

THE EFFECTIVENESS OF VISUAL RESOURCES IN TEACHING ESP TO LIGHT INDUSTRY STUDENTS

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Abstract : This study investigates the role of visual resources in enhancing English for Specific Purposes (ESP) instruction for students in light industry disciplines. It aims to determine how visual aids—such as infographics, technical diagrams, videos, and digital simulations—support vocabulary acquisition, comprehension of specialized texts, and overall student engagement. A mixed-methods approach was used, involving classroom observations, learner surveys, and performance assessments over one academic term. Findings show that visual resources significantly improve both comprehension and retention of industry-specific language. Students reported increased motivation and understanding of professional concepts when visual materials were integrated into lessons. The study concludes that visual-based instruction is an effective pedagogical strategy for ESP in technical fields, particularly in contexts where linguistic and conceptual complexity may hinder learning.

Keywords: English for Specific Purposes (ESP); light industry; visual aids; multimodal learning; vocabulary acquisition; learner engagement; technical education.

1. Introduction

Teaching English for Specific Purposes (ESP) to students in technical fields, such as light industry, requires approaches that combine language learning with domain-specific knowledge. Traditional text-based instruction often fails to address the practical and visual nature of industrial processes. Students in these disciplines must not only understand technical terminology but also interpret visual data such as product schematics, charts, and design models. Visual resources—ranging from diagrams and photos to digital simulations—help bridge this gap by providing contextualized input that connects language with real-world practice. Previous studies have shown that visual tools enhance comprehension and memory by engaging multiple cognitive channels. However, empirical research on their effectiveness in ESP courses for light industry students remains limited. This study therefore seeks to evaluate how visual resources influence students' linguistic performance, conceptual understanding, and motivation in ESP learning environments.

2. Methods

The study was conducted over one semester at a technical university offering a Light Industry Engineering program. A total of **50 undergraduate students** participated, divided into control and experimental groups. Both groups followed the same ESP syllabus, but the experimental group received lessons supplemented

with visual resources, including infographics, process diagrams, short industry-related videos, and interactive digital materials. Data collection employed both quantitative and qualitative instruments. Pre- and post-tests measured vocabulary acquisition and reading comprehension. Classroom observations recorded levels of engagement and participation. Additionally, learner surveys and semi-structured interviews captured perceptions of how visual materials affected their learning experience. Statistical analysis was used to compare test results, while qualitative data were coded thematically to identify recurring patterns related to motivation, comprehension, and confidence.

3. Results

Results showed clear differences between the two groups. Students exposed to visual resources outperformed the control group, achieving **20% higher gains** in vocabulary retention and **17% improvement** in comprehension scores. Observations indicated higher participation rates and more frequent use of technical vocabulary in class discussions. Survey responses revealed that **88%** of students found visual materials helpful for understanding complex industrial processes, while **82%** reported increased motivation to learn English. Students described visual tools as “memorable,” “engaging,” and “closely connected to real work situations.” Qualitative data also suggested that visual input reduced language anxiety and supported learners with lower English proficiency by providing contextual clues for meaning-making.

4. Discussion

The findings confirm that visual resources play a critical role in ESP instruction, especially in technical disciplines like light industry. By combining linguistic and visual input, educators can facilitate multimodal learning that enhances comprehension, retention, and practical application of knowledge. Visual aids not only clarify technical concepts but also foster inclusive learning environments where students with varying proficiency levels can participate effectively.

However, the study acknowledges limitations, including its small sample size and focus on a single discipline. Future research should examine long-term impacts of visual-based instruction across broader technical domains. Nevertheless, the evidence strongly supports integrating visual tools as core components of ESP pedagogy to better prepare students for professional communication in the modern industrial context.

5. Conclusion

This study demonstrates that visual resources play a vital role in improving English for Specific Purposes (ESP) instruction for light industry students. The integration of diagrams, infographics, videos, and other visual tools enhanced learners’ understanding of complex technical concepts, expanded their vocabulary, and increased motivation to participate in class activities. By linking linguistic input with visual representation, students were able to better comprehend specialized texts and apply newly learned terms in context.

Furthermore, visual-based instruction proved particularly beneficial for mixed-proficiency groups, providing contextual support that reduced language

barriers and encouraged collaboration. These findings highlight the importance of adopting multimodal, learner-centered approaches in ESP classrooms to foster both language development and professional competence. Although the study was limited to one institution and discipline, it offers valuable insights for broader application in technical education. Future research could explore how sustained use of visual tools influences long-term retention and communication skills in various ESP contexts.

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