

Implementing 21st Century Skills in EFL Classrooms: ENS Teachers' Attitudes Toward Pedagogical Practices of the 4C Skills

تفعيل مهارات القرن الحادي والعشرين في فصول اللغة الإنجليزية لغةً أجنبية: مواقف أساتذة المدرسة العليا للأساتذة تجاه الممارسات البيداغوجية للمهارات الأربع (Cs4)

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Article abstract:

This study investigates EFL teachers' attitudes toward implementing 21st-century skills, specifically the "4Cs" at the École Normale Supérieure (ENS) of Constantine, Algeria. Employing an exploratory research design, the study utilizes semi-structured interviews conducted with nine instructors. The findings reveal a high level of awareness and generally positive perceptions of the 4Cs framework; however, while communication and critical thinking are frequently integrated into classroom practices, collaboration and creativity receive relatively less emphasis. Despite acknowledging the importance of these competencies, participants identified several systemic challenges. The study underscores the necessity of adopting more structured and explicit pedagogical approaches to effectively integrate 21st-century skills into EFL instruction.

Key words : EFL instruction; 21st-Century Skills ;The 4Cs Framework ;Teacher perceptions; Pedagogical practices.

ملخص المقال :

تستقصي هذه الدراسة مواقف أساتذة اللغة الإنجليزية لغةً أجنبية تجاه تطبيق مهارات القرن الحادي والعشرين—وتحديداً "المهارات الأربع" (Cs4) بالمدرسة العليا للأساتذة بقسنطينة، الجزائر. وبتطبيق تصميم بحثي استكشافي، استندت الدراسة إلى مقابلات شبه موجهة أجريت مع تسعة أساتذة. كشفت النتائج عن مستوى عالٍ من الوعي وتصورات إيجابية عامة تجاه إطار المهارات الأربع؛ ومع ذلك، وبينما برزت مهارتا التواصل والتفكير النقدي كأكثر المهارات دمجاً في الممارسات الصفية، حظي التعاون والإبداع بتركيز أقل نسبياً. ورغم الإقرار بأهمية هذه الكفاءات، أشار المشاركون إلى جملة من التحديات النسيجية. وتؤكد الدراسة على ضرورة اعتماد مقاربات بيداغوجية أكثر تنظيماً ووضوحاً لدمج مهارات القرن الحادي والعشرين بفعالية في تدريس اللغة الإنجليزية.

كلمات مفتاحية: تدريس اللغة الإنجليزية لغةً أجنبية؛ مهارات القرن الحادي والعشرين؛ إطار المهارات؛ مواقف الأساتذة؛ الممارسات البيداغوجية.



Introduction

Contemporary education is undergoing a profound transformation in response to digitalization, globalization, and the emergence of novel professional domains. As Higho (2016) observes, today's classrooms, learners, and pedagogical approaches bear little resemblance to those of two decades ago. Many occupations that existed in 2012 have disappeared, while numerous future careers remain undefined, underscoring the need to equip students with adaptable competencies rather than static knowledge (Higho, 2016). Preparing learners for the 21st century extends beyond technological literacy to encompass transferable skills essential for thriving in a dynamic global economy (Saavedra & Opfer, 2012). To this end, the Partnership for 21st Century Learning (P21) framework emphasizes that success in the modern world requires an integrated mastery of content knowledge and practical abilities, structured into three primary domains: learning and innovation skills (specifically the "4Cs": critical thinking, communication, collaboration, and creativity); information, media, and technology skills; and life and career skills such as flexibility and initiative.

In the realm of language education, this shift manifests as a move from rote memorization to a dynamic, multimodal environment that prioritizes the 4Cs. However, the tension between innovative pedagogy and exam-driven accountability remains a significant concern for many educators. While the goal is for students to navigate complex digital spaces, traditional standardized tests often fail to capture higher-order skills, creating a "bottleneck" in curriculum reform. Research by Ağaoğlu and Demir (2020) highlights several critical barriers to moving beyond traditional, lecture-based teaching. In many EFL settings, the transition to 21st-century pedagogy is hindered by instructors lacking the practical pedagogical knowledge needed to integrate the 4Cs into daily lessons. Furthermore, limited access to digital tools and a curricular emphasis on rote memorization over higher order thinking often prevent the implementation of student-centered practices. Consequently, while 4C frameworks and "Education 4.0" are highly popular in theory, the literature remains fragmented between theoretical advocacy and actual classroom implementation.

Addressing this gap, the present study investigates ENS Constantine EFL teachers' perceptions and practices regarding 4C skill integration in higher education. Specifically, it examines teachers' conceptual understanding of the 4Cs, their perceived significance for language learning, current implementation strategies, and the challenges they encounter. To guide this inquiry, the research addresses the following questions:

1. What are ENS Constantine EFL teachers' attitudes toward pedagogical practices involving the 4C skills?
2. What is the extent of their background knowledge regarding the 4C framework?
3. To what degree do these teachers integrate 4C skills into their instructional practices?
4. What are the primary challenges encountered during the implementation of these skills?

This research contributes to the field in three vital ways. First, it provides a nuanced situational analysis of 4C skills integration within Algeria's teacher education system—a context underrepresented in global literature—offering transferable insights for similar higher education institutions in the Global South. Second, by identifying multi-layered barriers—whether curricular, attitudinal, or systemic—the study furnishes a roadmap for targeted interventions to support effective implementation. Third, the detailed documentation of teachers' practical strategies and activity designs serves as a valuable resource for EFL practitioners seeking concrete approaches to embed 21st-century competencies within language instruction.

1. Literature Review

1.1 Theoretical Framework: The 4C Skills in Language Learning:

The 4Cs, critical thinking, creativity, collaboration, and communication, are central to 21st-century skills frameworks (P21, 2009; OECD, 2018). In EFL contexts, these interrelated competencies shift the focus from linguistic accuracy to holistic meaning-making. Critical thinking supports higher-order text analysis; creativity enables generative language use beyond formulaic structures; collaboration facilitates the co-construction of knowledge through peer negotiation; and communication encompasses multimodal expression. Together, they align with Second Language Acquisition (SLA) principles of communicative competence and scaffolding, positioning language as a tool for cognitive and social development.

1.2 The 4C Integration in EFL Contexts: Empirical Evidence:

A growing body of literature regarding 4C integration in EFL contexts reveals a complex relationship between teacher cognition and classroom practice. Studies indicate that while teachers generally value the 4Cs, there is significant variance in their preparedness to implement them effectively (Tran, 2021; Şahin & Han, 2020). Despite positive attitudes toward 21st-century skills, actual pedagogical integration remains inconsistent, with creativity and collaboration often marginalized in favor of traditional instruction (Fajriah & Septiyanti, 2021).

Furthermore, a distinction exists between pre-service and in-service teacher development. Pre-service teachers often receive formal training in 4C methodologies, whereas in-service teachers frequently rely on experience and self-directed learning. This discrepancy highlights critical gaps in continuous professional development and suggests that initial teacher education may not sufficiently sustain long-term pedagogical change (Bedir, 2019).

1.3 Systemic Barriers to 4C Integration:

The enactment of 4C pedagogy is frequently constrained by multi-layered systemic obstacles. Teachers report limited flexibility to incorporate 4C-focused activities due to rigid content demands and crowded curricula (Seliem et al., 2019). Compounding this issue is the predominantly exam-oriented nature of evaluation systems, which creates a “washback effect” that discourages skill-based pedagogical practices in favor of rote memorization. Additionally, the feasibility of implementing the 4Cs is influenced by learner variables, including motivation and proficiency levels, as well as culturally shaped expectations regarding the teacher's role. These structural and cultural factors collectively limit teacher agency, making the transition to a 4C-oriented classroom challenging even for willing practitioners.

1.4 Research Gap:

While prior studies have examined teacher attitudes toward the 4Cs (Tran, 2021) or focused on pre-service preparation (Bedir, 2019), few have investigated how in-service EFL teachers navigate the tension between rigid curriculum mandates and 4C pedagogy in non-Western contexts. Specifically, there is a paucity of research regarding the strategies teachers employ to reconcile these competing demands within the Algerian higher education context. This study addresses this gap by exploring the 4C integration processes within Algeria's École Normale Supérieure (ENS) teacher-training ecosystem, offering insights into how institutional constraints shape pedagogical innovation in EFL.

2. Methodology

2.1 Research Design:

This study adopts a qualitative case study design to explore the perceptions and experiences of EFL instructors regarding the "4Cs" framework. Following Yin's (2018) approach, this design allows for an in-depth investigation of a contemporary phenomenon—the teaching of 21st-century skills—within its real-life institutional context. The "Case" is defined as a nested unit of analysis focusing on instructors to capture their specific pedagogical perspectives within the university setting. This methodology is particularly suitable here, as the boundaries between the phenomenon (pedagogical practice) and the context (the teacher-training environment) are deeply intertwined.

2.2 Research Context:

The study was conducted at the École Normale Supérieure (ENS) of Constantine, Algeria's premier teacher-training institution. As an elite center for academic excellence, the ENS represents a critical site for pedagogical innovation. The findings are intended to be transferable to similar higher education contexts where curriculum mandates and institutional pressures shape the implementation of modern educational frameworks.

2.3 Participants:

A total of nine EFL instructors were selected via purposive sampling to ensure a diverse range of teaching experience and pedagogical expertise (Creswell, 2013). Participants were categorized based on years of service to capture varying levels of professional socialization. The demographic profile of the participants is presented in Table 1.

Table 1. Participant Demographic Profile

Experience Level	Definition	Male	Female
Novice	1-2 years	1	2
Experienced	3-10 years	0	3
Senior	10+ years	1	2
Total		2	7

2.4 Data Analysis, Trustworthiness, and Ethical Considerations:

The qualitative data were analyzed using Reflexive Thematic Analysis (RTA), following the recursive six-phase framework established by Braun and Clarke (2019). This iterative process involved moving from verbatim transcription and initial coding to the development and refinement of themes that capture the essence of instructors' attitudes toward the 4Cs. While manual analysis is a common practice among Algerian EFL researchers, with recent studies indicating that 85.7% have not yet integrated specialized CAQDAS software into their workflow (Bouguebs & Djouima, 2025), this study acknowledges that such processes require high levels of precision. Therefore, the analysis was conducted with a heightened focus on the "coding" phase, which is recognized by 44% of local researchers as the most cognitively demanding aspect of the research process (Bouguebs & Djouima, 2025).

To ensure the study's trustworthiness, several rigorous strategies were employed to establish credibility and dependability: the interview guide was validated through a focus group and peer review, while an external audit of the coding process was conducted to mitigate researcher bias. Furthermore, the provision of a "thick description" of the ENS Constantine context facilitates the transferability of these findings to similar teacher-training environments. Ethical integrity was maintained throughout the research process, with the study receiving formal approval from the Scientific Committee of the Department of English. All participants provided informed, voluntary consent. To guarantee confidentiality, personal identifiers were removed, and participants were assigned alphanumeric codes (e.g., Teacher 1) during the analysis. All audio recordings and transcripts were stored securely and utilized exclusively for scientific purposes.

3. Findings

This section presents the qualitative findings derived from semi-structured interviews with nine EFL instructors at the École Normale Supérieure of Constantine. Analysis using reflexive thematic analysis (Braun & Clarke, 2019) generated four main themes related to instructors' understanding, practices, and challenges in integrating the 4C skills.

3.1 Conceptual Understanding and Perceived Significance of the 4Cs:

Instructors demonstrated a generally strong theoretical grasp of the 4Cs framework, though their pathways to this knowledge varied. While six participants reported prior familiarity with the framework, the depth of understanding correlated more strongly with teaching experience than with formal pre-service training. As one proficient instructor articulated, the framework represents a pedagogical paradigm shift:

"Shifting education from teaching 'what' to 'how' to think cultivates a critical spirit, transforming students into active, creative, and culturally aware participants, rather than passive recipients." (Instructor 6, Experienced)

This sentiment was echoed across experience levels, with instructors defining critical thinking as the ability to "analyze or challenge ideas, even if they disagree with them" and creativity as "producing original work... rather than relying solely on pre-existing, 'ready-made' information." Notably, instructors framed the 4Cs not merely as pedagogical tools but as essential meta-competencies for navigating contemporary complexity. One experienced instructor captured this perspective:

"Since we can't hand students a roadmap for a landscape that hasn't been mapped yet, the 'curriculum' becomes the development of transferable meta-skills... It turns education from a one-time delivery system into a lifelong toolkit for resilience and adaptation." (Instructor 6, Experienced)

The perceived significance of the 4Cs clustered into two interrelated domains: contributions to holistic learner development and contributions to specific language acquisition (see Table 2). Instructors consistently identified the 4Cs as "essential life skills" that foster intercultural competence, peer learning, and long-term retention. Simultaneously, they linked these skills to tangible language outcomes, particularly writing proficiency. As one novice instructor explained:

"Teaching academic essay writing is fundamentally an exercise in cultivating critical thinking. Beyond mechanics, developing body paragraphs requires analyzing evidence, structuring arguments, and organizing thoughts logically." (Instructor 2, Novice).

Table 2. Perceived Benefits of 4C Integration

Benefit Domain	Specific Contributions	Frequency of Mention
Holistic Learner Development	Life skills for future readiness; Enhanced engagement & motivation; Intercultural competence; Peer learning	9/9
Language Skill Development	Writing proficiency (most cited); Speaking fluency; Grammar through inductive discovery; Vocabulary acquisition	8/9
Cognitive-Affective Outcomes	Deeper retention; Intellectual autonomy; Reduced reliance on rote memorization	7/9

3.2 Theme 2: Instructional Practices and Differential Skill Prioritization:

While all instructors reported integrating at least some 4C skills, their practices revealed a clear hierarchy of prioritization. Communication and Critical Thinking were consistently identified as the most frequently addressed skills, given their direct alignment with core EFL objectives. As one novice instructor stated:

"I adopt communication as the foundational skill that unlocks the other '4Cs'... By prioritizing 'manners' (social-emotional intelligence) and 'language' (literacy and expression), I create a

democratic classroom where students actively construct meaning through dialogue." (Instructor 1, Novice)

In contrast, Collaboration and Creativity were less consistently integrated, often constrained by contextual factors. Instructors described these skills as requiring more pedagogical risk and classroom time than rigid curricula typically allow. One experienced instructor reflected on this tension:

"Students prefer the safety of 'correct answers' over the risk of original thinking. Breaking that barrier often requires shifting the focus from the final product to the creative process itself." (Instructor 6, Experienced)

Despite these constraints, instructors employed a range of strategies to foster 4C development, including problem-posing discussions, authentic materials, and digital tools. Importantly, several instructors emphasized dynamic balancing rather than equal coverage in every lesson. As one experienced instructor noted:

"I am balancing soft skills based on the specific assessment type. I emphasize Communication and Critical Thinking, while dialing back on Collaboration since the work is solo." (Instructor 5, Experienced)

This adaptive approach suggests that instructors view the 4Cs as an integrated ecosystem to be cultivated over time, rather than a checklist to be completed in each session.

3.3 Theme 3: Systemic and Learner-Related Barriers to Implementation:

Instructors identified a constellation of barriers that impede consistent 4C integration, which can be categorized as systemic-institutional and learner-related.

3.3.1 Systemic-Institutional Constraints:

The most frequently cited obstacle was the tension between curriculum mandates and pedagogical innovation. Instructors described a "coverage vs. depth" dilemma, where time-pressured, content-heavy syllabi marginalize skill-based activities. One proficient instructor captured this constraint vividly:

"I am caught in a classic 'coverage vs. depth' trap. When a curriculum prioritizes finishing pages over developing skills, the 4Cs often get squeezed out by the sheer volume of grammar and vocabulary." (Instructor 9, Proficient)

This structural pressure was compounded by exam-oriented assessment systems, which instructors felt incentivized rote learning over higher-order thinking.

3.3.2 Learner-Related Challenges:

The second major barrier concerned learner readiness. Instructors reported that student demotivation, anxiety, and linguistic limitations frequently hindered 4C-oriented tasks. One novice instructor observed:

"It is incredibly frustrating to deal with 'moody' disengagement... This behavior is often a form of communication rather than just defiance—it may signal that they feel overwhelmed, fear failing in front of peers, or lack the specific social skills needed for group work." (Instructor 1, Novice)

Particularly in EFL contexts, instructors noted a disconnect between students' cognitive maturity and their linguistic proficiency: "While a student might have the intellectual maturity to analyze complex issues in Arabic, they lack the 'tools' to express those thoughts in English" (Instructor 6, Experienced). This gap necessitates careful scaffolding that many instructors felt underprepared to provide.

3.4 Theme 4: Recommendations for Enhanced Integration:

In response to these challenges, instructors proposed multi-level recommendations focused on curricular redesign and targeted professional development.

Instructors advocated for curricula that embed the 4Cs through project-based learning and authentic tasks, rather than treating them as add-ons. One novice instructor emphasized:

"When you stop treating the curriculum like a script and start treating it like a resource, the classroom dynamic completely transforms. It moves the needle from 'we finished Chapter 5' to 'the students can now analyze a primary source.'" (Instructor 2, Novice)

Several instructors specifically recommended reinstating dedicated courses, such as Critical Reading, to provide structured spaces for skill development.



As for Professional Development importance, in-service training was highlighted as crucial, but instructors stressed the need for practical, modeling-based workshops rather than theoretical lectures. One experienced instructor noted:

“Professional development through conferences and events is a critical component of growth... These gatherings provide a unique, high-leverage environment to gain new skills, witness industry trends firsthand, and meet like-minded peers.” (Instructor 6, Experienced)

Mentorship structures were also suggested to support novice teachers in bridging the theory-practice gap.

3.5 Summary of Key Findings:

The findings reveal a landscape of informed aspiration constrained by contextual reality. Instructors at the ENS possess a robust conceptual understanding of the 4Cs and recognize their profound significance for both language learning and holistic development. However, their instructional practices are mediated by a complex interplay of curricular rigidity, assessment pressures, and learner variables. While Communication and Critical Thinking are routinely integrated, Collaboration and Creativity remain more aspirational, requiring additional structural support. The recommendations emerging from instructors themselves point toward systemic solutions, curricular flexibility and practice-oriented training, as essential enablers for meaningful 4C integration in Algerian EFL teacher education.

4. Discussion

By triangulating instructor perceptions, instructional practices, and institutional constraints, the discussion elucidates the complex dynamics surrounding the integration of the 4C skills (Critical Thinking, Creativity, Collaboration, and Communication) at the École Normale Supérieure (ENS) of Constantine.

4.1. Teacher Attitudes and Knowledge Base:

The study reveals a generally positive attitude among instructors toward the 4Cs, coupled with a self-reported high level of knowledge regarding their integration. This finding contrasts with prior studies such as Saleh (2019), and Zhang et al. (2020), which often identify significant gaps in teacher knowledge. The discrepancy observed in this context may be attributed to robust institutional support mechanisms. Unlike contexts where teachers rely solely on external professional development, ENS instructors benefit from internal initiatives, including regular institutional conferences and semesterly newsletters focused on 21st-century skills. This aligns with literature suggesting that school-level initiatives significantly enhance teacher readiness for 21st-century pedagogies.

However, a qualitative shift was observed in how instructors conceptualize these skills. Rather than adhering to rigid definitions, participants offered contextualized explanations, demonstrating an applied understanding of how the 4Cs manifest in classroom settings. For instance, Critical Thinking was framed not merely as problem-solving but as the capacity for informed judgment; Creativity was viewed as innovation and openness to diverse viewpoints; Communication was extended to intercultural competence; and Collaboration was recognized as a vehicle for peer scaffolding.

Despite this conceptual fluency, the study identified a significant gap in pre-service preparation. Consistent with Bedir (2019), almost none of the instructors received explicit instruction on the 4Cs during their Bachelor's or Master's programs. Many reported feelings unprepared to teach creativity, often perceiving it as an innate trait rather than a teachable skill. This suggests a "generational curriculum lag," where instructors have bridged the gap through self-directed professional development and adaptive practice rather than formal teacher education.

4.2. Perceived Significance of the 4Cs:

Instructors' perceptions of the 4Cs align closely with established literature regarding their dual role in holistic development and language acquisition.

4.2.1 Life Skills and Global Competence: Instructors viewed the 4Cs as essential "life skills" that extend beyond linguistic proficiency. This perspective resonates with Tran (2021), who highlights the

necessity of nurturing responsible global citizens capable of operating in knowledge-based economies. Furthermore, the emphasis on problem-solving and critical thinking as workplace competencies mirrors findings by Ratminingsih et al., (2021), underscoring the role of EFL in preparing students for future employability. These findings corroborate studies by Bedir (2019), Şahin & Han (2020), and Eker Uka & Bedir (2023), which emphasize the centrality of these skills in modern English language teaching.

4.2.2 Motivation and Engagement: The findings indicate that 4C-integrated pedagogy transforms students from passive recipients into active participants. This supports Stefaniak and Tracey (2015), whose work demonstrates that learner-centered activities lead to higher motivation. Additionally, the preference for collaborative work over independent tasks to boost internal motivation is bolstered by Gillies (2016), whose synthesis of cooperative learning research confirms that structured social interaction enhances intrinsic motivation through positive interdependence and shared goal orientation, a dynamic particularly salient in EFL contexts where peer support mitigates linguistic anxiety.

4.2.3 Contributions to Language Learning: Instructors reported that the 4C framework improves linguistic proficiency by providing meaningful contexts for learning. Specifically:

- **Writing:** Critical and creative thinking facilitate better argumentation and organization in academic essays.
- **Grammar:** Critical thinking enables inductive learning, where students analyze patterns rather than memorizing rules.
- **Speaking:** Collaboration necessitates active idea exchange, naturally boosting oral proficiency.

This holistic improvement suggests that language skills are best developed when embedded within higher-order cognitive tasks.

4.3. Instructional Practices and Prioritization:

Regarding actual classroom implementation, instructors generally integrate all four skills over the course of a semester, though prioritization varies. Communication was identified as the most frequently integrated skill, echoing findings by Fajriah and Septiyanti (2021) and Boonsuk and Ambele (2021), who posit communication as foundational for language learners in EFL contexts. Conversely, Collaboration was often the least integrated, attributed to student apathy and classroom dynamics—a pattern also observed by Fajriah and Septiyanti (2021), who report that collaborative tasks in EFL contexts frequently encounter barriers related to learner engagement and perceived instructional complexity.

Despite these disparities, most instructors managed to balance the skills dynamically, adjusting focus based on assessment types and lesson objectives. This aligns with Ratama et al. (2021), who note that teachers often employ adaptive integration techniques to navigate contextual constraints. The data suggests that while Communication and Critical Thinking are routine, Collaboration and Creativity require more deliberate pedagogical effort.

4.4. Challenges to Integration:

The study identified multi-layered obstacles hindering consistent 4C integration, categorized into systemic and learner-related barriers.

Systemic Constraints: The obligation to follow strict, content-heavy curricula forces teachers to prioritize coverage over depth. This "teach-to-the-test" environment leaves insufficient time for the open-ended inquiry required by Critical Thinking and Creativity. This finding aligns with Alismail and McGuire (2015), who identify curriculum constraints and exam-oriented approaches as significant barriers to the effective integration of 21st-century skills in educational practice.

Learner-Related Barriers: A significant challenge lies in learner motivation and attitudes. Instructors reported that student resistance to active learning, hesitation to participate, and preference for individual work disrupt collaborative tasks. Mixed-ability classes further complicate implementation, as varying proficiency levels make equitable engagement difficult. Additionally, insufficient technological infrastructure was noted as a hindrance to digital collaboration tools. These factors collectively suggest that successful 4C integration requires not only teacher willingness but also learner readiness and institutional resources.

5. Implications and Recommendations

Based on the study's findings, this section synthesizes practical implications and actionable recommendations for three key stakeholder groups: classroom practitioners, teacher education programs, and policy makers. By aligning theoretical insights with concrete strategies, the aim is to facilitate meaningful integration of the 4C skills within Algerian EFL contexts.

5.1. For Classroom Practitioners: Pedagogical Adaptation and Resource Innovation

The findings indicate that while instructors possess strong conceptual knowledge of the 4Cs, their instructional practices are often mediated by curricular constraints and learner variables. This suggests a need for pedagogical approaches that maximize skill integration within existing structural limits.

Adopt Experiential Learning Models: Instructors should incorporate Project-Based Learning (PBL) and task-based activities that inherently require collaboration, communication, and critical analysis. Tasks should be designed to move beyond recall, prompting students to evaluate evidence, synthesize perspectives, and produce original outputs (e.g., debates, digital portfolios, community-based projects).

Diversify Instructional Materials: Reliance on standard textbooks should be supplemented with authentic, linguistically diverse materials, such as news media, literary excerpts, and multimodal texts, that invite interrogation and debate. This not only fosters creativity but also models real-world language use.

Shift Pedagogical Role: Teachers should act as facilitators who scaffold higher order thinking rather than sole providers of knowledge. This involves modeling metacognitive strategies (e.g., think-aloud protocols for critical reading) and creating “safe-to-fail” environments where creative risk-taking is encouraged.

Introduce Specialized Skill-Building Sessions: Where curriculum allows, instructors can advocate for or design modular sessions such as Critical Reading workshops that explicitly target 4C sub-skills (summarizing, inferencing, evaluating bias) within language instruction.

5.2. For Teacher Education Programs: Bridging the Pre-Service/In-Service Gap

The study reveals a significant gap in pre-service teacher preparation regarding the 4Cs, with instructors relying on in-service training and self-directed learning to develop relevant competencies. This underscores the need for structured, practice-oriented professional development that bridges theoretical knowledge and classroom application.

Redesign Pre-Service Curricula: Bachelor's and Master's programs in English Language Teaching should embed explicit modules on 21st-century skills pedagogy, focusing on methodical strategies for teaching creativity and collaboration—skills often perceived as innate rather than teachable (Bedir, 2019).

Enhance In-Service Training: Continuous professional development (CPD) should move beyond theoretical workshops to include modeling sessions, peer observation, and micro-teaching opportunities where instructors practice facilitating 4C-integrated lessons. Training should be contextualized to address local challenges, such as large classes or limited resources.

Foster Reflective Practice and Mentorship: Instructors should be encouraged to use feedback from students and peers to refine their methods. Formal mentorship programs pairing novice and proficient teachers can facilitate knowledge transfer regarding adaptive 4C integration strategies.

Promote Engagement with Professional Networks: Instructors should be supported in attending conferences, seminars, and communities of practice focused on 21st-century skills, as these platforms provide exposure to innovative practices and research-informed strategies (Tran, 2021; Eker Uka & Bedir, 2023).

5.3. For Policy Makers: Systemic Alignment and Institutional Support

Systemic barriers, particularly rigid curricula and exam-oriented assessment were identified as primary obstacles to 4C integration. This implies that sustainable change requires top-down reforms that align curriculum, assessment, and support structures with 21st-century learning goals.

Integrate 4Cs into Core Curriculum: Policy makers should ensure that the 4C skills are explicitly embedded in national and institutional curriculum documents, with clear learning outcomes that prioritize skill development alongside linguistic competence. Objectives should drive structure, not vice versa.



Reform Assessment Practices: High-stakes examinations and classroom assessments should be redesigned to include performance-based tasks (e.g., collaborative projects, oral presentations, critical essays) that measure critical thinking, creativity, and collaboration—not just grammatical accuracy. This reduces the “washback effect” that currently incentivizes rote learning.

Strengthen Institutional Support Mechanisms: Universities and teacher-training institutions should formalize and sustain support structures such as regular conferences, pedagogical newsletters, and resource banks focused on 4C integration. The ENS administration, for instance, could expand its existing initiatives to ensure equitable access for all staff.

Invest in Infrastructure and Conditions: Policy should address practical enablers of 4C pedagogy, including reducing class sizes to facilitate interaction, providing reliable technological infrastructure for digital collaboration, and allocating time within teaching loads for lesson planning and professional collaboration.

By implementing these implications and recommendations in concert, stakeholders can move toward a more coherent ecosystem where the 4C skills are not peripheral additions but central, actionable components of English language teacher education and practice.

Conclusion:

This study investigated the experiences and perceptions of English language instructors regarding the instructional practices of the 4C skills at the ENS of Constantine. The findings indicate that instructors possess adequate knowledge of the 4C skills, largely acquired through in-service training and institutional support, despite a lack of specific training during their pre-service B.A. and M.A. education.

Instructors perceive the 4Cs as significant for learner development, recognizing them as essential life skills that contribute to language learning experiences, particularly in writing, speaking, and grammar. While they manage to integrate all four skills throughout the semester, Communication and Critical Thinking are prioritized more frequently than Collaboration and Creativity. Instructors utilize authentic themes and web tools as convenient methods to reinforce these skills. However, significant challenges persist, including the obligation to follow a predetermined curriculum, lack of learner motivation, resistant learner attitudes, and varying levels of student proficiency. To ensure further integration, instructors recommend adjustments in the curriculum and enhanced in-service training focused on these target skills. Ultimately, the study underscores that while teacher agency is high, systemic alignment is required to fully realize the potential of 21st-century skills in the Algerian EFL context.



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