

ESP FOR CADETS IN A BANI WORKPLACE: LANGUAGE TRAINING AS A TOOL FOR DIGITAL RESILIENCE

Alina Gabriela NEGOESCU, Gabriela MIHĂILĂ-LICĂ

“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania

negoescu.alina@armyacademy.ro, mihaila.gabriela@armyacademy.ro

Abstract: *As the current workplace is often characterized by the expression BANI — brittle, anxious, non-linear and incomprehensible — there is a growing emphasis nowadays on cognitive and communicative demands for professionals, including cadets from military academies. Even though the military and academic training have integrated digital competencies, less attention is given to the linguistic capacities required to function effectively in a digital and information era. This article focuses on the idea that English for Specific Purposes (ESP) can help cadets achieve not only communicative objectives but can also serve as a strategic tool for building digital resilience. Drawing on research on multilingual thinking, attention and reading behaviours, translation, perspective-taking, linguistic complexity, and the detection of misinformation, the article presents language training as a mechanism that enhances attention control, information analysis, working memory and critical assessment of digital content. Furthermore, the paper proposes a framework that connects ESP with the cognitive skills necessary for navigating complex digital systems, interpreting ambiguous information, and resisting misinformation. The purpose of this framework is to highlight ESP relevance for preparing cadets to operate in a BANI workplace.*

Keywords: ESP, BANI, digital resilience, cognitive skills

1. Introduction

Nowadays cadets and military personnel operate in high-stakes, complex and rapidly changing settings, in which the BANI framework applies. By emphasizing fragility, emotional intensity, nonlinearity of effects, and epistemic opacity in modern crises, Jamais Cascio's BANI phrasing (Brittle, Anxious, Nonlinear, Incomprehensible) offers a vocabulary that enhances and occasionally replaces the conventional VUCA lens (Volatile, Uncertain, Complex, Ambiguous). In fact, this change is meant to better describe settings with fast decision cycles and high stakes, such as military, police, and cadet training contexts, where the cost of misinterpretations or delayed response is existential or life changing. The literature often highlights that BANI demands various

combinations of competences, particularly mindfulness, resilience, adaptation, and transparent communication [1].

The BANI framework is composed of the four elements that are defined as brittle, describing a system that is fragile and fails under stress; anxious, emphasizing concern and stress in response to unpredictable threats; nonlinear, describing disproportionately large outcomes caused by small triggers, and incomprehensible, unforeseen or unpredictable events. Thus, the BANI concept is used in settings that deal with fast and unconventional disruptions, and it describes a phenomenon but also a reaction model. In the face of brittle systems, growing anxiety, nonlinear dynamics, and incomprehensibility, authors treat BANI as a framework for organizing leadership knowledge, training needs, and

organizational design. Several sources clearly place BANI as a modern evolution beyond VUCA. Additionally, several studies highlight BANI as a more behaviourally and cognitively demanding setting than VUCA alone, emphasizing the clear connection to sensemaking and continual adaptation in real-time. The BANI concept is particularly appropriate in military environments, where failure to anticipate, adapt or communicate can be fatal. The literature mentions that BANI helps shaping training and leadership development focusing on a set of cross-domain competencies, such as thinking outside the box, creativity, innovation, intuition, flexibility, resilience and mindful awareness [2].

Due to BANI's emphasis on sensemaking, rapid and transparent communication, and efficient intercultural and interorganizational language use, ESP (English for Specific Purposes) can be a vehicle to support the BANI core competencies of resilience, attentiveness, adaptation and transparency by improving cadets' ability to read, interpret and respond to fast-paced and information-rich situations in English (the lingua franca of many international defence and security organizations) [3].

2. Methodology

Our article employs a theoretical, qualitative approach based on the authors' combined pedagogical experience as well as on their professional observations as professors of military students at the "Nicolae Bălcescu" Land Forces Academy of Sibiu, Romania. Going beyond the experiential collection of data, the research analyzes, in a reflective manner, some of the most frequent language-learning practices, the interactions that occur during the English classes, and the cognitive challenges as well as the communicative ones that cadets are confronted with in an educational and

professional environment that is now digitally mediated. The paper draws on a review of relevant specialized literature in multiple fields of study: digital literacy, English for Specific Purposes (ESP), multilingual cognition, translation processes, learning behaviors, detecting misinformation, critical thinking. By means of a conceptual synthesis, the two authors develop a theoretical framework that explains the manner in which English for Specific Purposes, in our case Military English, can contribute to increasing the digital resilience of the LFA cadets in a BANI workplace. The theoretical framework that is advanced aims at offering a reflective and practice-based perspective on the way in which English language education can enhance the ability of students to process increasingly complex information, to face uncertainty, and to tackle digital challenges in a critical manner.

3. ESP as a foundational element of digital resilience in the BANI era

Beyond teaching grammar, ESP may educate cadets how to read and react to dynamic information channels in English and other lingua francae with the same speed and accuracy needed in crisis operations or on the battlefield.

Digital literacy and cross-domain coordination are emphasized as being essential to contemporary disruption. Cadets will communicate with command structures, cyber-physical systems, and multinational partners—all of which depend on standardized, transparent information sharing. According to research, performance in BANI workplaces is mutually reinforced by organizational culture, tool proficiency, and quick adaptation. This highlights the necessity for language courses that specifically develop these skills in practice. To put it briefly, language serves as a

channel for both communication and the development of the coordinating and cognitive processes that support digital resilience [4, 5].

Psychological stressors such as burnout, fatigue, and cognitive overload are commonly observed in high-pressure BANI work environments – including military, healthcare, social services, and education – where information flows rapidly and responsibility levels are high. Studies show that organizational support, effective coping strategies, and clear communication can reduce stress and sustain performance in these demanding contexts. English for Specific Purposes (ESP) supports these efforts by reducing ambiguity in key interactions and standardizing how critical information is produced and understood in English, thereby helping maintain effectiveness under stress [6].

Digital environments are characterized by technical challenges like fast-paced information exchange, complex data handling, and multilingual communication. Research on digital leadership, and technology-driven resilience highlights the importance of language skills that enable quick decision-making, effective cross-cultural teamwork, and secure information sharing across dispersed teams. In this context, English for Specific Purposes (ESP) equips cadets with targeted vocabulary, appropriate communication styles, and information literacy strategies essential for dependable interactions – both with people and automated systems – strengthening overall digital resilience beyond simple language accuracy.

Research on e-learning in crisis situations highlights the importance of psychosocial and cognitive factors – like self-efficacy during emergencies and social capital – in supporting effective digital learning under pressure. ESP programs can incorporate these elements by using scenario-based language training that develop confidence, teamwork in solving problems, and responsible use of information within digital environments [7].

4. Practical implications of ESP for digital resilience

Educators should shift focus from grammar alone to language use in crisis contexts. ESP programs should include discourse related to crises, such as quick briefings, succinct reporting, and cross-disciplinary negotiations in English, while clearly addressing how such communication aids understanding in BANI conditions.

In addition, language instruction must be strengthened with digital literacy and systems thinking. Teaching English should include cyber-awareness, responsible information handling, and the ability to coordinate across domains, ensuring learners can function effectively in interconnected environments where accurate data and timely responses are essential.

In order to build digital resilience, English classes should integrate wellbeing and fatigue reduction strategies. Since technology-mediated work has been linked to increased fatigue and burnout, ESP programs should include approaches that lessen cognitive strain, encourage balanced communication patterns, and foster emotional security during critical interactions. This integration supports wider objectives related to health and effectiveness in digital work settings.

English classes should be based on a flexible, research-supported framework. Although there is ongoing discussion about whether BANI replaces or complements VUCA, the key implication for ESP design is adaptability: curricula should help learners make sense of complex situations and build resilience in multilingual, multi-stakeholder environments, while remaining responsive to changing views on disruption.

Contextual factors are significant. Successful English classes aimed at digital resilience work best when connected to leadership training, systems thinking, wellbeing initiatives, organizational culture, and proficiency with digital tools. Research indicates these factors influence how effectively language instruction contributes

to resilient performance under pressure.

5. How language training builds digital resilience

In the table below, we present certain mechanisms that link language training to digital resilience, based on recent studies and our own educational practice. For cadets working in digital-dominant, high-disruption settings, this framework connects specific language practices to underlying

cognitive functions and measurable outcomes in digital resilience. The table integrates findings from research on multilingual cognition, attention and reading processes, translation, perspective-taking, linguistic complexity, and the identification of misinformation. Each entry pairs a language-based activity with a cognitive mechanism and a corresponding digital resilience outcome that can be targeted in instructional design.

Table 1 Language practices mapped to cognitive mechanisms and digital resilience outcomes

Language practice	Cognitive mechanism activated	Digital resilience outcome	Example activity
Vocabulary precision and conceptual clarity	Precision in meaning; cross-linguistic semantic alignment; development of discipline-specific glossaries	Improved sensemaking speed and accuracy; higher information integrity; stronger cross-domain coordination under pressure	- Develop subject-specific glossaries in English that include clear semantic connections and definitions across languages. - Create concept maps linking terminology from different fields, such as military, cybersecurity, and health. - Apply structured terminology exercises focused on identifying equivalent terms across languages.
Multilingual perspective taking as part of vocabulary work	Perspective shifting across languages; translanguaging practices enable cross-cultural interpretation	Enhanced cross-domain sensemaking and ethical, contextually appropriate communication; better mis/disinformation discernment in multilingual contexts	- Integrate translanguaging strategies in crisis briefing contexts, emphasizing the ability to switch perspectives when conveying information from various speakers. - Design translation-based perspective-taking activities that involve clearly expressing multiple viewpoints in English.
Syntax and logical structuring	Parsing capacity; information chunking; pattern recognition using grammatical frameworks	Clearer, more logically structured messages that reduce misinterpretation; lower cognitive load during rapid briefing	- Train with full-length briefing texts in English (from problem statement to evidence to conclusion), emphasizing clear transitional phrases. - Practice building tightly connected, cause-and-effect sentence structures appropriate for high-pressure decision-making summaries. - Conduct coherence reviews across languages (native language to English) to maintain logical consistency and clarity

Intensive reading and sustained attention	Breaking down complex information into manageable units; distributing attention effectively across multilingual materials; identifying patterns within complex texts	Faster, more reliable extraction of relevant information from distractions; better sustained attention in high-information tasks; improved detection of misleading cues	- Timed reading exercises on multi-source crisis briefs; tasks requiring rapid extraction of key points and time markers. - Critical reading tasks identifying qualifiers, modal expressions, and assertions of source credibility in diverse languages.
Writing and structured reasoning	Writing as a tool for organized thinking; building arguments across languages; clear and transparent communication	Enhanced documentation, reasoning that can be followed and verified, and the ability to apply knowledge across different fields; better exchange of information even in high-pressure situations	- Standardized reporting formats in English that require clearly outlined reasoning, identification of limitations, and citation of sources. - Exercises focused on summarizing content and reconstructing arguments across different languages. - Writing tasks involving translation, with deliberate attention to intended audience and ethical implications.
Listening and working memory	Listening in real time while managing cognitive demands; grouping spoken information into meaningful segments; quickly refreshing working memory	Improved ability to understand speech as it happens; reduced cognitive overload in digital settings; more accurate and prompt decisions	- Practice real-time listening exercises with note-taking and rapid reconstruction of spoken content in English. - Listening tasks in multiple languages combined with data from various domains (such as cybersecurity, communications, and operations). - Debriefings afterward to assess recall of critical information and required actions.

The five mechanisms – parsing ability, pattern recognition, information chunking, perspective shifting, and semantic precision – are integrated into the language practices described above as functional tools.

- a) Parsing ability involves extracting syntactic structure from language input, either through full or shallow parsing. In English for Specific Purposes (ESP) settings, this is frequently combined with chunk-based processing and pattern analysis to manage effectively domain-specific texts [8].
- b) Pattern recognition refers to identifying recurring linguistic features – such as lexical, morphological, or discourse-level patterns – to deduce meaning or structure,

particularly when full parsing is impractical. ESP research highlights the importance of corpus-based approaches to uncovering these domain-relevant patterns [9].

- c) Information chunking entails using meaningful linguistic units – like basic noun phrases or multiword expressions – as foundational elements in processing. These chunks often serve as building blocks that support or supplement full parsing, enhancing the reliability of interpretation across specialized texts [10].
- d) Perspective shifting involves managing discourse-level perspective and coherence across texts, enabling readers

or systems to adjust interpretation as discourse unfolds in ESP domains (e.g., genre, rhetoric, and intercultural discourse [11].

- e) Semantic precision concerns the accuracy of meaning representation, including correct identification of named entities and semantic roles. In ESP, this is best achieved by integrating parsing with semantic labelling and vocabulary tailored to specific domains [12].

Engaging in translanguaging practices develops cross-cultural understanding, which in turn facilitates coordination across domains and responsible information exchange in global, digital settings [13]. Translanguaging refers to the use of a speaker's full linguistic repertoire across languages to make sense of and convey meaning in multilingual environments, without being restricted by conventional language boundaries. This dynamic approach to language use enhances understanding and communication in varied contexts [14, 15].

Detecting misinformation becomes more effective when language instruction focuses on exact meaning, verification across languages, and considering alternative viewpoints. Recent studies in text-based misinformation analysis highlight how the way language is processed shapes the ways people identify, interpret, and respond to false information in multilingual environments [16].

Precise vocabulary and clear concepts contribute to semantic consistency across languages, supporting accurate translation and effective reasoning across domains, especially under pressure. This is reinforced by research on integrated multilingual systems [17].

The ability to adopt a multilingual perspective is essential for understanding across cultures and addressing information imbalances in diverse operational environments, as demonstrated in studies on translanguaging and networked multilingual models [18].

Well-structured syntax and logical organization enhance parsing and chunking efficiency, enabling faster production of clear, sequential briefings – such as crisis or decision summaries – that can be reliably translated across languages [19].

Deep reading and sustained focus rely on chunking and pattern recognition to reduce cognitive load, a tendency observed in studies on multilingual reading and learning strategies based on information grouping. Writing and structured reasoning transform internal cognitive processes into clear, traceable outputs in high-pressure situations. Cross-linguistic coherence and ethical communication are supported by findings in translation and cross-language writing research [20].

Active listening and working memory, supported by real-time processing and memory techniques, help minimize cognitive overload and speed up responses in fast-paced, information-rich digital settings [21, 22].

Although most sources support the view that language functions as a cognitive tool for resilience, the strength of its impact depends on factors such as linguistic distance, proficiency level, context, and task demands. Therefore, ESP programs should be adaptable and tailored to specific tasks.

6. Conclusions

BANI environments demand rapid sensemaking, resilience, cross-domain coordination, and transparent communication under information overload and emotional strain. ESP for cadets, therefore, should be considered as an integrated program that connects linguistic proficiency with psychosocial resilience, systems thinking, and digital literacies to support robust, ethical, and effective performance in military environment.

Digital resilience has become a central concern for cadets operating in modern, information-rich, multinational, and cognitively demanding settings. ESP offers cadets a path to digital resilience, as English

competences are required for effective job performance in multinational and digital information environments (especially reading and domain-specific language). By integrating ESP with resilience training, cadets can develop the linguistic and psychological resources needed to navigate digital information landscapes, cope with high-stress contexts, and function more effectively in future professional roles. ESP for military cadets directly supports operating in brittle, anxious, nonlinear, and uncertain (BANI) environments by integrating five mechanisms: parsing ability, pattern recognition, information chunking, perspective shifting, and semantic precision. ESP materials emphasize domain-specific vocabulary and authentic, task-based texts, enabling cadets to parse technical instructions and orders under ambiguity. Pattern recognition – through recurring

protocols and multiword expressions – facilitates rapid, intercultural communication in multinational operations. Information chunking reduces cognitive load by organizing content into manageable units and staged practice (presentation–practice–production) suitable for high-stress contexts. Perspective shifting – combining listening/reading with speaking/writing – develops transferable skills for real-world, time-pressured communication in uncertain settings. Semantic precision centres meaning through professional terminology and functional language crucial for interoperability and accurate interpretation in military tasks. To conclude, ESP-centred training enhances cadet readiness for interoperable, agile, and resilient performance in a BANI security environment.

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