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Immersive Environments for Medieval Languages: Theory and Practice

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I. Introduction

One of the major challenges facing medieval studies today is linguistic in nature. While students enjoy reading and analyzing medieval literature, they are rarely prepared to access these sources in the original medieval languages. Since they are not learning these languages as undergraduates, students are not prepared to study medieval literatures in depth at the graduate level, and we may soon find that these older works are no longer read at all in the original. In addition, while language pedagogy has progressed in new and exciting ways, the learning of medieval languages has remained, well, medieval. Books contain dry explanations of how Old French derived from Latin (as if that would help today's students better learn the language!), and the only cultural context given is the story that the students are to translate. The ability to actually read these languages aloud is quickly becoming lost, as training in pronunciation and practice speaking is nonexistent. As most medieval literature is rhymed, proper pronunciation is key to understanding the puns, plays on words, and meaning of the texts.

Surely technology promises immersive experiences in fantastic or historical environments, immersive experiences that are rapidly erasing the line between virtual and real worlds. These experiences can be harnessed to improve interest in earlier periods, as well as facilitate language and culture acquisition. Video games and digital simulations offer a type of immersive experience. In addition, language and culture acquisition is highly suited to video gaming. Games, digital and otherwise, are often used in language learning because in theory they are fun, and they lower the inhibition of the language learner (Derrington; Holden and Sykes; Sykes, Oskoz, and Thorne).

In this article we describe our experience creating a video game for learning Anglo-Norman. Our work was based on current research in 1) video games and learning, and 2) second language acquisition and immersive practices. Thus we review the literature in these two fields and indicate where there are gaps in research. Finally we point toward future directions both in the development of video games such as

ours as immersive environments for learning dead languages, along with needs for assessing outcomes and best practices for developing these games.

II. Video Games and Learning

As Kurt Squire notes, “video games create what the psychologist Eric Erickson has called a psychosocial moratorium—that is, a learning space in which the learner can take risks where real-world consequences are lowered” (Squire and Jenkins 59). This is particularly true when, as is often the case, the learner assumes a new identity embodied in an avatar that varies considerably from the learner’s real-world identity. In a good video game, the gamer/learner builds a personality for the avatar, complete with a set of values and goals. While these goals and values may be rooted in a player’s real-world persona, they are also shaped by the virtual world of the game. Squire defines a “projective identity” for the gamer, which is where real-world and virtual identities intersect. The gamer can escape limitations of either real-world or virtual-world identities (Squire and Jenkins 62–63). Real-world identities that limit learning, such as a belief that “I am not good at learning languages,” no longer hold. Within this framework, learning through video games is enhanced as the learner sometimes expends considerable effort reaching virtual-world goals even though the learner may begin the game with a negative attitude about the material. In response, a good game must provide rewards to the player who puts forth this effort (Squire and Jenkins 57–58).

Games are also quite useful at teaching cultural situations and values. A game differs from a prose-based analysis of cultural rules in that the player does not grasp the rule-set synchronically “from above.” James Gee points out that learning the rules, how to play the game, is no different from learning how to “do” another academic subject, like biology (Gee, *Good Video Games and Good Learning* 4). Understanding of the game system, and thus the culture it represents, emerges diachronically, through a process of choices and consequences linked to a sense of agency and a (virtual) body that seems to interact with its world. For instance, in terms of medieval travel it is one thing for a reader/learner to understand the challenges, but it is quite another for a gamer/learner to experience from a first-person perspective, even in a speculative way, how access to materials and food sources might have been negotiated through extended networks. Who must visit and talk to whom? How does this happen over long and difficult terrain? The process of system discovery through embodied agency has immense

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potential value for research and teaching through critical empathy (Gee, *Learning and Games*).

3D modeling has become commonplace in certain academic fields like archeology and art history because of the ability to safely explore and share fragile or inaccessible artifacts and environments. Literary and language studies have not embraced the use of 3D media to the same degree, perhaps due to continued appreciation for the printed page. In addition, literary scholars and avid readers are long used to constructing imaginative worlds in their minds as they read, so some may find that a 3D model of the environment falls short of what the brain can construct, or they may not wish to impose a monolithic reading via a 3D reconstruction of a literary world.

However, a game engine diverges in fundamental ways from 3D platforms designed primarily to capture and analyze data, such as the impressive 3D virtual walk-through models of medieval Paris and certain cathedrals. In contrast to the objective orientation of these platforms, a game engine is designed primarily to create games, which typically construct a sense of subjective agency through interactive mechanics and narrative. So while the gamer gives up some of the ability to fully construct the literary world in his or her own imagination, this control is traded for the power to change the virtual world and the outcome of the game narrative through choices and decisions made by the player.

A key potential of the video game medium lies in its ability to explore cultural rules through narrative and game play. Game engines have the ability to represent cultural systems as they unfold across space and time, giving the game systems themselves a central role. Game systems function by applying certain rules to various game situations rather than determining in advance every choice and movement. As Katie Salen and Eric Zimmerman put it, “this special class of representations, experienced as procedures, sets of behaviors, or forms of interaction, is the raw material from which simulations are constructed. We call this form of depiction procedural representation” (Salen 422). Procedural representation is necessarily selective, since it is impossible to capture through a game’s rules and mechanics every aspect of the “reality” the game simulates. So the game system cannot be “thick” in that it attempts to capture every aspect of the culture in question. Rather, its thickness lies in its explanatory intent, in the way that the rules can be applied to new situations and interactions. This flexibility makes the procedural representation of cultural systems through game systems necessarily rhetorical, in that the game system makes an argument about how the culture in question might have worked through the way it selectively models its rules (Bogost 125).

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In sum, games (computer-based or not) can be used to promote learning, and video games are particularly useful in modeling cultural systems because they teach players the rules of engagement in a particular aspect of a culture, allowing players to draw conclusions about how these rules might work in other, non-scripted, situations and further give the possibility to test these conclusions in a simulated environment where failure has little real-world consequence. Video games allow immersion in an environment that may no longer exist or may never have existed. A review of research on the application of immersive environments to the specific field of language acquisition comprises the next section.

III. Language Learning and Immersion

Within studies on language acquisition, “immersion” generally refers to the teaching of an academic subject in a second language (L₂) within a formal school environment. The students are generally native speakers of a common language (L₁). Johnson and Swain identify eight characteristics of such immersion programs:

1. The L₂ is a medium of instruction
2. The immersion curriculum parallels the local L₁ curriculum
3. Overt support exists for the L₁
4. The program aims for additive bilingualism
5. Exposure to the L₂ is largely confined to the classroom
6. Students enter with similar (and limited) levels of L₂ proficiency
7. The teachers are bilingual
8. The classroom culture is that of the local L₁ community (Johnson and Swain 15; Cummins 2).

For example, a group of students in the United States whose first language is English would receive instruction and perform work in a school subject, such as Math or History, in French with a bilingual instructor. This approach contrasts with the traditional format, in which students use French only in French language classes and take all “content courses” in English. The underlying rationale for immersion programs is that, by using the second language for all or a part of each school day, students will become “bilingual,” demonstrating similar levels of proficiency in both languages.

We are using here a modified definition of “immersion.” Our use of the term refers to the sensation a player has that he or she is part of the videogame world, which entails the perceived ability to interact

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with its inhabitants and to change its environment. This notion of immersion depends on a feeling of *telepresence*, which Jonathan Steuer defines as “the experience of presence in an environment by means of a communication medium” (6). In theory, students who play our videogame will receive the impression that their use of the language, together with their actions through the avatars of Benedeit and Brendan, will produce certain outcomes within the virtual landscape. Steuer identifies two central components of telepresence: vividness and interactivity (10). In designing our game, we sought to achieve vividness, “the representational richness of a mediated environment as defined by its formal features” (Steuer 11), by paying careful attention to both the graphical quality of our materials and the level of visual detail in each scene. In contrast to many pedagogical games, in which objects exist in the game world exclusively to educate the player, we attempted to feature an excess of realia, as if the player were experiencing a real-life setting. Deer wander in the forest, butterflies gather among a cluster of bushes, and characters who have nothing to do with Benedeit’s quest haggle with merchants at the marketplace. We opted for a first-person perspective in the game, in which the player “sees” and “hears” the world through the eyes and ears of the avatar, in order to enhance this feeling of vividness.

Our game likewise attempts to achieve interactivity, “the extent to which users can participate in modifying the form and content of a mediated environment in real time” (Steuer 14), by offering multiple opportunities for players to affect their surroundings. Townspeople not only speak with the player but may change their actions as a result of the player’s decisions: a certain villager becomes much more willing to help Benedeit after receiving a gift of food, while another reconciles with his neighbor once the player intervenes in the argument. The natural environment likewise promotes a feeling of interactivity by responding to mouse clicks or keyboard input. Benedeit can gather herbs, fill a jar with water, or consult books in the library as directed by the player. Our videogame landscape is not a lifeless background but rather, as in the real world, helps to construct the player’s understanding of space and the cultural practices that occur within it.

Partially as a result of the great variety of experiences that videogames can offer, scholars have yet to reach a consensus on their benefits for language acquisition. Margaret de Jong Derrington has studied the possibility of teaching English as a second language through immersion in the virtual world *Second Life*. Students in the program complete language lessons but primarily use English to perform a variety of authentic tasks, such as communicating with fellow users and designing a home in the game world (Derrington 146). While Derrington con-

cluded that the immersive possibilities of Second Life allowed her students to take on new personas and progress rapidly in their learning, a study by Jonathan deHaan, focusing on students' ability to notice and recall words in Japanese, found that players of a game recalled fewer vocabulary items than their peers who merely watched (deHaan 104). He explains, however, that the videogame he used (*Parappa the Rapper 2*) did not require language use for the completion of in-game tasks, as players needed only to press buttons along with the rhythm as song lyrics were displayed (deHaan 109). DeHaan concludes that “[p]rojects should continue to look at the various technological features of video games and the instructional strategies of game designers in order to build a more complete understanding of how video games can help or hinder second language acquisition” (119).

IV. Current State of Medieval Language Learning

Learning medieval languages, from Latin to Classical Arabic to Old French, generally uses the grammar-translation approach, where students read in their native language about a particular grammar point and then translate passages from the target language into their own language. This method has been used for centuries, allowing students who excel in this approach to become fluent readers of the target language. While some students appreciate the solitary nature of this sort of learning, others do not respond well and find the approach boring (Rivers 14–18).

The grammar-translation method has fallen out of vogue in most modern language departments today due to the many drawbacks of the method. In addition to student boredom, communication with native speakers is poorly facilitated because of the lack of pronunciation modeling and practice. However, this method remains the primary one for medieval languages under the supposition that communication is unimportant and therefore the oral aspects of the language can be eliminated.

In a valiant attempt to “keep dead languages alive,” the University of Texas at Austin hosts an “Old French Online” textbook that illustrates the grammar-translation method (Bauer). Each lesson consists of fragments from well-known Anglo-Norman works, such as *La Chanson de Roland* and *Le voyage de St. Brendan*. After a general overview of the text, the website offers a translation and detailed grammatical analysis of each word, using metalanguage like “third person singular preterite” or “second person plural subjunctive imperfective.” The lesson then provides the full Anglo-Norman text of the selection, followed

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by a translation into English. Finally, students receive explanations in English of various grammatical points, and the last lesson includes an in-depth bibliography of grammars, dictionaries, literary criticism, and manuals on linguistics or medieval culture, some of which are written in French or German. This online textbook thus contains a wealth of useful scholarly resources but may intimidate or discourage all but the most determined students. Likewise, the textbook's pedagogical approach conceives of language in terms of reception of established meanings: students are expected to translate each word into English and check their comprehension against the accompanying translations from the textbook's authors. Although students who complete each lesson will acquire a great deal of knowledge about the grammatical system of Anglo-Norman, no opportunities exist for sharing their personal views through the language.

Yet the middle ages, around the world, were a time where writing certainly existed but oral communication was by far the most common way of exchanging culture and ideas. Most of the texts that students are aspiring to read were communicated in an almost exclusively oral transmission route, and understanding these texts through the written remnants leaves out vital information.

V. The Immersive Approach

But immersion in medieval life would not simply mean navigating the space and society of a time where people spoke differently and lived in a different landscape and used different tools. While that is a part of what we can try to reproduce, the very meaning and experience of that space we are navigating was likely very different one thousand years ago. Robert Tally, following and modifying the work of Bertrand Westphal, Leonard Goldstein, and others, suggests that perceptions of time and space changed radically about the time that linear perspective arose in artistic works (Tally 18). In a medieval illumination, for instance, one might have snapshots of past, present, and future within one framed block. Foreground and background rest in the same plane. Starting with perspectival drawing, Goldstein suggests that space became experienced as:

- 1) continuous, isotropic, and homogenous; 2) quantifiable; and 3) perceived from the point of view of a single, central observer (20–21).

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As a contrast, if we look at a medieval map such as the 1375 Catalan Atlas (see Fig. 1), a different notion of time and space emerges, at least in terms of visual representation. The map simultaneously includes the Queen of Sheba, the three wise men, and the Great Khan from vastly different eras (Old Testament, New Testament, and thirteenth century). Distances and landmasses are not measured to a modern sense of scale, though meaning can be induced from the relative sizes given to different areas and cities. Furthermore, we cannot know from



Fig. 1

Facsimile of the 1375 ed of the Catalan atlas in the Bibliothèque nationale de France, known as "Atlas catalan de 1375." Library of Congress. Public domain.

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which end the viewer was meant to see the map, as the writing and images are oriented in all directions. Space could comprise multiple times and places, and the lack of orientation toward a particular viewer indicates that perhaps multiple perspectives were expected.¹ In this sense of space, medieval maps share many traits of video game maps, including the sense relationship between place and object, where time, distance, and proportion vacillate between being important and irrelevant. For Mario in *Super Mario Bros.*, distance on the map is not proportionate to the difficulty of the task of reaching the next point (Rowland 197). On the Catalan Atlas, Sheba and the Three Wise Men are a part of the map because they share space and time since Creation, showing that time unites us (we are all post-Lapsarian and part of the map of Christian history) and separates us (we can never meet up since we do not exist at the same moment).

Medieval literary works evince similarly disorienting notions of time and space for the modern reader and viewer. In the story of the *Voyage of Saint Brendan*, the Irish monk Brendan takes a group of men with him as he sets sail in search of an earthly paradise of which he has heard tell. Brendan's voyage is a text well suited for examination of medieval travel and notions of space, as the spiritual goals of the voyage are intertwined with the material realities of pre-modern travel. To further complicate the matter, the space that Brendan and his group occupy is somewhat linked to what we would call real-space, but it is also fantastic and seems to have no physical beginning or end.

According to Irish annals and genealogies, Brendan lived in Ireland from about 484 to 577. Though he started his spiritual life as a hermit, he went on to found important monasteries throughout Ireland and served as Abbott of Clonfert. A patron saint of navigation and travel, Brendan is said to have set forth on a multi-year voyage in a hide-covered boat in search of an earthly paradise, which, according to legend, he eventually reached. Much of what is known about Brendan comes from two story traditions—the *Vita Brendani* (*Life of Saint Brendan*) and the *Navigatio sancti Brendani abbatis* (*Voyage of Saint Brendan*). As was often the case with saints' lives, the *vita* was most likely written long after the death of the saint, as the cult of Brendan grew more popular. The *Voyage* is a longer, more complex text that was likely composed in Latin centuries after Brendan died. The oldest versions of the *Voyage* date from the ninth or tenth century, and the large number of surviving manuscripts in Latin and various vernaculars indicate a wide readership all over Europe. An Anglo-Norman adaptation of the Latin text appears to have been penned in the early twelfth century by Benedeit, whose name appears in the prologue, and his work was popular enough that, in addition to being the most widely spread vernacu-

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lar version of the *Voyage*, parts were even translated back into Latin at some point. All of the many linguistic versions of the *Voyage* are relatively homogeneous in certain ways, not to say that they are identical, and this has generally been understood to indicate that they all come from a common original Latin manuscript. The story is episodic, as the monks travel from island to island for several years before returning home. Each manuscript varies at least a little from the others, and some leave out entire islands and/or encounters.

Brendan's travels have been subjected to spatial analysis before. Most notably, Tim Severin built a replica of Brendan's boat using medieval tools and materials and sailed it to the New World according to a path that he mapped out by meticulous close reading of the *Voyage*, linking one of the hellish islands to a volcanic region near Iceland, for example (Severin). Other scholars have joined in the search for equivalent spaces. Margaret Burrell and Carston Wollin have looked to specific times and places of volcanic activity both to date the text and to situate the voyage in modern geographical space (Burrell; Wollin). Geoffrey Ashe equated the Faroes Islands, which means "Sheep Islands" in Danish, to the island that Brendan chances upon that is also replete with sheep (Ashe 86), and the presence of whales off the coast of the Faroes convinced Ashe that Benedeit could have been describing one of these creatures as seen on Brendan's voyage. Likewise, the crystal towers that Benedeit mentions could be actual icebergs, and so forth.

These studies are fascinating, and without discounting them in any way, we would like to suggest that this impulse to geo-rectify the medieval world with our modern world might cause us to forget that medievals may well have (and probably did) understand space in a very different way. Sarah-Jane Murray has suggested that the voyage is a tale of longing for knowledge, where Brendan finds he must leave his homeland in order to apprehend the fullness of what Paradise entails (Murray). The travel that the monks make is in a seemingly endless circle until the moment that they trust God and react with faith rather than fear when the whale upon which they have celebrated mass seven times starts to swim away, for the seventh time. Travel is complete not when a particular destination is reached but rather when a state of spiritual understanding is achieved.

With our video game, our goal is not to reproduce the voyage or retell the story as Benedeit did with his Latin model. Rather, we believe that a video game is an ideal medium to explore the notion of medieval travel. Much as the touted 2010 game *Braid* allowed for manipulation of time, our video game allows for the interweaving of different times and spaces. The game cannot be "finished" until certain deeds have been accomplished and the player makes the correct decision to allow a

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seemingly hopeless situation unfold. Travel is both circular and linear, and the material needs of the travelers, and even Benedeit himself, are mixed in with the spiritual progress of the crew.

VI. Process

So how does a humanist go about creating a game about medieval travel, and what does this bring to our understanding of the medieval text and culture? Just as with any academic analysis of a medieval text, we sought out secondary literature and examined various editions of the text. Once we settled on an edition (Burgess), we read the text carefully line-by-line. We drew maps of how we imagined the islands and split the story into scenes with each student taking an island to develop. A script was written that included dialogue largely but not entirely drawn from the edition.

From a linguistic point of view, teaching methods and needs for the Anglo-Norman are paramount. We identify a set list of vocabulary for each scene. While some words might not appear in the text, they are common to everyday medieval life and they are key elements of the scene, and therefore we have the ability to teach those words in context. Pronunciation of Old French, which poses a teaching challenge, is part of the vocabulary acquisition from the outset. Grammar constructions are a bit trickier, but the teaching practice is to first introduce the grammar point in the context of the story and then to extrapolate and present more formally. We have discussed the notion of quizzes punctuating the scenes because, while this game is meant to be pleasurable, its purpose is to facilitate the instruction of medieval culture and Anglo-Norman reading and speaking skills. However, one of the main values of learning through games is precisely the fact that it does not feel like learning, so we will have to make decisions about effectiveness and next steps when we test the game with real students.

The program was developed in Unity3d, which is a free download and runs on Mac OS X as well as Windows. The games that are created can be run on just about any system, including android and iphones, macs and pcs, and even game consoles. There is also a web player via browser plug-in that can run in Windows and OS X. Unity is used by many professionals, was used to develop *Assassin's Creed Identity*, and is now the default software for development for the Nintendo Wii U game system. While it takes some amount of time to get used to the interface, many free tutorials are online to help get new users up to speed, as well as a design community forum in which to ask questions. The objects in the game can be created using the computer graphics

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programs Photoshop and Blender, and Unity offers many pre-made objects as well. Sound files (voice and background music and sounds) are mp3 format and added where appropriate. Most characters were made using Mixamo. The movements and gameplay must be scripted, or programmed, in JavaScript or C#, though there are some automated or visual scriptors available to facilitate this, and we used the popular Unity3d plugin Playmaker.

The user begins the game as Benedeit, who is speaking to Adeliza, the first wife of Henry I of England. An example of one of many decisions we made while designing the game, we chose Adeliza as the patroness though several scholars have made a good case for the text actually having been written for Matilda, Henry's second wife. We settled on Adeliza because she is mentioned as the patroness in our base manuscript. The goal for this opening scene is to place the user into the environment as a first-person character who will experience the cultural phenomenon of patronage. During this and all other dialogue scenes, the Anglo-Norman text is read aloud and appears in the subtitle box with options available for modern French or English.

We have constructed Brendan's Voyage as a frame tale, beginning with Benedeit (the author of the Anglo-Norman version mentioned in the base manuscript) in the twelfth century. In order to make language learning make sense in the context of the game, the player's avatar is introduced as a modern-day university student in the library who finds a strange book about a medieval traveler. When the traveler opens the book and begins to read, he or she is mysteriously transported into the court of Henry I where Adeliza is commissioning a book from Benedeit. New to the Anglo-Norman court, the traveler is curious about the culture and needs help mastering the language. As the traveler watches Benedeit work on the manuscript, the book again draws the traveler into the story, this time to the tenth century, where the traveler must accompany Brendan on his voyage. This change of time period in the game serves to highlight to the player/traveler/student that the twelfth century story is a version of a tenth century tale that refers back to events that supposedly took place in the sixth century when Brendan lived. We surmised that Adeliza and her court imagined a mythical and non-specific past that looked much like their own present, and they did not have what we would consider historical data about architecture, clothing, and practices except for what was passed down in tales like this one.

Benedeit's portion of the game provides an example of how we attempted to fulfill our learning objectives through specific design decisions. After accepting Adeliza's challenge in the opening sequence, the traveler and Benedeit go in search of the materials he

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will need to make his book. These include a Latin text from which he will translate, some parchment, and different inks. The player must use Anglo-Norman to complete a series of tasks within the virtual world. Free to roam around the monastery and the surrounding village, the player interacts with various members of the community, who share their knowledge of the bookmaking process and explain where to find certain materials. Whenever the player approaches a non-player character, a dialogue begins in Anglo-Norman, played as an mp3 file and displayed in subtitles (Anglo-Norman, French, or English) at the bottom of the screen. Information obtained through such conversations is saved and can be consulted on the pause screen, which lists, for example, the ingredients that Benedeit still needs to find in order to make his book. The pause screen also features an inventory grid, inspired by the “backpack” or “equipment” windows of commercial adventure games, where the player can view all of the items gathered thus far. We designed the inventory grid as a kind of in-world visual dictionary. As Benedeit acquires ingredients, they appear on the inventory grid as two-dimensional images. When the player clicks on the ingredient, its Anglo-Norman name appears in a dialogue window, accompanied by what is known as “flavor text”: a short message providing description or commentary. The “parchment” ingredient, for example, includes the flavor text “Sturdy yet soft. Received from a monk in the library.” In addition to exposing the player to a wider field of vocabulary (richer linguistic input), these flavor texts also establish a constant link to the narrative, reminding players of each ingredient’s role in the quest at hand.

The Benedeit sequence likewise rewards players who put forth effort in order to understand the language and culture of the virtual world. At the beginning of this portion of the game, the player knows only that Benedeit needs to make a book; no explanations are provided of how to complete this task. Only through communication with the townspeople do the answers begin to emerge. Even so, the game is not a mere journey from point A to point B in which the player is a passive spectator. Each inhabitant of Benedeit’s world has information to offer, but the player must decide whom to trust in each case, as we have designed the game to further not only linguistic competence but cultural competence as well. For example, monks in the library possess a wealth of information on the bookmaking process, but townspeople may have greater day-to-day experience with the natural world and thus superior knowledge of where to gather certain herbs or berries. In similar fashion, merchants in the marketplace are willing to sell Benedeit materials but are not always the best option. Some offer ingredients that Benedeit can obtain for free elsewhere, while others attempt to

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sell him ingredients that he does not need to produce his book. Since Benedeit possesses limited funds, the player must consult a variety of characters and think critically before making decisions. This aspect of our game design promotes awareness of cultural situations and teaches players about the virtual environment through a series of choices and consequences.

Although designing a videogame to teach language, literature, and culture is a rewarding experience, there are several questions to keep in mind before beginning such a project. The process of making the game provides unique and detailed insight, as close reading and analysis are imperative for imaginative construction of this world. However, instructors who wish to design games for their work must either invest time in learning the system and in finding the required materials or assemble a design team and delegate responsibilities. Given the budgetary constraints at many institutions, it will often be preferable to build this team through undergraduate or graduate student volunteers, who benefit from the opportunity to produce a “deliverable” academic resource, capable of being used by students around the world, instead of a traditional term paper that only the professor will read. Working in a group gives additional advantages as game designers discuss ideas and problems in a group (we did this on a daily basis) before splitting up to work on individual aspects of the game. Forming a team not only accelerates the design process but also draws upon the strengths of each member. Students with a background in music, for instance, can compose the game’s soundtrack, while their peers in visual arts programs can create 3D models or 2D graphics. A further advantage of collaborating with students is that their perspective helps to shape the product, avoiding games created exclusively by instructors and, therefore, possibly out of touch with the needs and preferences of the intended audience.

Instructors must also address the tension between meeting pedagogical goals and encouraging student engagement. At the most basic level, our objective is for students to hone their linguistic abilities and acquire cultural knowledge through immersion and interaction. Nonetheless, as student motivation plays a key role in language learning, we attempted to stimulate interest through an attractive interface and appealing characters. When designing the menu screens, dialogue boxes, and in-game objects, we used as a model the aesthetics of successful commercial videogames such as *Assassin’s Creed* and *The Legend of Zelda*. We took a similar approach when scripting the behavior of non-player characters. Whereas many pedagogical games are explicitly didactic, creating the impression that the virtual world exists only for the player’s (educational) benefit, we attempted to promote

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learning in more subtle and organic fashion. Our non-player characters interact among themselves and introduce conversational topics that go beyond the player's quest. The illusion that we seek to create is that the player is negotiating the culture of an autonomous world, whose inhabitants hold a variety of beliefs and strategies for making sense of their surroundings. For example, the monk in the library who gives Benedeit the parchment, having fulfilled his narrative function in the game, continues to provide opportunities for communication, sharing gossip about his peers or complaining about the recent weather. This "excess of meaning" engages players in the virtual world and, though not explicitly didactic, introduces vocabulary and grammar not found in the source text.

Finally, tensions may arise between a desire for scholarly accuracy and the limitations of the software or digital materials. As academics and instructors, we strive for precision and "faithfulness to the source." When designing a video game, however, this mindset can prove counterproductive, generating frustration and preventing completion of the project. Unless instructors are working with a highly skilled and diverse team, it will likely be difficult to represent certain aspects of the text. In our game, for example, we soon ran across the problem of historical accuracy in character wardrobes and architectural styles. It would be possible, in theory, to replicate the textual descriptions, but such an undertaking would consume time and funds either unavailable or better used elsewhere. We eventually reached the conclusion that our primary goal was not to reproduce perfectly the physical reality of the text, but rather to promote learning through participation, which allowed us to overlook some of the details. Of course, we are not proposing that St. Brendan appear with wings and green skin, or that Benedeit's monastery resemble an Egyptian pyramid. We do suggest, however, that instructors maintain a certain degree of realistic flexibility in order to carry the project to its completion.

VII. Conclusions

Video games provide an exciting new area for instruction, as research shows that students engage with games, enjoying playing them, and can take advantage of avatar construction to create a learning space where mistakes can be made without embarrassment or serious consequences. Research remains to be done on the best kinds of games to learn foreign languages, and further studies are needed to assess the outcomes on student learning. For our own purposes of learning Anglo-Norman through an immersive environment, we have already

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seen the excitement and depth of engagement with the material on the part of those who *make* the game. Our next step will be testing the game and determining which aspects of the game are most effective and which need to be changed. At that point, the general method could be used to make further games to learn and teach dead languages through immersion. As gaming technology continues to develop and resources like the Oculus Rift allow greater sensations of immersion, the time will come when students of medieval languages can indeed “study abroad” in both time and space.

Notes

1. The perception of colors was also different in medieval culture. Unlike the modern-day system, based on pigments or light values, medieval color theories involved the categories of hue, depth, and luster (Meredith 83–84).

Works Cited

- Ashe, Laura. *Fiction and History in England, 1066–1200 Cambridge Studies in Medieval Literature*. Cambridge, England: Cambridge UP, 2007. Print.
- Bauer, Brigitte L. M. “Old French Online.” Text. N.p., 13 May 2014. Web. 20 July 2015.
- Bogost, Ian. “The Rhetoric of Video Games.” *The Ecology of Games: Connecting Youth, Games, and Learning*. Ed. Katie Salen. Cambridge, MA: MIT Press, 2008. 117–40. Print.
- Burgess, Glyn S. and Clara Strijbosch. *The Brendan Legend: Texts and Versions*. Leiden: Brill, 2006. Print.
- Burrell, Margaret. “Hell as a Geological Construct.” *Florilegium* 24 (2007): 37–54. Print.
- Cresques, Abraham. “Mapamondi.” map. N.p. Web. 14 Aug. 2015.
- Cummins, J. “Immersion Education for the Millennium: What Have We Learned from 30 Years of Research on Second Language Immersion?” *Learning through Two Languages: Research and Practice. Second Katoh Gakuen International Symposium on Immersion and Bilingual Education*. Japan: Katoh Gakuen, 1998. 34–47. Print.
- deHaan, Jonathan William. “Video Games and Second Language Acquisition: The Effect of Interactivity with a Rhythm Video Game on Second Language Vocabulary Recall, Cognitive Load, and Telepresence.” Diss. New York University, 2008. Print.
- Derrington, Margaret de Jong. “Second Language Acquisition by Immersive and Collaborative Task-Based Learning in a Virtual World.” *Understanding*

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- Learning in Virtual Worlds*. Ed. M. Childs and A. Peachey. London: Springer-Verlag, 2013. Print.
- Gee, James Paul. "Good Video Games and Good Learning." *Phi Kappa Phi Forum* 85(2). The Honor Society of Phi Kappa Phi, 2005. 33. Print.
- . "Learning and Games." *The Ecology of Games: Connecting Youth, Games, and Learning*. Ed. Katie Salen. Cambridge, MA: MIT Press, 2008. 21-40. Print.
- Goldstein, Leonard. *The Social and Cultural Roots of Linear Perspective*. Minneapolis, MN: MEP Publications, 1988. Print.
- Holden, Christopher L., and Julie M. Sykes. "Leveraging Mobile Games for Place-Based Language Learning." *International Journal of Game-based Learning* 1 (2011): 1-18. Print.
- Johnson, R. K., and M. Swain. *Immersion Education: International Perspectives*. Cambridge: Cambridge UP, 1997. Print.
- Meredith, Elysse T. "Coloring Tension: Medieval and Contemporary Concepts in Classifying and Using Digital Objects in 'World of Warcraft.'" *Digital Gaming Re-Imagines the Middle Ages*. Ed Daniel T. Kline. New York: Routledge, 2014. 81-92. Print.
- Murray, K. Sarah-Jane. *From Plato to Lancelot: A Preface to Chrétien de Troyes*. Syracuse UP, 2008. Print.
- Rivers, Wilga. *Teaching Foreign-Language Skill*. Chicago: U of Chicago P, 1981. Print.
- Rowland, Thomas. "We Will Travel by Map: Maps as Narrative Spaces in Video Games and Medieval Texts." *Digital Gaming Re-Imagines the Middle Ages*. Ed. Daniel T. Kline New York: Routledge, 2014. 189-201. Print.
- Salen, Katie and Eric Zimmerman. *Rules of Play*. Boston: MIT Press, 2004. Print.
- Severin, Timothy. *The Brendan Voyage*. New York: McGraw-Hill, 1978. Print.
- Squire, Kurt, and Henry Jenkins. *Video Games and Learning: Teaching and Participatory Culture in the Digital Age*. New York: Teachers College Press, 2011. Print.
- Steuer, Jonathan. "Defining Virtual Reality: Dimensions Determining Telepresence." *Social Responses to Communication Technologies Paper #104* (1993): n. pag. Web. 14 Aug. 2015.
- Sykes, J., Ana Oskoz, and Steven Thorne. "Web 2.0, Synthetic Immersive Environments, and Mobile Resources for Language Education." *CALICO Journal* 25 (2008): 528-46. Print.
- Tally, Robert T. *Spatiality*. The New Critical Idiom. New York: Routledge, 2013. Print.

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Wollin, Carsten. "The '*Navigatio Sancti Brendani*' and Two of Its Twelfth-Century Palimpsests: The Brendan Poems by Benedeit and Walter of Chatillon." *The Brendan Legend: Texts and Versions*. Ed. Glyn S. Burgess and Clara Strijbosch. Leiden: Brill, 2006. 281–313. Print.

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