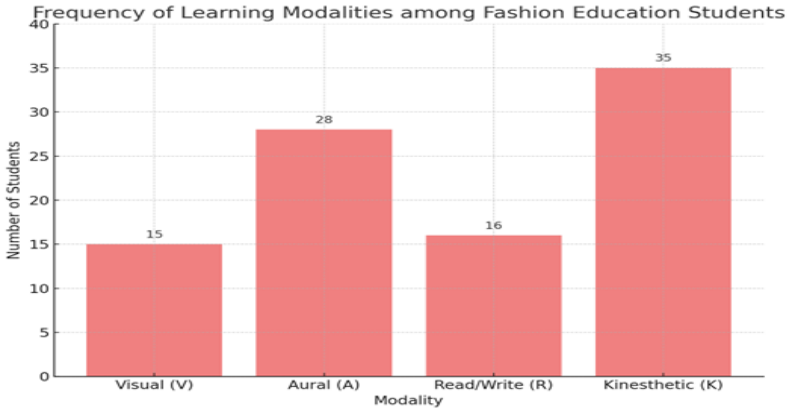

Figure 1. Frequency of Learning Modalities among Fashion Education Students

These findings echo the characteristics of vocational students described by Lisewski (2021), who note that learners in practice-based disciplines like fashion tend to favor experiential, hands-on approaches to learning. The high representation of kinesthetic learners reflects the profession's physical and design-oriented nature. Fashion Education is inherently grounded in tactile and visual tasks such as sketching, modeling, and sewing, which aligns well with kinesthetic and multimodal instructional preferences. The predominance of multimodal learners (70%) implies that most students require more than one sensory input to engage with ESP content effectively. Multimodal learners benefit from instruction that integrates auditory discussion, visual media, written tasks, and physical interaction. ESP courses could involve combining vocabulary instruction with product demonstrations, using fashion videos with embedded transcripts, or staging simulated client presentations in English.

Kinesthetic Learning Tendencies in Vocational Education

Kinesthetic learning preferences align with the nature of vocational education, where learning often occurs through action, manipulation, and direct physical engagement. Kinesthetic learners comprehend and retain information most effectively when involved in practical tasks, movement, or real-world application rather than through passive reception such as reading or listening. In Fashion Education, students develop professional competencies through tactile activities including sewing, garment construction, fabric selection, sketching, and design realization. These practical elements naturally support a kinesthetic learning environment, allowing students to connect linguistic input with physical experience, strengthening cognitive associations and retention (Lucas et al., 2012).

The current study found that 65% of the surveyed students exhibited learning styles that included a kinesthetic component, either as a dominant or part of a multimodal preference. This strong presence of kinesthetic tendencies reinforces existing literature indicating vocational learners prefer experiential learning methods, particularly in creative disciplines. Komari et al. (2019) emphasized that vocational students are more motivated by performance-based assessments and interactive problem-solving than by traditional instructional techniques. Similarly, Guile (2019) highlights that the most effective learning in vocational contexts emerges when learners actively engage in authentic, contextualized tasks that mirror professional practices.

However, many ESP programs in vocational institutions continue to rely on general English methodologies that are misaligned with the realities of students' learning profiles. Traditional ESP instruction often emphasizes reading comprehension, grammar-focused exercises, and structured writing activities, with limited physically interactive or visually engaging content integration. Such approaches can demotivate kinesthetic learners, creating a disconnect between the classroom experience and the practical nature of the students' intended professions (Basturkmen, 2010). Horwitz (2020) further argues that language acquisition becomes superficial when language instruction is divorced from learners' occupational identities and day-to-day professional activities, resulting in minimal long-term retention or practical applicability.

Multimodal Learners and the Need for Differentiated Strategies

A significant finding of this study is that 70% of the Fashion Education students exhibit multimodal learning preferences, meaning they do not rely on a single sensory modality but instead require a blend of visual, auditory, reading/writing, and kinesthetic inputs to process information effectively. This insight carries substantial pedagogical implications, especially for instructors designing ESP courses for vocational learners. Multimodal learners thrive when instructional content is diversified and interactive, rather than linear and monomodal. As Rohi & Nurhayati (2024) emphasize, learners with multimodal tendencies are most engaged when information is presented through various sensory channels—visual aids, spoken explanations, textual readings, and experiential tasks. Failure to address this diversity can limit comprehension and participation, especially in language learning settings where input and output modes are crucial.

In the context of ESP, the challenge lies in transforming language instruction into an inclusive, dynamic experience that reflects the complexity of both the target language and the students' professional domain. Multimodal ESP instruction might involve pairing subtitled fashion documentaries with class discussions on terminology, or using bilingual glossaries alongside sketching tasks where students describe garments in English. Suntsova & Fakhretdinova (2020) argue that such strategies improve vocabulary retention and enhance students' confidence in using English for industry-specific purposes. Similarly, Shi (2023) found that vocational learners who engaged in multimodal activities such as role-playing, peer feedback sessions, and project-based presentations showed greater motivation and deeper language acquisition than those who participated in traditional lecture-based ESP classes.

Discussion

The findings of this study show that Fashion Education students in an ESP course tend to prefer learning through multimodal and kinesthetic-oriented modes, with Multimodal AK as the most common profile, followed by Multimodal VARK and Mild Kinesthetic. In addition, kinesthetic appeared as the most frequently recurring modality across student profiles, while 70% of the participants were categorized as multimodal learners. These results suggest that ESP learning in the fashion context cannot be effectively delivered through a single instructional channel. Instead, students seem to benefit from a learning environment that combines movement, discussion, visual support, and written reinforcement in ways that mirror the practical and creative nature of their field

This pattern is consistent with the nature of vocational and fashion education itself. Fashion learning is closely tied to doing, making, observing, presenting, and revising. Students do not only learn concepts; they also construct garments, interpret designs, discuss materials, and present creative ideas. In this sense, the prominence of kinesthetic-inclusive learning in the present study aligns with Lucas et al. (2012), who argue that vocational pedagogy is most effective when learning is anchored in practical action, authentic performance, and real-world tasks. Similarly, Lisewski (2021) explains that fashion education is deeply shaped by practice-

based knowing, meaning that students develop understanding not simply through abstract explanation but through embodied and situated activity. The present findings therefore reinforce the view that ESP in vocational fashion settings should not be separated from the practical logic of the discipline.

The high proportion of multimodal learners also supports earlier VARK-based research suggesting that many students do not rely on only one learning channel. Fleming and Baume (2006) note that multimodal learners usually need information to be presented in several forms before it becomes meaningful and memorable. In the current study, this is particularly evident in the large proportion of students classified as AK, ARK, VARK, and other mixed profiles. This indicates that many learners in the class may need spoken explanation, hands-on engagement, and textual or visual support at the same time. In practical terms, this means that ESP lecturers who depend mainly on reading passages, grammar drills, or textbook-based explanation are likely to underserve a substantial proportion of learners.

These findings are also in line with research in other professional and vocational contexts. Mohd Noor and Amri Ramly (2023), in construction technology education, found that students often show varied VARK profiles and that teaching becomes more effective when educators respond to these preferences through multiple instructional modes. In medical education, Caetano et al. (2018) and Eslamian (2024) similarly report that identifying learning styles can help instructors better design teaching activities that match learner tendencies. Although the field of fashion differs from medicine or construction, the underlying implication is similar: when students are preparing for profession-specific communication, instruction becomes more meaningful when it reflects the sensory, cognitive, and practical patterns through which they learn best.

At the same time, the present findings appear especially relevant to creative disciplines. Qiu et al. (2018), in a study on students enrolled in fashion classes, found that learning preferences may vary according to academic focus and context, but fashion students often display tendencies that are compatible with active and applied learning. The current study extends that insight into the ESP domain by showing that such preferences are not only relevant in technical or studio classes but also in language instruction. This is an important contribution because ESP has often been treated as more text-centered than studio-based subjects, even when taught in highly practical disciplines. The findings suggest that this separation is artificial. For Fashion Education students, learning English should ideally be integrated with the same active, demonstrative, and communicative processes that characterize their disciplinary training.

Another important point is that the dominance of multimodal and kinesthetic patterns calls into question the continued reliance on one-size-fits-all ESP instruction. Aslrasouli (2012) criticizes standardized ESP materials that do not reflect the actual needs and learning characteristics of students in specific fields. More recently, Sakti et al. (2024) and Agzamovna (2024) argue that ESP pedagogy must evolve beyond traditional methods if it is to remain relevant to contemporary learners and workplace demands. The present study strongly supports that position. When students are primarily multimodal and kinesthetic-oriented, classroom practices limited to silent reading, teacher explanation, and written exercises are unlikely to maximize engagement or retention. Instead, students may need activities such as garment-description tasks, role-plays with clients, product presentations, collaborative design brief discussions, vocabulary learning through objects and samples, and multimodal project work.

The findings further resonate with research on multimodal instruction in language education. Choi and Yi (2016) show that integrating multimodality into classroom practice can enrich language learning by making meaning accessible through multiple semiotic resources. Rohi and Nurhayati (2024) similarly report that multimodal strategies can enhance EFL learning by engaging students more actively and accommodating diverse learning needs. In the present study, the large percentage of multimodal learners suggests that such approaches are

not merely optional enhancements but pedagogical necessities. Students in the fashion ESP classroom may understand terminology more effectively when it is paired with sketches, fabrics, demonstrations, oral explanation, and short written prompts rather than delivered through isolated vocabulary lists alone.

The study also highlights the pedagogical value of differentiated instruction. Suwastini et al. (2021) argue that differentiated instruction enables EFL teachers to respond to learner diversity more meaningfully, while Goyibova et al. (2025) describe differentiation as essential for tailoring instruction to varied learner profiles. In the context of this study, differentiated ESP teaching could mean allowing students to access the same content through different modes or to demonstrate learning in varied formats. For instance, one student might explain a design orally, another might submit a written fashion description, and another might combine visual slides with spoken narration. Such flexibility would not dilute learning outcomes; rather, it would likely strengthen them by aligning learning tasks with how students process information most effectively.

However, the findings should not be interpreted as proof that matching teaching strictly to learning styles automatically guarantees better achievement. Rogowsky et al. (2015) caution that the evidence for a simple matching hypothesis remains limited. This caution is important. The value of the current study lies not in promoting rigid labeling of students, but in showing broad tendencies that can inform more responsive teaching. In other words, the results are best used to diversify pedagogy, not to confine students to fixed categories. For ESP lecturers, the implication is to design instruction that is rich, varied, and context-sensitive rather than narrowly individualized.

A further noteworthy issue is the close relationship between learning preference and professional relevance. Hyland and Jiang (2021) emphasize that ESP as a discipline is fundamentally concerned with relevance to learners' domains and communicative purposes. Basturkmen (2010) likewise argues that ESP course design should emerge from a careful analysis of learner needs and target situations. The current results deepen that principle by showing that relevance is not only about vocabulary or professional genre, but also about pedagogy. In Fashion Education, industry-relevant ESP should resemble the communicative realities of the field: explaining designs, discussing fabrics, negotiating with clients, presenting collections, and collaborating visually and verbally. This kind of ESP naturally lends itself to multimodal and kinesthetic learning structures.

The discussion indicates that the study's findings fit well within the existing literature while also contributing something specific and useful. Previous studies have shown the importance of learning preferences, multimodality, and differentiation in vocational and ESP settings, but relatively few have focused on Fashion Education. By demonstrating that Fashion Education students in an ESP class are predominantly multimodal and strongly kinesthetic-inclusive, this study offers empirical support for redesigning ESP pedagogy in more practice-oriented, flexible, and learner-responsive ways. The results suggest that effective ESP instruction in fashion should integrate spoken interaction, visual representation, written support, and hands-on performance so that language learning becomes not an isolated academic requirement but a meaningful extension of professional formation.

CONCLUSION

This study concludes that the learning style profile of Fashion Education students in the ESP classroom is strongly shaped by kinesthetic and multimodal tendencies. The findings show that 65% of the students demonstrated kinesthetic learning tendencies, while 70% displayed multimodal profiles, indicating that most learners prefer to process English input through a combination of action, interaction, and multiple sensory channels rather than through a single mode of instruction alone. The dominant appearance of Multimodal AK, Multimodal VARK, and Mild Kinesthetic further confirms that students in this context are more responsive to

learning experiences that combine listening, doing, seeing, and reflecting. These results suggest that the conventional reliance on text-heavy, lecture-centered, and grammar-focused ESP instruction is not fully aligned with the cognitive and practical characteristics of learners in vocational fashion education. Because Fashion Education is inherently creative, practice-based, and performance-oriented, English instruction in this setting should also reflect those qualities by offering more contextualized, hands-on, and flexible learning opportunities that connect language use with authentic disciplinary practice.

In addition, this study highlights that understanding students' learning styles is not merely descriptive but pedagogically significant for improving ESP instruction in vocational education. The findings imply that lecturers should move toward differentiated lesson design that accommodates multiple entry points to learning, such as combining visual media, oral explanation, written support, and task-based activities in one instructional sequence. For curriculum developers, the study provides evidence that ESP materials for Fashion Education should be more industry-relevant, interactive, and multimodal so that students can develop communicative competence alongside their professional skills. In this sense, the study contributes to the broader ESP discourse by showing that learner-responsive pedagogy is especially important in creative vocational disciplines, where language learning must be integrated with authentic performance and workplace-like tasks. Overall, the study affirms that differentiated, multimodal, and practice-oriented ESP instruction is essential for increasing student engagement, motivation, and meaningful language learning, while also suggesting that future research should test the effectiveness of these strategies in other vocational contexts and on broader learning outcomes.

FUNDING

This study received no external funding. All stages of the research process, including planning, data collection, data analysis, interpretation of findings, and report writing, were conducted independently using the researchers' personal resources. The study was completed through the use of available tools and a cost-effective research approach. Although no financial support was provided by any institution, organization, or funding agency, the research was successfully carried out in accordance with its objectives. The absence of external funding did not affect the conduct of the study, and the researchers remained fully responsible for the design, implementation, and completion of the research.

INFORMED CONSENT STATEMENT

Participation in this study was entirely voluntary. Before taking part, all participants were informed about the purpose of the research, the procedures involved, and any potential risks and benefits associated with their participation. They were also assured that their identities would remain confidential and that the information they provided would be used solely for research purposes. Participants understood that they had the right to withdraw from the study at any time without penalty or loss of any entitled benefits. By agreeing to participate and continuing in the study, they indicated that they had read, understood, and provided informed consent under the stated conditions.

DATA AVAILABILITY STATEMENT

The data used in this study are not publicly available because of privacy concerns and ethical obligations to protect participant confidentiality. This restriction is necessary to ensure compliance with ethical research standards and applicable data protection regulations. However, access to the dataset may be considered upon reasonable request for purposes such as verification or further academic analysis. Any request will be reviewed on a case-by-case basis to determine its appropriateness and ethical suitability. Data sharing will only be possible with prior approval from the relevant institutional ethics review board, ensuring that the intended use is consistent with ethical guidelines and participants' consent.

REFERENCES

Abdumalikovna, P. Z. (2024). Teaching English as a Professional Language: Strategies And Methodologies In Esp Education. *International Journal of Pedagogics*, *4*(10), 86–92. https://doi.org/10.37547/ijp/Volume04Issue10-15

Agzamovna, T. U. (2024). Bridging Language and Professional Skills: Effective ESP Pedagogy For Diverse Learner Needs. *Current Research Journal of Pedagogics*, *5*(10), 36–41. https://doi.org/10.37547/pedagogics-crjp-05-10-06

Aisami, R. S. (2015). Learning Styles and Visual Literacy for Learning and Performance. *Procedia Social and Behavioral Sciences*, *176*, 538–545. https://doi.org/10.1016/j.sbspro.2015.01.508

Alghamdi, K. A. (2025). Effectiveness of a Simplified ESP Curriculum for Adult Learners. *Humanities and Educational Sciences Journal*, *4(4)*, 844–863. https://doi.org/10.55074/hesj.vi44.1312

Alharbi, W. (2022). Students' Perceptions and Challenges in Learning Business English: Understanding Students' Needs and Job Market Requirements. *International Journal of Learning, Teaching and Educational Research*, *21*(12), 65–87. https://doi.org/10.26803/ijlter.21.12.4

Aslrasouli, M. (2012). Challenging One-Size-Fits-All Approach in ESP Material Design: Insights from Iran & India. *Procedia - Social and Behavioral Sciences*, *69*, 1374–1382. https://doi.org/10.1016/j.sbspro.2012.12.075

Basturkmen, H. (2010). Analysing Needs. In *Developing Courses in English for Specific Purposes* (pp. 17–35). Palgrave Macmillan.

Benitez-Correa, C., Vargas-Saritama, A., Gonzalez-Torres, P., Quinonez-Beltran, A., & Ochoa-Cueva, C. (2022). Students' Preferences and Learning Styles in Relation to Reading and Writing Strategies at Distance Higher Education. *International Journal of Learning, Teaching and Educational Research*, *21*(4), 316–336. https://doi.org/10.26803/ijlter.21.4.18

Caetano, C., Luedke, R., & Antonello, I. C. F. (2018). The Importance of Identifying Learning Styles in Medical Education. *Revista Brasileira de Educação Médica*, *42*(3), 189–193. https://doi.org/10.1590/1981-52712015v42n3rb20170111r1ing

Choi, J., & Yi, Y. (2016). Teachers' Integration of Multimodality Into Classroom Practices for English Language Learners. *TESOL Journal*, *7*(2), 304–327. https://doi.org/10.1002/tesj.204

Cimermanová, I. (2018). The Effect of Learning Styles on Academic Achievement in Different Forms of Teaching. *International Journal of Instruction*, *11*(3), 219–232. https://doi.org/10.12973/iji.2018.11316a

Dou, A. (2024). Empowering Tomorrow's Professionals: The Fusion of Industry and Education in English for Specific Purposes (ESP). *Academic Journal of Humanities & Social Sciences*, *7*(5). https://doi.org/10.25236/AJHSS.2024.070537

Eslamian, M. (2024). Learning Styles and Teaching Preferences of Medical Students: Insights for Effective Medical Education. *Medical Education Bulletin*, *5*(2).

Fleming, N., & Baume, D. (2006). Learning Styles Again: VARKing up the right tree! *Educational Developments*, *7*(4).

Gao, J., Mohd Ridhuan Mohd Jamil, Mohd Muslim Md Zalli, Abdu Muqsith Ahmad, Wang, C., & Wang, H. (2025). Multimodal Teaching Strategies and Effectiveness in Vocational Colleges' Fashion Programs. *Journal of Modern Educational Theory and Practice*, *1*(3). https://doi.org/10.70767/jmetp.v1i3.463

Goyibova, N., Muslimov, N., Sabirova, G., Kadirova, N., & Samatova, B. (2025). Differentiation approach in education: Tailoring instruction for diverse learner needs. *MethodsX*, *14*, 103163. https://doi.org/10.1016/j.mex.2025.103163

Guile, D. (2019). The concept of "recontextualization": implications for professional, vocational and workplace learning. *Learning, Culture and Social Interaction*, *23*, 100343. https://doi.org/10.1016/j.lcsi.2019.100343

Harapan, M. A. M., Masriyah, M., & Suharyati, H. (2024). Improving Learning Outcomes of Kinesthetic Learners through a Differentiated Learning Approach. *International Journal of Sustainable Development & Future Society*, *2*(2), 70–75. https://doi.org/10.62157/ijsdfs.v2i2.74

Horwitz, E. K. (2020). *Becoming a Language Teacher: A Practical Guide to Second Language Learning and Teaching*. Castledown Publishers.

Hyland, K., & Jiang, F. (Kevin). (2021). Delivering relevance: The emergence of ESP as a discipline. *English for Specific Purposes*, *64*, 13–25. https://doi.org/10.1016/j.esp.2021.06.002

Jena, R. K. (2018). Predicting students' learning style using learning analytics: a case study of business management students from India. *Behaviour & Information Technology*, *37*(10–11), 978–992. https://doi.org/10.1080/0144929X.2018.1482369

Kayalar, F., & Kayalar, F. (2017). The effects of Auditory Learning Strategy on Learning Skills of Language Learners (Students' Views). *IOSR Journal Of Humanities And Social Science*, *22*(10), 4–10.

Komari, R. N., Aryanti, T., & Sudjani, S. (2019). Skill and Performance Assessment Using Problem Based Learning in TVET. *Proceedings of the 5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018)*. https://doi.org/10.2991/ictvet-18.2019.117

Kumaravadivelu, B. (2012). *Language Teacher Education for a Global Society*. Routledge. https://doi.org/10.4324/9780203832530

Li, J., Han, S., & Fu, S. (2019). Exploring the relationship between students' learning styles and learning outcome in engineering laboratory education. *Journal of Further and Higher Education*, *43*(8), 1064–1078. https://doi.org/10.1080/0309877X.2018.1449818

Lisewski, B. (2021). How tutor-practitioners conceptualised and enacted their practice-based knowing in a Higher Education Fashion School: a Teaching and Learning Regime approach. *Journal of Further and Higher Education*, *45*(6), 730–743. https://doi.org/10.1080/0309877X.2020.1812550

Lucas, B., Spencer, E., & Claxton, G. (2012). *How to teach vocational education: A theory of vocational pedagogy*. Centre for Real-World Learning, University of Winchester.

Mao, F., & Zhou, J. (2024). A needs analysis of ESP courses in colleges of art and design: Consensus and divergence. *PLOS ONE*, *19*(6), e0305210. https://doi.org/10.1371/journal.pone.0305210

Mohd Noor, S. N. A., & Amri Ramly, M. K. (2023). Bridging Learning Styles and Student Preferences in Construction Technology Education: VARK Model Analysis. *International Journal of Academic Research in Progressive Education and Development*, *12*(3). https://doi.org/10.6007/IJARPED/v12-i3/19313

Nasiri, E., & Khojasteh, L. (2024). Evaluating panel discussions in ESP classes: an exploration of international medical students' and ESP instructors' perspectives through qualitative research. *BMC Medical Education*, *24*(1), 925. https://doi.org/10.1186/s12909-024-05911-3

Pawlak, M. (2021). Investigating language learning strategies: Prospects, pitfalls and challenges. *Language Teaching Research*, *25*(5), 817–835. https://doi.org/10.1177/1362168819876156

Poole, A., & Li, X. (2023). Beyond a one-size-fits-all approach: considering English language teachers' differential capacities for engaging in and implementing professional learning

in China. *Professional Development in Education*, 1–13. https://doi.org/10.1080/19415257.2023.2189284

Qiu, H., Saiki, D., & Adomaitis, A. D. (2018). Learning styles of students enrolled in fashion classes: academic level, geographic region, and academic focus. *International Journal of Fashion Design, Technology and Education*, *11*(3), 277–286. https://doi.org/10.1080/17543266.2018.1429497

Rogowsky, B. A., Calhoun, B. M., & Tallal, P. (2015). Matching learning style to instructional method: Effects on comprehension. *Journal of Educational Psychology*, *107*(1), 64–78. https://doi.org/10.1037/a0037478

Rohi, M. P., & Nurhayati, L. (2024). Multimodal Learning Strategies in Secondary EFL Education: Insights from Teachers. *Voices of English Language Education Society*, *8*(2). https://doi.org/10.29408/veles.v8i2.26546

Sakti, N. S. S., Sarkiah, S., Sukma, S., Amaluddin, A., & Efendi, R. (2024). Redefining ESP: Bridging the Gap Between Traditional Methods and Modern Educational Needs. *KLASIKAL : Journal of Education, Language Teaching And Science*, *6*(3), 806–813. https://doi.org/10.52208/klasikal.v6i3.1164

Shi, D. (2023). *The Effects of Task Repetition on Learners' Processing of Multimodal L2 Input and Acquisition of Technical Vocabulary: A Mixed-Methods Study*. University College London.

Sukying, A., Supunya, N., & Phusawisot, P. (2023). ESP Teachers: Insights, Challenges and Needs in the EFL Context. *Theory and Practice in Language Studies*, *13*(2), 396–406. https://doi.org/10.17507/tpls.1302.14

Suntsova, M., & Fakhretdinova, G. (2020). Strategies for Teaching Industry-Specific English and German Terminology to Engineering Students. *2020 IEEE Global Engineering Education Conference (EDUCON)*, 525–529. https://doi.org/10.1109/EDUCON45650.2020.9125190

Suwastini, N. K. A., Rinawati, N. K. A., Jayantini, I. G. A. S. R., & Dantes, G. R. (2021). Differentiated Instruction For EFL Classroom. *TELL-US Journal*, *7*(1), 14–41. https://doi.org/10.22202/tus.2021.v7i1.4719