Design of a Transmedia Project targeted to Language Learning

Patrícia Rodrigues, José Bidarra
Centro de Investigação em Artes e Comunicação, Universidade Aberta,
Lisboa, Portugal

Abstract — Transmedia is steadily gaining ground in education. A transmedia learning environment is immersive and engaging and presents the potential to meet the needs of 21st Century learners. This paper looks into the design stage of a transmedia learning project targeted to English as Second Language learners and explores aspects concerning the integration of learning goals and strategies within the structure of the project. In this manner, we hope to contribute to the development of transmedia learning environments.

Index Terms — English as Second Language, Transmedia Learning.

I. Introduction

Transmedia is a concept rooted in the entertainment area, however its use in education is becoming more common. As learning environments are being redefined in order to meet today's learners needs, digital media, social media platforms, augmented reality and mobile devices become the tools of trade for educators - "(...) the Net Gen identifies with media and technology. Today learning with the new media involves a social process of participation in a shared culture" [1].

Transmedia is an approach of educational value as it provides multiple entry points to learning and is in alignment with the most recent orientations for the design of new learning paradigms. Addressing the required transformation of learning and teaching practices, different reports such as System Upgrade [2]; Learner at the Center of a Networked World [3]; Transmedia Play [4] and Connected Learning [5] have come to light. More than providing pedagogical frameworks based on learners' media consumption and production tendencies, these documents supply valuable guidelines for educators to accommodate the move into learner-centered environments. At the core of the reports Transmedia Play and Connected Learning lies the need to enhance collaborative practices and engage learners through the use of media. "The disconnect between classroom learning and the everyday lives and interests of many young people is not new." [5] The question is "How can we capitalize on today’s new media to expand these forms of learning opportunity?" [5].

Creative transmedia storyworlds are participatory spaces and can engage learners in the creation of their own stories and production of artefacts while developing learning paths. Wolf points out "imaginary worlds are enjoyed not only by those who visit them, but also by those who invent them. (...) They are often transnarrative and transmedial in form. Stories written by different authors can be set in the same world, so imaginary worlds can be transauthorial as well" [6]. The affinity spaces created by the players of MMORPGs such as World of Warcraft or League of Legends are the evidence that imaginary worlds are shaped by players. Moreover, they are spaces in which learning processes occur - "players socialize within the game, and they come together in fan sites to discuss, critique, analyse, and mod the game" [7] Gee & Hayes stress that "the game beyond the game" encourages the development of skills related to "technology, design, system thinking and sociotechnical engineering." [7].

Not only 21st Century learners play, they are also taking advantage of the possibilities available in the media landscape to weave their stories across multiple platforms - they "do not see narrative as text-based only; rather they view narrative as a multimedia enterprise"[8]. Since Transmedia Storytelling mirrors the learners' dynamics in the media ecosystem, it can be perceived as a way to capitalize on learning opportunities.

The use of storytelling as a learning tool is not new. Stories lend themselves to learning. As Frank Rosen points out, storytelling is "a symbiotic exchange between teller and listener. (...) We use stories to make sense of our world and to share that understanding with others. They are the signal within the noise" [9].

The art of storytelling is taken to a new dimension when combined with a transmedia approach. Jenkins defines Transmedia Storytelling as "a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story" [10]. For learners it’s an opportunity to “seek out content through active hunting and gathering processes while crisscrossing various media platforms [10] and evaluate ideas with others. [11]. Hence, creating a transmedia learning environment provides the learners the “opportunity to be deeply immersed in a topic. (...) They concurrently use technology tools for exploration as they develop narrative and characters that will provide others with a learning, as well as play, experience [11].

In order to tap into how a transmedia learning environment might be stimulated, the following sections describe the theoretical framework, as well as, the
design phase of a transmedia learning project which is currently being used as basis of research for this subject.

II. The Project's Goals

The project Connecting Cat is the basis of research for the creation of a transmedia learning environment in the context of English as Second Language (ESL) learning. It is specifically targeted to Portuguese 10th-grade learners, 16-year-old teenagers. Connecting Cat's storyworld hopes to be the setting for the exploration of contents and curricular goals of ESL, level six - Intermediate. Through this project, one intends to provide space for the development of communication skills and engagement in the topics: media culture, multiculturalism, linguistic diversity and use of technology. It is also aimed at developing media literacy and engaging learners in multimodal learning experiences. For this effect, a set of media platforms were selected taking into consideration the expected learning outcomes, as well as the learner's interests.

Warren et al. highlight that a "transmedia story is never ending, and it is continuously reshaped with the help of peer constative feedback"[11]. Thus, transmedia can be perceived as "a continuous learning process where linear learning is no more. Instead, multimodal experiences allow learners to seek, weigh, and communicate answers. Knowledge is found socially constructed based on existing knowledge [11].

Connecting Cat intends to be a social space for learners in which collaborative learning practices may occur. The design of the project attempted to instigate the development of a learning community via integration of content curation processes, joint media artefact production activities and promotion of social interaction between participants within the storyworld.

III. Theoretical Framework

Connecting Cat draws upon two learning models: Transmedia Play [4] and Connected Learning [5]. It also integrated suggestions of the reports Student at the Center of the Networked World [3] and System Upgrade [2] during the stage of design of the project. The selection of the most appropriate elements was determined by the project goals and the enhancement of the learning experiences.

Transmedia Play is "a way of thinking about children’s experimentation with, expression through, and participation in media"[4]. Alper & Herr-Stephenson suggest that the transmedia play model promotes learner-centered practices, experiential learning and develops literacy. A transmedia play experience implies:

1. Resourcefulness- creative thinking to solve challenges;
2. Sociability- communications among peers mediated by media/technology;
3. Mobility- use of mobile devices and the movement between media platforms;
4. Accessibility- access from different points of entry and definition of a trajectory according to singular contexts and types of access;
5. Replayability- the act of revisiting and exploring worlds that require multiple visits.

These aspects were taken into consideration while designing the different elements of the project and modes of representation used.

Based on media use trends, thus relevant to the design of a transmedia learning project, the Connected Learning model proposes the following learning principles: activities must be interest-powered; peer-supported and academically oriented. In terms of design principles, Ito et al. suggest that activities should be production-centered, openly networked and be focused on a shared purpose. Connected Learning is rooted in the active participation of learners and educators and nurtures the ability to connect people, resources and content - "the integration of personal in-class and out-of-class experiences, collaborations and resources leads to learning experiences that suit the learners' specific needs"[5].

Similar to the Connected Learning report, Learner at the Center of a Networked World [3] focuses on promoting learning networks that "allow learners and teachers alike to connect directly to resources, people and activities"[3]. The Aspen Task Force on Learning and the Internet presents five principles and a set of recommendations that might enhance learning experiences: "learners need to be at the center of new learning networks; every student should have access to learning networks; learning networks need to be interoperable; learners should have the literacies necessary to utilize media as well as safeguard themselves in the digital age and students should have safe and trusted environments for learning"[3]. Though aimed at a wider scope of application (an educational system), part of the set of recommendations [3], listed below, were considered in the setting of the learning ecosystem within the project; access to the media platforms; possible interactions between platforms and media artefact production activities:

1. Redesign learning environments to empower learners to learn any time, any place, and at any pace, both in school and beyond;
2. Enhance the ability of educators to support and guide learners in a networked learning environment;
3. Build an infrastructure that will connect all students in all of the places they learn;
4. Support the maximum feasible degree of interoperability across learning networks;
Adopt policies to incorporate digital, media and social-emotional literacies as basic skills for living and learning in the digital age. The report System Upgrade: Realising the vision for UK education [2] addresses 12 key issues that promote the use of digital literacy: connect; share; analyze; assess; apply; personalize; engage; streamline; include; know; compute and construct. These aspects apply on various levels to the design of different learning experiences and were used as reference in the conception of the learning opportunities integrated in the project.

Using a holistic approach, allows for the selection of principles and aspects that best suit the needs of the project and the audience it is targeted to. All the reports presented in this section, from different perspectives, put into evidence the need to shift learning and teaching practices. The reports also highlight the importance to connect with learners in their context. In the 21st Century, it implies making use of the possibilities available in the media landscape and capitalize their potential for learning. The creation of a transmedia learning environment, in this case promoted by a transmedia learning project, may provide a space for the development of learning paths suited for the 21st Century learners.

If a solid theoretical framework is essential, no less is applying it to the design stage of the project. The following sections present the different elements that constitute Connecting Cat and address issues inherent to the design of a transmedia learning project.

IV. The Story and the Storyworld

In a preliminary stage of the project, as suggested by the transmedia producer Bernardo, three key elements were considered: "compelling characters; an exciting and convincing storyworld and a strong storyline with clearly defined plot points" [12].

In terms of narrative structure, Connecting Cat uses the hero's journey model. Campbell's structure is flexible and reusable, which in terms of transmedia is an advantage. Using a transmedia approach to telling a story, implies distributing different elements of the story across multiple platforms and adapting them to different formats. Gronstedt & Ramos identify reliability and reliability as the strengths of the structure - "What works universally with this structure is its reliability for telling stories based on self-reflection, stretching one’s capability, finding friends, inspiration, attainment of goals, and perhaps what up until this point had been undiscovered talents" [13]. To a large extent, a learner's progression path is punctuated by challenges and moments like the ones that shape the hero's journey. In this manner, the learners will be able to identify with the story and the hero.

Connecting Cat is an adventure story. Cat, an ordinary teen girl, living in Portugal, is a seeker of the Fluxus tribe (native cyberspace warriors) with the mission to assemble a portal that ultimately allows the Fluxus to interact with humans. The portal pieces are scattered all over the world. In order to collect them, Cat relies on her cat, an undercover warrior of the Fluxus, to give her clues. Together they will try to connect the Fluxus to mankind. Cat's quests take place in a storyworld in which learners are direct participants in helping the story to unfold across different platforms.

The hero's journey is comprised of 12 different steps. The following table presents how the structure was applied to Cat, the heroine of the story:

<table>
<thead>
<tr>
<th>The Hero's Journey</th>
<th>Connecting Cat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ordinary world</td>
<td>Cat in her space; getting to know her skills</td>
</tr>
<tr>
<td>2 The call to adventure</td>
<td>Cat identifies her mission to collect and assemble the portal pieces</td>
</tr>
<tr>
<td>3 Refusal of the call</td>
<td>Cat identifies the challenges in completing the quests and the need to be successful</td>
</tr>
<tr>
<td>4 Meeting with the mentor</td>
<td>Shakid and Dawn provide her the intel she needs to complete her mission</td>
</tr>
<tr>
<td>5 Crossing the threshold</td>
<td>Cat completes the quests to find the portal pieces and is committed to forging the link between Humans and the Fluxus.</td>
</tr>
<tr>
<td>6 The test, allies</td>
<td>Cat develops her modus operandi and tries to assemble the portal pieces</td>
</tr>
<tr>
<td>7 The approach</td>
<td>Cat finds the location to assemble the portal and discovers new facts about her mother</td>
</tr>
<tr>
<td>8 The ordeal</td>
<td>Cat succeeds in assembling the portal</td>
</tr>
<tr>
<td>9 Reward</td>
<td>Cat's encounter with the Fluxus tribe</td>
</tr>
<tr>
<td>10 Road back</td>
<td>Cat takes stock of her quests and learns the Fluxus flow</td>
</tr>
<tr>
<td>11 Ressurection</td>
<td>Cat attempts to put into action the principles she learned with the Fluxus and seeks collaboration</td>
</tr>
<tr>
<td>12 Return with the elixir</td>
<td>Cat integrates the acquired knowledge in her actions and relationship with humans</td>
</tr>
</tbody>
</table>

Besides using a setting and a main character with a profile that the learners can easily relate to, Connecting Cat's story incorporates both the mystical (the Fluxus world) and the real dimensions (Cat's quests). This strategy is aimed at providing different entry points to the story and allowing for the exploration of a wider range of event type. "Campbell suggests that the most classic and enduring stories are the ones fueled by a standard framework filled with challenge and
adventure—both mystical and real" [13]. It’s a balanced blend of imaginary and ordinary world elements to reach learners at different levels and with varied interests.

The main arc of the story, with the purpose of developing the events related to the protagonist, supports micro-narratives - the heroine's quests. This was a strategic choice. Even if the learners don't have prior knowledge of the story, they will still be able to make sense of the micro-narrative. From the learning perspective, each segment of the story explores a curricular topic or aspect thus facilitating the management of learning goals. In parallel with Cat's story, the learners can unfold adventures related to the Fluxus world. These are interconnected to the events of the main narrative; nevertheless, they can be explored outside the main frame of the story. The adventures in the Fluxus world are targeted to provide different exploration points to the learning contents introduced via the micro-narratives of the main arc of the story.

Writing a transmedia narrative presents particular design challenges. It involves perceiving the individual affordances of each medium to be used and how to integrate each one of them into a cohesive and coherent narrative. Not only is it necessary to carefully design the narrative, characters, interactions with the targeted audience, but also take into account emergent forms of expression - how the narrative can be shaped, expanded or even defied. Thus, developing a storyworld is crucial during the design phase - "Stories involve time, space, and causality, every story implies a world in which it takes place. Worlds can exist without stories, but stories cannot exist without a world" [6].

The story architecture of the project, the bible, implies developing every aspect of the storyworld. Bernardo argues that "a fully fleshed storyworld 'bible' should include: detailed character profiles; character backstories and extended story arcs, historical and real world events which help define and authenticate your setting; the rules of your storyworld and visual elements that distinguish or define your world"[12]. Bernardo reinforces the importance of building a storyworld by stating "establishing firm rules for your storyworld and sticking to them is vital to creating and maintaining the credibility of your story" [12].

Connecting Cat's storyworld is constituted by a primary world and a secondary world. The first one, set in the real world, explores the adventures of the main character and the second one taps into the imaginary world of the Fluxus tribe. Both worlds are interconnected through characters, assuming double identity, present in the real and imaginary dimensions - a strategy to give cohesiveness to the storyworld and to provide a unified experience to the user.

In order to provide an overview of the storyworld, the core elements are described in the following table:

<table>
<thead>
<tr>
<th>Entry Point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Webisodes</strong>&lt;br&gt; &quot;Connecting Cat&quot;</td>
<td>- Primary world&lt;br&gt; - Characters: Cat (main character); Peter (friend); grandmother; father; Sassy (cat).&lt;br&gt; - Goal - develop the main narrative arc.</td>
</tr>
<tr>
<td><strong>Motion Book</strong>&lt;br&gt; &quot;The Fluxus Flow&quot;</td>
<td>- Secondary world&lt;br&gt; - Characters: Shakid (Fluxus warrior); Sassy in the primary world; Dawn (Fluxus leader); grandmother in the primary world; members of the Fluxus tribe.&lt;br&gt; - Goal - explore aspects of the Fluxus imaginary world; give access to triggers to develop the main narrative.</td>
</tr>
<tr>
<td><strong>Main Character's Facebook page</strong></td>
<td>- Primary world&lt;br&gt; - Goal - promote interaction between the audience and the main character.</td>
</tr>
<tr>
<td><strong>Blog</strong>&lt;br&gt; &quot;The Fluxus log archive&quot;</td>
<td>- Secondary world&lt;br&gt; - Goal - engage the audience to contribute to the expansion of the Fluxus world via production of media artefacts.</td>
</tr>
<tr>
<td><strong>Edmodo Community</strong></td>
<td>- Goal - explore the storyworld through an educational perspective and create a space for educators and learners to interact and develop learning processes around the storyworld.</td>
</tr>
<tr>
<td><strong>Live Event Location based Quest</strong></td>
<td>- Description - live event depicting one of Cat's quests. It is set in a location in which participants access triggers, set through the Augmented Reality app Aurasma, to develop the mission.&lt;br&gt; - Goal - engage the audience to take part in the development of Cat's adventures.</td>
</tr>
</tbody>
</table>

Table II. Description of the core elements of the storyworld

Designing a transmedia storyworld is a complex procedure since "Transmedia Storytelling is a strategic process where the scale and scope are a whole lot more than the sum of all its parts" [1]. In addition to this process, it is still necessary to delineate a coordinated plan to integrate the learning dimension in the storyworld. The following section presents the rationale supporting the design of the learning layer of the project.

V. Scaffolding Learning in the Project

To determine the learning potential of the transmedia narrative, Kalogeras [1] suggests taking into consideration the following set of questions (in this case in reference to the application in a E-module):

1. Can the story be integrated into an existing curriculum?
2. Is the story engaging, and can it help make learning more effective?
3. Does the story contain subject matter that is relevant to the module?
4. Do the hyperlinks found in the story provide valuable information in keeping with learning objectives and outcomes?
5. Can additional learning extensions be created by subject-matter experts/producers?
6. Can the students create stories extensions via digital stories to provide educational value?

At root, Connecting Cat considers the embedding of learning contents, specific to the 10th-grade subject of ESL. It is expected that the project may reach learners at different levels and with different learning profiles by exploring the audiovisual language in a diversified form and the inclusion of learning challenges that can be explored both in an autonomous or oriented approach.

The storyboards for the webisodes and the motion book were set on the subject's learning topics and communicational skills in focus. The goal was to create context for the learning process by integrating audio and visual triggers. The storyworld can be accessed through different platforms, and the topics are explored through distinct angles thus diversifying and allowing to generate personalised learning paths. Below, you find an example of a visual trigger, set in the first sequence of the motion book, to explore the topic of linguistic diversity - an alien tree affected by human communication.

The triggers seek to engage students in learning activities. These may vary according to specific learning goals. As an example, in a hypothetical ESL class scenario, the event concerning the alien tree, depicted in the motion book, can be used as resource for learning activities such as brainstorming. Learners can activate prior knowledge on the topic of linguistic diversity; exchange and gather information orally; practice collaboration by working in groups; present to peers their views and/or express themselves via digital artefacts that can be published and shared on the blog dedicated to expand the Fluxus knowledge about Humans.

The series of webisodes "Connecting Cat" are aimed at developing the main story. Apart from the first (introduction to the setting of the story and main characters), the webisodes will allow the learner to build his/her path of exploration within a controlled set of options using for this effect the interactive video format.

In parallel with the webisodes, the motion book "Fluxus Flow" explores the imaginary world of the Fluxus. It is also a secondary story that complements the webisodes. Each panel sequence will on one hand present relevant information about the Fluxus culture and members and on the other provide valuable information or clues that will have an impact in the development of the main story. In every sequence, there will be panels that the user can explore and access different information, clues or puzzles to solve. Fluxus Flow is a motion comic book blending elements of print comic books and animation. Schmidt argues motion books are immersive - “Its DNA is comic books. Lots of people have responded that it reminds them of video game elements or having cinematic sort of qualities to it (...) It’s an immersive reading experience” [14]. The integration of a motion book was strategic. The format facilitates the manipulation of imaginary elements difficult to translate to real world sceneries. Concurrently, it integrates references of interest to the target audience - MMORPG elements and the comic book language.

Connecting Cat's storyworld is intended to be shaped by the learners and is oriented to promote the creation of media artefacts. The storyworld integrates spaces that might be used for this purpose - Cat's Facebook page; the Fluxus log archive, in the form of a blog, set to develop the knowledge of the Fluxus regarding humans, and the Edmodo platform.

Picking up on the digital spaces in which learners interact, one of the entry points to the storyworld is Cat's Facebook page. The main character will strategically publish posts that on one hand will immerse the learners in her quests and on the other encourage curation of learning topics embedded in the webisodes.

Similarly, the blog "Fluxus log archive" will include challenges that might encourage the learners to develop wikis, podcasts, videos or any other form of digital creation. The goal is to provide learning opportunities to engage learners in the topics, activate prior knowledge as well as develop media literacy skills. Ultimately, learners are expected to become co-producers of the story and shape it according to their inputs or contributions.

At its core, the project is focused on enhancing learning through interactions on digital spaces, therefore it was important to address how the educational
community would be able to interact. Taking this into account, the Edmodo platform, given its affordances, was integrated in the project - "Edmodo is a social network specifically designed for primary and secondary schools, offering a way for teachers to more easily assess students and trade tips" [15]. It is intended to be the space for the community of learners and teachers to share resources and content related to Cat's storyworld. In this way, one intends to bring the project to life in the classroom by connecting Cat's adventures to the learner's environment and learning needs. For educators, this space can be used as a dynamic learning ecosystem in which different learning models can be implemented, and diverse topics can be explored in order to align with different curriculum goals.

To immerse learners in the storyworld, another story-based learning strategy was applied - a location based quest. Participants are encouraged to help Cat by revealing vital clues and story details that ultimately lead to the discovery of one of the portal pieces.

The location based quest intends to be a situated learning experience in a geographic space by taking advantage of the locative storytelling application Aurasma. This mobile augmented reality application allows a storyteller to attach story elements (digital images, videos, instructions, clues) to a real world marker. The main goal is to make the story tangible to learners by using a learner-centered and active participation approach - "(...) what might be otherwise be salient but abstract information when read on a computer screen can become something potentially more impactful when consumed or engaged with on location" [16].

Designing a transmedia project is a process of leveraging platforms and formats to tell a story and build an interactive experience. “To better serve our audiences, we producers need to evolve the language of ‘new media’ which is, in many ways, the conjunction of every medium” [12]. To design a transmedia experience translates into planning and acting upon a block of actions, contributing to a planned modification in the behaviour of the target audience. In the case of a transmedia learning project, it implies building a framework that enables learners to engage constructively with the digital resources provided in the platforms and design interactions that sustain an authentic experience for the learner. Crafting a coherent learner’s experience is crucial, in others words, is to provide a way for learners to weave together and interconnect the resources and tools. It requires analytical thinking and creativity at the same time. The following diagram presents a possible route to navigate through the different spaces of the project.

VI. CLOSING DISCUSSION

In the 21st century, educators are faced with the challenge of capitalising learning opportunities in a media charged environment. Today's learners communicate, express themselves and interact within a participatory culture emerging from the digital spaces they take part in. Learners' habits of media consumption have changed from passive to active. The educational community needs to acknowledge this shift and address the fact that learning occurs not only, but also outside institutional context and even without the presence of educators.

Transmedia is no longer a buzzword for educators. The exploration of educational uses of transmedia practices has become a prevalent topic of discussion in recent years. The growing community of new media literacy educators is tapping into processes to explore the learning potential of transmedia storyworlds - "(...) when transmedia is done well, it creates a deeply engaging, immersive experience, which multiplies the number of learning opportunities"[17].

In this paper, we propose that the design of a transmedia learning project can promote the emergence of a transmedia learning environment that nurtures collaborative practices, engagement in curriculum topics and supports personalised learning paths.

To this purpose, this paper presented theoretical models analysis, the results of which led to the emergence of a consistent theoretical framework for the project. Through the analysis of reports such as Transmedia Play and Connected Learning, it was
possible to identify recurrent guidelines related to the design of learning experiences: development of engagement; focus on collaborative practices; take into account the interconnected media context of the learner and bridge the gap between formal and informal learning environments.

The theoretical foundation of the project led to the development of a design methodology focused on expanding the learning opportunities within an immersive storyworld. The description of the project’s design phase attempted to demonstrate how learning activities and strategies were embedded in the narrative and experience layers of the project as well as set forth elements upon which a learning layer might be created.

The design of Connecting Cat focused on providing different portals to interact with content and mobilising learners to participate in the storyworld. In this manner, we expect on one hand that Connecting Cat learners to participate in the storyworld. In this manner, Connecting Cat is a space in which learners can express themselves on their own terms and interact across media platforms and devices, while manipulating learning contents.

In order to tap into the learning experiences Connecting Cat intends to provide, a beta version of the project will be tested with a control group of students. The creation of a study case based on the project’s contents.

Acknowledgement

The authors wish to acknowledge the artistic intervention of the graphic illustrator Delfim Ruas.

References