

TELLING STORIES, ARTICULATING MATHEMATICS: AN EXPERIENCE WITH  
STORYTELLING

*CONTANDO HISTÓRIAS, ARTICULANDO A MATEMÁTICA: UMA EXPERIÊNCIA  
COM O STORYTELLING*

*CONTANDO HISTORIAS, ARTICULANDO LAS MATEMÁTICAS: UNA  
EXPERIENCIA CON STORYTELLING*



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**ABSTRACT:** This experience report presents the process of producing digital narratives addressing mathematical content, carried out by students of the Mathematics Degree in the Professional Practice course. The methodology was based on the following steps: conversation with students and presentation of types of video; choice and research of the video production theme; script development; scene recording and editing, and video dissemination. Furthermore, the narratives addressed Storytelling elements: characters, conflicts, and lessons. The themes addressed learning difficulties of Basic Education students, identified by the students of the course, namely: arithmetic progression; division of integers and decimals; equivalence, the addition of fractions, and the meaning of fraction as part-whole. The production of narratives provided a practical experience in developing audiovisual teaching materials. The narratives proved to be resources with the potential to explore contextualized situations and playful elements in mathematics learning.

**KEYWORDS:** Digital narratives. Mathematics. Teacher education. Audiovisual resources. Videos.

**RESUMO:** Este relato de experiência apresenta o processo de produção de narrativas digitais abordando conteúdos matemáticos, realizado por estudantes da Licenciatura em Matemática na disciplina de Prática Profissional. A metodologia baseou-se nas seguintes etapas: conversa com os alunos e apresentação de tipos de vídeo; escolha e pesquisa do tema de produção do vídeo; elaboração do roteiro; gravação e edição das cenas e divulgação dos vídeos. Além disso, as narrativas abordavam elementos do Storytelling: personagens, conflitos e ensinamentos. As temáticas versaram sobre dificuldades de aprendizagem dos estudantes da Educação Básica, identificadas pelos discentes da disciplina, quais sejam: progressão aritmética; divisão de números inteiros e decimais; equivalência, adição de frações e o significado de fração como parte-todo. A produção das narrativas propiciou uma experiência prática de elaboração de materiais didáticos audiovisuais. As narrativas mostraram-se como recursos com potencial para explorar situações contextualizadas e elementos lúdicos na aprendizagem de matemática.

**PALAVRAS-CHAVE:** Narrativas digitais. Matemática. Formação de professores. Recursos audiovisuais. Vídeos.

**RESUMEN:** Este relato de experiencia presenta el proceso de producción de narrativas digitales abordando contenidos matemáticos, realizado por estudiantes de la Licenciatura en Matemáticas en la asignatura de Práctica Profesional. La metodología se basó en las siguientes etapas: conversación con los alumnos y presentación de tipos de video; elección e investigación del tema de producción del video; elaboración del guion; grabación y edición de las escenas y divulgación de los videos. Además, las narrativas abordaban elementos del Storytelling: personajes, conflictos y enseñanzas. Las temáticas versaron sobre dificultades de aprendizaje de los estudiantes de Educación Básica, identificadas por los discentes de la asignatura, a saber: progresión aritmética; división de números enteros y decimales; equivalencia, adición de fracciones y el significado de fracción como parte-todo. La producción de las narrativas propició una experiencia práctica de elaboración de materiales didáticos audiovisuales. Las narrativas se mostraron como recursos con potencial para explorar situaciones contextualizadas y elementos lúdicos en el aprendizaje de las matemáticas.

**PALABRAS CLAVE:** Narrativas digitales. Matemáticas. Formación de profesores. Recursos audiovisuales. Vídeos.

## Introduction

The use of audiovisual technologies has proven to be a relevant resource for contemporary Mathematics education, as evidenced by the research of Oechsler (2015), Amaral (2013), and Santos (2014).

In this context, video production emerges as a pedagogical approach with the potential to transform the classroom and Mathematics education itself, positioning students as active participants in the learning process. Through these videos, students communicate mathematical topics selected according to their interests (Borba; Souto; Canedo, 2022).

Oechsler (2015) conducted a literature review of Mathematics education studies that addressed the use of videos. This involved searching for theses and dissertations in the CAPES thesis database. The results of this research were further developed by Borba and Oechsler (2018), who expanded their search to national and international Mathematics education journals. They identified three groups for video use: “(i) recording classes, (ii) video as a teaching resource, and (iii) video production by both students and teachers” (Borba; Oechsler, 2018, p. 395, our translation).

Following the third group described by the authors, which is video production by students, this report presents the process of producing digital narratives that address mathematical content created by students from the Mathematics Teaching degree program in the Professional Practice course. This curriculum component covers the use of Digital Information and Communication Technologies in Mathematics education.

These audiovisual materials were produced based on Storytelling, which refers to the mental construction, derived from the memories and imaginations that each individual has about a particular story, and the version of the story expressed by a narrator, which can be in the form of text, script, or account, and is later realized through performances, filming, or publications (Palacios; Terenzzo, 2016). This form of communication involves the following elements: character, conflict, and teaching.

The production of the narratives followed the stages proposed by Oechsler, Fontes, and Borba (2017), which included presenting inspiring videos, selecting the theme, researching the content, drafting the script, filming, editing, and dissemination. Additionally, efforts were made to incorporate Storytelling elements, including characters, conflicts, and mathematical teachings (Oliveira, 2020).

This report presents the digital narratives produced, considering these elements, and how mathematical knowledge was addressed within these contexts. It is hoped that this experience will contribute to the use of videos in Mathematics education.

## Storytelling in the Educational Context

Storytelling is used for the effective transmission of messages. This communication strategy is applied in both business and educational contexts. In the business field, it assists executives in optimizing attributes such as leadership, engagement, and the dissemination of culture and values (Palacios; Terenzzo, 2016). In education, Tenório *et al.* (2020) assert that teachers and students can interact through stories, metaphors, and narratives, engaging individuals by activating emotions and imagination.

From this perspective, a study conducted by Oliveira (2020) aimed to analyze the concepts and foundations of Storytelling to assess its potential as a teaching method. Based on this study, a guide was developed for using Storytelling in educational settings, intended for teachers interested in creating narratives with disciplinary content.

The guide on how to apply Storytelling in education outlines essential components for structuring a plot. One fundamental element is the central figure or protagonist, with whom students should initially identify. Another aspect is the introduction of a challenge or obstacle that the main character needs to overcome, with its resolution linked to the knowledge the teacher aims to address in the classroom. Finally, the moral or lesson derived from this narrative journey represents the learning acquired by the protagonist, fostering the student's reflection on specific content.

Studies suggest that Storytelling can capture attention, engage emotions, increase interest, and motivate students to learn. This is because narratives stimulate imagination, allow for the establishment of connections, and give meaning to the content being studied.

Moura (2022) created digital narratives involving mathematical content from the work practices of members of solidarity economic enterprises. These educational materials proved to be potentially effective resources for learning mathematical content related to self-management, stimulating critical thinking and behavior changes in response to situations within this context.

Cleophas and Bedin (2023) investigated the effectiveness of Storytelling as a tool for promoting learning about the history of chemistry. Students in initial teacher training in the Chemistry Teaching program produced videos about the history of chemistry in the 17th and

18th centuries and their scientists. The results indicate that this methodological approach aided in the construction of knowledge about the history of chemistry and may motivate future teachers to learn and apply this method in their teaching practices.

Due to technological advancements, Storytelling can now be performed using digital resources that combine visual and auditory elements. Platforms such as Storybird, used by Maddalena and Santos (2019), and VideoScribe, used by Moura (2022), can assist in the editing process.

### **The Process of Producing Digital Narratives**

The Professional Practice course is part of the curriculum for the Mathematics Teaching program at the University of Pernambuco. Its syllabus covers the use of Digital Information and Communication Technologies in Mathematics education. The activities developed in this curricular component are part of a Teaching Project approved with funding through an internal institutional call and a Research Project approved by the ethics committee, both coordinated by the author of this report.

The course focused on producing educational videos to teach essential educational mathematical content using storytelling. The methodological approach followed the steps described by Oechsler, Fontes, and Borba (2017): discussions with students and presentation of video types; selection and research of the video production theme; script development; filming and editing of scenes; and, finally, video dissemination.

In discussions with the students, the authors emphasize the importance of presenting various types of videos with mathematical content, such as video lectures, narrated videos, animations, manipulative materials, dramatizations, and screen captures, to inspire their productions.

After presenting inspirational videos, it is crucial for students, divided into groups, to choose a mathematical topic to research and produce a video. The research involves exploring definitions, applications, and exercises to determine how to approach the content in the video, what type of video to produce, and what message to convey. Students must define the argument, characters, and narrative, and consider from the outset the format, whether it will include recordings, animations, artistic expression, or technological resources.

The next step is scriptwriting, which involves drafting the scenes with the identification of visual and auditory elements (Seabra, 2016). At this stage, it is essential to detail these elements as thoroughly as possible, as this facilitates the development of the subsequent stage.

Various equipment can be used to record the videos, such as cell phones, tablets, digital cameras, camcorders, and computers. The choice depends on the type of recording intended and the available resources. Image quality varies with the equipment, but recording techniques can improve it. In this production process, students have the opportunity to express and communicate in their language, revealing their perspectives and opinions on the covered content.

The following are the stages of video production, as described by Oechsler, Fontes, and Borba (2017): discussion with students and presentation of video types; selection and research of the video production topic; scriptwriting; filming and editing of scenes; and, finally, video dissemination.

### **Discussion with Students and Presentation of Video Types**

At this stage, a theoretical discussion regarding the use of videos in educational processes took place, including studies by Borba, Souto, and Canedo Junior (2022) and Moura (2022). Several types of videos were presented to the students, including video lectures and animated videos created using animation platforms, with a demonstration of the YouTube channel titled Nespól, which showcases various animation models and platforms for creating these videos.

Additionally, the concept of Storytelling was discussed through Oliveira's (2020) research. The vídeo "*Formação do preço de venda de um produto*"<sup>2</sup>, from Moura's (2022) research, was shown. With this example, students identified the character, the conflict, and the lesson of the story. These studies informed the production of digital narratives.

### **Selection of the Video Production Topic**

The Professional Practice course is offered in the 7th semester of the Mathematics Teaching degree program. Of the 15 students enrolled in the course, some were part of the Pedagogical Residency Program, while others were taking the Supervised Internship course,

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<sup>2</sup> Formation of the Selling Price of a Product.

which provided them with experience in Basic Education teaching. A session was held to discuss the difficulties in learning mathematical content that they had identified in Basic Education students.

In this discussion, several skills were highlighted: understanding the meanings of terms in an arithmetic progression; performing division with whole and decimal numbers; and understanding the meanings of fractions.

### **Scriptwriting**

Based on the identified themes, the class was divided into groups to begin the scriptwriting for each video. Students were instructed to create narratives that incorporated the elements proposed by Oliveira (2020). Additionally, they were advised to include moments of questioning about the situation addressed in their stories to engage the viewer's attention.

At this stage, some groups did not follow the proposed guidelines, which were to develop a story featuring characters with a conflict involving mathematical content; instead, explanatory video lectures were created. Suggestions for improving the stories were exchanged, both by the students and the course instructor. Changes were recommended in the approach to explaining mathematical content to make the narrative more understandable for viewers.

### **Filming and Editing the Scenes**

VideoScribe is an online and locally installed program that creates animated videos in the style of a hand drawing or writing and offers a vast image library. Capcut is a mobile video editor with an intuitive interface and various options for editing and customizing videos, available for free.

The video production took place in the university's computer lab, where students used either computers or their cell phones. It is important to note that some difficulties were reported during this process.

On the VideoScribe platform, some functions were only discovered when the videos were near completion, and the online version limits scene downloads to just 10 operations per day. Since the videos had more than 10 scenes, this issue extended the construction time.

## Video Distribution

After completing the videos, each group presented their narrative to a Basic Education class, where some members of the group were already engaged in activities related to the Supervised Internship or the Pedagogical Residency.

The students were instructed to conduct this session interactively; thus, the narrative was presented with pauses for discussions about the mathematical content covered. The results were recorded through photos and students' journals, which supported the writing of the experience report presented at a seminar in the Professional Practice course. It is worth noting that some of these videos were published and are available in Torres *et al.* (2023) and Oliveira *et al.* (2023).

The narratives are accessible on the website showcasing the teaching, research, and extension work developed in the Mathematics Teaching degree program at the university, allowing Basic Education teachers to use these materials in their classes.

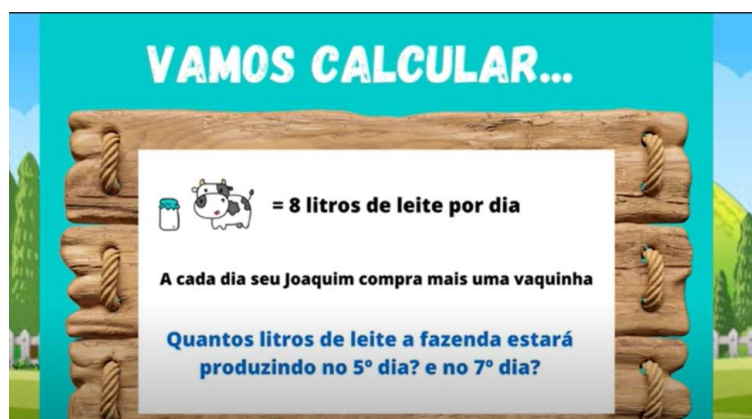
## Understanding the Narratives: Elements and Integration of Mathematical Concepts

This section will present three narratives, describing the characters, conflict, and lesson as proposed by Oliveira (2020), and the mathematical knowledge addressed.

The narrative titled "*Fazenda Mimosa*" aimed to teach the concept of arithmetic progression (AP) through the situation of a farmer who needs to calculate his daily milk production. The story's character is Mr. Joaquim, the farmer. He has a cow that produces an average of 8 liters of milk per day. He wants to acquire one cow per day, each producing an average of 8 liters of milk daily. Mr. Joaquim wants to know his total milk production over the course of the month. This presents the following conflict to the viewer (Figure 1).



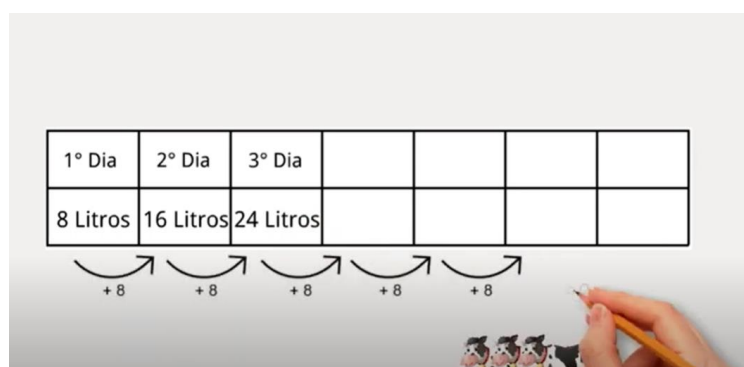
**Figure 1 - Initial Conflict of the Narrative**



Source: Video of the narrative “*Fazenda Mimosa.*”

The intention is for the viewer to develop their own resolution strategies. At this point, the video must be paused. Following this, the solution strategy is presented (Figure 2).

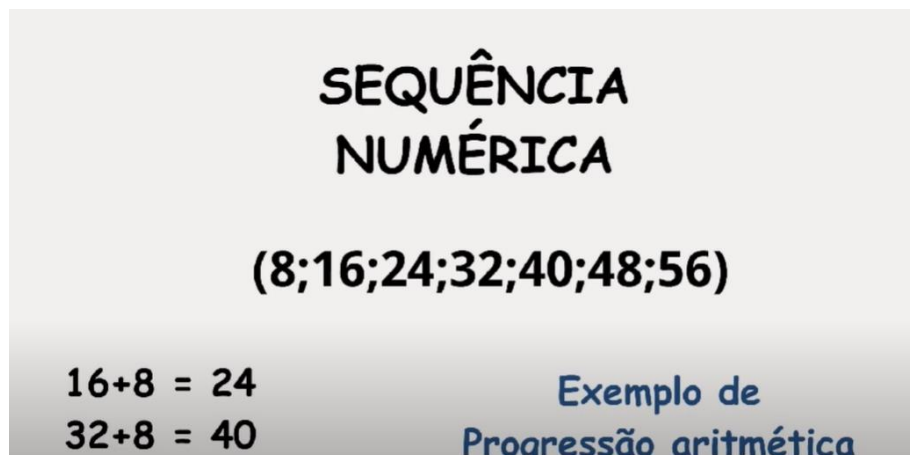
**Figure 2 - Resolution of the Initial Conflict**



Source: Video of the narrative “*Fazenda Mimosa.*”

Using data presented in a table, the visual aids aim to help the viewer understand that milk production increases by 8 liters each day. Next, the sequence representing the milk production each day up to the seventh day is shown, where each term equals the previous term plus 8 units, thus exemplifying an arithmetic progression (Figure 3).

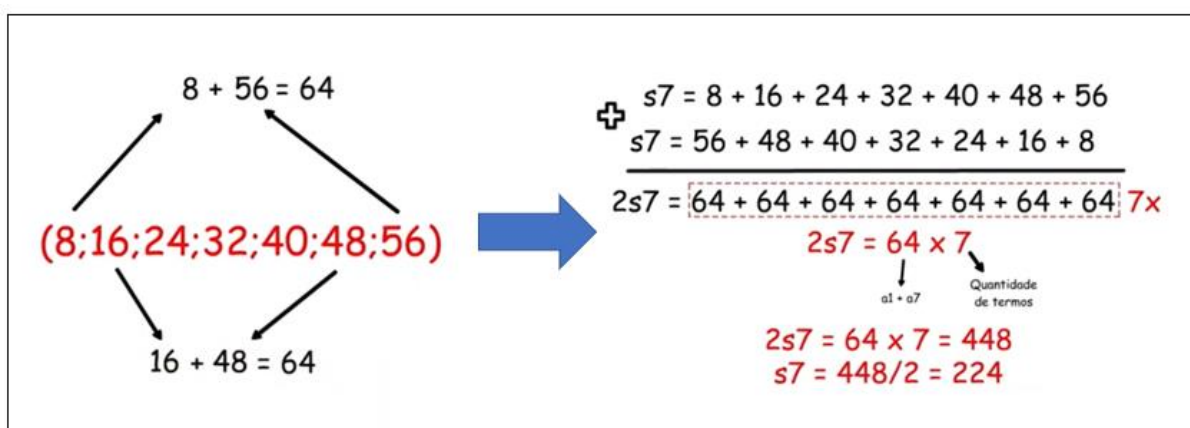
Figure 3 - Numerical Sequence Representing an Arithmetic Progression



Source: Video of the narrative “Fazenda Mimosa.”

A new conflict is then introduced in the narrative: Mr. Joaquim needs to calculate the milk production for the entire month. At this point, the video is paused to allow viewers to propose their methods for performing this calculation. Initially, the reasoning for calculating the total milk production for the first seven days is presented (Figure 4).

Figure 4 - Total Production of Milk for the First Seven Days



Source: Video of the narrative “Fazenda Mimosa.”

These sequences of images presented in the video show that the sum of the first term and the last term is 64, the sum of the second term and the second-to-last term is also 64, and the middle term is half of 64. Therefore, the calculations will be arranged by summing the seven

terms in ascending and descending order, as shown in Figure 4. In other words, twice the sum of the seven terms will equal the sum of seven segments of the number 64.

Next, the generalization of the sum in terms of an arithmetic progression is introduced. To calculate the sum of in terms, one simply adds the first and last terms, multiplied by the number of terms, and divides by 2 (Figure 5).

**Figure 5** - Generalization of the Sum of in Terms of an Arithmetic Progression

**GENERALIZAÇÃO**

$$s_n = \frac{(a_1 + a_n)n}{2}$$

Soma dos n termos

Source: Video of the narrative “*Fazenda Mimososa*.”

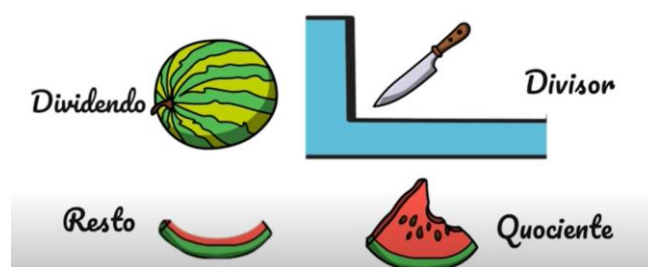
The mathematical lesson provided by this narrative focuses on the concept of arithmetic progression and the generalization of the sum in terms. By following the situation experienced by the character Joaquim, the viewer is led to reason about the regularity in the progression of daily milk production. Organizing this data in a table and then in a numerical sequence makes the constant increment pattern between terms evident, which is the expected difference in the arithmetic progression.

From the visual representation of the sum of the terms, the algebraic expression is introduced in an inductive manner, allowing for the calculation of the sum of any number of terms in an arithmetic progression. That is, the viewer is encouraged to understand that it is sufficient to add the first and last terms, multiply by half the number of terms, and thus generalize the calculation without the need to sum all terms individually.

Therefore, this is the main teaching provided by the narrative: to introduce the generalization of the sum of the terms of an arithmetic progression through a contextualized problem situation and stimulate mathematical reasoning visually and inductively. It is learned that mathematical generalizations can be perceived from the observation of regularities.

The narrative titled “*Conversando sobre a divisão: matemática e as figurinhas da copa do mundo*”<sup>3</sup> begins by presenting the elements of division using an analogy with slicing a watermelon: the watermelon represents the dividend, the knife is the divisor, the slice is the quotient, and the rind is the remainder (Figure 6).

**Figure 6 - Representation of the Elements of Division**



Source: Video of the narrative “Conversing About Division: Mathematics and World Cup Stickers”.

The story then follows Davi and Miguel, two brothers who collect World Cup album stickers. The initial conflict is presented: Their mother buys 18 stickers to distribute equally between the brothers. How many packets will each of them receive? (Figure 7).

**Figure 7 - Initial Conflict**

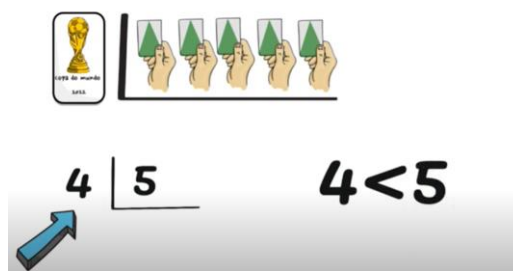


Source: Video from the narrative "Talking About Division: Mathematics and World Cup Stickers."

The solution is presented visually, with each pack being separated alternately, resulting in 9 packs for each person. Next, a new conflict arises: the question is now the price of each sticker, given that a pack of 5 stickers costs 4 reais (Figure 8).

<sup>3</sup> Conversing About Division: Mathematics and World Cup Stickers.

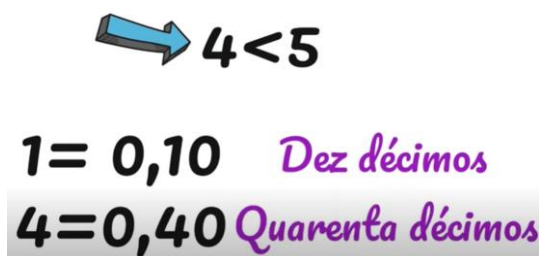
Figure 8 - Second Conflict



Source: Video from the narrative "Talking About Division: Mathematics and World Cup Stickers."

In this new conflict, the dividend is smaller than the divisor, requiring conversion of the unit into tenths (Figure 9).

Figure 9 - Third Conflict



Source: Video from the narrative "Talking About Division: Mathematics and World Cup Stickers."

The new conflict that the viewer must resolve is how to perform the division of 40 tenths by 5, which results in 8 tenths, corresponding to 80 cents.

The primary lesson provided by this narrative is to introduce the concept and the step-by-step process of division in two distinct situations: with whole numbers and with decimal numbers. Through the scenario of dividing stickers between the siblings, the viewer first learns about division as an equitable distribution. The concrete example with the stickers aids in understanding the meaning of dividend, divisor, quotient, and remainder.

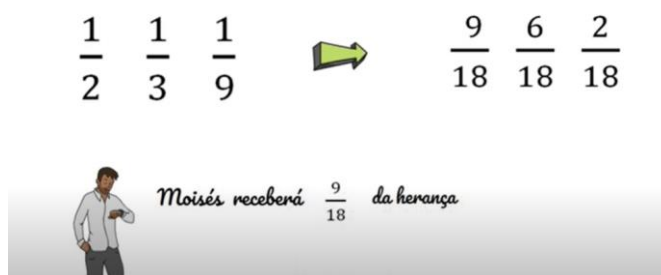
Subsequently, by introducing the challenge of determining the unit price of the stickers, it is necessary to use decimal representations to facilitate the division. The viewer is then encouraged to reason about converting units into tenths.

Thus, the narrative promotes a comprehensive understanding of the concept and operational process behind the division, avoiding the mechanical use of the algorithm. By

starting with examples and situations familiar to the students, learning about division is facilitated.

The narrative titled “*A difícil divisão de uma herança*”<sup>4</sup>, introduces the character Amadeu, a collector of vintage cars, who bequeathed 35 cars to be divided among his three children: the oldest will receive half, the middle child will receive a third, and the youngest will receive a ninth. The initial conflict of the story is determining which of the three children will receive the largest portion of the inheritance. The solution proposed involves using equivalent fractions to compare the given fractions (Figure 10).

**Figure 10** - Initial Conflict of the Narrative “The Difficult Division of an Inheritance”



Source: Video from the narrative “The Difficult Division of an Inheritance.”

To compare the fractions, equivalent fractions with a common denominator are obtained, specifically a common multiple of 2, 3, and 9, which is 18. Thus, Moses will receive the largest portion of the inheritance, that is, 9 parts out of a total of 18. Another conflict arises: “Is it possible to divide the 35 cars among the siblings without selling them?” The answer given is no, because 35 is not divisible by 2, 3, or 9. At this point, a new conflict is introduced: how to divide the 35 cars? Uncle Fonseca offers his own car, making a total of 36 cars. Now the division can be done exactly, leaving 2 cars. A new conflict is presented: The three siblings and Uncle Fonseca all benefited from this new arrangement, how is this possible?

The narrative explains that the sum of the fractions does not equal 1, indicating that it does not represent the sum of all parts of the inheritance (Figure 11).

<sup>4</sup> The Difficult Division of an Inheritance.

**Figure 11** - Second Conflict of the Narrative “The Difficult Division of an Inheritance”

$$\frac{1}{2} + \frac{1}{3} + \frac{1}{9} = \frac{17}{18} = \frac{34}{36}$$

Source: Video from the narrative “The Difficult Division of an Inheritance.”

Thus, there will be one part of the inheritance left, specifically 1/18 of the inheritance. With 36 cars now, 1/18 corresponds to 2 cars. One of these cars already belonged to Uncle Fonseca, and he suggests keeping the remaining car for himself as it resolves the problem for the siblings.

The primary lesson provided by this narrative is to deepen the conceptual understanding of fractions and their equivalences through a proportional division problem. By presenting the need to divide the inheritance of vintage cars among three siblings in the proportions of half, a third, and a ninth, the narrative naturally explores the concept of equivalent fractions. The viewer is encouraged to use this concept to compare the parts of the inheritance.

Additionally, the issue created by the initial number of cars (35) not allowing an exact division among the assigned fractions reinforces the idea of fractions as parts of a whole divided into equal parts. By adding one more car to facilitate the division, it becomes evident that the total of the fractions does not complete the whole (sum different from 1).

Therefore, in a contextualized manner, the narrative develops the viewer’s mathematical reasoning regarding fractional representation, the equivalence of fractions, the addition of fractions, and the meaning of a fraction as part-to-whole.

### **Final considerations**

This experiential report presented the process of producing digital narratives addressing mathematical content, carried out by students from the Mathematics Teaching Degree program in the Professional Practice course.

The themes covered in the digital narratives dealt with learning difficulties identified by students during the Supervised Internship and Pedagogical Residency courses in the following

content areas: arithmetic progression; division of integers and decimals; equivalence, addition of fractions, and the meaning of fractions as part-to-whole.

The production of these narratives provided future teachers with practical experience in creating audiovisual teaching materials. Additionally, it required research into teaching strategies for mathematical content, contributing to their professional development.

The presentation of the narratives in Basic Education schools fostered reflection among students on the use of technology in the teaching and learning process of mathematics. These insights were documented in experience reports written by the students, which were published in the studies of Torres et al. (2023) and Oliveira et al. (2023). The digital narratives proved to be potentially motivating resources, allowing for the exploration of contextualized situations and playful elements in the learning of mathematical concepts.

It is hoped that this report will inspire other mathematics teachers to explore the methodology of producing digital narratives in their pedagogical practices as a means of integrating digital technologies.

## REFERENCES

- AMARAL, R. B. Vídeo na Sala de Aula de Matemática: Que Possibilidades? **Educação Matemática em Revista**, n. 40, p. 38-46, 2013. Available at: <http://www.sbem.com.br/revista/index.php/emr/article/view/298/pdf>. Accessed in: 14 June 2023.
- BORBA, M. C.; SOLTO, D. L. P.; CANEDO JUNIOR, N. R. **Vídeos na educação matemática**: Paulo Freire e a quinta fase das tecnologias digitais. Belo Horizonte, MG: Autêntica, 2022.
- BORBA, M. C.; OECHSLER, V. Tecnologias na educação: o uso dos vídeos em sala de aula. **Revista Brasileira de Ensino de Ciência e Tecnologia**, Ponta Grossa, v. 11, n. 2, p. 181-213, 2018. Available at: <https://periodicos.utfpr.edu.br/rbect/article/view/8434>. Accessed in: 01 June 2022.
- CLEOPHAS, M. G.; BEDIN, E. Storytelling como Ferramenta Educativa Eficaz no Ensino de História da Química. **Alexandria**, v. 16, n. 2, p. 355-382, 2023. DOI: <https://doi.org/10.5007/1982-5153.2023.e90867>. Available at: <https://periodicos.ufsc.br/index.php/alexandria/article/view/90867/54627>. Accessed in: 20 Dec. 2023.
- MADDALENA, T. L. SANTOS, E. Digital Storytelling na formação de professores. **Revista Educação e Cultura Contemporânea**, v. 16, n. 43, p. 306- 328, 2019. Available at: <https://mestradoedoutoradoestacio.periodicoscientificos.com.br/index.php/reeduc/article/view/5812/47965995>. Accessed in: 15 May 2023.



MOURA, C. S. R. **Tecnologias digitais e a etnomatemática no contexto de empreendimentos econômicos solidários**. Orientador: Jorge Luis Cavalcanti Ramos. 2022. 195 f. Tese (Doutorado em Agroecologia e Desenvolvimento Territorial) - Universidade Federal do Vale do São Francisco, Juazeiro, BA, 2022.

OECHSLER, V. Vídeos e Educação Matemática: um olhar para dissertações e teses. *In*: ENCONTRO BRASILEIRO DE ESTUDANTES DE PÓS-GRADUAÇÃO EM EDUCAÇÃO MATEMÁTICA, 19., 2015, Juiz de Fora. **Anais [...]**. Juiz de Fora: UFJF, 2015. p. 1-12.

OECHSLER, V.; FONTES, B. C.; BORBA, M. C. Etapas da produção de vídeos por alunos da educação básica: uma experiência na aula de matemática. **Revista Brasileira de Educação Básica**, v. 2, n. 1, p. 71–80, 2017. Available at: <https://rbeducacaobasica.com.br/2017/02/13/etapas-da-producao-de-videos-por-alunos-da-educacao-basica-uma-experiencia-na-aula-de-matematica/>. Accessed in: 15 Oct. 2023.

OLIVEIRA, D. S. L. **Storytelling como estratégia de ensino no contexto da educação profissional e tecnológica**. Orientadora: Ana Sara Castaman. 2020. 118 f. Dissertação (Mestrado Profissional em Educação Profissional e Tecnológica) - Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul, Porto Alegre, RS, 2020.

OLIVEIRA, G. H.; VELOSO, L. M.; SILVA, A.D.; MOURA, C. S. R.; PEREIRA, L. B. D. Utilização do Storytelling na aprendizagem dos Números Racionais: Um Relato de Experiência. *In*: ENCONTRO DE EDUCAÇÃO MATEMÁTICA DO VALE DO SÃO FRANCISCO, 4, 2023. **Anais [...]**. Petrolina, 2023. p. 428-439.

PALACIOS, F.; TEREZZO, M. **O Guia Completo do Storytelling**. Rio de Janeiro: Alta Books, 2016.

SANTOS, M. P. Ensinando e Aprendendo Geometria Plana Através de Vídeo Educativo: Algumas Sugestões de Atividades Didáticas para Aulas de Matemática no Ensino Médio. **Revista Brasileira de Educação Científica e Tecnológica**, v. 7, n. 3, p. 27-43, 2014. Available at: <https://periodicos.utfpr.edu.br/rbect/article/view/1518>. Accessed in: 01 June 2023.

SEABRA, C. **Pequeno guia de microvídeos**. São Paulo, SP: Oficina Digital, 2016.

TORRES, F.A.; BOMFIM, Y.R.S.; DIAS, A.; MOURA, C.S.R.; PEREIRA, L.B.D. Conversando sobre divisão: Matemática e figurinhas da copa do mundo. *In*: SILVA, M. G.; SILVA, C.B.; MELLO, R.G. (org.). **Olhares da educação: ações, rupturas e conhecimento na construção de saberes coletivos**. Rio de Janeiro: e-publicar, 2023.

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