

## **EMPOWERING ENGLISH LANGUAGE TEACHERS THROUGH AN ONLINE DEVELOPMENT PROGRAM: BNCC and digital culture**

### **CAPACITANDO PROFESSORES DE LÍNGUA INGLESA POR MEIO DE FORMAÇÃO CONTINUADA ON-LINE: BNCC e cultura digital**

### **EMPODERAR A LOS PROFESORES DE INGLÉS A TRAVÉS DEL DESARROLLO DOCENTE EN LÍNEA: BNCC y la cultura digital**

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**Abstract:** Given the changes in the new national curricular guidelines based on the Brazilian National Common Core (BNCC) (Brasil, 2018), and the need for continued training for the digital competence of basic education teachers, this research examines the formative guidelines focused on digital culture competence. With preliminary studies completed, the project develops and offers an online extension program for the in-service professional development of English language teachers in the state basic education network of Pará, with a focus on digital culture. This paper presents the syllabus designed for the teacher education module aligned with the BNCC and DIGCOMPEDU Framework. As part of the theoretical and methodological foundation of the development program, the BNCC was used in conjunction with the guidelines in the European Framework for Digital Competence for Educators (Lucas; Moreira, 2017), and authors such as Redecker (2017). A methodological framework for the proposed program was provided by Filatro's instructional design guidelines (2008, 2023), which outline five phases of the program, namely: (I) analysis; (II) design; (III) development; (IV) implementation, and (V) evaluation. Notable outcomes of this research include: an innovative proposal for English teachers' professional development; a product with high replicability in other areas of knowledge; a formative syllabus mapping BNCC to DigCompEdu; and the promotion of digital culture in public schools.

**Keywords:** Digital Competence; Digital Culture; BNCC; Language teacher development; Syllabus design.

**Resumo:** Diante das mudanças nas novas diretrizes curriculares nacionais a partir da Base Nacional Comum Curricular (BNCC), e da necessidade de formação continuada para a competência digital de professores da Educação Básica, esta pesquisa teve por objetivo discutir as diretrizes formativas relacionadas à cultura digital, e a partir de estudos preliminares, planejar e ofertar um curso de extensão on-line para a formação continuada de professores de língua inglesa da rede básica de ensino, com foco na cultura digital, tendo como documento oficial a BNCC. Este artigo apresenta a trilha formativa elaborada

para a formação continuada em linha com a BNCC e com o *Framework* DIGCOMPEDU. O embasamento teórico-metodológico do curso teve como documento norteador a BNCC, articulada ao teor da Base Nacional (Brasil, 2018), do Quadro Comum Europeu de Competências Digitais para Educadores (Lucas; Moreira, 2017) e ao aporte de autores como Redecker (2017). Para a estruturação da trilha formativa proposta, nos apoiamos metodologicamente nas diretrizes do *design* instrucional de Filatro (2008, 2023), que propõe cinco fases de execução: (i) Análise; (ii) *Design*; (iii) Desenvolvimento; (iv) Implementação; e (v) Avaliação. Dentre os resultados desta pesquisa, se destacam a materialização de: uma proposta inédita do curso/programa de formação continuada para professores de língua inglesa do Estado do Pará com foco na cultura digital; produto com potencial de replicabilidade para outras áreas do conhecimento; criação de uma trilha formativa que propõe o mapeamento da cultura digital da BNCC com as áreas de progressão do DigCompEdu; e promoção da cultura digital em escolas públicas da educação básica.

**Palavras-chave:** Competência Digital; Cultura Digital; BNCC; Formação de Professores; Trilha Formativa.

**Resumen:** Ante cambios en delineaciones curriculares basadas en la BNCC, esta investigación busca discutir la formación para la competencia digital de docentes de Educación Básica. El objetivo es planificar y ofrecer un curso en línea para profesores de inglés en la red básica, con enfoque en cultura digital, utilizando la BNCC como guía oficial. Se presenta un itinerario preparado para el curso alineado con la BNCC y el Marco DIGCOMPEDU. La base teórico-metodológica tiene como documento rector la BNCC, articulada con lo recomendado en la Base Nacional (2018), en el Marco Común Europeo de Competencias Digitales para Educadores (Lucas; Moreira, 2017) y autores como Redecker (2017). Para estructurar el curso, nos basamos en los lineamientos de Filatro instruccional diseño (2008, 2023), que orientan cinco fases: (i) Análisis; (ii) Diseño; (iii) Desarrollo; (iv) Implementación; y (v) Evaluación. Resultados destacados incluyen: desarrollo de un curso para profesores de inglés en el Estado de Pará sobre cultura digital; producto replicable en otras áreas; creación de un itinerario que mapea la cultura digital de la BNCC con DigCompEdu; y promoción de la cultura digital en contextos escolares públicos de educación básica.

**Palavras clave:** Competencia Digital; Cultura Digital; BNCC; Formación de Profesores; Ruta Formativa.

## INTRODUCTION

Several changes are unfolding in Brazil's educational system in the contemporary context, the most significant being the New High School Reform and the implementation of the Brazilian National Common Core (BNCC) (Brasil, 2018). The BNCC serves as a guideline for curriculum development, focusing on a competence-based education model.

This framework outlines the skills and abilities students must develop throughout their schooling, with the primary objective of fostering student autonomy and agency.

One pivotal competence outlined in the BNCC and emphasized throughout the document is digital competence (DICT), considered an essential skill. Consequently, teachers are tasked with the responsibility for fostering digital literacy among their students.

This objective, however, faces several challenges as the communities we serve, especially in Brazilian public schools, usually have very limited resources and lack reliable internet connectivity. Additionally, many educators have not received adequate professional development to enhance their own digital competence. This research, therefore, undertakes a systematic investigation of the following questions: How can the target language be taught effectively using digital tools within public school settings? How can DICTs be rendered more accessible to educators? What is the most effective strategy for educators to learn how to use DICTs within Brazilian public-school environments? Which teacher education models are most conducive to the educators' own digital competence?

The teacher development program we propose was designed to address or to mitigate an existing gap in English language teachers' education within the public system. It fosters reflections on the promotion of digital culture (Brasil, 2018), in English language classrooms with supportive technological apparatus or resource-constrained environments. The initiative aims to enrich English language pedagogy, as well as to validate strategies to promote active student participation through digital competence.

Therefore, it is essential to discuss the concept and importance of digital competence for Brazilian English language teachers, exploring key principles such as information literacy, communication, creation, selection, reflective teaching, and ethical learning through strategies that develop the student's competence. The ultimate goal is to empower students to engage critically and responsibly with the digital world. Upon completion of this in-service program, teachers will be equipped to design lesson plans and projects incorporating technology to enhance students' learning in alignment with the BNCC.

## THE BRAZILIAN NATIONAL COMMON CORE (BNCC) AND THE DIGITAL CULTURE

The Brazilian National Common Core advocates for the production of a competence-based curriculum, defining competence as "the mobilization of knowledge (concepts and procedures), skills (practical, cognitive, and socioemotional), attitudes, and values to solve complex demands of everyday life, the full exercise of citizenship and the world of work" (Brasil, 2018, p. 8). This definition implies that the curriculum should not be comprised only of isolated content to be memorized, disconnected from local and regional requirements of each teaching context. Rather, it must encompass skills and knowledge essential for effective learning, enabling learners to mobilize these resources in their personal, social, and professional lives.

Broadly speaking, the BNCC frames competence as acquisition and integration of knowledge, skills, attitudes, and values to foster the holistic education of students and prepare them for life. The BNCC emphasizes the need to cultivate **knowledge**, understanding its relevance for their lives; **skills**, by enabling the practical application of such knowledge in daily life; **attitudes** by fostering the disposition to utilize these resources as required; and **values**, ensuring that such competencies are exercised consciously, ethically, and constructively.

By defining competences, BNCC (Brasil, 2018, p. 8) recognizes that "education must affirm values and stimulate actions that contribute to the transformation of society, making it more humane and socially just". This objective aligns with the United Nations (UN) 2030 Agenda, which seeks to ensure inclusive, equitable, and quality education, and promote lifelong learning opportunities for all. To this end, the BNCC outlines ten general competences for basic education (see Figure 1). These competences underpin a holistic educational approach, aiming to ensure students' development across intellectual, physical, emotional, social, and cultural dimensions.

**Figure 1-** Brazilian National Common Core Ten General Competences



Source: Base Nacional Comum Curricular (Brasil, 2018, p. 9-10) - Our translation.

Basic education should ensure that students engage in meaningful and contextualized learning experiences. In this regard, the BNCC’s ten general competences “intend to ensure, as a result of their learning and development process, holistic human development aimed at building a just, democratic and inclusive society”. (Brasil, 2018, p. 25).

Among the ten overall competences presented, the fifth competency, Digital Culture, stands out due to its recurrence throughout the document. Digital culture is also integrated into other competences, underscoring its significance within Brazilian school curricula. In this regard, the document emphasizes that "work proposals that allow students access to knowledge about the digital world and practices of digital culture should also be prioritized" (Brasil, 2018, p. 478). Competency 5 is related to the need to:

**Understand, use and create** digital information and communication technologies in a critical, meaningful, reflective and ethical way in the various social practices (including school) to communicate, access and disseminate information, produce knowledge, solve problems and exercise agency and authorship in personal and collective life. (Brasil, 2018, p. 9 - our emphasis).

The first three verbs delineate the developmental process of this competence, indicating the skills and abilities that students are expected to acquire regarding DICT integration into their teacher education. However, a conceptual ambiguity arises in how educators understand these precepts as the document outlines pedagogical pathways for teachers to put into practice the skills necessary to understand, to use, and to create educational technologies.

In this regard, BNCC recognizes the importance of technology, stipulating that students should attain proficiency and deep understanding of the digital domain by making qualified and ethical use of available tools. Additionally, students are expected to understand computational thinking and the impacts of technology on the lives of people and society (Fernandes, 2009). Technology is reshaping the way people learn, teach, and think. In this sense, the integration of technology to one or more of these general competencies requires that educators reflect on their practices across the knowledge areas, as well as on the overarching structures of the BNCC (Souza, 2020).

Digital competence involves more than the mere use of technological resources; rather, it gains significance from what is critically constructed through the reflective use of DICTs. We understand that developing such competence requires comprehensive in-service programs that equip teachers to become digitally proficient and, subsequently, foster the skills and abilities mandated by the BNCC in their students. Therefore, as explained by Schorn, Silva, and Behar (2022, p. 55), “BNCC aims to build a curriculum based on inclusive practices, in which the student’s body of knowledge and ‘know-how’ are respected in its entirety”.

The implementation of BNCC within Brazilian curricula presents a challenge for many educators nationwide. This is particularly evident regarding the implementation of competency 5, digital culture, and DICTs. In recommending that students master these competencies, it is imperative to acknowledge local specifics, such as the precarious technological infrastructure in most Brazilian public schools, no Internet connectivity, lack of computers and other tools, and the persistent resistance among some faculty members toward integrating DICTs into their pedagogical practice.

That said, teacher education ought to be grounded in a praxis that enables educators to develop knowledge through critical reflection of their immediate classroom context, specific target audience, and prior learning experiences, particularly as “the current generation of children and young people is composed of people increasingly connected to digital technologies” (Mafra; Munhóz, 2017, p. 550). Consequently, it is essential for teachers to adapt these technologies reflexively and critically to meet the needs of each pedagogical context.

Considering the aforementioned reflections, it is imperative to emphasize that digital culture permeates the English language component of the Brazilian National Common Core. This stems from the pivotal role digital technologies play in contemporary communication and social interaction.

The integration of digital culture within the BNCC guidelines aims to prepare students with the literacies required to face the complexities of a globalized digital environment. Furthermore, it is essential to ensure that both educators and learners are able to employ these digital technologies in multifaceted linguistic and communicative practices, ethically and consciously in the digital era.

## **DIGITAL COMPETENCE THROUGH THE LENSES OF DIGICOMPEDU FRAMEWORK**

The European Framework for the Digital Competence of Educators (DIGCOMPEDU, 2017) emphasizes that a digital society requires digitally competent citizens. This necessity implies the proficient and secure use of technologies for various purposes, including professional engagement, career development, lifelong learning, and access to health information (Carretero; Vuorikari; Punie, 2017).

Within the educational field, the document framework was designed to foster the development of educators’ digital competencies and to boost innovation in education (Redecker, 2018). According to Ghomi and Redecker (2019), this competence is defined as a multifaceted set of pedagogical knowledge, abilities, and skills in information and

communication technologies that enable professionals to solve pedagogical problems effectively.

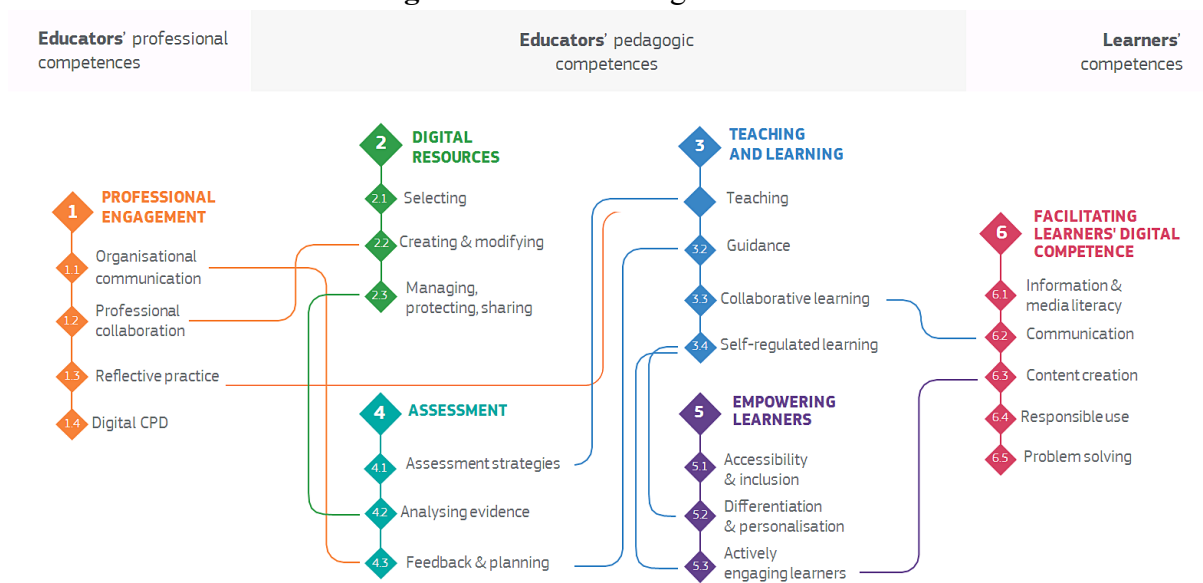
The Framework encompasses six proficiency levels. Newcomers (A1) typically maintain little contact with technology, requiring external guidance and encouragement when it comes to technology use. Explorers (A2) have initiated to use technology, but they necessitate further vision and inspiration to expand their digital repertoire. Integrators (B1) employ technology across various contexts while seeking a deeper understanding of available tools. Experts (B2) use technology with confidence, creativity, and criticality. Leaders (C1) have mastered comprehensive approaches that ensure consistent and comprehensive use, serving as a benchmark for peers. Pioneers (C2) critically challenge the pedagogical practices of using technology and launch the innovation process within educational environments (Punie; Redecker, 2017).

The teacher's levels of digital proficiency constitute an important tool for identifying their capacity to integrate technology into pedagogical practices. The leveling test, provided by the European Commission's Joint Research Center (JRC) in collaboration with MetaRed (Iberoamerican Network of Higher Education Institutions of the Universia Foundation), is a freely accessible online instrument designed to evaluate educators' digital competencies, identify their digital skill level, and the areas they need improvement (Metared, 2023). The instrument comprises 22 items aligned with the six competence areas of the DigCompEdu framework. Upon completion, teachers receive an automated report detailing their proficiency level of competence in each domain and recommendations for improvement (Metared, 2023).

Although originally conceived as a European standardized assessment, Metared (2023) has worked to culturally adapt the test to reflect the Brazilian educational context, thereby enhancing its relevance and applicability. Assessing teachers' levels of digital proficiency enables the identification of areas requiring further development and intervention.

We represent Punie and Redecker's framework of educator's professional competences in Figure 2.

**Figure 2- Areas of Progression**



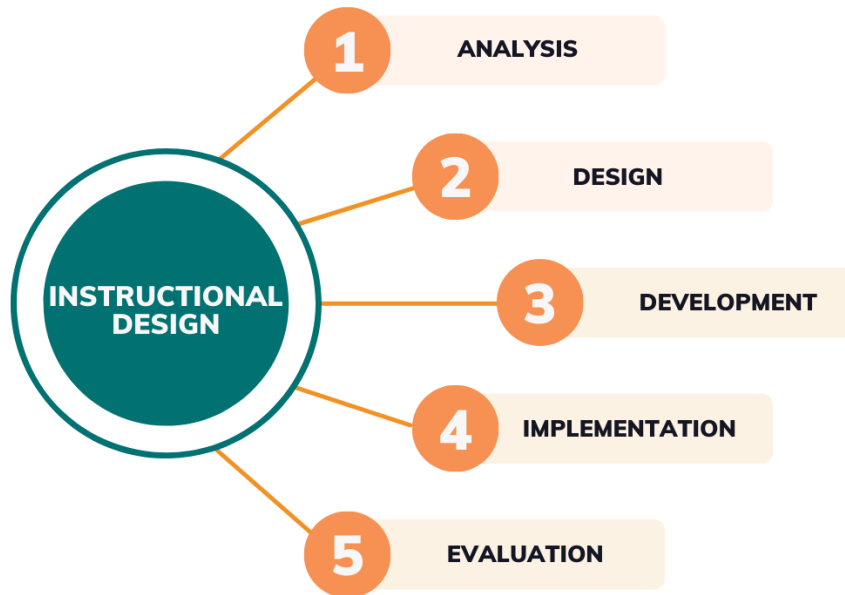
Source: Punie; Redecker, 2017, p.8.

The framework constituted a fundamental component in the design and development of the syllabus (Teacher Education Module). It served as a diagnostic instrument to assess the digital proficiency levels of participating teachers besides structuring the syllabus in alignment with the guidelines of the BNCC, with particular emphasis on the development of digital culture competence.

## MATERIALS AND METHODS

As an approach to structuring the pedagogical design of the teachers' development program, we adopted instructional design principles for the workshop. This approach aimed to support teacher education in the effective integration of digital tools, particularly in relation to the development of the fifth area of digital competence. The instructional design process is divided into five phases: analysis, design, development, implementation, and evaluation (see Figure 3).

**Figure 3-** Phases of Instructional Design.



Source: Filatro, 2023, p. 31-41.

Instructional design analysis aims to identify problems within the educational context, explore potential solutions, and identify the underlying needs that justify the creation of a course, workshop, or instructional material (Filatro, 2008; 2023). The analysis phase focuses on:

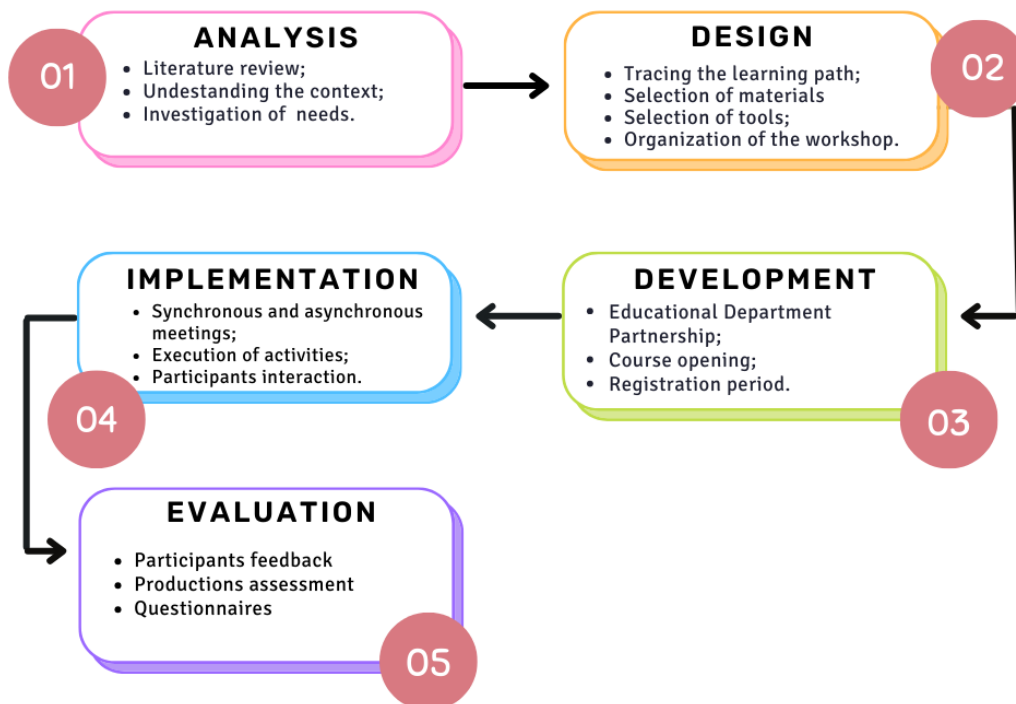
1. Identifying learning needs,
2. Describing people with these specific needs, and
3. By examining the potentialities and constraints of the context in which learning needs arise, Filatro (2023, p. 34) emphasizes that the design phase should include “the general planning of the solution that will address the identified learning needs” and the structuring of the learning situation through the mapping and logical sequencing of the content to be delivered. In addition, this phase includes the “definition of learning strategies and activities to achieve the outlined objectives, the selection of the most appropriate media and tools, and the specification of the materials to be produced” (Filatro, 2008, p. 28-29), thereby supporting the systematic organization and production of learning units.

The development phase, in turn, “includes the production and adaptation of resources as well as printed or digital teaching materials, parameterization of virtual learning environments, and the preparation of pedagogical, technological, and administrative support media” (Filatro, 2008, p. 30). This phase is characterized by the systematic selection, organization, dissemination, and facilitation of access to these materials.

Subsequently, the implementation phase consists of the didactics itself, applying the instructional design proposal and comprises two stages: the launch and the execution. The launch stage involves making the learning content units and materials available to participants. An example is the uploading content to the cloud, configuring tools, organizing access schedules, and carrying out activities. The execution stage encompasses participants’ engagement with materials and activities as well as their interactions with teachers and peers. In the words of Filatro (2023, p. 37), during this phase, “design decisions and the materials produced to support the projected learning experiences are applied and tested.”

The last phase, evaluation, is concerned with assessing the effectiveness of the proposed solution as well as analyzing the strategies implemented throughout the process. As Filatro (2008, p.31) notes, this phase "evaluates both the educational solution and the students' learning outcomes, which will ultimately reflect the adequacy of instructional design". For the author, one of the roles of the instructional designer is to systematically evaluate, review, and validate all participants involved and all stages of the process. Based on this premise and considering each phase in the development of an educational product in virtual environments as outlined by Filatro (2008, 2023), Figure 4 presents the methodological pathway of the proposed in-service English teacher development project.

**Figure 4 - Methodological Procedures of Research.**



Source: Elaborated by Espírito-Santo (2025), based on Filatro’s (2023, p. 31-41) ideas.

The carefully selected and illustrated procedures played a crucial role in shaping the syllabus for the in-service teacher education program. By clearly exemplifying the intended learning outcomes, they supported the creation of a coherent and comprehensive framework for the program.

## TEACHER DEVELOPMENT PROGRAM SYLLABUS

The English in-service teacher program syllabus was designed having two major documents as references: the Brazilian National Common Core (BNCC) and the DIGCOMPEDU Framework. Through a comparative analysis of both documents, key concepts were identified, mapped, and aligned with particular emphasis on digital culture and the development of digital competence. It is important to highlight that the initial version of program syllabus presented in Figure 5 was specifically for English language teachers; however, it is possible to adapt it to any other area of knowledge.

**Figure 5- Program Syllabus**



Source: Elaborated by Espírito-Santo (2025), based on the ideas of Redecker (2017, p. 24-25) and Base Nacional Comum Curricular (2018, p.9).

Given the absence of teacher education programs focused on digital competence for English language teachers in the State of Pará, this program was specifically designed for level A1 competency (Newcomers). It is essential to administer a diagnostic assessment to all participants to ensure the homogeneity level. This allows for the modification of specific modules to better accommodate both newcomers and more advanced participants.

The syllabus is organized into three Modules: Module I - Technology and Society; Module II - Digital Literacy; and Module III - Digital Citizenship. Thematic units were chosen based on a rigorous review of guiding documents. In each unit, principles of BNCC’s digital culture are highlighted, integrating the progression areas established by

DIGCOMPEDU (see Figure 5). Upon completion of each module, educators are expected to have advanced in both knowledge and practical development of the proposed DIGCOMPEDU areas.

In Module I- Technology and Society, the learning focus of digital culture is on critical, reflective, and collective learning:

Understand, use, and create digital information and communication technologies in a **critical**, meaningful, **reflective**, and ethical way in the various social practices (including school) to communicate, access, and disseminate information, produce knowledge, solve problems, and exercise agency and authorship in **personal** and **collective life**. (Brasil, 2017, p. 9, our emphasis).

The learning objectives are aligned with Area 1 of DIGCOMPEDU - Professional Engagement, which defines the use of technologies to improve collaborative pedagogical practices. This area is organized into three competences. First, **professional collaboration** involves utilizing digital tools to foster synergy among educators, facilitating the exchange of knowledge, experience, and collaboratively innovating pedagogic practices (Punie; Redecker, 2017). Second, **reflective practice** entails the “critical assessment and proactive development of both individual and community-based digital pedagogical approaches” (Punie; Redecker, 2017, p. 19). Finally, **digital continuous professional development (CPD)** emphasizes the utilization of “digital sources and resources for continuous professional development”. (Punie; Redecker, 2017, p. 19).

The primary objective of the first Module is to introduce educators to various free and online professional development and enhancement opportunities, such as platforms, webinars, websites, digital repositories, among other resources. By fostering a reflective and analytical approach regarding available options in the Network resources, the Module encourages teachers to critically evaluate the learning process and the potential benefits that these resources can provide to the educational context.

This perspective allows an in-depth analysis of the tools and services offered by the internet, enabling the identification of opportunities to improve the quality of teaching

and the promotion of an enriching educational experience. Subsequently, teachers create strategies for peer collaboration by using sharing tools and collaborative documentation for planning.

In Module II - Digital Literacy, the main objective is to foster understanding, exploration, and creation of content and materials, developing practices and strategies through digital tools such as platforms, apps, and gamified environments. The digital culture attributes assigned to this module are:

**Understand, use, and create** digital information and communication technologies in a critical, meaningful, reflective, and ethical way in the various social practices (including school) to communicate, access, and disseminate information, produce knowledge, solve problems, and exercise agency and authorship in personal and collective life. (Brasil, 2017, p. 9 – our emphasis).

The organizing principles of this module contribute to the understanding, application, and creation of digital resources, as outlined in Area 2 of DIGCOMPEDU. This Area focuses on supporting educators in conscious and responsible management of digital content by educators. Specifically, it emphasizes the effective identification of resources that align with learning objectives, learner demographics, and teaching styles, enabling educators to structure the wealth of materials, establish connections, and to modify, add on to and develop themselves digital resources to support their teaching. (Punie; Redecker, 2017).

Area 2 is governed by three core principles. The first principle, **selecting digital resources**, is defined as the ability to "identify, assess, and select digital resources for teaching and learning while considering specific pedagogical contexts and learning needs" (Punie; Redecker, 2017, p. 20). The second principle, **creating and modifying digital resources**, involves the modification of existing openly-licensed resources and the co-creation of new educational resources when permitted (Punie; Redecker, 2017, p. 20). The third and last principle, **managing, protecting, and sharing digital resources**, refers to the ability to "organize digital content and disseminate it to learners, parents, and other educators", while ensuring the "protection of sensitive content" and respect the rules of privacy and copyright regulations.

The premise of this module is to engage educators in a critical discussion regarding the numerous learning resources available on the Internet, both online and offline. Some examples of these features are digital integration applications, digital murals, digital portfolios, gamification, and search platforms. The module aims to empower teachers in the utilization and creation of digital content tailored for their own teaching context, learners' profiles, and learning objectives, while considering the technical accessibility of their target audience to these resources. Beyond the stage of understanding, using, and creating content for teaching, educators are encouraged to modify, manage, and disseminate these materials to ensure their effective integration within the school community.

Furthermore, module III is also aimed to foster students' digital citizenship. The learning objective within the scope of digital culture is based on ethics, on problem solving, and on the important role of the students as active participants in a digital society:

Understand, use, and create digital information and communication technologies in a critical, meaningful, reflective, and **ethical** way in the various social practices (including school) to communicate, access and disseminate information, produce knowledge, **solve problems**, and exercise **agency** and authorship in personal and collective life. (Brasil, 2017, p. 9 - our emphasis).

Aligning these objectives with Area 6 of DIGCOMPEDU - Facilitating Learners' Digital Competence – the module focuses on the principles of **responsible use**, ensuring pedagogical practices that safeguard the "physical, psychological, and social wellbeing while using digital technologies". (Punie; Redecker, 2017, p. 23). In this module, teachers explore ways to equip students to deal with risky situations, such as interacting with strangers or unauthorized sharing of personal data, thereby using digital technologies safely and consciously. The second principle, **digital communication and collaboration**, emphasizes the utilization of digital technologies to participate effectively and responsibly in the civic sphere, through the insertion of activities, tasks, and evaluations.

Furthermore, the **creation of digital content**, the third principle, aims to promote tasks and learning evaluations that require students to express themselves digitally and to

"modify and create digital content in different formats" (Punie; Redecker, 2017, p. 23). The final module aims to instill a safe, ethical, and conscious use of digital technologies through critical reflection. It addresses contemporary challenges such as the spread of fake news, cyberbullying, data privacy, and security. Based on the understanding of these societal issues, the module presents pedagogical practices that enable educators to nurture conscious students who act as protagonists in adopting ethical, collaborative, and responsible behaviors.

## **PROGRAM UNITS OVERVIEW**

Each unit provides an overview of the program syllabus designed to practically align the principles of digital culture proposed by BNCC with the progression areas of the DIGCOMPEDU Framework.

### Unit 1: Technology in My Community

This unit applies the BNCC principles of 'Reflective Practice in Personal and Collective Lives', while focusing on the DigCompEdu competence of Reflective Practice. The objectives of this unit are to analyze the foundations of digital culture under the theoretical assumptions of BNCC and to foster individual and collective reflection. Besides, it aims to critically evaluate and actively develop their digital pedagogical practices within their educational community and examine the localized impacts of technology.

### Unit 2: Social Media and the Real World

Based on the BNCC principle of 'Critical Reflection in Personal and Collective Lives' and the DigCompEdu competency of 'Professional Collaboration', this unit introduces several interactive tools that empower teachers to develop more creative, meaningful, and innovative materials as well as lesson plans found in different social networks and through peer collaboration; however, given the vastness of online resources, the unit emphasizes the importance of developing teachers' competence of critical filtering required to select appropriate tools for their specific teaching reality.

### Unit 3: Transforming Technology

The scope of Unit 3 covers the following objectives: using digital technologies to foster collaboration among educators, facilitating the exchange of knowledge and professional experience, as well as collaboratively innovating pedagogical practices. It also focuses on utilizing digital sources and resources for continuous professional development, aligned with the DigCompEdu's framework. The central guiding principle of BNCC's perspective on digital culture is social practices.

#### Unit 4: Educational Apps

The objectives of this unit are to provide educators with the skills to understand, use, and develop technologies for teaching and learning in accordance with BNCC's principles (Brasil, 2018). Key topics include the selection, creation and modification, management, protection, and dissemination of digital educational resources outlined by DigCompEdu.

#### Unit 5: Models of Technology Integration

The primary objective of this unit is to explore and analyze various models of technology integration and allow educators to reflect on their ability to create, modify, and customize digital content, to enhance student's learning. The BNCC's principles of understanding, using, and creating digital information and communication technologies permeate all units of this module. In this unit, educators will explore how different technological models facilitate digital content creation and learn to maximize the potential of mobile devices like cell phones to improve students' literacy and teamwork. These results stem from building a digital culture, even in contexts characterized by basic tech infrastructure and limited resources.

#### Unit 6: Gamification

The objectives of Unit 6 encompass a comprehensive understanding of the precepts of gamification as established by Kapp (2012). This includes a critical analysis of game-based mechanics and logic to engage students, motivate actions, promote learning, and solve problems. Precepts of BNCC's digital culture involve comprehension, application, and creation of didactic materials through gamification. Ultimately, this unit empowers teachers to design personalized and more captivating lessons, to promote

immersive learning that optimizes students' motivation by employing educational game strategies.

#### Unit 7: Data Privacy

This unit pursues a twofold objective: first, to foster digital competence by instilling ethical practices; and second, to heighten awareness regarding the responsible use of social media and data protection within virtual environments. Upon completion of this unit, participants will not only have honed their digital skills but also heightened a sense of ethical responsibility and conduct in the digital realm, enabling them to effectively mentor learners in these areas. Educators will be equipped with the theoretical knowledge and practical tools necessary to navigate the online world safely, safeguard personal data, and contribute to a more responsible and ethical online community.

This unit adopts a gamification approach to effectively convey data privacy concepts, providing teachers with innovative and engaging methods for teaching critical digital literacy. This framework enables educators to disseminate these materials to students even in resource-constrained or in low-tech settings once they become available in the form of worksheets. By gamifying data privacy, this unit not only enhances teachers' understanding, but it also empowers them to make the learning experience more enjoyable and accessible to their students. This novel approach offers a sophisticated strategy for bridging the digital divide and ensuring that essential digital literacy skills are equitable and inclusive.

#### Unit 8: Cyberbullying

As an extension of Unit 7, the objective of this lesson is to discuss the principles of digital cybersecurity, identify offensive actions on the internet as cyberbullying and suggest protective actions. The unit facilitates critical discussions regarding personal conduct that may infringe upon the rights of others, and encourages students to propose constructive actions for the well-being of all users. By situating students as central agents in this process, Unit 8 fosters an understanding of their responsibility as citizens in the digital age. This unit also seeks to enhance digital competence through proactive engagement, ensuring ethical standards are maintained across both online and offline environments.

### Unit 9: Digital Insight

This final unit of the program synthesizes the knowledge acquired throughout the course. During this stage, educators develop hands-on projects designed for implementation in their classrooms upon completion of the program. These projects are expected to be tailored for each teacher's local context, considering their unique challenges and limitations, while proposing viable technological solutions. The purpose is to strengthen the competence and digital culture of both educators and students. Through the application of these projects, teachers promote learner's digital competence, agency, and illustrate the transformative role of the digital citizen within a community. As a final assessment, educators share their activities, which must be original and aligned with the fundamental principles of digital culture proposed by BNCC. These proposals are then compiled into a collaborative e-book serving as a peer-based resource to inspire future pedagogical practices. As Dominschek Lima and Souza Martins (2025) state, professional development should primarily be understood as a privileged space where teachers can engage with colleagues, share their experiences, and foremost connect with theories, methodologies, and technologies capable of strengthening and enriching their professional practice.

### FINAL REMARKS

The in-service teacher development program aims to enhance the continuing education of English language teachers regarding the functional application of Digital Information and Communication Technologies (DICTs). The syllabus proposed in this paper provides educators with the opportunity to utilize, comprehend, and create digital technology as tools for technological mediation. By emphasizing "hands-on" activities rooted in the digital culture principles of the BNCC, these concepts are applied specifically within the context of Brazilian public schools, where the resources are often limited. Upon completion of the course, participating teachers are expected to:

- Evaluate and select digital materials suited to their specific school settings;

- Disseminate proposals and innovative ideas among other colleagues, and collaborate with peers throughout the learning process;
- Develop lesson plans aligned with the National Curricular Core (BNCC) and the principles of the 5th general competence, namely, the digital culture;
- Assess their individual level of digital proficiency through self-assessment;
- Formulate pedagogical interventions using both digital online and offline tools adapted to low-tech contexts;
- Design a project with their students with a focus on digital competence and data privacy;
- Propose interventions to enhance students' awareness regarding the importance of digital citizenship in their schools while promoting students' agency.

This proposal for in-service teacher education employs strategies that boost the active participation of teachers through the lenses of digital culture and competence. By exploring key principles such as information, literacy, ethical communication, creation, selection, and reflection this program demonstrates significant creative and innovative potential. Ultimately, these strategies are designed to develop students' digital competence, empowering them to engage critically and responsibly within the digital world.

As a result, the syllabus presented has the potential to be adapted to other areas of knowledge, empowering teachers in several different teaching environments, employing technology as a potent tool to foster learning and improve teaching methods.

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