



MINECRAFT: EDUCATION EDITION AND THE TEACHING OF TOURISM: AN EXPLORATORY ANALYSIS OF LESSON WORLDS AND CURRICULAR APPLICATIONS

MINECRAFT EDUCATION EDITION E O ENSINO DO TURISMO: ANÁLISE EX-
PLORATÓRIA DE MUNDOS-LIÇÃO E APLICAÇÕES CURRICULARES

MINECRAFT EDUCATION EDITION Y LA ENSEÑANZA DEL TURISMO: UN ANÁLISIS
EXPLORATORIO DE MUNDOS-LECCIÓN Y APLICACIONES CURRICULARES

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ABSTRACT:

Purpose – This article investigates the potential of the digital game Minecraft, in its Minecraft: Education Edition version, as a pedagogical tool for teaching and learning in Tourism courses.

Design/methodology/approach – Drawing on qualitative, exploratory, and descriptive research, this study analyzes articles, educational videos and official lesson plans from the platform to map lesson worlds related to the disciplines of the Tourism curriculum and the competencies required for professional training.

Findings – The results indicate that *Minecraft: Education Edition* can support the development of immersive and contextualized learning experiences, bridging theory and practice and contributing to methodological innovation in Tourism education.

Practical implications – The analysis identified possibilities for integrating the game with curricular components such as Cartography and Geoprocessing, Urban Planning, Development and Sustainability, Ecotourism, History and Culture, as well as with the development of socio-emotional skills, critical thinking, and active learning.

Originality/value – This article advances an emerging field of study by examining the use of *Minecraft: Education Edition* within Tourism education and aligning its pedagogical features with curriculum competencies. It stands as one of the first systematic analyses in Portuguese to map lesson worlds from the platform oriented toward professional training in Tourism, providing theoretical and practical insights for educators, researchers, and developers of gamified educational materials.

Research limitations – This study is based on a qualitative analysis of official lessons and reported uses and does not include quantitative empirical data on the impact of Minecraft on academic performance in Tourism.

Keywords: Tourism Education; digital games; Minecraft; pedagogy.

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RESUMO:

Objetivo – O presente artigo tem o intuito de investigar as potencialidades do jogo digital Minecraft, em sua versão Minecraft: *Education Edition*, como ferramenta pedagógica no ensino-aprendizagem em cursos de Turismo.

Desenho/metodologia/abordagem – Com base em uma pesquisa qualitativa, exploratória e descritiva, foram analisados artigos acadêmicos, vídeos educativos e planos de aula oficiais da plataforma, buscando mapear mundos-lição relacionados às disciplinas do currículo de Turismo e às competências requeridas à formação profissional.

Resultados – Os resultados indicam que o Minecraft Education Edition pode favorecer a construção de experiências imersivas e contextualizadas, aproximando teoria e prática e contribuindo para a inovação metodológica no ensino do Turismo.

Implicações práticas – A análise permitiu identificar possibilidades de articulação do jogo com componentes curriculares, como Cartografia e Geoprocessamento, Planejamento Urbano, Desenvolvimento e Sustentabilidade, Ecoturismo, História e Cultura, bem como com o desenvolvimento de habilidades socioemocionais, pensamento crítico e aprendizagem ativa.

Originalidade/valor – Este artigo contribui para uma área ainda incipiente de estudos ao investigar o uso do Minecraft Education Edition no contexto do ensino de Turismo, articulando seus recursos pedagógicos com as competências curriculares da área. Trata-se de uma das primeiras análises sistemáticas em língua portuguesa a mapear mundos-lição da plataforma com foco na formação profissional em Turismo, oferecendo subsídios teóricos e práticos para educadores, pesquisadores e desenvolvedores de materiais didáticos gamificados.

Limitações da pesquisa – Este trabalho se concentrou em uma análise qualitativa de lições oficiais e relatos de uso, mas carece de dados empíricos quantitativos sobre o impacto do Minecraft no desempenho acadêmico em Turismo.

Palavras-chave: ensino do Turismo; jogos digitais; Minecraft; educação.

RESUMEN:

Propósito: El presente artículo tiene como objetivo investigar las potencialidades del juego digital Minecraft, en su versión Minecraft: Education Edition, como herramienta pedagógica en la enseñanza-aprendizaje en los cursos de Turismo.

Diseño/metodología/enfoque – A partir de una investigación cualitativa, exploratoria y descriptiva, se analizaron artículos académicos, videos educativos y planes de lecciones oficiales de la plataforma, con el fin de mapear mundos-lección relacionados con las asignaturas del currículo de Turismo y las competencias requeridas para la formación profesional.

Hallazgos: Los resultados indican que Minecraft: Education Edition puede favorecer la construcción de experiencias inmersivas y contextualizadas, acercando teoría y práctica, y contribuyendo a la innovación metodológica en la enseñanza del Turismo.

Implicaciones prácticas: El análisis permitió identificar posibilidades de articulación del juego con componentes curriculares como Cartografía y Geoprocésamiento, Planificación Urbana, Desarrollo y Sostenibilidad, Ecoturismo, Historia y Cultura, así como con el desarrollo de habilidades socioemocionales, pensamiento crítico y aprendizaje activo.

Originalidad/valor: Este artículo contribuye a un campo de estudio aún incipiente al investigar el uso de Minecraft: Education Edition en el contexto de la enseñanza del Turismo, articulando sus recursos pedagógicos con las competencias curriculares del área. Se trata de uno de los primeros análisis sistemáticos en lengua portuguesa que mapea mundos-lección de la plataforma enfocados en la formación profesional en Turismo, ofreciendo aportes teóricos y prácticos a educadores, investigadores y desarrolladores de materiales didáticos gamificados.

Limitaciones de la investigación: Este trabajo se centró en un análisis cualitativo de lecciones oficiales y relatos de uso, pero carece de datos empíricos cuantitativos sobre el impacto del Minecraft en el rendimiento académico en Turismo.

Palabras Clave: Enseñanza del Turismo; juegos digitales; Minecraft; educación.

INTRODUCTION

The teaching of Tourism, as a multidisciplinary field that dialogues with cultural, historical, geographical, and social dimensions, requires methodologies capable of stimulating students' active and critical participation. Active learning, based on interaction, experimentation, and the collaborative construction of knowledge, becomes particularly relevant in this context, as it connects theoretical understanding with practical experience of the dynamics of territories and tourism.

A recurring challenge in Tourism lies in consolidating theoretical content while adopting methodologies that stimulate critical reflection and future-oriented thinking; however, the field remains strongly linked to the traditional model of formal education (Reis; Brusadin, 2014). Pedagogical practices centered on exposition and transmission of content, often far removed from the students' digital language, still hinder the promotion of a more interactive and engaged training, which is necessary for preparing new professionals to work in the sector (Tedesco, 2004).

The COVID-19 pandemic, which began in 2020, caused an abrupt and profound restructuring of educational systems worldwide (Nakano; Rosa; Oliveira, 2021). This situation created new needs, whether related to maintaining physical distance or to reinventing strategies such as remote teaching, highlighting not only inequalities in access to digital technologies but also the fragility of traditional teaching methods in crisis situations.

In this transformative scenario for education, the use of interactive tools and innovative resources that support autonomous, collaborative, and meaningful learning becomes necessary, as Moesch (2000) proposes for tourism knowledge, expanding it beyond merely economic, pragmatic, and consumerist perspectives.

The pandemic experience revealed the importance of more flexible, engaging, and student-centered methodologies capable of dialoguing with the cultural and technological repertoires of the new generation of learners (Lee & Hammer, 2011). Among these methodologies, gamification stands out, a concept that involves the application of typical game elements in educational contexts with the aim of increasing student engagement and motivation.

Gamification represents a paradigm shift by recognizing games as a language and didactic strategy that supports students' individual and social development, emphasizing the cognitive and constructive dimensions of learning. The goal is to create more playful and interactive environments. As Lee and Hammer (2011, p.2) point out: "it is not intended to teach with games or through games, but to use game elements as a way to promote student motivation and involvement".

Digital games also contribute to the creation, modeling, and multiplication of actions. Unlike games played for purely recreational purposes, serious, or educational games offer new learning experiences through interactivity, problem-solving, and the simulation of real situations (Palha, 2022). These experiences directly support critical thinking, creativity, and decision-making – essential skills in the contemporary world and central to the mission of higher education (Palha, 2022).

Among the various digital tools available, the game Minecraft emerges as a promising resource for Tourism education, as it allows the creation of virtual worlds that stimulate creativity, critical thinking, and problem-solving. Through its proposal of a free and collaborative world-building environment, it enables the simulation of tourist environments, urban planning, space management, and reflections on sustainable practices, all of which relate directly to the competencies required in Tourism training (Lee and Hammer, 2011).

Furthermore, when interacting in Minecraft, players develop their own teaching and learning strategies, turning the game into a non-formal educational tool through the creation of maps, collaborative challenges, and historical simulations, among other possibilities. This dynamic reinforces Papert's (1980) idea that "the best learning occurs when the student builds a product meaningful to them or others", illustrating how virtual environments can support authentic and creative learning beyond conventional classroom techniques and strategies.

Given this scenario, a central question arises: to what extent can Minecraft, especially its Minecraft: Education Edition version, be systematically incorporated into higher education in Tourism, beyond occasional or intuitive applications? Although the international literature documents various experiences with digital games in education, studies that examine, in a structured way, how lesson worlds and lesson plans from this platform can be related to specific components of the Tourism curriculum remain scarce. This study therefore aims to investigate the potential of Minecraft, in its educational version, as a pedagogical tool in Tourism teaching, mapping existing lessons, identifying the content and skills they develop, and discussing the limits and possibilities of its application in Tourism disciplines.

THEORETICAL REVIEW

Gamification and Digital Games in Education

Gamification, understood as the intentional use of game elements to non-game contexts, has become one of the most widely studied pedagogical approaches in the past decade. Meta-analyses indicate consistent gains in student engagement and performance when systems of points, levels, missions, and immediate feedback are incorporated into learning environments (Hamari; Koivisto; Sarsa, 2014). Importantly, gamification does not imply "turning everything into a game", but rather, selecting mechanics that, with clear pedagogical intent, encourage desirable behaviors such as persistence, collaboration, and academic autonomy.

Based on contemporary motivational theories such as the Self-Determination Theory (RYAN; DECI, 2000), learning is understood to be enhanced when the educational environment meets three basic psychological needs: autonomy, competence, and relatedness. According to this framework, intrinsic motivation increases when students can make meaningful choices, perceive their own progression through increasingly challenging tasks, and build social connections that reinforce a sense of belonging. Thus, gamified environments like Minecraft: Education Edition align directly with these dimensions, as they allow students to make decisions within the virtual world, engage with tasks that evolve in complexity, and collaborate with colleagues, fostering more autonomous, engaged and socially connected learning experiences.

In the educational field, authors such as Kapp (2012) and Prensky (2001) argue that the core characteristics of effective good games—clear goals, adjustable difficulty, engaging narratives, and continuous feedback—correspond directly to the conditions required for meaningful learning. Gee (2009, p. 23) reinforces this perspective by noting that “we learn to experience the world in a more active way [...] and gain resources for future learning” when we interact in challenging environments. These experiences are even more powerful when using serious games, which directly incorporate educational content into their design and are developed for explicit educational purposes. Studies such as that of Kaczmarczyk et al. (2021) demonstrate the value of these games in tourism management courses.

Recent literature on Tourism higher education supports these findings. Minozara and Costa (2023) report gains in motivation and conceptual retention when gamifying the technical terminology. Buhalis and Sigala (2023) highlight the potential of interactive narratives to strengthen students’ ability to plan sustainable destinations. Baki and Yaman (2021) emphasize that game-based environments foster socio-emotional skills aligned with the international guidelines of the World Tourism Organization (UNWTO / ONU Tourism).

The integration of digital games such as Minecraft: Education Edition, GeoGuessr, and the serious game Planète Tourisme enables classrooms to function as virtual laboratories, where students can simulate tourist itineraries, reconstruct historical heritage, manage scarce resources, and develop strategies to mitigate environmental impacts. Based on this playful and constructive approach, Gee (2009, p. 36) argues that such experiences can be “actively engaging and highly meaningful”, supporting lasting learning that can be transferred readily to professional contexts. business planning, problem-solving in companies, and the development of new ventures, expanding their professional choices and possibilities within Tourism.

Aligned with this dynamic of engagement, The National Curricular Parameters (PCNs) of Tourism courses emphasize the importance of understanding the interactions between society and its dynamics, as well as developing critical perspectives on destination planning. From managing local resources and applying technologies that shape interactions between humans and the environment, to designing action strategies, Tourism education can support informed judgments on controversial issues related to sustainable development, the use of natural resources and technological innovation, always considering the preservation of ecosystems, social justice, and the well-being of host communities.

Kaczmarczyk et al. (2021) demonstrate that serious games focused on tourism management skills can enhance decision-making and strategic thinking among undergraduates, improving motivation and effective participation. An example is the Planète Tourisme engine, developed by Excelia, which places the student in the role of a manager responsible for balancing profitability and conservation in real destinations, encouraging debate on the Sustainable Development Goals – an increasingly relevant dimension of sustainability performance.

In the cultural sphere, the intersection between Tourism and Cultural Heritage also benefits from serious games. These tools support deeper understanding of the historical and cultural values embedded in tourist sites. Through immersive experiences, participants engage with historical and cultural contexts in interactive and dynamic ways, fostering greater awareness and sensitivity regarding the importance of cultural heritage – an essential component of heritage education, for example.

Buhalis and Sigala (2023) argue that, when properly integrated into tourism, hospitality, and leisure curricula, gamification contributes to experiential learning. This occurs through immediate feedback, clearly defined objectives, and mechanisms that reinforce engagement and practical understanding of the contents taught, grounded in creative processes.

In summary, digital games offer an effective means of integrating theory and practice in Tourism education. By creating virtual laboratories for experimentation, they allow students to explore how their decisions affect the spatial and social dynamics, while strengthening skills such as critical thinking, problem-solving, and responsible management of resources and services.

The digital game Minecraft and the *Minecraft: Education Edition* Platform

Minecraft is one of the most popular and influential digital platforms in the universe of electronic games, currently ranking as the second best-selling game worldwide, with more than 238 million copies sold (UOL, 2024). Its availability in both free and paid versions has contributed to its widespread adoption across diverse contexts. The game was originally developed in Sweden by Markus “Notch” Persson, with its first alpha version released in 2009 and its official launch in 2011. In 2014, Mojang, the company responsible for creating the game, was acquired by Microsoft, marking a new phase of expansion and consolidation of the franchise. Following this acquisition, Minecraft received increased technical support, more frequent updates, and growing integration into educational settings, eventually leading to the creation of *Minecraft: Education Edition*—a pedagogically-oriented version designed for classroom use and interactive learning environments. According to Souza and Caniello (2015), Minecraft is based on the free and collaborative construction of virtual worlds using cubic blocks, a characteristic reflected in its name, which combines the English words “mine” and “craft”. As Nebel, Schneider, and Rey (2016) highlight, the game’s mechanics are simple and intuitive, directly encouraging creativity, logical reasoning, and problem-solving.

Minecraft offers three primary modes of play. In creative mode, all items are available in the inventory, allowing players to build freely and without restrictions. In Survival mode, players are required to gather resource, craft tools and items, and face threats in order to survive, and in Adventure mode, tools can only be used under predefined rules (Mojang Studios, 2021). The construction process makes the game a space for projection, construction, and dynamic actions, encouraging players to approach problems creatively and develop possible solutions.

Figure 1 – Creative Mode in Minecraft inventory of items available for use.



Source: Minecraft, Inventory.

The image in Figure 1 illustrates how the Minecraft universe is composed of blocks that reproduce natural and artificial elements, such as stone, water, lava, ores, clay, logs, vegetation, and fire, among others. This structure allows players to recreate real-world objects and landscapes on a virtual scale. From this foundation, the user’s imagination expands the possibilities, enabling the creation of entirely original buildings, infrastructures, and environment. As players move through procedurally generated territory, they engage in a continuous cycle of collecting and repositioning blocks, mining resources, organizing materials, and assembling them into configurations. Through these actions, the environment is transformed, reflecting the player’s design choices and construction goals.

Minecraft has become a worldwide phenomenon, appealing to a wide range of age groups and allowing interaction across various digital platforms, including Android, iOS, Xbox, PlayStation, and Windows. Its block-based format allows players to freely build, rebuild, and modify the virtual environment, with mechanics reminiscent of Lego construction. The game world consists of cubic blocks representing various materials and elements, which can be combined in countless ways to stimulate creativity (Mojang Studios, 2021).

Figure 2 –Representation of the fictional city Atheria, created by the player community.



Source: Minecraft, Planet. Atheria.

The possibility of modifying virtual space and designing educational scenarios enables not only the development of cognitive skills but also the simulation of social and environmental problems, fostering active experiential learning. As illustrated in the image above, Minecraft makes it possible to visualize a city under construction, articulating mobility, spatial organization, and the projection of elements that compose the urban environment. The game supports the representation of real situations and contributes to the teaching-learning process by allowing the player to build natural spaces, monuments, and even entire cities, such as the fictional city Atheria illustrated in Figure 2), initiated by a player in 2020 and continuously expanded with increasingly complex details.

In Minecraft, the player assumes the role of an avatar – Steve or Alex –, both with customization options. The game dynamics simulate everyday actions such as harvesting food, building shelters, cultivating plants, and interacting with the environment, which is governed by day and night cycles. The game worlds are generated randomly and procedurally, enabling the creation of practically infinite environments composed of diverse biomes, animals, and landscapes (MOJANG STUDIOS, 2023). This characteristic offers players broad freedom to shape and transform the virtual space according to their objectives. At the same time, the limitation of available resources requires planning and management, promoting important notions of sustainability, organization, and conscious use of the environment.

Minecraft: Education Edition is an educational version developed by Microsoft to integrate digital playfulness into the school context in a structured and intentional way. According to Microsoft, thousands of educators worldwide already resort to the platform to make abstract contents more tangible in in-person, hybrid, or remote classes, supported by hundreds of lessons aligned with STEM curricula (Science, Technology, Engineering and Mathematics) and other areas of knowledge (Minecraft Education Edition, 2021).

Microsoft describes the educational edition as follows:

This version of Minecraft is intended to stimulate learning, promote creativity and collaboration, applying technology to new forms of interaction through exploration and simulation". The goal is to encourage students to learn by solving, in real-time, the problems that arise throughout the game, requiring critical thinking, teamwork, and innovation (Microsoft News Center, 2016).

Officially launched in 2016, Minecraft: Education Edition incorporates tools specifically designed for classroom use, such as the possibility of creating worlds guided by lesson plans, the insertion of non-playable characters (NPCs) to mediate activities, command blocks that allow the programming of in-game behaviors, and features for assessing and monitoring learning, such as the "Camera Portfolio" and "Chalkboard" (MICROSOFT BLOG, 2016). The platform also offers integration with tools like Microsoft Teams and OneNote, allowing educators to share activities, organize classes, and track student progress in real-time (MICROSOFT BLOG, 2016).

Additionally, Minecraft: Education Edition offers a global library with hundreds of ready-made lessons aligned with national and international curricula, covering Natural Sciences, Mathematics, History, Geography, Languages, Programming, and Socio-emotional Education. A key differential of the platform is its emphasis on project-based learning (PBL), in which students construct practical solutions within the game while facing challenges that simulate real-world problems (MCCOY, 2024).

Figure 3 – Library of classes available on the official Minecraft: Education Edition website.



Source: Minecraft Education.

The disciplines, areas, and information available in this library strongly support competency-based education and align with normative documents such as the National Common Curricular Base (BNCC) and the National Curricular Guidelines (DCNs) for Tourism programs. The proposed activities articulate conceptual, procedural, and attitudinal knowledge. In the context of this study, many lesson worlds were found to promote learning through doing and reflecting on one's own actions, through situations that bring the curriculum closer to the reality of tourist territories and to the interdisciplinary nature of Tourism education.

METODOLOGY

This investigation is characterized as qualitative research of an exploratory and descriptive nature. The technical-methodological procedure was organized into three complementary stages: (a) bibliographic survey; (b) documentary analysis of educational videos; and (c) survey and analysis of lesson plans available on Minecraft: Education Edition.

In the first stage, a bibliographic survey was conducted on Google Scholar, searching on works published between October 2024 and May 2025, using combinations of terms such as "Minecraft" and tourism/tourism/tourism education. A total of 4,130 records related to the educational use of Minecraft were identified. After applying eligibility criteria: availability of full text, direct relationship with didactic practices, and relevance to Tourism or related areas, 3,146 records were excluded due to superficial mentions of the game, lack of pedagogical application, duplication, or lack of connection to the teaching proposal. Only studies describing practical experiences, proposals for use, theoretical foundations, or analyses relevant to the dialogue between Minecraft and Tourism education were retained.

The second stage involved documentary analysis of educational videos on YouTube. On the official Minecraft: Education Edition channel, 420 videos were identified, of which 80 were selected for analysis. Selection criteria included: (a) explicit demonstration of pedagogical practices; (b) relevance to Tourism-related content; (c) clear explanation of educational objectives; (d) minimum duration sufficient to observe the activity (over 3 minutes); and (e) general relevance, excluding strictly promotional content. Each video was examined regarding the type of activity proposed, skills stimulated, possible interactions, and connections to curricular content.

In the third stage, a systematic mapping of the official Minecraft: Education Edition library was carried out. The internal search identified 150 lesson worlds directly or indirectly related to contents present in the Tourism course curriculum matrix. Of these, 15 were selected for detailed analysis based on their alignment with the course disciplines and pedagogical clarity of their activities. The areas represented include Cartography and Geoprocessing, Urban Planning, Rural Tourism (Agrotourism), Tourism and Environment, Development and Sustainability, Tourism Marketing, and Foreign Languages.

For each lesson, the following categories were recorded: Area, Contents, Skills, Objective, Expected Answers, and Official Source. These categories allowed consistent comparisons across materials and supported the identification of how each lesson world contributes to the development of competencies required in Tourism education.

The analytical stage integrated data from the three sources (articles, videos, and lesson worlds), enabling a broad interpretation of Minecraft's potential for Tourism education. This methodological triangulation made it possible to identify convergences and gaps, to recognize practical applications, and to delineate the boundaries between real possibilities and limitations of the platform in educational contexts.

Beyond the epistemological aspects already mentioned, it is necessary to consider contemporary methodological approaches in higher education in Tourism. Studies such as that of Sousa and Bispo (2023), in a systematic review published in *Turismo em Análise*, highlight the importance of diversifying teaching-learning methods by incorporating tools such as bibliographic research, documentaries, case studies, and participant observation. Similarly, academic production from 2000 to 2009, analyzed by Lima and Rejowski (2012) in *RBTUR*, reveals a movement towards the adoption of hybrid methods—from bibliographic to experimental approaches—aimed at broadening the understanding of professional training in Tourism. Recent curricular policies, discussed by Aranha and Rocha (2014), already indicate a tendency to integrate digital technologies into teaching, encouraging the use of technological resources as pedagogical tools in higher education Tourism programs. Tourism Education thus emerges as a dynamic and interdisciplinary field, seeking to integrate technological resources into pedagogical practices to prepare professionals capable of acting in contemporary cultural, environmental, and technological contexts.

RESULTS AND DISCUSSIONS

On the Use of the Minecraft Game in Offering Interactive Disciplines

The findings of this work indicate that Minecraft, along with the lesson plans offered in its educational version, supports a constructivist pedagogical approach aligned with theories of Seymour Papert (1980). From this perspective, students can actively construct knowledge through experience – an idea expanded by Papert, a disciple of Piaget, who emphasized that learning is most effective when the learner “builds something meaningful” for society. In other words, “learning by doing” enhances the development of knowledge through the creation and manipulation of tangible objects (or virtual ones, in the case of Minecraft), making learning more active and profound.

The open-ended environment of Minecraft enables precisely this type of active learning. Through experimentation, trial and error, correction and reconstruction, students build their understanding within the virtual world. Because Minecraft presents challenges that require applying theoretical concepts in practice, students must test, adjust and refine their constructions until they function as intended.

A relevant example in the constructive process is presented by Leite and Montoito (2025, p. 1-22), in the article “Study on the pedagogical appropriation of the game Minecraft in the Technical Course in Building Construction”, published in *Olhares & Trilhas*. The authors investigate how Minecraft can be integrated into the curriculum of a technical course in Civil Construction. Using a qualitative approach, they analyzed the pedagogical project and the course curriculum, comparing formal contents with game elements and mechanics. They found that all disciplines, such as technical drawing, applied mathematics and building materials, could be related to activities within Minecraft. This example highlights how pedagogical activities based on the game and dynamically and engagingly align virtual challenges with course content.

Souza and Cruz (2022), in the undergraduate thesis “Potentiality of the game Minecraft in Biology teaching”, conducted an experience report and exploratory review to investigate the use of Minecraft in basic Biology teaching. Drawing on lesson plans from the Minecraft: Education Edition platform, YouTube tutorial videos, and academic articles, they identified didactic proposals covering Botany, Cytology, Zoology, Genetics, and Ecology. Their findings confirm Minecraft as a tool aligned with active learning in the Natural Sciences, bringing theory and practice together in a playful and engaging way. In this sense, Tourism, with its multidimensionalities, has even greater potential to appropriating games in student training.

Ferreira (2024), in the report “The teacher who gives tutoring classes inside Minecraft”, published in the *Estudo* section of *Guia do Estudante*, describes the “Universidade Craftsapiens” project, created to offer school tutoring classes within the Minecraft environment. The virtual world was configured as a school and other thematic scenarios – including replicas of historical buildings – to make the classes immersive and interactive. Multiple disciplines were integrated into these spaces, generating strong student engagement. Gamification elements were incorporated, such as quizzes at the end of each class in which virtual coins were awarded to students who answered correctly, allowing them to purchase items (houses, vehicles) on the Minecraft server. This reward system, directly linked to academic performance, increased students’ motivation and placed the student at the center of the learning process.

These examples in different courses demonstrate how Minecraft can be applied in a multidisciplinary environment and how its playful environment promotes active student participation. During this process, the student becomes a protagonist: formulating hypotheses, testing solutions, and observing outcomes – an approach that is aligned with Papert’s conception of meaningful learning, in which knowledge is constructed by the learner. This approach puts into practice Papert’s (1980) concept of “mathetics”, that is, the science of learning as opposed to teaching, which argues that learning can occur without direct instruction, and often occurs more effectively when less teaching is imposed. This emphasis on learner autonomy is clearly reflected in the exploratory, self-directed learning that Minecraft enables.

Ribeiro (2011) argues that knowing what the population knows, thinks, feels, and does in relation to ecology and pollution is essential for promoting behavioral change in response to environmental problems. In this sense, Minecraft lessons focused on Environmental Education—such as “Green Energy City”, “Climate Futures”, and “Green Building”—allow students not only to assimilate theoretical concepts of sustainability but also to experience the implementation of clean technologies and their consequences within the virtual environment. By designing solar plants, calculating the ecological footprint of construction materials, or simulating climate-change scenarios, students build integrated knowledge: they “know” (learn the concept), “think” (plan solutions), “feel” (observe visual and auditory impacts), and “do” (implement and test strategies).

Tourism programs in Brazil – whether Bachelor’s, Technologist, or Licentiate – present a broad and diverse curricular structure, as defined by the National Curricular Guidelines. They include foundational subjects such as Cartography and Geoprocessing, Urban Planning, History Topics, Tourism and Environment, Development and Sustainability, and Ecotourism, among others. This curricular composition seeks to provide comprehensive that integrates technical, social, environmental, and cultural knowledge, essential for the critical and responsible professional practice (NATIONAL COUNCIL OF EDUCATION, 2006).

An analysis of the Tourism curriculum revealed strong potential for integration with the pedagogical resources available on the Minecraft: Education Edition platform, which allows the simulation of real contexts and supports meaningful, collaborative learning. Based on this premise, a detailed survey was carried out of the disciplines available in the Minecraft: Education Edition library that could directly dialogue with the curricular contents of the Tourism course. The analysis focused on areas such as Cartography and Geoprocessing, Urban Planning, History Topics, Tourism and Environment, Development and Sustainability, Geography, English, Ecotourism, Rural Tourism, Tourism Planning and Organization, and Tourism Marketing.

The research explored how these disciplines are approached interactively and practically through the platform, enabling students to experience real situations and solve concrete problems in an immersive digital environment. Additionally, a comparative analysis was carried out between the educational content available in Minecraft: Education Edition and materials found on platforms such as Google Scholar and YouTube. This comparison sought to identify both the quantity and specificity of educational resources directly related to Tourism course disciplines.

The results demonstrated that the Minecraft: Education Edition platform offers a greater variety and suitability of teaching plans aligned with curricular disciplines of the course when compared to other platforms, as shown in the chart below:

Chart 1 – Areas covered in proposals for using the Minecraft in Tourism-related disciplines across different platforms.

Area	Videos on YouTube	Scientific articles on Google Scholar	Minecraft: Education Edition Lesson Plans
Cartography and Geoprocessing		X	X
Urban Planning	X	X	X
History Topics	X	X	X
Tourism and Environment			
Development and Sustainability		X	X
Geography	X	X	X
English			X
Ecotourism			X
Tourism Marketing			X
Rural Tourism			X

Source: Research data (2025)

On the Minecraft: Education Edition platform, the availability of lesson plans is considerably greater than the number of scientific articles identified on Google Scholar related to the teaching of tourism disciplines, which in turn, exceed the number of educational videos found on YouTube. The only discipline without directly related content on the surveyed platforms was Tourism and Environment; however, several lesson plans addressing environmental themes in general were found, though not specifically linked to Tourism.

Minecraft: Education Edition has an extensive library of educational lesson worlds developed by educators and aligned with international curricula. This allows for a stronger connection between theoretical concepts taught in the classroom and their practical application, providing students with realistic challenges that reflect the complexities of the tourism sector. The chart below organizes the curricular areas addressed, the lesson titles, and the skills developed in each, according to the platform:

Chart 2– Skills developed in lesson worlds aligned with Tourism course-related subjects.

Area	Lesson World	Skills	Lesson Objectives	Expected in-Game Output
Rural Tourism	Agroturism	Creativity in integrating agricultural and tourist activities.	Understand the fundamental concepts of agrotourism and its economic and social relevance.	Collaborative planning of activities and structures for a tourist farm.
Development and Sustainability	Green Energy City	Knowledge of renewable energies and sustainability and Sustainable Urban Planning.	Explore clean energy solutions and assess their environmental impact.	Develop a sustainable virtual city using renewable energy sources.
Cartography and Geoprocessing	Exploring Contour Maps	Creation, interpretation of topographical maps; understanding of relief and topography..	Construct and analyze contour maps to understand topographical variation.	Create precise topographical models and apply geographic concepts.
Tourism Marketing	Tourist Information Center	Organization of tourism information; interpersonal communication.	Design an effective and functional tourist information center	Build an informative center including maps and service areas.
English	Adventures in English with Cambridge	Oral and written communication, vocabulary expansion, and listening comprehension	Practice using English in meaningful contexts and develop confidence in communication through playful activities.	Interact with Non-Player characters (NPCs) and solve linguistic challenges in English

Source: Research data (2025)

Although the lesson content on the Minecraft: Education Edition website is initially available in English, pages and materials can be quickly translated using auxiliary digital tools. In addition to the lessons mentioned in the chart, the platform includes several other enriching educational worlds, such as “The Round City of Baghdad”. This lesson world allows students to explore, on a 1:2 scale, the ancient capital of the Abbasid Empire of the 8th century, enabling practical experiences with guided tourist itineraries, detailed urban analyses, and reflections on the management of historical and cultural heritage. This helps give students a critical understanding of topics related to History and Cultural Heritage.

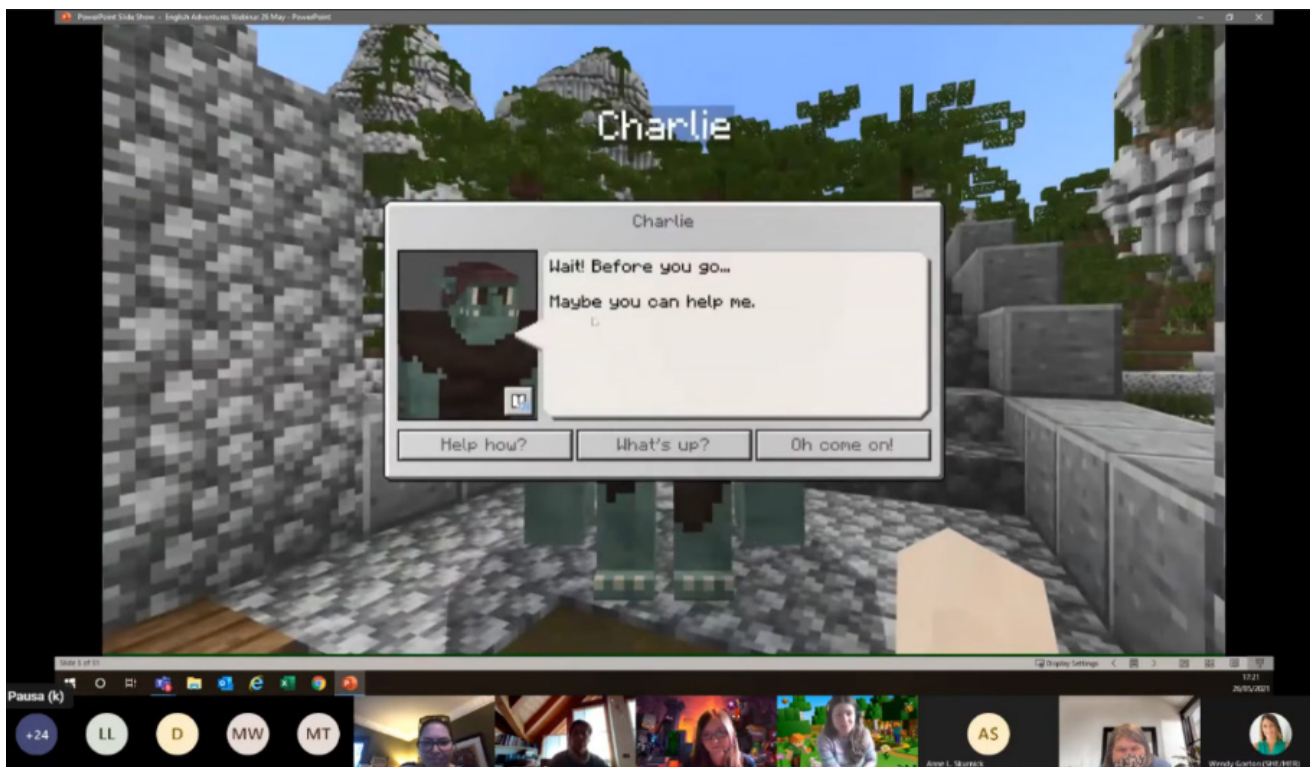
The alignment between course disciplines and their adherence to the constructive model of game-based actions become forms of interaction and oriented practice, which follows the idea proposed by the contents together with the students’ actions, as they interact and can create spaces and even processes, and debates within the game. Additionally, the “Climate Futures Package” stands out, composed of three worlds created in collaboration with the United Nations Program. It explores the Sustainable Development Goals (SDGs) in depth, highlighting themes such as Ecotourism and the Planning of Resilient Destinations, and helps students understand the global relevance of current and future environmental challenges.

Finally, the lesson world “Adventures in English with Cambridge”, developed by experts from the organization affiliated with the University of Cambridge, promotes the practical development of students’ linguistic skills, encouraging them to use English in authentic and meaningful contexts. Through playful and immersive activities, students have the opportunity to strengthen their confidence and communicative capacity in the English language. From these actions within the creative process itself, the forms of performance of each student in the dialogical process of game performance, and the creation of propositions within the course disciplines, are also highlighted. Regardless of the proposed curricular matrix, perfor-

mance is articulated in holistic training mainly based on problem-solving and the creative process.

The various forms of interaction can use methodologies that seek pedagogical practices applied in current contexts, and the use of games/gamification meets the purpose of gamification strategies and tools, promoting what Schlemmer (2018) understands as a cooperation process. Through skills such as creativity in integrating agricultural and tourist activities; knowledge about renewable energies and sustainability and Sustainable Urban Planning; creation, interpretation of topographic maps, and understanding of topography and reliefs; organization of tourism information and interpersonal communication; oral and written communication in English, vocabulary expansion, and listening comprehension, it becomes clear that creation is shaped by what is expected from students in practice.

Figure 4 – Screenshot of the video from the official Minecraft: Education channel of the lesson “Adventures in English with Cambridge”



Source: Minecraft: Education Edition. English Adventures with Cambridge and Minecraft Lesson Jam [video]

In addition to the study plans offered by the platform, Minecraft stands out as an effective resource for learning foreign languages, particularly English, due to interactions in multiplayer mode and the textual content embedded in the game. Although the game's vocabulary is relatively simple, this characteristic facilitates spontaneous communication between players, who must read, write, and speak in English in order to carry out activities and interact on global servers. As Dodgson (2019) observes, the absence of long texts encourages players to create their own communicative exchanges, providing an authentic context for language use.

In online environments, English often becomes the main language for collaboration, information exchange, and problem-solving. Experiences reported by teachers – on the platform and in other sources – indicate that when participating in projects in Minecraft, foreign students produce substantial amounts of real communication in English, whether sharing tips, accessing tutorials, explaining construction processes, or solving in-game challenges. The desire to play more effectively and interact with colleagues motivates learnings to acquire vocabulary and language structures almost incidentally, overcoming the limitations of traditional language teaching and promoting more natural, meaningful learning.

In the context of rural tourism, Minecraft offers the lesson “Agrotourism”, in which students are invited to plan and build a functional tourist farm. This scenario goes beyond simple memorization of concepts: by defining planting areas, animal husbandry, and visitor attractions, students experience the economic and social dimensions of agrotourism. Ribeiro (2011) emphasizes that ecological responsibility and awareness of personal values depend on practice and skill development. Thus, when dealing with agricultural safety, tourist flows, and natural resource management within the game, students develops management, planning, and decision-making skills that directly contribute to understanding the importance of

agrotourism for sustainable local development.

In the “Tourist Information Center” lesson, students assume the role of a team responsible for designing a tourist information center. They must organize contents, create maps, develop brochures, and simulate services for virtual visitors. This exercise strengthens interpersonal communication and customer service skills, essential components of tourism marketing, while highlighting the importance of well-structured planning to meet tourist expectations. Translating public needs into virtual environments—choosing colors, signage, and circulation flows—brings students closer to the perspective of real tourists, demonstrating how each design and information choice impacts the visitor’s experience.

The research also revealed that players often develop their own learning strategies when solving practical challenges presented in the game environment. The platform’s flexibility enables active and autonomous learning, in which players apply creativity and logical reasoning to explore complex concepts across various areas of knowledge.

The adoption of digital didactic games moves away from purely mechanical and rote learning, offering an innovative pedagogical format supported by theoretical references that emphasizing knowledge construction throughout the gaming process (Barbosa; Vinhouli-Júnior, 2020). However, it is important to recognize that such benefits are not automatic: the absence of pedagogical planning, unequal access to technologies, or merely instrumental use of the game can limit its formative potential. These limitations reinforce the need for qualified teacher mediation and critical evaluation of experiences developed with Minecraft in real teaching contexts. As Leme (2018, p. 25) states, when the teacher uses the game in a planned way, content is assimilated more quickly and effectively, enhancing not only retention but also student’s concentration and decision-making abilities. In this sense, Minecraft emerges as a particularly versatile educational platform for Tourism teaching. Its open structure allows the teacher to design and implement scenarios that harmonize traditional curricular components with the modernity of digital technologies, fostering an active and contextualized learning environment in which student reinvent and applies practical, meaningful challenges aligned with their training to work in the tourism sector (Lee e Hammer, 2011).

FINAL CONSIDERATIONS

The results indicate that interaction and collaboration mediated by games constitute both a major challenge and a significant opportunity for education in the 21st century. Creating more cooperative, dynamic, and attractive academic environments depends on tools that promote the joint construction of knowledge and the expansion of digital content. In this sense, a viable path emerges for updating curricular models still rooted in traditional teaching-learning approaches, promoting more engaging and participatory experiences aligned with contemporary demands.

This study demonstrated that Minecraft: Education Edition establishes itself as a high-impact pedagogical resource in Tourism teaching by integrating active learning and digital constructionism. The lessons “Green Building” and “Climate Futures Package” not only conveyed sustainability concepts in concrete ways but also allowed students to experience the effects of environmental decisions firsthand, consolidating skills such as critical thinking and socio-environmental responsibility. These modules exemplify how playfulness, combined with careful instructional design, supports the internalization of complex contents within the context of responsible tourism.

Immersion in virtual worlds, such as “Exploring Contour Maps” and “Agrotourism” reinforced the importance of spatial visualization and territorial planning in tourism training. Another relevant aspect was the curricular integration provided by the Minecraft interface itself. Tools such as command blocks, NPCs, and camera portfolios allow the teacher to design customized educational scenarios aligned with disciplines such as Cartography, Urban Planning, Tourism Marketing, and even language teaching. This flexibility supports both formal teaching, with planned lessons, and informal learning, when students explore beyond what was originally anticipated.

The release of the Minecraft movie in 2025 reinforced the cultural centrality of the game universe, attracting new audiences and consolidating the interest of young people and adults in this playful language. Its cinematic impact broadened the spectrum of potential educational users, as many students became motivated to explore the game after watching its adaptation for the big screen. This phenomenon highlights how Minecraft transcends the digital gaming environment, establishing itself into a multimedia platform with significant potential for social and educational engagement.

YouTube also plays a complementary role: tutorial videos and practical demonstrations support the application of official Minecraft: Education Edition lesson plans and assist teachers in creating new activities. However, the limited number of

scientific articles in Portuguese addressing the use of the game in disciplines such as Tourism underscores the need for empirical studies in the Brazilian context, particularly when it comes to assessing outcomes and best practices.

It is therefore essential to encourage research involving diverse groups of students and school contexts to perform critical constructive evaluations of methodologies based on Minecraft. Combining quantitative and qualitative data will make it possible to identify advantages, limitations, and necessary pedagogical adjustments, thereby enhancing the effectiveness of this resource in teaching and learning.

It is important, however, to recognize limitations and outline avenues for future research. This work focused on a qualitative analysis of official lessons and usage reports, but lacks empirical quantitative data on the impact of Minecraft on academic performance in Tourism. Further studies could implement controlled experiments, measuring variables such as content retention, self-esteem, and student motivation. Additionally, it would be valuable to investigate how different student profiles (e.g., age groups, cognitive styles) respond to gamified approaches.

Ultimately, the potential of Minecraft in Tourism education lies in its ability to bridge traditional curricular content with technological innovation, creating an educational environment that is meaningful, collaborative, and contextually grounded. Current findings suggest that the future of Tourism education may not only embrace playfulness as a pedagogical tool, but also rethink the teacher's role—from transmitter of content to facilitator of experiences. This work therefore affirms the value of Minecraft as a key element in shaping tourism education, capable of addressing the social, cultural, and environmental challenges of the 21st century.

Finally, it is worth emphasizing the need for student engagement, aligned with the transformative dimension that Lee and Hammer (2011, p.2) attribute to game-based learning, namely, that teaching through games can promote student motivation and active involvement.

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DISPONIBILIDADE DOS DADOS

Os dados da pesquisa estão no corpo da pesquisa.

CONTRIBUIÇÃO DOS AUTORES

Danilo Silva de Santana: Concepção da pesquisa, análise dos dados, discussão dos resultados.

Elis Regina Barbosa Angelo: Revisão de literatura, análise dos dados, discussão dos resultados.