Developing Multiliteracies Through Digital Storytelling
A Case Study on Learners of Italian as a Foreign Language

Ilaria Compagnoni
Università Ca' Foscari Venezia, Italia

Abstract Multiliteracy approaches are based on enhancing students' agency and participation, which can be fostered by integrating digital storytelling into linguistic activities. However, literature lacks practical examples of how students can develop multiliteracies in learning Italian as a foreign language with digital storytelling. This article attempts to fill this gap by presenting the results of task-based language learning activities conducted on students of Italian as a foreign language with the digital storytelling platforms Wakelet and izi.Travel. Evidence will show how multiliteracies manifested in agency, creativity and social engagement.

Keywords Multiliteracies. Educational technologies. Task-based language learning. Digital storytelling. Italian language learning.

Summary 1 Introduction. – 2 Literature Review. – 3 Research Questions and Methodology. – 4 Analysis. – 5 Discussion. – 6 Limitations. – 7 Conclusions.

1 Introduction

The term 'multiliteracies' refers to two aspects of contemporary language use, namely variability of meaning-making in different cultural, social or domain-specific contexts and new forms of media communication (Kalantzis et al. 2012). Therefore, approaching language learning from a multiliteracies perspective implies developing students' abilities to discern differences in contextual meanings and infer, create and communicate them with increasingly multimodal tools that expand the possibilities of using the target language in social interactions and real-life contexts (Kalantzis, Cope 2009). Within the language education field, developing students' multiliteracies in classroom activities is challenged by the diversified range of abilities that learners are expected to develop. The situation is further complicated by the implementation of evolving technologies in multiliteracy approaches to language education. In fact, while it is true that technologies expand agentive possibilities and goal accomplishment, they also place challenges to the planning and delivery of activities fostering multiliteracies due to their ever-evolving features and uses (Reinders, Lakarnchua 2014). However, as technologies increasingly permeate human communities, developing multiliteracies can help learners fulfil their social and professional objectives through the use of language and digital skills. Therefore, it is necessary to provide educators with replicable examples of activities and methodological indications fostering multiliteracy development amongst language students. However, despite the amount of literature on the topic of multiliteracies, there is a lack of practical examples of didactic implementations of language students' multiliteracy development, especially with reference to teaching Italian as a foreign language (FL). Moreover, few studies have documented the use of digital storytelling to foster multiliteracies development in language learning, and even less so with specific reference to Italian. Drawing from these considerations, the present study investigates the use of digital storytelling as a means of developing multiliteracies amongst students of Italian as a FL. Specifically, it attempts to address the effects of the use of technologies for digital storytelling on the development of multiliteracies in a group of learners of Italian selected as participants. To address this enquiry, after an initial literature review, the study will present the results of task-based linguistic interventions conducted with the use of the digital storytelling platforms Wakelet and izi.Travel to support the development of participants' multiliteracies. Results suggest that the use of digital storytelling fosters the development of multiliteracies by stimulating students' enjoyment, heightening agentive possibilities and content personalisation. It also prompts considerations on the use of digital storytelling in task-based language learning methodologies, validating the usefulness of this tool for foreign language acquisition.

2 Literature Review

Meaning-making is the modality through which individuals exercise their agency in the world as they are involved in a constant process of interpreting meanings from their social and material environments (Kress 2009). By using language as a cognitive tool, human beings constantly redesign their outputs in a lifelong process of skill acquisition known as literacy (Kalantzis, Cope 2015). Since literacy development has traditionally been remitted to institutionalised education, methods of language instruction adopted until the first half of the nineteenth century were highly teacher-focused and had memorisation of linguistic patterns as their main learning objective (Celce-Mucia 2012; Renau 2016). However, in recent years attention has been given to student-centred, context-based and multimodal language learning methods which have caused profound changes in approaches to language education. Effects include variations of language education methods towards task and content-based learning, as well as variations in teacher-student relationships. In fact, while educators acquire the role of learning facilitators, students are the focus of a personalised, requirement-based language learning. Through these changes, an important role is played by evolving technologies, which are increasingly being adopted in language education. The greatest benefit of this incorporation is the enhanced capability of individuals to use multiple communication channels expanding interactional and agentive possibilities in the target language (Kukulska-Hulme et al. 2017).

With the evolution of communication affordances and social spaces, redefinitions of language education modalities are also taking place. In fact, language learning is becoming increasingly ubiquitous, accessible and deliverable via mobile technologies. One of the advantages of using these tools in language learning consists in the application of daily technological practices to implement linguistic skills. Central to this notion of changing communication modalities through technologies is the concept of multiliteracies, in which "knowledge and meaning are 'designed' artefacts which transform language and literacy pedagogy" (Kalantzis, Cope 2008, 203). This has brought to the attention of educators the necessity of introducing instruments and practices assisting language learners in expressing their agentive capabilities through multimodal communication channels. Within this field, one of the practices that could greatly impact the development of multiliteracies is the use of digital storytelling for linguistic learning given its potential to promote creativity, activity engagement and personalised content creation.

Digital storytelling is defined as the practice of "telling stories with a mixture of digital media, including text, pictures, recorded audio narration, music and video" (Robin 2016, 18). Digital stories

are generally short, with sequences of pictures or videos accompanied by audio stimuli which require the Internet to be viewed on PCs and mobile devices (Robin, McNeil 2019; Nair, Yunus 2021). The popularity of digital storytelling applications such as WhatsApp, Instagram, Snapchat and TikTok has resulted in their implementation in language learning activities which foster the development of multiliteracies. In fact, it has been demonstrated that by integrating virtual narrations with multimedia components and web publishing technologies, digital storytelling platforms are likely to encourage students' active learning and collaboration towards content creation (Tahriri, Tous, MovahedFar 2017; Nicoli et al. 2021). From a linguistic point of view, studies have shown that the use of digital storytelling platforms can improve learners' interactions and pronunciation skills, as well as target language use outside of classroom walls (Nuraeni, Nurmalia 2020; Yang 2020; Tragant et al. 2021). Researchers have also shown that digital storytelling can foster motivation, creativity, instantaneous participation and multimodal content production and personalisation (González Arroyo 2011; Ohler 2013; Alismail 2015; Lomika, Lord 2016; Lee 2021). However, there are also gaps that the literature has failed to address so far. Firstly, investigations on specific notions of multiliteracy development amongst language students are still missing. Secondly, conducting storytelling research in foreign language education has often focused on English instead of other languages. Thirdly, considerations are missing on the use of digital storytelling applications for language education purposes not specifically built for language learning. On this matter, researchers have used applications of digital storytelling to build cohesive stories serving as language acquisition tools and benefit anyone accessing the platforms. In fact, studies have evidenced how mobile and PC-accessible digital storytelling platforms such as Wakelet and izi.Travel can contribute to enhance digital literacy and social agency (Buratti 2019; Fazzi 2021). However, attention is still missing on the specific multiliteracy skills that the use of these platforms may help students develop.

The lack of guidance from the literature on defining the methodologies fostering multiliteracies has prompted researchers to develop a framework for a language pedagogy of multiliteracy skills. In fact, as stated by Kalantzis and Cope:

> The Multiliteracies argument suggested an open ended and flexible functional grammar which assists language learners to describe language differences (cultural, subcultural, regional/ national, technical, context specific, etc.) and the multimodal channels of meaning now so important to communication. (Kalantzis, Cope 2008, 197)

For this reason, the same authors (Kalantzis, Cope 2015) have expanded on the theories of functional grammar elaborated by Halliday and Matthiessen (2004) proposing that multimodal meaning-making satisfies five purposes: ideational, interpersonal, textual, contextual and ideational. In this framework, each purpose is linked to semiotic functions that explain the organisation of worldwide languages in terms of the meanings they express (Halliday, Matthiessen 2004; Bakuuro 2017). Table **1** summarises the main features of this framework with descriptions of the parameters helping to identify multiliteracy skills in students' language activities.

Table 1 Summary of the semiotic functions identified by Kalantzis and Cope (2015, 19) with their corresponding multiliteracies

Functions	Purpose	Multiliteracies
Reference	Ideational	"To refer to things, events, processes and abstractions."
Structure	Textual	"To structure meanings in ways that are both conventional and always innovative to the extent that every remaking is uniquely moderated."
Dialogue	Interpersonal	"To dialogue with ourselves and others."
Situation	Contextual	"To situate our meanings in contexts, or at least find that they are situated by default."
Intention	Intentional	"To position and/or encounter meanings in webs of intention and agency."

While the aforementioned framework provides parametrical guidelines for the identification and development of multiliteracies amongst language students, its importance surfaces when it is applied to educational methodologies centred on meaning-making activities. A methodology of this kind is Task-Based Language Learning (TBLL), which is shown in figure **1** and proposes highly context-based activities in which students act as language agents, content creators and interactants with their peers and teachers (Willis 1996; Ellis 2003).
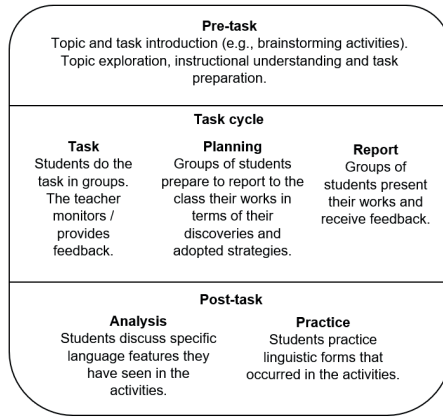
Pre-task
Topic and task introduction (e.g., brainstorming activities). Topic exploration, instructional understanding and task preparation.

Task cycle

Task	**Planning**	**Report**
Students do the task in groups. The teacher monitors / provides feedback.	Groups of students prepare to report to the class their works in terms of their discoveries and adopted strategies.	Groups of students present their works and receive feedback.

Post-task

Analysis	**Practice**
Students discuss specific language features they have seen in the activities.	Students practice linguistic forms that occurred in the activities.

Figure 1 Overview of the Task-Based Language Learning method adapted from Willis 1996, 38

Aside from task structure, task-based learning efficiency also relies on the types of instructional tools that are used in language activities. For this reason, technological means can be incorporated into this methodology as they intensify students' task-oriented behaviours and contribute to situate language activities in real-life contexts (Müller-Hartmann, Schocker-v. Ditfurth 2010; Schulze 2010; Hauck 2010; Stockwell 2010; Rossi 2016; Herraiz-Martínez 2018). With regards to research on TBLL-based digital storytelling platforms, researchers have found that the use of social networking significantly boosted students' motivation, linguistic interactions and acquisition of sector-specific vocabulary (Azlan, Zakaria, Yunus 2019; Meri-Ylan 2020). However, little research on TBLL has been conducted on the use of digital storytelling applications outside the realm of social networks. Therefore, what remains to be addressed are the effects of digital storytelling on the development of multiliteracies amongst language students involved in TBLL activities.

In the present study, the applications that have been used for multiliteracy development are izi.Travel and Wakelet. These apps are designed with social networking characteristics as they "foreground personal profile and network activity" (Reinhardt 2019, 4) and their main features involve shareability and multimedia content creation. In fact, while izi.Travel is a platform for producing digital travel guides, Wakelet allows users to create and share multimedia content (Compagnoni 2022; Buratti 2019). Both platforms are free and accessible from PCs and mobile phones but they differ in terms of content creation modalities. In fact, while elements on Wakelet can be created on smartphones and PCs, audio guides on izi.Travel can be followed, shared, commented and reviewed on mobile phones but designed on computers via the platform izi.Travel CMS. Despite some differences in structure and aims,

both applications enable the creation of engaging digital storytelling experiences. In fact, by using these applications, users enjoy creators' experiences as they unfold through videos, audio recordings, pictures and web links. Such characteristics motivated the selection of these applications as intervention tools for this study. In fact, the relative novelty of using these applications for language learning purposes and their technological affordances for creating interactive and personalised content made them suitable candidates for testing the development of students' multiliteracies with digital storytelling. Moreover, due to their practical orientation and multimodal characteristics, Wakelet and izi. Travel were integrated into task-based activities on which the multiliteracy framework outlined by Kalantzis and Cope (2015) was applied. Lastly, these applications were used in this study as tools for learning Italian as a foreign language, bridging the gap in English-focused literature on language acquisition with digital storytelling.

3 Research Questions and Methodology

To address the lack of research in didactic activities and the use of digital storytelling to foster students' multiliteracies in learning Italian as a FL, results collected from the case study examined in this paper attempt to answer the following research question:

What are the effects of digital storytelling on the development of multiliteracies in a group of students of Italian as a FL?

Data was collected during Italian language activities conducted between September and December 2021 and completed by 24 students of Italian as a FL who were attending a Master programme in Management of Cultural Assets and Activities at Ca' Foscari Challenge School in Venice. With the exception of two individuals, the majority of the participants were native French speakers with an age range from 23 to 52 years old. Following an initial placement test, the students were divided in two groups, one of 8 beginners and the other of 16 intermediate/advanced students. Evidence of students' deployment of multiliteracies through the use of the digital storytelling applications Wakelet and izi.Travel was collected through observations conducted by the researcher during the TBLL activities and a short questionnaire on students' perceptions of digital storytelling affordances, usefulness and ease of use for language learning purposes.

The activities were conducted twice a week for a total of 4 hours for each group and structured according to the 3 phases of TBLL (Willis 1996). They consisted of an initial pre-task conducted in the classroom, where students were brainstormed on the topics of travel, tourism and sustainability. They were also provided with activity instructions and

examples of presentations and tours on the platforms Wakelet and izi. Travel. Furthermore, students learned how to use Wakelet and izi.Travel CMS. As an activity goal, students created in groups a digital story about a topic they liked in the form of an interlinked sequence of pictures and hyperlinks (Wakelet) or a city tour (izi.Travel). They were given freedom of content and application choice and requested to make their stories as engaging and interactive as possible. The time allowed to conduct the presentations of their digital stories was of 10 minutes. The first part of the task cycle was conducted outside of classroom walls. In this phase, students followed interactive itineraries on the applications Wakelet and izi.Travel during tours of the city of Venice. The teacher supervised the students, providing help and suggestions when needed. Content and presentation planning took place outside school hours, with students designing their digital stories in groups. They subsequently reported their projects to their peers in the classroom. During the post-task analysis, students attended to the linguistic forms detected during the activities and revised the skills and strategies deployed to present their digital stories.

A questionnaire was administered to participants via Google Forms and embedded within the post-task cycle as part of an experience valuation. It consisted of 1 multiple choice and 2 open-ended questions on the enjoyment of technology use. Out of the 24 students registered in the course, 18 gave their responses. To formulate the survey questions, the researcher preferred to use English to ensure that all participants understood their content. Data collection procedures consisted of the researcher analysing students' interactions during the TBLL activities and their answers to the survey. As such skills unfolded, multiliteracies were categorised and arranged according to the corresponding parameters of Kalantzis and Cope's framework outlined in table **1**. Moreover, the researcher recorded, transcribed and categorised oral presentations according to patterns of multiliteracies surfacing from students' dialogues. Given that some of the activities were conducted outside of classroom walls, making it difficult for the researcher to record students' dialogues and simultaneously observe all groups, it was decided to consider the task cycle as the most representative and useful data source. Consequently, most of the examples provided in this analysis have surfaced from students' presentations and interactions during the report phase.

4 Analysis

The activity resulted in a distinction between the two groups in terms of the platforms selected to conduct the tasks. In fact, all beginners used Wakelet to perform digital storytelling, while intermediate/advanced students planned their tours on izi.Travel. Moreover, students prepared and rehearsed their presentations. Consequently, spontaneous discourse only took place when students were asked questions by the public.

In this analysis, results related to the appearance of multiliteracies have been provided as separate for each group and summarised in table **2**. On the other hand, survey results have been provided as aggregate data. Additional evidence of multiliteracies has been underlined in the transcriptions of students' presentations and provided in tables together with their translations.

Table 2 Results listing the multiliteracies that surfaced amongst students with the use of digital storytelling according to the framework of Kalantzis and Cope (2015, 19)

| Functions	Multiliteracies in beginner students (8 participants)	Multiliteracies in intermediate/advanced students (12 participants)
Reference	Reference to changes in personal life experiences. Metaphorical language used for describing objects, buildings, cities. Presenting tour contents referencing to films, books and cities (Wakelet presentation titled like the film *La Grande Bellezza*, origin of the word 'hamburger' from the city of Hamburg).	Reference to locations previously visited during out-of-class lessons, tips given to listeners on locations to visit.
Structure	Provision of personal views on content choice. Insertion of pictures, hashtags, emojis, hyperlinks, YouTube videos and Spotify tracks played with a loudspeaker.	Tour planning with personal visits to the locations mentioned in the tours. Insertion of passages taken from books/web resources. Pictures taken by the students while planning the tours.
Dialogue	Conversational and informal language and enhanced dialogue with readers. Metalinguistic observations.	Informal and conversational language. Use of informal *tu* to address the public and of vocabulary in Venetian dialect. Intrapersonal dialogue with teammates.
Situation	Indications of past events and personal habits. Situated stories in real locations. Picture descriptions. Audio stimuli provided during live presentations.	Explanations of historical anecdotes on Venice. Tour planning according to destination proximity. Stories of local folk tales connected to historical information.
Intention	Descriptions of similarities/differences between the hosting country and the ones of provenance.	Role assignment and role-play (students presented themselves as tour guides). Specifications of tour purposes. External resources provided in the activities (books/web resources).
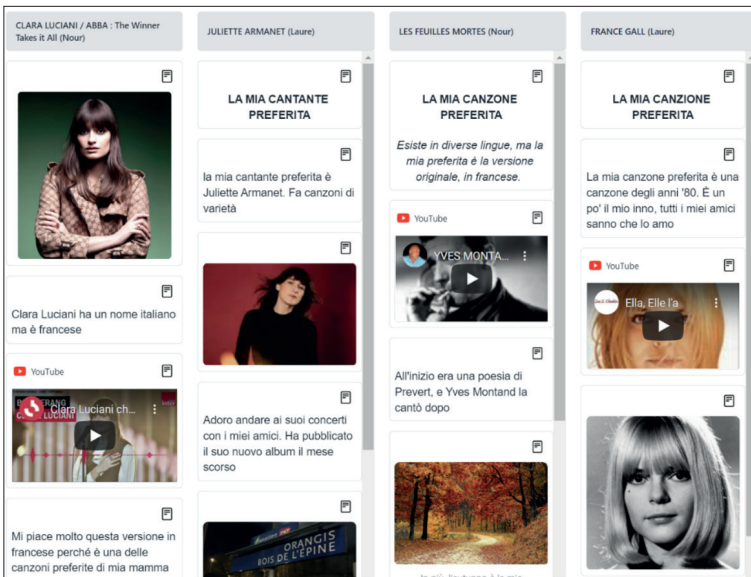
Figure 2 Screenshots of digital storytelling conducted by the students on the platform Wakelet, titled: a) *MUSICA FRANCESE i nostri artisti e le nostre canzoni francesi preferite*, b) *48 ore ad Amburgo… "Tor zur Welt" o "La porta del mundo"*. 2021
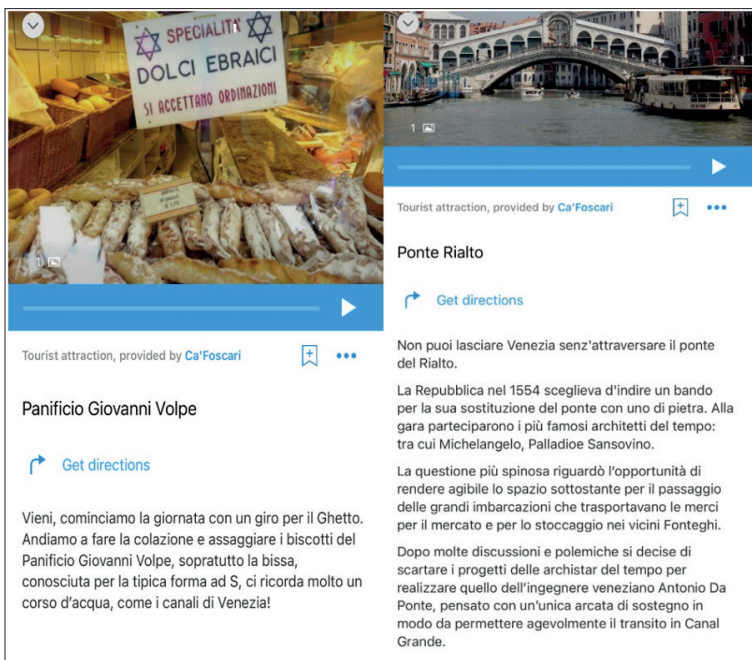
Results from the analysis of students' transcriptions were grouped according to the functions that they expressed. The functions of reference and dialogue were grouped together as they appeared in the same extracts.

Table 3 Evidence of multiliteracies surfacing as functions of reference and dialogue

Extracts from students' presentations in Italian	Translations of the extracts in English
a. Per me la musica è un inno alla vita. Ho ascoltato molto il suo album qui a Venezia e mi ricorderà Venezia per sempre.	a. For me music is a hymn to life. I have listened a lot to her album here in Venice and it will make me remember Venice forever.
b. È stato un piacere condividere con voi la nostra musica preferita e ai nostri amici italiani, se cercate concerti a Parigi chiedete a noi, ci andiamo tutte le settimane!	b. It was a pleasure to share with you our favourite songs and to our Italian friends, if you are looking for concerts in Paris to go to, ask us since we go to one every week!

Extracts from students' presentations in Italian	Translations of the extracts in English
c. "Prima di venire a Venezia, ho letto un libro, *Morte a Venezia* di Thomas Mann, e parla di un autore che si innamora di un bel ragazzo. In questo romanzo c'è una bellissima frase, 'Tu non devi sorridere così! Non bisogna sorridere così a nessuno. Io ti amo'. E io vorrei dire adesso questa frase a Venezia: 'Io ti amo; tu sei una grande bellezza!'".	c. "Before coming to Venice I read a book, *Death in Venice* by Thomas Mann, and it talks about a writer who falls in love with a handsome boy. In this novel there is a beautiful quote, 'You should not be smiling like this! You should not be smiling like this to anybody. I love you'. And I would like to say this to Venice now 'I love you; you are a great beauty!'".
d. "Non sono una fan degli hamburger ma quel giorno ne ho voluto provare uno perché l'hamburger è americano ma ha radici tedesche e il suo nome deriva dalla città di Amburgo".	d. "I am not a fan of hamburgers but that day I wanted to try one because the hamburger is American but it has German roots and its name derives from the city of Hamburg".
e. "Magari se un giorno vi trovate senza schei, potrete usare questo tour come un altro modo per visitare la città".	e. "Maybe if one day you will find yourself without money, you could use this tour as an alternative way to visit Venice".
f. "Quello che mi piace particolarmente è che il suo aspetto cambia completamente con i giochi di luce del cielo, dell'acqua e della città. Dà un'impressione di movimento".	f. "What I particularly like [of the building] is that its appearance changes completely thanks to the way light from the sky, water and the rest of the city plays with it. It gives an impression of movement".

Table 4 Multiliteracies surfacing as a function of intention

Extracts from students' presentations in Italian	Translations of the extracts in English
a. "Dobbiamo attraversare il ponte di Rialto per trovare la nostra terza guida, per l'ultima parte del tour".	a. "We need to cross Rialto bridge to find our third guide, for the last part of the tour".
b. "Se il mio collega mi aiuta a mostrare l'altra parte del tour…"	b. "If my colleague helps me to show the other part of the tour…"
c. "Adoro il cibo di Venezia, mi piacciono molto i frutti di mare come le cicale. A noi cinesi piace molto questo pesce e il suo nome in italiano è molto divertente perché è uguale a quello di insetto".	c. "I love food in Venice, I like seafood like sea cicadas. As a Chinese, we like this type of fish a lot and its name in Italian is very funny since it's the same as the one of an insect".
d. "I biscotti del panificio Giovanni Volpe, soprattutto le Bisse, sono conosciuti per la tipica forma ad esse che ci ricorda molto un corso d'acqua e canali di Venezia".	d. "The biscuits of the bakery Giovanni Volpe, especially the Bisse, are known for their traditional S shape which reminds us of rivers and Venice canals".

With regards to survey results, students were quizzed about whether they enjoyed the use of technology in language activities and were asked to motivate their answers [chart 1] [tab. 5].
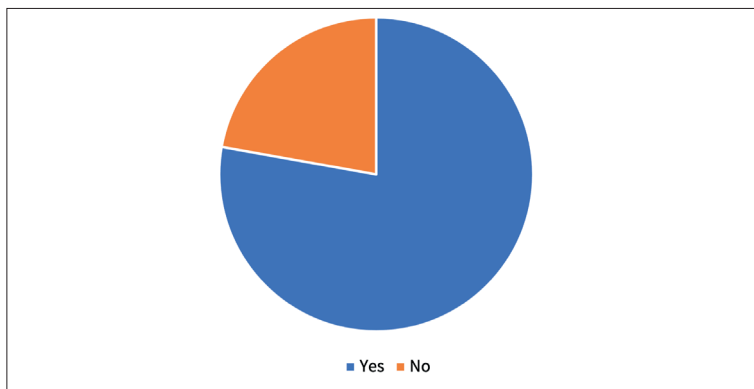

■ Yes ■ No

Chart 1 Answers to the question: "Did you like using technology during language activities?"

Table 5 Students' answers to the last two questions of the survey

If you answered YES, can you explain why?	If you answered NO, can you explain why?
a. [it was] interactive.	l. I don't like creating an account. When I don't need to create one, I am fine with it.
b. I think it is a useful tool that enables many things.	m. *Sì e no perché mi piace più parlare che sentire per esempio* (yes and no because I prefer talking than listening, for instance).
c. [it was] fun, reactive, interactive.	n. Yes and No. Yes because, it allows to change dynamics very easily during lessons, and go fast from one activity to the other. No, because my phone doesn't work well and battery dies fast. Also, sometimes I prefer activities without phones/screens directly with people.
d. Interaction is great!	
e. Using technology allows interaction and offers a wider range of tools and… it's fun!	

If you answered YES, can you explain why?	If you answered NO, can you explain why?
f. It was interesting to have more active attitude in class. However, the constraints of using technology do not make a class easy, especially with the signal at Seminario [reference to unstable Internet connection in the lecture room].	
g. It was interesting.	
h. It's interactive and can be useful but I don't like when there's too much of itwhen the learning process of the apps was not too long, it introduced variety in the ways of learning. But it could sometimes have a little of a 'gadget' aspect. Maybe have less diverse apps and use them more often…	
i. It is more dynamic and interactive.	

5 Discussion

Findings from the data suggest that the use of the digital storytelling platforms led to the appearance of multiliteracies matching the functions outlined in the framework of Kalantzis and Cope (2015, 19). In particular, the effects of the reference function can be seen in the students' high personalisation of digital stories with meaningful experiences and hobbies, enhanced by YouTube videos and photos taken by the participants as they situated and reflected on past experiences. For instance, by keeping an informal and conversational language, one participant showed a picture of herself as a child beside a more recent selfie with a musician, explaining that her childhood playmate later became her favourite singer. Additionally, since they were given the freedom to choose digital tour contents, the resulting products contained highly personal narrations of topics not directly connected to Italian culture. Examples can be found in students' descriptions of personal music preferences and travel destinations outside of Italy **[fig. 2a-b]**. Personalisation also surfaced in the use of metaphorical language, as students made analogies between natural elements and physical objects **[tab. 3, f] [tab. 4, d]**. Furthermore, the same function was also expressed through content personalisation and creativity. For instance, beginners took advantage of the application Wakelet to recognise combinations of special characters as emojis in order to personalise their digital stories **[fig. 2b]**.

The dialogue function can be identified in students' deployment of strategies to enhance interactivity and engagement with the public,

such as playing songs on Spotify during their presentations and providing recommendations of locations to visit **[tab. 3, b, e]**. Additional multiliteracies as dialogic functions appeared in intrapersonal conversations between 'past' and 'present' selves, as students reflected on changes in their behaviours and experiences **[fig. 2a-b] [tab. 3, a, d]**. Transcriptions also revealed that students utilised digital storytelling to insert metatextual references, dialoguing not only with the public but also with multimodal texts whose relationships with the presentation topics were assumed to be known by the listeners **[tab. 3, c]**. This added to the resulting dialogues an aspect of intertextuality surfacing together with intrapersonal and interpersonal conversations. Moreover, intermediate/advanced students enacted a role-play where they assumed the identities of tour guides and used formal language to present their tours **[tab. 4, a, b]**.

With regards to the function of intention, students connected the activities with their identities as they compared and contrasted cultural aspects of their daily lives in Italy with the ones of their own culture. This suggests that digital storytelling fostered self-reflection, cultural comparison and intercultural learning by encouraging multimodal meaning-making. In one instance, cultural comparisons also led to metalinguistic reflections. For instance, when comparing the eating habits of a type of seafood between China and Italy, one student was amused to find that its name corresponded to an Italian noun indicating an insect **[tab. 4, c]**. Additionally, another student compared the shape of a type of a local biscuit to the canals of Venice **[tab. 4, d]**.

Further effects of digital storytelling on developing students' multiliteracies can also be identified in the students' answers to the questionnaire. In fact, students revealed positive receptions of the use of technology for language learning purposes, praising the interactivity provided by platform use. They appreciated that technologies added diversification and dynamism to the tasks as these affordances were recognised as positive, even by the few students who responded negatively to technology use **[tab. 5, a, b, c, d, e, g, h, m, n]**. In fact, negative responses were related to personal preferences for face-to-face learning, and technological constraints such as unstable Internet connection, device limitations, data and privacy protection issues **[tab. 5, l, m, n]**. However, nobody appeared to question the enhanced interactivity and agency provided by the technologies in use. Therefore, from the overall enjoyment of technology use outlined in chart **1**, it is possible to infer that multiliteracies surfaced as students enjoyed creative content personalisation with a boosted sense of agency and participation.

Observations conducted by the researcher during the report phase revealed that multiliteracies surfaced in face-to-face interactions as students presented their digital stories to the rest of the class. In fact, it was observed that students utilised intention, dialogue and structure functions to interact with the audience and enhance their engagement

with presentation contents. For instance, the students who presented the Wakelet story on their favourite French singers **[fig. 2a]** played the songs mentioned in their work on a loudspeaker as background music. As their story unfolded, music accompanied their speech as an attempt to enhance content meaningfulness to the audience. Additionally, intermediate students who presented the *No Schei Tour* shown in figure **3** dressed in matching colours to enhance the illusion of being tour guides. These instances, together with mimicking the verbal and nonverbal language of tour guides, demonstrated students' display of multiliteracies with interpersonal, situational and contextual purposes.

Overall results showed that when students were involved in digital storytelling activities, multiliteracies appeared in the creation and presentation of virtual stories. In fact, multiliteracies surfaced as a combination of communicative functions aimed at increasing audience engagement, sense of agency and personalisation of digital contents. The medium used for content delivery allowed for different types of multiliteracies to arise; for instance, intertextuality, intercultural comparisons and metaphorical language use more likely to appear in written and visual information while face-to-face presentations permitted students to personalise contents and enrich their dialogue with the public. These features can all be considered manifestations of the functions of reference, structure, dialogue, context and intention and effects of the implementation of digital storytelling to develop multiliteracies amongst students of Italian as a FL.

6 Limitations

Limitations concerning the research design can be found in the lack of homogeneity between the applications utilised in the study. In fact, despite possessing similar functions of digital storytelling, the structural design of Wakelet and izi.Travel fulfils different purposes, with potential repercussions for the development of students' multiliteracy and language skills. Moreover, little attention has been given to the fact that all beginners opted for Wakelet while intermediate/advanced students chose izi.Travel, suggesting different suitability of application use according to language proficiency levels. Moreover, the study did not measure language competence according to the criteria of the Common European Framework of Reference for Languages (CEFR), suggesting the need of conducting further investigations into linguistic improvement associated with multiliteracy development. From methodological perspectives, control and experimental groups were not included in the case study due to the small population size. However, they could be used in future investigations to provide a comprehensive overview of the effects of digital storytelling on the development of students' multiliteracies.

7 Conclusions

Results from this case study have confirmed that the effects of digital storytelling on the development of multiliteracies manifested as enhanced opportunities for content personalisation, interpersonal and intrapersonal dialogue, self-reflection and intercultural consideration, as it was highlighted in the discussion section. Moreover, the study also confirmed the validity of using the framework of Kalantzis and Cope (2015, 19) to map the development of multiliteracies according to semiotic functions. From a linguistic point of view, the development of multiliteracies enhanced practices of informal language use and the deployment of context-specific language forms and vocabulary. Consequently, these results suggest that with evolving educational practices towards the increasing incorporation of technologies and multimodal learning methods, attention should be placed on the enhancement of multiliteracy skills amongst language learners. In fact, results from this case study hint at the importance of implementing digital storytelling in language educational contexts and call for an understanding of their pedagogical and behavioural implications. In this way, teachers can better design activities fostering students' multiliteracies, which are necessary to meet the demands of a progressively digital society where language skills are inextricably intertwined with multimodal communicative competences.

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