

Needs Analysis of English for Specific Purposes (Esp) for Aviation Staff

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Abstract: This study aims to analyse the English language learning needs of aviation staff within the framework of English for Specific Purposes (ESP). A descriptive qualitative approach with an exploratory design was employed. Data were collected through interviews, questionnaires, and observations. The analysis was guided by the concepts of target needs (necessities, lacks, and wants) and learning needs. The findings reveal that the primary needs of aviation staff are related to functional and situational oral communication skills. Major gaps were identified in technical vocabulary mastery, comprehension of various international accents, and confidence in spontaneous communication. These findings indicate that ESP course design should emphasize authentic contexts, workplace simulations, and the enhancement of communicative competence.

Keywords: English for Specific Purposes (ESP), needs analysis, aviation communication, communicative competence

I. Introduction

The global aviation industry relies on precise, timely communication to maintain safety and efficiency. English functions not only as a lingua franca among international flight crews, air traffic controllers, ground personnel, and regulators, but also as a safety-critical instrument whose failure can have severe consequences. Misunderstandings, ambiguous phrasing, or insufficient language competence have been implicated in a number of aviation incidents and near-misses, underscoring the need for high standards of English proficiency among aviation personnel. Consequently, aviation-related English training must address more than general proficiency: it must develop accuracy, fluency, and clarity of meaning in operational contexts.

The English for Specific Purposes (ESP) approach argues that effective language instruction is contingent on tailoring content to learners' real-world needs (Hutchinson & Waters, 1987). Within ESP, needs analysis is central: it provides the empirical basis for curriculum design and helps prioritize the linguistic features, communicative tasks, and contextual knowledge learners must master. Dudley-Evans and St. John (1998) further elaborate that ESP should draw on both target situation analysis — the communicative demands and genres of the workplace — and learning situation analysis — the learners' characteristics, constraints, and available resources. Applying these principles to aviation suggests that a robust needs analysis must extend beyond lists of vocabulary or phraseology to capture how language is used in operational discourse, how meaning is negotiated under time pressure, and how contextual factors such as technology, organizational procedures, and cross-cultural interaction shape communication.

Despite existing research on aviation English, many needs analyses remain narrowly focused on phraseology (e.g., standardized radiotelephony) or on broad proficiency measures, leaving gaps in our understanding of the fuller linguistic and communicative demands faced by diverse aviation roles. To design relevant curricula that improve operational safety and effectiveness, educators and training designers require a richer, multidimensional picture of language needs that integrates linguistic features (vocabulary, grammar, pronunciation), pragmatic competence (speech acts, politeness strategies, explicitness), interactional skills (turn-taking, repair, confirmation), and contextual factors (workflows, equipment interfaces, cultural norms).

This study aims to provide a comprehensive analysis of aviation English needs by integrating linguistic, communicative, and contextual dimensions. Building on ESP theory and prior work in aviation communication, the research will conduct a combined target and learning situation analysis across selected aviation staff groups to identify real-world communicative tasks, language functions, performance criteria, and training constraints. The findings will inform recommendations for curriculum design and assessment that align with operational safety priorities and adult learning principles. By situating language requirements within authentic operational contexts, the study seeks to bridge the gap between standardized phraseology and broader communicative competencies essential for safe, effective aviation practice.

II. Research Method

This study employed a descriptive qualitative approach (Creswell, 2009). The data were analyzed thematically to identify patterns of language needs within authentic workplace contexts. Data validity was strengthened through methodological triangulation involving interviews, observations, and questionnaires.

III. Results and Discussion

3.1.1 Critical Interpretation of Necessities

The findings indicate that aviation staff require English not merely as a foreign language but as an operational tool that directly affects service quality and flight safety. This suggests that language competence in aviation should be viewed as a professional competency rather than a general educational outcome.

From the perspective of workplace communication theory, communication failures in aviation environments often stem not from grammatical inaccuracies but from misunderstandings of meaning under pressure. Therefore, communicative effectiveness becomes more important than linguistic perfection. This supports the view that ESP instruction should prioritize functional communication skills over traditional grammar-oriented approaches.

Furthermore, the aviation sector represents a unique context in which communication occurs under time constraints, high responsibility, and multicultural interaction. Consequently, language training programs must prepare learners for real-time decision-making and information exchange.

3.1.2 Analysis of Communicative Competence Gaps

The identified deficiencies reveal that aviation staff face multidimensional communication challenges. Limited technical vocabulary affects the precision of information exchange, while pronunciation issues may reduce intelligibility during critical interactions.

More importantly, sociolinguistic and strategic deficiencies indicate that communication problems extend beyond language form to language use. In multicultural aviation settings, speakers must adapt their communication style according to passengers' linguistic and cultural backgrounds.

The inability to employ communication repair strategies, such as clarification requests, confirmation checks, and paraphrasing, may increase the risk of misunderstandings. This finding highlights the importance of integrating strategic competence training into ESP curricula.

From Canale and Swain's (1980) framework, the data suggest that grammatical competence alone is insufficient for aviation professionals. Effective communication requires the simultaneous development of grammatical, sociolinguistic, discourse, and strategic competence.

3.1.3 Learners' Wants and Adult Learning Theory

The strong preference for simulation-based learning can be interpreted through the lens of Adult Learning Theory (Knowles, 1984). Adult learners generally prefer learning experiences that are directly relevant to their professional responsibilities and immediate workplace needs.

The aviation staff participating in this study demonstrated a clear tendency toward experiential learning rather than theoretical instruction. Their preference for scenario-based activities reflects the practical nature of their profession, where communication skills must be applied instantly in authentic situations.

Therefore, ESP programs for aviation personnel should incorporate experiential learning principles, allowing learners to practice communication in realistic and problem-solving contexts.

3.2.1 Authenticity and Transfer of Learning

The importance of authentic learning materials can be explained through the concept of transfer of learning. When instructional content closely resembles real workplace situations, learners are more likely to transfer acquired skills to actual job performance.

Authentic materials expose learners to natural language variations, diverse accents, and realistic communicative challenges. As aviation personnel frequently interact with speakers from different linguistic backgrounds, exposure to accent diversity is particularly important.

This finding suggests that ESP materials should be developed from authentic aviation discourse, including cabin announcements, passenger interactions, emergency procedures, and operational briefings.

3.2.2 The Role of Simulation in ESP Learning

Simulation-based instruction emerged as a central learning need because it bridges the gap between classroom learning and workplace performance.

According to experiential learning theory (Kolb, 1984), knowledge is most effectively acquired when learners engage in concrete experiences followed by reflection and application. Aviation simulations provide opportunities for learners to practice communication under realistic conditions while developing confidence and automaticity.

The effectiveness of simulation training is particularly relevant in aviation because communication frequently occurs under stressful conditions where rapid responses are required. Therefore, simulation activities should not be viewed as supplementary exercises but as core components of ESP instruction.

3.3 Broader Pedagogical Implications

The findings have several implications for curriculum developers and ESP practitioners.

First, curriculum design should shift from language-centered instruction toward competency-based instruction. Learning outcomes should be aligned with workplace communication tasks rather than solely linguistic objectives.

Second, assessment practices should move beyond written examinations and incorporate authentic performance tasks such as role plays, simulations, and scenario-based evaluations. Such assessments are more likely to capture learners' actual communicative abilities.

Third, intercultural communication competence should be integrated into the curriculum. Aviation personnel interact with passengers from diverse cultural backgrounds, making cultural awareness an essential component of effective communication.

Finally, continuous professional development programs should be established to ensure that aviation staff maintain and update their English communication skills in response to changing industry demands.

IV. Conclusion

The needs analysis demonstrates that the English language competence required by aviation staff is multifaceted, encompassing linguistic, communicative, and strategic dimensions. The primary need lies in the ability to communicate effectively in professional and high-risk situations.

Therefore, ESP course design should prioritize authenticity, simulation-based learning, and real workplace needs in order to enhance aviation staff's communicative readiness and professional performance.

The findings suggest that the English language needs of aviation staff extend beyond linguistic proficiency and encompass communicative, strategic, and intercultural competencies. Effective communication in aviation requires the ability to convey information accurately, respond appropriately to diverse communicative situations, and manage interactional challenges in real time.

The study highlights the necessity of designing ESP programs that reflect authentic workplace demands through simulation-based learning, task-oriented instruction, and performance-based assessment. By aligning language instruction with professional communication practices, ESP curricula can contribute significantly to improving operational efficiency, service quality, and safety standards within the aviation industry.

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