

LEARNING ENGLISH THROUGH DIGITAL STORYTELLING AND VIRTUAL EXCHANGE IN PROFESSIONAL AND TECHNOLOGICAL EDUCATION

O APRENDIZADO DO INGLÊS MEDIANTE A CONTAÇÃO DE HISTÓRIAS DIGITAIS E O INTERCÂMBIO
VIRTUAL NA EDUCAÇÃO PROFISSIONAL E TECNOLÓGICA

EL APRENDIZAJE DEL INGLÉS MEDIANTE LA NARRACIÓN DE CUENTOS DIGITALES Y EL INTERCAMBIO
VIRTUAL EN LA EDUCACIÓN PROFESIONAL Y TECNOLÓGICA

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RESUMO: Este estudo teve como objetivo discutir a forma como uma atividade de histórias digitais (HD) (Robin, 2016; Vicencio; Vicencio, 2022; Schaefer, 2024a) facilitou o aprendizado do inglês no Instituto Federal Catarinense. Nesta pesquisa de abordagem qualitativa (Patton, 2002), narrativas foram analisadas a partir de relatos de experiência, por meio dos quais os estudantes tiveram a oportunidade de apresentar suas impressões concernentes à atividade de HD, e de uma entrevista semiestruturada. A análise dos dados mostrou que a atividade propiciou oportunidades de: (a) *superação de desafios e transformação* e (b) *socialização entre os estudantes*. Com base nos resultados, pode-se afirmar que a aplicação de atividades e de projetos de HD envolvendo o intercâmbio virtual constitui um meio adequado para estudantes dispostos não apenas a aprender inglês, mas também a se engajar em interações com pessoas de outras línguas e culturas.

PALAVRAS-CHAVE: Histórias digitais. Ensino-aprendizagem de inglês. Educação Profissional e Tecnológica. Intercâmbio virtual. Formação integral.

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RESUMEN: Este estudio tuvo como objetivo discutir cómo una actividad de historias digitales (Robin, 2016; Vicencio; Vicencio, 2022; Schaefer, 2024a) facilitó el aprendizaje del inglés en el Instituto Federal Catarinense. En esta investigación con enfoque cualitativo (Patton, 2002), se analizaron narrativas a partir de informes de experiencia, a través de los cuales los estudiantes tuvieron la oportunidad de exponer sus impresiones sobre la actividad, y una entrevista semiestructurada. El análisis de datos mostró que la actividad proporcionó oportunidades para: (a) *superación de desafíos y transformación* y (b) *socialización entre los estudiantes*. Con base en los resultados, se puede afirmar que la aplicación de actividades y proyectos de historias digitales que involucran el intercambio virtual es un medio adecuado para estudiantes que desean no solo aprender inglés, sino también interactuar con personas de otros idiomas y culturas.

PALABRAS CLAVE: Historias digitales. Enseñanza y aprendizaje del inglés. Educación Profesional y Tecnológica. Intercambio virtual. Formación integral.

ABSTRACT: This study aimed to discuss how a digital storytelling activity (Robin, 2016; Vicencio; Vicencio, 2022; Schaefer, 2024a) facilitated the learning of English at Instituto Federal Catarinense. In this qualitative approach research (Patton, 2002), narratives were analyzed from experience reports, through which students had the opportunity to put forward their impressions concerning the activity, and a semi-structured interview. Data analysis showed that the activity provided opportunities for: (a) *overcoming challenges and transformation*, and (b) *socialization among students*. Based on the results, it can be stated that the application of digital stories and projects involving virtual exchange is a suitable medium for students willing not only to learn English, but also to engage in interactions with people of other languages and cultures.

KEYWORDS: Digital stories. English teaching-learning. Professional and Technological Education. Virtual exchange. Integral education.

1 INTRODUCTION

According to Mentges (2019), the evolution of digital technologies in today's world has led educational institutions to rethink their teaching practices, which is a central aspect for the development and quality of didactic-pedagogical activities. From this perspective, institutions have prioritized “the effect of technologies, the need for mobility and the formation of an individual with a global and systemic vision of the society in which they are inserted” (MENTGES, 2019, p. 7)¹.

When learning English, two possibilities, among many others, for incorporating technology are: (1) digital stories (DS) (ROBIN, 2008, 2016; TUMOLO, 2015; NASSIM, 2018; TREVISOL, 2019; SCHAEFER, 2022a, 2022b; SCHAEFER, 2024a; VICENCIO, VICENCIO, 2022) and (2) virtual exchange (O'DOWD, 2019, 2021; GUTIÉRREZ; O'DOWD, 2021; SCHAEFER, 2024b; SCHAEFER; MANCHADO-NIETO, 2025). According to Robin (2016, p. 18), DS are related to “the art of telling stories with a mixture of digital media, including text, pictures, recorded audio narration, music and video”. As will be explained later, the process of creating DS is considered to be socially co-constructed (VYGOTSKY, 1978, 1986) in this study, since the students and the teacher were socially involved in this process.

Virtual exchange (HELM, 2016; O'DOWD, 2019, 2021; SCHAEFER; HEEMANN, 2024), or telecollaboration, the second way to include digital technologies, allows, in addition to the practice of the four language skills — reading, writing, speaking, and listening (SCHAEFER; HEEMANN, 2021) — contact between people from different countries and cultures (SCHAEFER, 2024b). In fact, the video produced by each student was presented to the participants of a virtual exchange session.

Considering that one of the authors of this study conducted a research project that investigated DS and virtual exchange at an institution focused on offering Professional and Technological Education (PTE) – which, according to the Law of Directives and Bases of National Education (LDBNE)², has as objective to prepare students for the exercise of professions and social interaction (BRAZIL, 1996) –, this study aimed to discuss how a DS activity facilitated English learning at Instituto Federal Catarinense.

¹ Original quote: “o efeito das tecnologias, a necessidade de mobilidade e a formação de um sujeito de visão global e sistêmica sobre a sociedade em que está inserido”.

² Lei de Diretrizes e Bases da Educação.

According to Hildeblando Júnior and Finardi (2020), the suspension of face-to-face classes in 2020, in order to prevent the spread of Coronavirus (COVID-19), caused activities that previously took place in person to move to online spaces, as is the case in this study. Given this, the contribution of our study to the field of digital storytelling can be explained by the fact that, considering the short period of time between 2020 and the present, it is possible to say that, in Brazil, there is no significant body of research that explores the creation of DS exclusively in online environments related to English teaching and learning in the context of PTE.

This text is divided into seven sections. The first section focuses on the objective and provides a brief contextualization of this research, while the second and third sections address the relevant literature that underpins this study. The fourth section describes the DS activities developed, and the fifth section discusses the methodological procedures adopted. In the sixth section, we present the analysis and discussion of the data. Finally, some considerations are made in the seventh section.

2 PROFESSIONAL AND TECHNOLOGICAL EDUCATION (PTE) AND DIGITAL STORIES (DS)

As previously mentioned, the research project involving DS and virtual exchange, from which this study was derived, was conducted at an institution focused on providing PTE. In view of this, we present in the following paragraphs some theoretical constructs on PTE and then on DS.

Ramos (2008) refers to two perspectives on educating students for the world of work, namely *unilateral* and *integral*. Unilateral training refers to the development of skills to be used in specific work activities, which Saviani (2007) critically describes as *the training of individuals*³. Integral training, on the other hand, is linked to the view that students are part of a socially and culturally situated universe. From the perspective of integral training, therefore, work should be considered an educational principle (SAVIANI, 2007, 2015). Moura, Lima Filho, and Silva (2015, p. 1061) expand on this notion that, through curricular organization, space must be reserved for “intellectual, physical, and technological education”, as well as for “the idea of integral human education”⁴ (p. 1601).

Similar to Ramos (2008), Moura, Lima Filho, and Silva (2015), Nitschke, Plácido, and Pitt (2021) explain that PTE is characterized by the proposal of an integral education. The latter authors add that PTE is committed to “a complete or integral education, in the sense of developing the physical and intellectual capacities of the individual from a broad perspective”⁵ (NITSCHKE; PLÁCIDO; PITT, 2021, p. 42).

According to Ramos (2008, 2010), integral education is guided by principles of *omnilateral* and *polytechnic* education. While the former allows for the integration of the basic dimensions of life, namely work, science, and culture, polytechnic education provides students with access to historically and socially constructed knowledge. In view of the above, we suggest that, in the context of PTE, activities involving DS and virtual exchange enable the articulation, as advocated by Law No. 11,892 (BRAZIL, 2008), between education for the world of work and the sociocultural realm.

Working with DS began in San Francisco, United States (BOASE, 2013). According to information available at Storycenter, The San Francisco Digital Media Center, a group dedicated to the creation and sharing of DS, was founded in 1994 and, over the years, has refined a curriculum that became the basis for a community workshop called “digital storytelling.” According to Boase (2013), the initial period was marked by the use of autobiographies that sought to provide moments of self-discovery. The author adds that DS activities, which explored the various possibilities of use that were emerging in advent of ICT (Information and Communication Technologies), adopted therapeutic methods, in which issues related to self-reflection and the expression of identities were at the core of such activities.

³ Original term used: adestramento de indivíduos.

⁴ Original quote: “a formação intelectual, física e tecnológica”, bem como para “a ideia de formação humana integral”.

⁵ Original quote: “uma formação inteira, ou integral, no sentido de desenvolver as faculdades físicas e intelectuais do sujeito em uma perspectiva ampla”.

Based on Boase (2013), the main focus of DS is usually on the *script* — which constitutes “the primary material for planning and creating the story” (p. 6) — rather than on the technologies themselves. For the author, “[t]he effectiveness of a digital story depends primarily on the ‘story’ it tells, enhanced by images” (BOASE, 2013, p. 1). In this sense, Boase (2013) adds that incorporating different resources into the script, such as images, music, photographs, and narration by the student himself, “can create a powerful tool of communication” (p. 1), establishing fertile ground for enhancing active learning. Following this line of reasoning, Boase (2013) argues that DS comprise “the bread and butter of everyday interpersonal experience, providing a means of communication, interaction, organising, perception, reflection, thought, and ultimately action” (p. 2), while the use of digital resources in the process of creating DS, according to Tumolo (2015), opens space for personal narratives linked to special moments, sharing memories, reports of experienced events, etc.

Using narratives, Castañeda's (2013) study aimed to analyze, through the creation of DS, the effects related to the participation of foreign language learners. For data collection, the author included questionnaires, focus groups, interviews, and, finally, reflective journals recorded by the researcher. The results, which converge with Robin's (2016) view that DS provide full student engagement, showed that learners “practiced language in an expressive manner and engaged in real-world communication” (CASTANEDA, p. 56).

DS, which usually last between 2 and 10 minutes (ROBIN, 2016), have been integrated into language teaching and learning worldwide (CASTAÑEDA, 2013; TUMOLO, 2015; NASSIM, 2018; TREVISOL, 2019; SCHAEFER, 2022a, 2022b, 2024a; VICENCIO, VICENCIO, 2022). Through these stories, teachers and professionals can “support language learning, facilitate discussion, increase social presence, and more” (ROBIN, 2016, p. 18). DS, therefore, enable students to be “empowered with the ability to communicate using various multimedia techniques” (ROBIN, 2016, p. 19). These techniques are combined through the use of software or applications, allowing different topics and content to be addressed.

For Robin (2016), there are three main types of DS. The first type concerns personal narratives, that is, stories related to events that occurred in a person's life; the second type, which involves a historical approach, promotes a better understanding of humanity's past; finally, the third type refers to stories that have an instructional scope, in that they “inform or instruct the viewer on a particular concept or practice” (p. 18). The author states that DS lead students to develop creativity and critical thinking, as they “begin to research and tell stories of their own [as well as] to research rich, deep content while analyzing and synthesizing a wide range of information and opinions” (p. 19).

Robin's words (2016) support Boase's definition of *critical thinking* (2013). For this author, “critical thinking is the mental processes of discernment, analysis, and evaluation” (BOASE, 2013, p. 5). Furthermore, producing DS “requires numerous cognitive strategies” (2013, p. 4), including information review, creativity, comparison, organization, and selection criteria, which presupposes the development of *critical awareness*. This creative and reflective process has an impact on students not only in relation to the construction of the story itself, but also to the final product, that is, the final version of the digitized story, since it must subsequently be presented to an audience, at which time students normally “seek to project a certain image of himself or herself to the audience” (BOASE, 2013, p. 4).

The process of creating DS, according to Lambert (2006, 2007), involves several stages. *Planning* involves establishing all the procedures involved in creating DS; *the presentation of samples*, the second stage, represents the need to provide students with examples of DS previously produced by other people. While the *script* refers to the writing of the events that make up the story itself, *receiving feedback* concerns the linguistic correction of the script, which can be facilitated by the teacher or classmates. *The creation of storyboard* is related to the illustrations that represent the script of the story as a whole, followed by the *digitization of the story*, that is, the inclusion of digital elements. The last step, *presentation to an audience*, allows students to share their stories.

It is worth mentioning that, this study, like those by Robin (2008, 2016), Castañeda (2013), and Trevisol (2019), was conducted in the context of Digital Storytelling Education, a specific type of DS, namely “a guided practice that requires cooperation between both students and teacher” (GREGORI-SIGNES, 2014, p. 241). In this context, “the teacher becomes the guide who monitors and

assists in the distribution and proper use of both the story content and the relevant organization” (GREGORI-SIGNES, 2014, p. 241).

According to Gregori-Signes (2014, p. 242), “both teacher and student become socially involved in the production of stories”. With this in mind, it should be noted that, in our study, the process of creating DS is socially co-constructed (VYGOTSKY, 1978, 1986). For Vygotsky (1978), learning occurs first socially, and then higher mental functions are developed. Furthermore, Vygotsky (1978, 1986) explains that historical and cultural characteristics contribute to such development. From this perspective, individuals are an integral part of a specific cultural context, through which they learn, and construct knowledge based on their interaction with other people.

One of the central aspects of Sociocultural Theory (VYGOTSKY, 1978, 1986) is mediation, also known as symbolic mediation. For Vygotsky, the relationship between humans and the world is not direct, but mediated through instruments and signs. The first mediating element, the instrument, increases the possibilities for transforming nature and regulates actions on objects when humans interact with the world around them. The second mediating element, the sign, has the ability to bring about internal changes, since it regulates actions on people's minds.

The *Zone of Proximal Development* (ZPD) is another central concept of Sociocultural Theory. Vygotsky (1978, p. 86) defines ZPD as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers”. In this *zone*, therefore, more experienced people assist others who are less experienced in learning, as well as in the task of becoming more autonomous within their potential. The concept of *scaffolding*, introduced by Wood, Bruner, and Ross (1976), is closely related to ZPD. Scaffolding refers to the support mechanism that, in the ZPD, assists the less experienced in learning. For the authors, such support “enables a child or novice to solve a task or achieve a goal that would be beyond his unassisted efforts” (p. 90).

Vygotsky (1981) explains that the development and transformations of individuals occur based on four genetic domains: *phylogenetic*, *sociocultural*, *microgenetic*, and *ontogenetic*. Phylogenetic refers to the evolution of living organisms through their gradual adaptation to the environment, while sociocultural is related to the idea that social interactions are the basis of higher cognitive processes. Microgenetic, in turn, refers to specific situations experienced by individuals, which can modify higher mental functions. Finally, the ontogenetic domain integrates the entire history of individuals and the different transformations that, through dialectical interactions, occur throughout their lives, that is, from birth to adulthood.

After presenting theoretical contributions on Professional and Technological Education (PTE) and digital stories (DS) based on Sociocultural Theory (VYGOTSKY, 1978, 1986) in this section, Section 3 will address theories related to virtual exchange, given that, as will be explained later, the students' DS were presented to participants in an extension project that aims to offer opportunities for virtual exchange.

3 VIRTUAL EXCHANGE

According to O'Dowd (2021), virtual exchange has been developing for over 25 years. However, the year 2020 was particularly significant in this area, as the COVID-19 pandemic sparked interest among teachers and researchers in virtual exchange “on a much larger scale” (O'DOWD, 2021, p. 6). The author adds that “[t]he lack of possibilities for study abroad during the pandemic led many to seriously consider how telecollaborative⁶ learning initiatives could be effectively integrated into curricula”.

O'Dowd (2021) explains that research generally highlights four main aspects of virtual exchange. The first suggests that it is a valuable learning opportunity which is very popular among students, while the second aspect is related to the development of foreign language skills and cultural knowledge. The third aspect, in turn, concerns awareness of cultural differences. Finally, the

⁶ Another term used to refer to virtual exchange.

fourth aspect highlights the potential of virtual exchange for communication with people from different countries and cultures.

In line with O'Dowd (2021), Schaefer, Heemann, and Belli (2017, p. 239) emphasize that virtual exchange is “a tool for connecting with the world, capable of promoting intercultural encounters”⁷, in addition to contributing to language teaching and learning. From this perspective, it can be said that such encounters can lead students “to understand the complexity of the experiences of others to enrich their own” (PHIPPS; GONZALES, 2004, p. 3), while also promoting “transformational engagement of the learner” (LIDDICOAT; SCARINO, 2013, p. 42).

Most research focused on virtual exchange, according to Gutiérrez and O'Dowd (2021), is bilingual-bicultural in nature, such as the *e-tandem* and *telecollaborative* models. In the e-tandem model, two students who are learning each other's language exchange roles: sometimes as learners of a foreign language and at other times as tutors of their mother tongue or other languages in which they are proficient. The telecollaborative model, on the other hand, which is usually integrated into classroom activities and supervised by a teacher-mediator, focuses on linguistic and intercultural development. In addition, this model includes tasks such as comparing cultural aspects and discussing various texts and topics.

Gutiérrez and O'Dowd (2021) add that, in addition to the two models described in the previous paragraph, there has been considerable interest in recent years in teaching and learning languages, particularly English, as *lingua franca*, “which gives learners the opportunity to engage in online collaboration with partner classes who are not necessarily native speakers of the target language” (p. 18). Oliveira (2017) explains that English, the target language of our study, is characterized as a global, international *lingua franca*, allowing interaction between thousands of speakers in different parts of the world. In other words, it is a contact language that facilitates communication between groups of multilingual speakers.

After describing the theoretical framework that served as a reference for defining the methodological and analytical procedures of this study, we present below the way in which projects and activities including digital stories were developed.

4 DESCRIPTION OF DIGITAL STORYTELLING ACTIVITIES UNDERTAKEN

One of the authors of this study teaches the subject English for Specific Purposes⁸ in the Higher Education Course in Computer Networks⁹, which corresponds to a total amount of 30 hours per semester. Approximately 10 students enroll in this course each semester. According to its 2018 Political-Pedagogical Project, this course aims to prepare professionals who have “a qualified practical and theoretical vision and the ability to act in the development, implementation, management, and maintenance of logical and physical projects for local or long-distance networks”¹⁰ (p.12). The course syllabus includes: (a) fundamental strategies for reading and textual comprehension in English; (b) technical vocabulary in the field of computer science; (c) study of the semantics and syntax of the English language; (d) reading scientific and didactic texts in the field of computer science. The contents are as follows: (a) elementary linguistic-grammatical aspects of the English language — pronouns, verbs, articles, vocabulary, and composition of basic statements —; (b) linguistic strategies for reading and interpreting texts in English, such as inference and contextual reference; and (c) textual production (written and oral).

⁷ Original quote: “um instrumento de conexão com o mundo, capaz de promover encontros interculturais”.

⁸ In Portuguese, *Inglês Instrumental*.

⁹ In Portuguese, *Curso Superior de Tecnologia em Redes de Computadores*.

¹⁰ Original quote: “uma visão prática e teórica qualificada e com capacidade de atuarem na elaboração, implantação, gerenciamento e manutenção de projetos lógicos e físicos de redes locais ou de longas distâncias”.

The research project *Perceptions of IFC¹¹ Language Learners on Telecollaborative Activities and Digital Storytelling^{12 13}*, coordinated by one of the authors of this study, had the main objective of promoting contact between students from Instituto Federal Catarinense and other English speakers. More specifically, this project, developed between 2019 and 2021, aimed to analyze students' perceptions of their participation in virtual exchange sessions and DS creation. In the classroom or on Google Meet during the COVID-19 pandemic, students were able to engage in discussions about their experience in the proposed activities, through which the teacher encouraged reflections on the development of the activities in general, as well as on (inter)cultural issues.

Two actions resulted from the research project in question: (1) an extension project involving weekly one-hour virtual exchange sessions, entitled *IFC English Conversation Meetings: Intercultural Dialogue through Telecollaboration¹⁴*, with the aim of bringing together not only students of English for Specific Purposes, but also participants from the wider community, including other states in Brazil and countries (e.g. Italy, Paraguay, Spain, Canada, the United States, England, Poland, and Mexico), to discuss different topics—for example, products, practices, and cultural values—while practicing their speaking and listening skills; and (2) a DS activity, given that the final product, e.g., the video produced by each student, was presented to the participants of the extension project at stake. The following describes how the actions were integrated into the English for Specific Purposes course.

Between January 19 and March 16, 2021¹⁵, the aforementioned DS activity, named DST¹⁶: a little bit about myself, was applied in the English for Specific Purposes course, which had a total of eight students. The activity at issue aimed to enable the practice of writing and speaking in English through the production of digital stories, and was developed based on (a) the first type of DS, that is, personal narratives (ROBIN, 2016); and (b) the steps necessary for the creation of DS proposed by Lambert (2006, 2007).

To achieve the above-mentioned objective, the students were asked to individually create a digital video by using Movavi Video Editor (video editing program), narrated in English in their own voice, containing (a) their self-presentation (name, age, where they lived, profession, hobbies, etc.), and (b) a narration of a special event that has affected their life, for example, the birth of a child in the family, a wedding, a trip, graduation, a birthday party, a promotion at work, among other possibilities. At the same time as carrying out the activity with DS, the following content was studied in class throughout the semester: pronouns, verbs (present simple and past simple), definite and indefinite articles, vocabulary and textual production (written and oral).

After completing the process of digitizing their stories, the students presented their videos to the participants of the *IFC English Conversation Meetings: Intercultural Dialogue through Telecollaboration* extension project. The presentation, which was attended by 32 people (8 students from the English for Specific Purposes course, 23 participants from the extension project and the researcher), took place on Google Meet on March 9, 2021, a week before the end of English for Specific Purposes. In addition to the participants enrolled in the extension project, there were six English speakers who accepted the researchers' invitation to attend the presentations: two from Spain, three from Brazil and one from Canada.

¹¹ Instituto Federal Catarinense.

¹² Original name: *Percepções de Aprendizizes de Línguas do IFC sobre Atividades Telecolaborativas e Contação de Histórias Digitais*.

¹³ Research project approved by the Human Research Ethics Committee (CEPSH), under Opinion Number 4.291.275.

¹⁴ Original name: *Encontros de Conversação em Inglês do IFC: Diálogo Intercultural pela Telecolaboração*.

¹⁵ It can be seen that classes took place over a period of almost two months. This is because, due to the context of the COVID-19 pandemic, classes could not be conducted over the course of a semester as usual, for various reasons.

¹⁶ Digital Storytelling.

5 PROCEDURES FOR DATA COLLECTION AND ANALYSIS

This qualitative research (PATTON, 2002), which aimed to discuss how a DS activity facilitated English learning at Instituto Federal Catarinense - Brusque campus, can be considered a case study (DUFF, 2014), in the sense that this activity concentrated on a contemporary phenomenon and its real context. For Duff (2014, p. 233), case studies “are normally studied in depth in order to provide an understanding of individuals’ experiences, issues, insights, developmental pathways, or performance within a particular linguistic, social, or educational context”.

Therefore, as this is a case study, it included: (a) three students from Instituto Federal Catarinense, Godofredo, Mayra and Kaique; and (b) Frederica, a participant in the extension project who attended the students’ DS presentations. Godofredo was 50 years old and worked as a computer technician. Mayra was 19 years old and also worked as a computer technician, while Kaique, 26, was a systems support analyst. Finally, Frederica was a 16-year-old high school student. Godofredo, Mayra, Kaique and Frederica were Brazilian.

We would like to point out that we chose Godofredo, Mayra and Kaique from the eight students who attended the English for Specific Purposes course, and Frederica from the extension project, for the following reasons: (a) as this is a case study, our intention was to interpret the data from a small number of participants, which would allow us to delve more deeply into the analysis that would be undertaken. In view of this, we felt that including more than four participants would result in a less detailed analysis; (b) Godofredo, Mayra and Kaique were very dedicated, assiduous and helpful throughout the development of the DS project’s activities; (c) among all the participants who attended the extension project *IFC English Conversation Meetings: Intercultural Dialogue through Telecollaboration*, we observed more enthusiasm and interest on Frederica’s part, particularly when she commented, in one of the extension project’s virtual exchange sessions, on her perspectives related to the presentation of the students’ digital stories.

The narratives analyzed were collected in March 2021 through experience reports and semi-structured interviews, and the data were transcribed in full by the authors themselves. Through the experience report, written via Google Forms a few days after the final DS presentation, Godofredo, Mayra and Kaique had the opportunity to individually present their personal impressions of the DS activity. Godofredo also took part in a semi-structured interview, which lasted 1 hour and 20 minutes, the week after the final presentation, through which the researchers were able to better understand what the student had said in his experience report.

Frederica, as well as Godofredo, was invited to take part in an interview, which lasted 51 minutes, and to write an experience report, in which she, as a spectator of the students’ DS presentations, was able to share her opinions and observations. The researchers also took notes, through reflective diaries, regarding the data collection process in general, the students’ opinions, unforeseen situations, and so forth.

After completing the English for Specific Purposes course, the data were subjected to a process of analysis, interpretation and reflection. In this effort, attention was paid to narratives, e.g. “descriptions of what people experience” (PATTON, 2002, p. 107).

To analyze the data, we used the Textual Discourse Analysis technique, which, according to Moraes and Galiuzzi (2006), consists of creating units of meaning. In this way, through the researchers’ interpretative view of the data collected and the theoretical reflections on the subject, units of meaning were created. This process of building units is called, in line with Moraes and Galiuzzi (2006), unitarization, characterized by the separation of elementary ideas based on the themes investigated.

Following this, the process of categorizing similar content began. Once the similar units were put together, the levels of analysis categories were constructed and, in this movement, the researchers started, as suggested by Moraes and Galiuzzi (2006), from the concrete to the abstract, from interpretative analysis to the elaboration of arguments. The aforementioned movement culminated in the production of analytical meta-texts that made up the final analysis of the subject under investigation (MORAES; GALIAZZI, 2006).

Finally, a meta-text (MORAES, 2003) was drafted in the light of the theoretical contributions presented above. As Moraes (2003) puts it, in the process of constructing texts, the argumentative movement in the formulation of understandings takes place through the action of questioning and the criticality of the constituted categories. Thus, by means of the process of interlocution between the data collected and the theoretical foundations, the validation of the data collected occurred (MORAES, 2003), resulting in an exercise of reflection by the researchers. Chart 1 displays the stages of the data analysis.

Stages in the data analysis period	Actions undertaken
First stage (June, July, and August, 2021)	Reading the experience reports. Transcribing the semi-structured interviews, followed by reading. Reading the researchers' reflective diaries.
Second stage (September, October, November, and December, 2021)	Creation of meaning units and categorization of content. Including comments on the units and categories. Beginning of the data analysis process based on theoretical contributions from different scholars in the research area.
Third stage (January, February, March, and April, 2022)	Refining and further developing the data analysis, in the sense that the researchers continued to read different texts in order to better understand the data and to theoretically support their interpretations. Conclusion of the data analysis process.

Chart 1: Stages in the data analysis period

Source: Authors, 2023

Fritzen (2012) stresses that the researcher must follow a thorough process of reflection and comparison in relation to data collected, their own experience in the field and the theoretical foundations. Therefore, in order to discuss how a DS activity contributed to English learning at Instituto Federal Catarinense, the data from the experience reports was triangulated with that from the semi-structured interview, as well as with the comments from the researchers' reflective diaries. According to Maxwell (1996), triangulation reduces the risk of the outcomes of a study reproducing the limitations of a single collection procedure.

In order to facilitate and optimize the transcription process, *Transana*¹⁷ program was used. Most of the data in this study, precisely 9 excerpts, were originally in Portuguese, and the authors translated them into English, for which they take full responsibility. The information between two parentheses, e.g. (()), as transcription conventions, relates to the researchers' comments.

6 DATA ANALYSIS AND DISCUSSION

The data analysis revealed that the DS activity provided opportunities for: (a) overcoming challenges and transformation, and (b) socialization among students. Both opportunities will be discussed below.

Excerpt 1, taken from the experience report, discusses the challenges faced by Godofredo in the process of digitizing his story:

¹⁷ Transana refers to software that can be used to analyze audio data as well as digital video. Visit <http://www.transana.org/> for more information.

The first ((challenge)) was a total lack of experience and insecurity about the ideal video format; the second was synthesizing the choices in the face of an infinite number of possibilities; the third was the difficulty in inserting the audio with the narratives in English; the fourth was the insertion of the soundtrack, with its respective synchronization. Lastly, there was the process of improving pronunciation so that it was intelligible. (*Excerpt 1 / Godofredo's experience report / 14-03-2021 / original in Portuguese*)

Excerpt 1 shows that Godofredo made an effort to insert digital resources into his story, including selection criteria, the soundtrack and the script narration. In addition, the student commented that, in order to overcome the difficulties that arose in the digitization process, the assistance provided by the teacher played an important role. Despite the challenges, Godofredo's speech highlights that he was able to use digital resources in the learning experience, which Robin (2008, 2016) calls *technology literacy* and Boase (2013), in turn, *critical awareness*. Robin (2016) pointed out earlier that the creation of DS allows students to be "empowered with the ability to communicate using various multimedia techniques" (p.19), as was the case with Godofredo. Excerpts 2 and 3 below emphasize the importance of teacher mediation in overcoming the challenges that arose in the DS production process.

((The teacher)) indicated to us what level of knowledge of the English language we were at, as well as stimulated the desire to continue and to increase our intimacy with and learning of the language. (*Excerpt 2 / Mayra's experience report / 14-03-2021 / original in Portuguese*)
All in all, the most important thing about the project was the unceasing feedback from the teacher who helped put the project on track and shape it. (*Excerpt 3 / Kaique's experience report / 14-03-2021 / original in Portuguese*)

As already mentioned, one of the characteristics of collaborative learning for Vygotsky (1978) is the role of someone more experienced in finding ways to help the less experienced in the ZPD. In our study, "learning" is linked to the assistance provided by the teacher in digitizing the students' DS as well as supporting their learning of English. In other words, the teacher had the chance to offer his students feedback, or, in line with Wood, Bruner and Ross (1976), scaffolding, in the ZPD not only with regard to the use of digital resources, but also linguistic aspects such as appropriate vocabulary, syntactic choices and pronunciation of English words.

At various moments during the interview, Godofredo stressed that his experience in the activity was both challenging and transformative. The following two excerpts, taken from the interview and from Godofredo's experience report, put forward the student's explanations as to why he considered the DS activity to be a transformative experience:

[...] it transformed me because it made me really.... is... want... for the project to really be in a good way... it was done with care, it was done with care... and it transformed me because it rescued me... I was on the edge of learning English and kind of consuming that everyday which was reading and music [...] and suddenly this time it was something that created a greater bond with myself... "How about you talk about yourself? Tell me something very special in your life, only in English?" with the support of the teacher [...] you commented on the whole process of making the cake [...] (*Excerpt 4 / interview between Godofredo and the researcher / 18-03-2021 / original in Portuguese*)

My experience of taking part in the project was rewarding and very transformative. This work gave me the opportunity to look inside myself and my own history. [...] The experience [on the day of the presentation at the telecollaboration session] was extremely challenging, exciting and important for me. [...] With regard to the emotional side, even though I was excited, the highlight was the crying that totally choked up my voice from the beginning to the end of the presentation. Lastly, the commitment I made to myself, in terms of progressing in my language studies. (*Excerpt 5 / Godofredo's experience report / 14-03-2021 / original in Portuguese*)

Excerpt 4 shows that the creation of the DS allowed Godofredo to “recover” his English language studies, since, before the development of the activity, the student was “on the edge” of the language learning process, possibly suggesting that he was not dedicating himself to studying English as much as he wanted to. This perception indicates that the creation of the DS, through the teacher’s mediation in the ZPD (VYGOTSKY, 1978), made it possible for the student to take up the study of English in a meaningful way, which Boase (2013, p. 6) calls *deep learning*. In addition, Godofredo said in the interview that this experience generated opportunities for transformation because it allowed him to make a commitment to himself to continue studying English after the activity was over. In Excerpt 5, we can see how the presentation of the DS to people from other cultures and countries in the virtual exchange session was significant for Godofredo. In fact, intercultural encounters, according to Helm (2016, p. 153), encompass “personal experience and emotions”, while Kramsch (2011, p. 364) emphasizes that such encounters should “engage the students’ emotions, not just their cognition”.

It was explained earlier that two of the four genetic domains for the study of higher mental functions are microgenetic and ontogenetic (VYGOTSKY, 1981). These domains can be related to the DS activity in this study as follows: microgenetic based on the fact that learning took place in specific instances, for example, in the process of writing the script, in the creation of the sequential outline, in the digitization process, in the narration of the script, and so on. Ontogenetic, on the other hand, because that learning occurred over time, given that the DS activity lasted almost two months. In view of this, Godofredo’s discourse in Excerpts 4 and 5 illustrates that a possible transformation (VYGOTSKY, 1981) or, according to Liddicoat and Scarino (2013, p. 42), a possible “transformational engagement”, of this student was taking place, considering that the DS activity aroused his interest in studying English again, as well as having made it possible, as seen in Excerpt 5, to “progress in language studies”.

Excerpts 4 and 5 also suggest that the DS activity, in line with the reasoning of Ramos (2008, 2010), Moura, Lima Filho and Silva (2015) and Nitschke, Plácido and Pitt (2021), played an important role in Godofredo’s integral formation, since, at the same time as he was acquiring knowledge specific to his area of education, e.g. Computer Networks, the student had the opportunity to improve his oral performance in English and reflect on his own story, giving him a “very transformative” experience. Correspondingly, in the evening of the DS presentation, Godofredo was able to share, through intercultural contact (SCHAEFER; HEEMANN, 2024; SCHAEFER, MANCHADO-NIETO, 2025) in English, a little of his life story with people from Brazil and other countries. Indeed, Schaefer (2022a, 2022b) states that virtual exchange is a valuable opportunity for practicing English.

Excerpt 6 below, taken from the experience report, describes Mayra’s favorable opinions of the DS activity:

I found the teacher's approach very interesting in the context of the pandemic in Higher Education, where, even though we are classmates, we don't know each other. The proposal to integrate spoken and written foreign languages in order to get to know each other briefly is really important at a time of total isolation. I believe that, more than a linguistics project, we had a moment of socializing with people who, in another context, we would be extremely close to. As for linguistics, I really liked the different method of working on content, involving computing in a playful way, working not only on writing and speaking rules, but also on conversation. (Excerpt 6 / Mayra's experience report / 14-03-2021-2021 / original in Portuguese)

It should be noted that the suspension of face-to-face school activities due to the COVID-19 pandemic took place ten months before the start of the DS activity, e.g. in January 2021. Based on what Mayra explained in Excerpt 6, it can be said that this activity offered not only an opportunity for written and oral English practice, but also for socializing in the online context with other classmates, which suggests that, before the DS activity, the students were unable to get to know each other better. In fact, from a sociocultural perspective (VYGOTSKY, 1978, 1986), Gregori-Signes (2014) argues that DS activities allow both the students and the teacher to engage in socialization processes.

The following excerpt, taken from Kaique’s experience report, highlights his opinion regarding the experience in the DS activity, as well as the presentation of his story to the participants of the project *IFC English Conversation Meetings: Intercultural Dialogue through Telecollaboration*:

Presenting the digital story to an audience was very interesting, getting feedback immediately after the presentation and being able to see the reaction of those involved was very interesting. Being able to express myself in English, seeing that I could be understood and heard by those present from different parts of the world [...] was very gratifying. I think that their acceptance of our project [...] brought us some relief, because our intention was understood and we got feedback on it both through the chat and through the voice and video channels. I think that for all the participants it was an experience that helped them to practise their English and improve their skills with a tool they weren't used to working. (*Excerpt 7 / Kaique's experience report / 14-03-2021 / original in Portuguese*)

Excerpt 7 and Excerpt 6 confirm that the DS activity provided opportunities for socialization. This is because, in addition to the presentation of the DS themselves, the English for Specific Purposes students were able to engage in intercultural contact (PHIPPS; GONZALES, 2004; SCHAEFER; HEEMANN, 2024) through the virtual exchange session, in which the students and the audience, e.g. the participants in that session, discussed aspects related to, for example, the aesthetics of the productions, the digitization process, (inter)cultural aspects and feelings aroused in both the students and the participants. Not only from Excerpt 7, but also from Excerpt 6, it can be seen that the presentation of the DS contributed, to a certain extent, to the integral formation (RAMOS, 2008, 2010; MOURA; LIMA FILHO; SILVA, 2015; NITSCHKE; PLÁCIDO; PITT, 2021) of the English for Specific Purposes students, since, according to Nitschke, Plácido and Pitt (2021, p. 42), this formation comprises a “broader perspective”¹⁸, that is, one that transcends looking exclusively at the technical knowledge of a course.

The day after the presentation of the students' DS to the participants of the extension project *IFC English Conversation Meetings: Intercultural Dialogue through Telecollaboration*, Frederica, one of the participants, shared her opinion about the project and the students' DS productions. The following three excerpts, two of them taken from the interview and one from the experience report, portray Frederica's impressions:

It's enriching! [...] this opinion thing, like different points of view on the same object, so I only have ONE... then there are SEVERAL others. (*Excerpt 8 / interview between Frederica and the researcher / 23-03-2021 / original in Portuguese*)

The participants are from all over the country or even from different parts of the globe. My favorite things about these meetings are the variety of people and the mutual respect, which provides a comfortable place to express my opinions. Honestly, I admire how English is presented: as a valuable tool to connect with different minds, and not just the grammar aspect. (*Excerpt 9 / Frederica's experience report / 22-03-2021 / original in English*)

The conversations they use in... language courses in language schools or sometimes on the internet, which is something much more artificial and you don't see it as something real and tangible, you know? but these stories in... that they told about a part of their life were really cool, you know? we were curious to know and we could see that it was something... relevant, you know? knowing how to explain something that happened in your life and that you like... so it was really cool in that sense I think the word would be relevant, the stories were relevant both for those who were listening and for those who were... for those who had already recorded them [the stories] in this case, right? (*Excerpt 10 / interview between Frederica and the researcher / 23-03-2021 / original in Portuguese*)

¹⁸ Original quote: “uma perspectiva mais ampla”.

Excerpts 8 and 9 show that, due to her participation in the extension project, in which various (inter)cultural topics such as countries, stereotypes and environmental issues were discussed, Frederica came across different perspectives. Her discourse also points out that this experience allowed her to develop a growing awareness of cultural differences (LIDDICOAT; SCARINO, 2013; SCHAEFER; HEEMANN, 2024; SCHAEFER, 2024b). In addition, Frederica's statement that the experience proved to be enriching is in line with Phipps and Gonzales (2004), for whom, through dialog with "the other", it is possible to lead students "to understand the complexity of the experience of others to enrich their own" (p. 3). Excerpt 10 demonstrates how the DS activity was "real" and relevant to the students' lives. Frederica's perception is in keeping with Castañeda (2013), in the sense that, in her study, the students communicated "in an expressive manner and engaged in real-world communication" (p. 56).

7 FINAL CONSIDERATIONS

The objective of this study was to discuss how a digital storytelling activity facilitated the learning of English at Instituto Federal Catarinense. Data analysis revealed that the activity allowed the following opportunities, which played a relevant role in students' English learning: (a) *overcoming challenges and transformation* and (b) *socialization among students*. Opportunities for *overcoming challenges and transformation* because students, despite the challenges that arose, were able, through the teacher's mediation, to include multiple technological tools to digitize their stories. Opportunities for *socialization among students*, in turn, due to the fact that there was socialization and integration, in the online modality, not only among students of the English for Specific Purposes course, but also between them and the participants of the virtual exchange session. Furthermore, through intercultural contact (SCHAEFER; HEEMANN, 2024), students and the audience, in the virtual exchange session, were able to address different issues related to the DS created by the students.

Based on the outcomes, it is possible to state that the application of DS activities and projects involving virtual exchange are an appropriate means for students willing not only to learn English, but also to engage in interactions with people from other languages and cultures. Furthermore, as the data analysis from our study revealed, virtual exchange has the potential to contribute to the development of the integral education (RAMOS, 2008, 2010; MOURA; LIMA FILHO; SILVA, 2015; NITSCHKE; PLÁCIDO; PITT, 2021) of students.

The Digital Education Action Plan¹⁹ (2021-2027) (EUROPEAN COMMISSION, 2020) highlights that education is essential for innovation, personal advancement, economic development and social cohesion, aspects on which changes resulting from the evolution of digital technologies have had a considerable impact. In this scenario, DS activities and virtual exchange, in addition to having the potential to contribute to the quality of teaching and learning in general, can provide English learners with intercultural encounters, preparing them to interact respectfully and successfully with people from other languages and cultures.

In conclusion, virtual exchange should be deemed as "an integral part of foreign language education" (O'DOWD, 2021, p. 14), the importance of which is evidenced by a large body of research in the area (e.g., HELM, 2016; O'DOWD, 2019, 2021; SCHAEFER, 2022a, 2022b; SCHAEFER; HEEMANN, 2024; SCHAEFER; MANCHADO-NIETO, 2025). As such, not only virtual exchange sessions, but also DS activities, are at the service of teachers and researchers, who can mediate, in the teaching-learning of English, the encounter between students, languages and cultures, incorporating their pedagogical action with real practices and contacts. In view of this, we understand that learning English through digital technologies must be linked to technical-professional elements related to the scope of Professional and Technological Education, which is why we recommend that future actions create opportune conditions for the development of students' integral education.

¹⁹ Plano de Ação da Educação Digital.

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