Learning to Make Sense of Japan in Video Games:
How the Educational Affordances of Japan-Related Video Games Inform Their Interpretation

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Abstract

The aim of this article is to outline an analytical framework for the educational affordances of Japan-related video games—examining how such affordances inform the interpretation of Japan-related signifiers. To lay the groundwork, the article builds on Bloom's revised taxonomy of cognitive learning to provide a multifaceted theory through which educational affordances can be identified, effectively appropriating an educational framework for the purposes of game analysis. It then seeks to define productive Japan-related learning outcomes by aligning them with Japan-related scholarship, which serves to legitimise interpretations based on their adherence to established knowledge about Japan. As the last step in establishing the framework, the article outlines different manifestations of Japan-related signifiers in video games and examines how they can be recognised, analysed, and evaluated productively. It then concludes with a brief example of how the framework can be applied by analysing Japan's nuclear discourse in *Final Fantasy X*. Although limited, the analysis provides structural evidence to how such video games require a holistic approach for learning to become productive. Furthermore, it sheds light on how the limits and allowances of the game's educational affordances may privilege non-Japan-related interpretations.

Introduction

The aim of this article is to outline an analytical framework for the educational affordances of Japan-related video games—examining how such affordances inform the interpretation of Japan-related signifiers. In other words, the current study is concerned with how learning behaviours can be enacted within the context of Japan-related video games and how such opportunities, or lack thereof, affect the perception of such games; Japan-related video games, in this case, encompassing any video game that can be said to contribute to, or build on an understanding of Japan. Such a framework enables analysts to discern the internal coherency of Japan-related learning opportunities, already present within individual titles, and determine to what extent they require a more holistic approach—i.e. the incorporation of external knowledge and guidance—for players to legitimately make sense of them. In this way, a better understanding of the educational affordances of Japan-related video games can contribute not only to an understanding of them as potential educational resources, but also—and more importantly to

the study at hand—to an understanding of how they are interpreted as cultural artefacts related to Japan.

As par for the course, exploring the educational affordances of different media is nothing new; such affordances being composed of that which enables learning in the context of a particular medium (Kirschner 2002, 14). On the contrary, as the landscape of modern media continues to be proliferated with novelties—which in turn present unorthodox opportunities for education—scholars have felt compelled to address them. Examples of this avenue of study might include exploring the educational affordances of film for literacy instruction (DeHart 2022), examining how blogs may promote self-directed learning (Robertson 2011), or inquiring how virtual reality technology can be leveraged to support effective learning experiences (Natale et al. 2020). Studies of this kind highlight aspects of different media that often go overlooked in their mundane application and demonstrate how they can be implemented productively as educational tools—sometimes even subverting prevalent expectations as to their detrimental effects (Johnson 2005).

The educational affordances of video games have similarly been studied, as scholars have attempted to

ascertain how a medium, typically associated with leisure and escapism, might contribute to education in unique and worthwhile ways (Gee 2003; Ma, Oikonomou, and Jain 2011). Although, it must be noted that when it comes to discussing the educational affordances of video games, it can be easy to get a sense of undue optimism, as various commentators have proclaimed how the medium may one day revolutionise education. (Squire and Jenkins 2003; Collins and Halverson 2018). Therefore, a healthy dose of skepticism is appropriate when discussing the revolutionary potential of video games for learning (Brown 2008, xiii).

However, seeing as the current study is primarily concerned with educational affordances as they pertain to the interpretation of Japan-related video games—as opposed to the efficacy of a specific study method—such concerns should be considered secondary, and only relevant as far as applied learning becomes a byproduct of the proposed framework. This means that instead of being concerned with the educational utility of specific tools and methods for learning, this article focuses on the theoretical underpinnings of how learning takes place, what the objectives of such learning should be in relation to Japan, and how Japan-related video games can accommodate such concerns in ways that enable or hinder players from interpreting Japan-related signifiers productively.

To establish the proposed framework, the article begins by outlining and appropriating a theory of learning that may serve as a basis for game analysis. Next it seeks to define productive learning outcomes in relation to Japan as a subject, further expounding on the function of the learning behaviours by designating their objectives and how they serve to justify the legitimacy of certain interpretations. The last step in establishing the framework is then to examine in what way Japan-related signifiers may be said to manifest in video games, and how they present opportunities in terms of productive learning outcomes.

After establishing the framework, the article concludes by tentatively analysing the educational affordances related to Japan's nuclear discourse in *Final Fantasy X* (Square 2001). As will be seen, the internal coherency of the game's educational affordances is limited, implying that interpreting its Japan-related signifiers requires a more holistic approach than simply playing the game. Considering that *Final Fantasy X* was not developed as an educational resource, this is to be expected, but the framework allows analysts to theorise with added precision as to what exactly needs to be supplemented.

Regardless, when it comes to the question of interpretation, this higher barrier for entry effectively privileges non-Japan-related interpretations in so far as players do not already possess the knowledge necessary to make sense of them.

Appropriating Education for Game Analysis

To lay the groundwork for the proposed framework, this article builds on Bloom's revised taxonomy of cognitive learning. By doing so, it hopes to provide a multifaceted theory of learning, through which various educational affordances can be identified. It is worth noting that aside from the cognitive domain, which involves knowledge acquisition and the development of intellectual skills, Bloom's taxonomy also includes the affective domain, targeting attitudes and emotions (Krathwohl, Bloom and Masia 1999), and the psychomotor domain, dealing with the development of motor-skills (Simpson 1972). However, as the current study is primarily concerned with interpretation as a cognitive process, this article will focus solely on the cognitive domain—hereafter referred to simply as Bloom's taxonomy.

In addition to these separate domains, there are also alternative taxonomies (Biggs and Collins 1982; Fink 2013; Wiggins and McTighe 2011). In fact, the introduction of Bloom's taxonomy inspired the development of several competitors vying to take its place (Seaman 2012, 35). What such taxonomies have in common is an attempt to establish guidelines to help navigate the teacher-student dynamic productively, establishing criteria to help structure learning objectives and assessment. Therefore, with no shortage of viable alternatives, the prevailing legacy of Bloom's taxonomy should be considered a testament to its enduring centrality to learning classification—as it has been used prominently to structure curricula, learning objectives and assessment around the world since 1956 (Lee et al. 2017). This centrality is part of the reason for its application here, as it aligns most strongly with a theory of learning as it is generally applied.

Unsurprisingly, considering its influence, Bloom's taxonomy has also been applied to the study of video games and education. The difference between prior efforts and the present article, however, is that whereas Bloom's taxonomy has previously been employed to associate video games with conventional learning practices (Lameras et al. 2016), or to improve the design of educational games

(Chavez 2019), the current study seeks to appropriate the model for textual game analysis and the study of hermeneutics. In this sense, the categories of Bloom's taxonomy, as presented in this article, are ultimately intended to help identify educational affordances, as they can be said to be embedded in Japan-related video games, and to examine how the interpretation of such games may be informed by them.
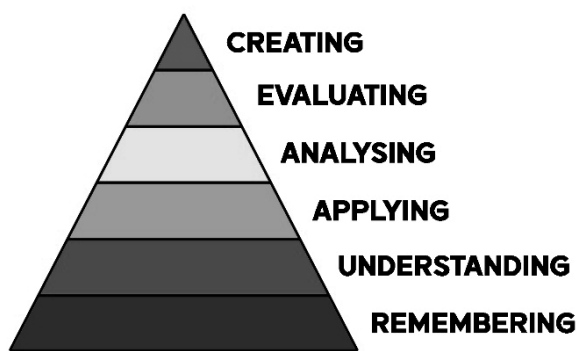

Figure 1. Bloom's taxonomy has popularly been depicted as a pyramid, featuring key learning behaviours arranged from top to bottom in a hierarchical formation

Consisting of six major categories, Bloom's taxonomy was revised and expanded upon in 2001, the most noticeable difference being the conversion of the categories from nouns to verbs. At present, the key components of the taxonomy are therefore: to *remember*, *understand*, *apply*, *analyse*, *evaluate*, and *create*. Furthermore, each category contains subcategories which expand on what sort of skills are to be associated with each category. For example, when examining the act of remembering, it can be broken down into the act of recognising, i.e., to identify what has been learned, and recalling, i.e., to retrieve relevant knowledge (Anderson and Krathwohl 2001, 67).

The reason for the shift from nouns to verbs was to properly illustrate the duality of learning in terms of the cognitive processes at work and their objectives regarding what type of knowledge is being acquired (Krathwohl 2002). Adding to this, the revised taxonomy further breaks down the knowledge dimension of learning into *factual knowledge*, *conceptual knowledge*, *procedural knowledge*, and *metacognitive knowledge*, i.e., knowledge of facts, knowledge of categories and classifications, knowledge of "how" to do something, and knowledge about cognition in general (Anderson and Krathwohl 2001, 63). In doing so, the taxonomy clarifies how learning is not limited to factual knowledge, instead embodying a wider array of objectives for cognitive processes to aspire to (see figure 2).

Figure 2. The interplay between cognitive processes and the knowledge dimension has been illustrated in this way (Anderson and Krathwohl 2001, 28)

For the purposes of game analysis, the combination of these categories can serve as a roadmap to identify structural prompts within video games which enable certain learning behaviors. For example, a game might feature notable Japan-related terminology which players can memorise. It can also provide opportunities for players to apply their knowledge about Japan, analyse the constituents of how Japan is mediated, and evaluate the material they are presented with. As such, the job of the analyst is to examine to what extent a particular video game can be said to align with Bloom's taxonomy—or an alternative taxonomy—and discern the internal coherency of Japan-related learning opportunities as they can be said to affect the interpretation of Japan-related signifiers.

Despite being widely embraced and applied, Bloom's taxonomy has had its fair share of criticism, although much of it could be said to be superficial. In this regard, Benjamin Bloom—who led the development of the original taxonomy—has been quoted as saying that the handbook which detailed the taxonomy has been "one of the most widely cited yet least read books in American education" (Anderson and Sosniak 1994, 9). As such, a significant portion of the criticism has been levied against a series of popular pyramid illustrations, intended to convey the taxonomy visually (as seen in figure 1).

This has led to prevailing misconceptions about the taxonomy, such as that its hierarchical structure is designed to devalue the lower tiers, effectively undermining the importance of certain skills. (Booker 2008; Lemov 2017). However, rather than being a hierarchy of importance, Bloom's taxonomy is more accurately described as a hierarchy of complexity, wherein the categories generally depict a spectrum of tasks ranging from simple to complex (Anderson and Krathwohl 2001, 5). Therefore, rather than

viewing advanced learning as a way of distancing the learner from simpler cognitive tasks, comprehensive learning should aim to embody the whole spectrum.

Another major point of criticism has been directed at the cumulative and sequential structure of the taxonomy, which has been assumed to imply that learning is to be understood as a strictly linear process (Berger 2018). It is true that the original taxonomy assumed a cumulative hierarchy, wherein each tier in the structure was to be considered dependent on the others (Bloom 1956). However, the revised edition only assumes such a hierarchy insofar as it can be supported by empirical evidence (Anderson and Krathwohl 2001, 267). In addition to this, the revised hierarchy assumes a level of overlap between the different categories, meaning that the cognitive hierarchy is not as rigid as it may originally appear

Although much of the criticism directed at Bloom's taxonomy appears to stem from its misrepresentation, it should not be considered infallible. In fact, adopting different models would no-doubt highlight different educational affordances. Accordingly, the privileging of Bloom's taxonomy should not be conflated with a totalizing view of how video games might be analysed as cultural artefacts from an educational perspective. However, as the basis for an educationally informed game analysis, the taxonomy represents a widely accepted spectrum of learning capable of informing such an analysis.

More so than its alleged flaws, it might nevertheless be prudent to keep in mind that the underlying assumptions inherent to the taxonomy—as to what constitutes cognitive learning—may reflect certain values inherited from its association with traditional school-based learning, or a set of philosophical presuppositions that favour an academically inclined epistemology (Bertucio 2017). This becomes especially relevant in relation to the definition of productive learning outcomes in the next section, as its appeal to Japan-related scholarship might be considered an extension of this bias.

Defining Productive Japan-Related Learning Outcomes

Having established a theory of learning applicable to game analysis, the next step toward establishing the proposed framework is to define productive Japan-related learning outcomes. This is imperative since a well-rounded understanding of learning behaviours also requires an understanding of the content through which they operate

(Tyler 1949, 30), not to mention what sort of knowledge they should yield. In general, it could be argued that a definition of such outcomes should consider learners holistically; for example, by including metrics to gauge their affective dispositions or their ability to collaborate (Yang, Tai and Lim 2016, 1276). However, as the current study is primarily concerned with learning as a facilitator for interpretation, the scope of the definition will be limited to the ability to make productive and legitimate sense of Japan-related signifiers; legitimacy being dependent on adherence to the taxonomy as a guideline for the development of justified knowledge that can serve as a basis for interpretation.

Some might hope to define productive learning outcomes by invoking the subjective aspirations of learners, making the definition synonymous with their self-imposed goals—learners in this case being players who encounter in-game educational affordances. For instance, learners might assume they have gained some insight into the culture of Japan by playing a video game like *Persona 5* (Atlus 2016), which features thinly veiled allusions to contemporary events and politics in the country (Gay 2017). Subsequently, some might even consider themselves content with their understanding of Japan, as the video game depicts a dramatically compelling version of societal issues currently in vogue in the country. As a result, such learners could be said to have fulfilled their own goals.

Regardless of learners' personal metric for success, however, the legitimacy of such unscrupulous formulations remains highly suspect and unlikely to engender an interpretation rooted in a thorough understanding of the subject. In fact, some might even take issue with the premise of basing a general understanding of Japan on a game like *Persona 5*, since the game could be said to have more to do with how Japan is popularly imagined—and its identity produced—as opposed to representing a critical breakdown of Japanese society (Herfs 2021). In this way, self-imposed goals run the risk of failing to properly evaluate what has been learned up against a backdrop of established knowledge and practices, especially since video games do not generally equip players with the intellectual theory necessary to do so (Rath 2015, 3). As such it is inadvisable to base a definition of productive learning outcomes solely on the subjective experiences of learners, at least in so far as learning is intended to foster legitimate interpretations.

In fact, delegating the scope of inquiry to learners themselves can be detrimental to their learning; the reason

being that learners often harbour preconceptions that can interfere with their development (Donovan, Bransford and Pellegrino 1999, 2). Aside from this being a general concern when it comes to learning, it has also been documented specifically in relation to video games, as José P. Zagal has pointed out how extensive personal experience with video games can be unconducive to developing a sophisticated understanding of the medium—contrary to what one might expect. According to Zagal, prior experience, although also an asset, can at times interfere with the ability to reason critically and analytically about games, resulting in a naïve understanding (Zagal 2010, 3).

Looking to Japanese studies, as a set of formal educational programs tasked with educating students about Japan, it is similarly possible to discern how prior engagement can negatively affect the ability of learners to think critically. As interest in Japanese culture has grown and Japanese media has become more accessible, students have increasingly started to bring a wealth of knowledge to the table at the outset of their studies (McLelland 2018). In general, this may be a positive development, but it has also been observed to make learners susceptible to rigid ways of thinking. As such, learners' prior investment in Japan-related materials can lead to narrow-minded assumptions about what their studies should entail, or even a reluctance to critically analyse the object of their studies (Miller 2017, 55).

Just like with video games, such an approach is likely to result in a naïve understanding—whether in a formal educational setting or not—as learners may fail to consider the intricacies of what they are learning about. Navigating such intricacies is nevertheless paramount to the pursuit of productive learning outcomes, as it is necessary to accommodate the full spectrum of learning previously outlined, which in turn legitimises interpretations on the basis of justified knowledge. Therefore, to ensure that such intricacies are properly represented, as a part of a definition of productive Japan-related learning, it is appropriate to distance the definition from the subjective concerns of learners.

Instead, a definition of productive learning outcomes might seek to align itself with the corpus of Japan-related scholarship, which in theory represents the most pioneering work related to the study of Japan. It should of course not exclude insights not currently represented by the field, but instead aim to adopt the implicit mission and methods of such studies, i.e., developing a deeper understanding of Japan by methodically generating and vigorously scrutinising knowledge about the subject. Such an understanding must take note of the complexities of the field and require learners to situate what they learn by analysing and evaluating their findings—*analysing* and *evaluating* representing two of the higher-order thinking skills inherent to Bloom's taxonomy. In general, navigating an academic field will always require such skills, but it is nevertheless important to examine how the particularities of the field in question may affect their concrete manifestation.

When reviewing the corpus of Japan-related scholarship, it becomes apparent it constitutes fertile ground for the development of such skills, as it encompasses differing, and to some extent even contentious theories about Japan. A part of the reason for this diversity is that Japan-related scholarship has been in the process of a paradigm shift, moving from an understanding of Japan as a unique and monocultural society, to characterising the country as a more diverse aggregation of subcultures and societal stratifications (Sugimoto 2009, 1). This shift is partly a response to a history of prevailing essentialist claims and generalisations about the national character of Japan and its people, which constituted the previous dominant model of understanding.

Among such essentialist theories—propounding that Japanese people are fundamentally different from other nationalities—it has been stated that the Japanese are inherently group-oriented (Nakane 1970), that Japanese society is predominantly shame-based (Benedict 1946), and that Japanese people share distinct psychological traits that are reflected in their language (Doi 1981)—although these are just a few notable contributions to this type of scholarship which rose to prominence in the latter half of the 20th century (Yoshino 2019, 16). As for examples of generalisations, it is still common for Japan to be portrayed as a decidedly homogenous nation, wherein the dominant culture is made to exemplify Japan as a whole; one common generalisation being the claim that Japan is a predominantly homogenous country in terms of ethnicity, despite evidence to the contrary (Saito 2015). Such portrayals effectively mask the apparent diversity of the country in terms of its culture, geography, language, and ethnic variances (Befu 2009), to name but a few concerns. Even though such essentialist claims and generalisations are not as academically viable as they once were, they are still a part of the prevailing discourse surrounding Japan (Kowner and Befu 2015, 390).

As a multifaceted subject, Japan embodies a myriad of topics to be interpreted in a myriad of different ways. What concretely constitutes a productive learning outcome will therefore differ significantly depending on what part of Japan is being studied, and for what purpose. For instance, a learner who primarily engages with Japan via an interest in classical literature can be expected to develop a vastly different set of expertise compared to someone whose main interest stems from the country's more recent cultural offerings, even though they are not mutually exclusive. Similarly, the study of Japan can manifest in contentious theories with varying degrees of legitimacy and cultural implications.

Despite this variety, a comprehensive definition of productive learning outcomes, as guided by an appeal to the mission of Japan-related scholarship, must include the ability to analyse, evaluate, and even generate knowledge about Japan—in addition to the less complex learning behaviours outlined in Bloom's taxonomy. As such, learners should strive to acquire the factual knowledge necessary to solve problems in the field, including familiarity with facts and relative terminology; the conceptual knowledge needed to understand Japan as a multifaceted subject, building on theories and concepts that explain the elements that make up Japan; the procedural knowledge required to know when and how to put those theories into practice; and the metacognitive knowledge that facilitates the capacity of learners to contextualise their knowledge and understand its underlying conditions.

Productive Japan-related learning outcomes, aimed at making legitimate sense of Japan-related signifiers, should in this sense result in the expertise necessary to navigate and contribute to the on-going study of Japan—a subject which relies on different interpretations to be made sense of in meaningful ways.

Japan-Related Signifiers in Video Games

Having laid out a theory of learning, as well as provided a definition for productive Japan-related learning outcomes, the last step in establishing the framework is to examine how video games may accommodate such concerns. Therefore, it is necessary to outline the cases wherein the application of such a framework might be deemed appropriate, and in what context video games may rightfully serve as targets for this approach.

Considering that the applicability of the proposed framework is dependent on video games featuring educational affordances related to Japan, such games must include discernable signifiers which demonstrate a connection to the subject. These signifiers can vary greatly, ranging from seemingly direct representations, such as *Persona V* being set in Tokyo, to abstract concepts, such as the parallels between Japanese religious traditions and the lore of The Legend of Zelda video game series (Hemmann 2021). It should also be noted that their discernibility is not uniformly apparent, as it is reliant on different sets of familiarities with Japan. In fact, all signifiers related to Japan must be learned for them to be perceived as such. This results in a range of discernibility, wherein learners may or may not register different elements as relevant to their understanding of Japan—dependence on external knowledge implying that no single artefact should be considered a fully coherent educational resource, despite varying degrees of internal coherency.

For example, as the symbol of Japan's national religion, Shintoism, as well the symbol for Japan itself in some cases (Ding et al. 2021), red torii gates are generally considered an obvious Japan-related signifier. When encountered in a game like *Dragon Quest III* (Chunsoft 1988), however, there is nothing inherent to the symbol itself which conveys its "Japaneseness" to the player. Therefore, for a player unfamiliar with the symbol of the torii gate, its conventional relationship with Japan must go unrecognised. If such players are to become familiar with torii gates by playing *Dragon Quest III*, they must therefore rely on alternative cues, such as that the gates are found in a country called Jipang—a name evocative of "Japan"—located roughly where Japan would be on a map imitating real world geography. By doing so they may tentatively incorporate torii gates as a signifier for Japan, thereby establishing familiarity with a well-known Japan-related signifier based on prior learning and the internal coherency of the presentation.

Although featured in *Dragon Quest III*, the inclusion of well-known signifiers in Japanese video games cannot be taken for granted. This is especially true considering how often their origins have gone unrecognised (Consalvo 2016, 4) despite the instrumental role of Japan in the development of the game industry on a global scale (Picard 2013). This apparent paradox has often been explained by alluding to the fact that Japanese exports have not always featured recognisable Japan-related signifiers. Such exports have been influentially described as culturally "odorless", as they lack elements that might help trace them back to their culture of origin, or "nationless", implying a lack, or

even deliberate erasure of a national character (Iwabuchi 2002, 24, 28).

A classic example might be that the Japanese character of Mario—who is diegetically an Italian plumber in the hugely popular Mario franchise—was generally not thought to signify the nation of Japan upon his debut in the 1980s. In fact, many in the West failed to recognise him as a Japanese construct, especially since the Nintendo Entertainment System, the platform which brought the character to prominence, had not been marketed as an explicitly Japanese piece of hardware—at least not in America (Alt 2020). Nowadays, it is relatively common knowledge that Mario and the video games which feature him are from Japan. Capitalising on this awareness, Japan's former prime minister, Shinzo Abe, even dressed up as the character as he emerged from a large green pipe, announcing to the world that Japan would host the Olympics in 2020 (Watson 2016; Hutchingson 2019, 1) — effectively endorsing Mario as a recognisable signifier for Japan worldwide.

However, even though Mario himself has become a recognisable signifier for Japan, many might still consider the character odorless, or nationless, as his alleged Japaneseness is not readily discernable. A discerning eye might nevertheless justify relating a figure like Mario to a broader culture of mascots in Japan (Iwabuchi 2010) or view his design as an extension of Japan's "kawaii", or "cute" culture (Lieber-Milo and Nittono 2019). Such approaches establish Mario not only as a Japanese construct, but rather as an abstract manifestation of Japanese culture, effectively attaching cultural odor to him by relating him to an understanding of Japan in a compelling way.

In her book titled *Japanese Culture Through Videogames* (2019), the Japanese- and game studies scholar Rachael Hutchinson makes the case that Japanese video games are a form of artistic and cultural expression, which by extension have something to say about their place of origin (1). In doing so, she echoes a multitude of comparable studies, arguing that video games can be meaningfully understood in relation to their national and cultural milieu (McAllister 2004; Cassar 2013; Wolf 2015). As such, practically any Japanese video game may be said to feature direct or indirect Japan-related signifiers by virtue of being Japanese.

In addition to this, the prominence of recognisable Japan-related signifiers has been on the rise to accommodate growing interest in explicitly Japanese video games. This is demonstrated by the fact that localisation efforts have become progressively more prone to preserve the sociocultural content of such video games as they are made available globally. (Mangiron 2021). This means that the discernibility of Japan-related signifiers in video games is increasing, both due to growing familiarity with Japan, and an increase in the way video games are presented as explicitly Japanese.

However, such signifiers are not limited to Japanese games, since even video games produced outside Japan may feature meaningful Japan-related signifiers. For example, the video game *Ghost of Tsushima* (Sucker Punch 2020)—which was developed in America—is set during the Mongol invasion of Japan in the 12th century, thereby directly representing a part of Japan's past. Some might question the validity of such signifiers, as the game's appeal to historical accuracy is debatable. In fact, by the developers own admission, the development of the game took deliberate creative liberties. An example of this is the inclusion of katanas as weapons, even though the invasion predates their actual usage (Takahashi 2020); this only being an instance of how the game's historical accuracy is compromised.

Regarding the depiction of history in video games, there has been a debate about how historically accurate such depictions can ultimately be. On the one hand, some contend that even allegedly historically inspired video games like *Assassin's Creed II* (Ubisoft 2009) should be considered unproductive historical exercises, as they portray an anachronistic and misleading version of their supposed historical settings (Dow 2013). Conversely, it has also been argued that even though commercial historical video games might not be vehicles for true historical representations, they nevertheless provide valuable tools for the acquisition and production of historical knowledge (Peterson, Miller and Fedorko 2013). Instead of appealing to the concept of accuracy, such studies may invoke the notion of "authenticity" (Wolterink 2017), as video games may strive to capture "the spirit of an age" (Fewster 2015, 169). This is comparable to how indirect Japanese signifiers, such as Mario's Japaneseness, can be seen as a particular interpretation of Japanese culture, as opposed to a direct representation of it—historical video games similarly presenting a particular interpretation of history.

Furthermore, such interpretations as mediated by video games already play a growing role in how an interest in and knowledge about the past is generated (Chapman 2016), the same applying to the subject of Japan (Consalvo 2016, 213). Coupled with the fact that Japanese video games, such as

Sekiro: Shadows Die Twice (FromSoftware 2019) are not necessarily rooted in historical accuracy (Byrd 2019), it becomes apparent that both Japanese and non-Japanese video games can participate in the production, maintenance, and interpretation of what constitutes Japan.

It must nevertheless be noted that a video game's nationality is not irrelevant when it comes to the study of Japan-related signifiers, as it can drastically impact their analysis and evaluation. As Hutchinson has pointed out, nearly all Japanese video games can be considered gateways into the culture of Japan in one form or another. However, for a foreign video game like *Ghost of Tsushima*, justifying it is a manifestation of Japanese culture presents added difficulty. It is true that the critical reception of the game in Japan made a point of its respectful depiction of historical Japan and Japanese culture (Ashcraft 2020a). Contrarily, it has also been claimed to be unlikely for such a game to be made in Japan, as the main character does not fit the mold for Japanese video game protagonists—being both older and not as traditionally handsome as his counterparts (Ashcraft 2020b). In this way, the "Japaneseness" of non-Japanese video games can be more easily refuted—meaning they must rely to a larger extent on direct representations of Japan—while Japanese games can more easily evoke abstract connections by appealing to their nationality.

Ultimately, while questions of accuracy may factor into an analysis of educational affordances, such concerns should only serve to qualify their utility as opposed to represent a fixed set of conditions as to whether such affordances are valid. Furthermore, the differences between how domestic and foreign Japan-related signifiers can be interpreted present further evidence of their educational affordances beyond their mere potential to be recognized. The reason being that as signifiers can be claimed to denote different relationships with the subject they reference—in this case Japan—a need arises to properly situate them within a broader discourse surrounding that selfsame subject. Properly situating such references then requires further analysis and evaluation, as the signifiers need to be broken down into their component parts and assessed.

This entails that when learning about Japan through video games, it is also necessary to be able to differentiate between what constitutes a manifestation of Japan and what constitutes a manifestation of Japanese gaming culture, or any other notable context. As such, analysing Japan-related signifiers in video games requires familiarity with video games to some extent, the reason being that the ability to

differentiate between Japanese elements and game elements is imperative when it comes to evaluating the full breadth of what they may meaningfully signify.

For instance, when it comes to Japanese video games, and the media ecology of Japan in general, there exists a substantial inventory of topics and motifs that can be referenced without directly appealing to their origins. Bestiaries are a good example of this, as Japanese video games have incorporated various mythical beasts from around the world. However, as such beasts continue to be featured in Japanese video games, their relationship to their original incarnations often becomes suspect. This is because their depictions can start to become self-referential to their portrayal in other video games as opposed to their original sources (Escande 2022). There is of course significant overlap between Japanese culture and Japanese gaming culture—as one could be said to encompass the other—but learning to make sense of Japan in video games requires an understanding of not only how Japanese culture gets filtered through these media artefacts, but also how the subculture of gaming, or other subcultures, get filtered through themselves, potentially resulting in a less meaningful connection to a specific point of origin as their genealogy gets altered.

Concerning the question of how Japan-related video games may accommodate the learning behaviours and objectives outlined in this article, the answer lies in how such behaviours and objectives can be said to operate through Japan-related signifiers. As outlined in this section, such signifiers are potentially diverse and a part of learning entails not only the ability to remember them and recognise them, but also to analyse and evaluate how they may be relevant to an understanding of Japan. In this way, the analysis of educational affordances is not markedly concerned with definitive answers to whether something should be considered representative of Japan. Instead, it constitutes a meta-analysis of how different analyses can build on and contribute to an understanding of Japan through video games by appealing to an established and growing corpus of knowledge. This entails that it is not the inherent Japaneseness of someone like Mario which is at stake, but rather the way in which the question of his Japaneseness can justifiably be related to an understanding of Japan, in order to make sense of Japan-related signifiers.

Making Sense of Japan

Having drafted a theory of learning, defined productive learning outcomes, and outlined how they may operate in relation to Japan-related signifiers in video games, the framework has finally been established (see figure 3). What follows is a short example of how it might be applied in practice and some concerns it might raise. As a demonstration, the framework will be applied to the interpretation and internal coherency of Japan's nuclear discourse in *Final Fantasy X*, a Japanese video game developed by Square—now a part of Square Enix. The analysis will focus on the English version of the game to limit its scope, and to invoke the hypothetical reception of the game as a foreign artefact. However, for the sake of brevity, the analysis will be relatively limited, leaving ample room for further study, both in terms of such a discourse and the application of the framework.
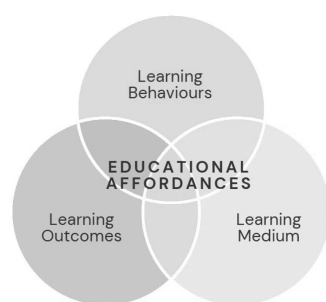

Figure 3. A diagram depicting educational affordances as a combination of learning behaviours, learning outcomes, and a medium which facilitates learning

As the name implies, *Final Fantasy X* is the tenth mainline installment in the popular Final Fantasy series of video games. Despite being Japanese, however, the game incorporates a mixture of different cultural elements—complicating the discernibility of its nationality (Consalvo 2006, 118). Compared to other titles in the series, *Final Fantasy X* could nevertheless be said to embody a distinctly Asian aesthetic, as instead of relying on Western fantasy tropes like its predecessors, the developers of the game opted for something closer to home (Juba 2019). Although the game's Asian inspiration is not limited to Japan, it remains a notable part of the game, both in terms of direct representations and more abstract cultural manifestations.

An example of direct representation might be the design of the heroine Yuna, as her attire constitutes a reimagining of the traditional Japanese kimono (Dark Horse 2012, 22). Another example might be the character design for Auron, one of her guardians, which is reminiscent of popular depictions of masterless samurai.

However, as is to be expected, the more abstract cultural manifestations are a bit harder to discern. As pointed out by Hutchinson, the issue of Japan's nuclear discourse might nevertheless be considered one of them as she argues that displays of devastating power, by a monster called Sin, are emblematic of attitudes toward technology and destruction relatable to how Japan has dealt with the nuclear devastation of the past (Hutchinson 2013).

To examine how players can learn to make sense of this discourse through play, the first step is to outline how it enables certain learning behaviours. Beginning with the act of *remembering*, it quickly becomes apparent that *Final Fantasy X* does not feature a lot of Japan-related facts or terminology for players to memorise—despite such knowledge being necessary to make sense of Japan, let alone its nuclear discourse. Rather, players are required to *apply* their external understanding of Japan to *analyse* potential Japan-related signifiers, such as the design of Yuna and Auron. Considering that *Final Fantasy X* was not developed as an educational resource, this is to be expected. This lack of internal coherency nevertheless has implications for the educational affordances of the game, as well as for how it is likely to be interpreted.

Firstly, it implies that *Final Fantasy X*—along with other video games developed for comparable purposes—are likely to require a more holistic approach for learning to become productive, incorporating external knowledge and guidance to a more significant degree. Secondly, it raises the barrier to entry regarding the discernibility of references to Japan, potentially advancing alternative interpretations in its stead. For example, even though Japan-related facts are limited, the English version of *Final Fantasy X* incorporates terms such as "sin," "crusaders," and "church", which are all highly evocative of Christianity. Instead of interpreting Sin as a manifestation of nuclear nostalgia, the discernibility of such signifiers and the way they are posited as central to the narrative may therefore privilege a Christian inspired reading, especially if players are unfamiliar with Japan. This might be one of the reasons *Final Fantasy X*'s message is often construed as being a critique of organized religion, à la Christianity (Qu 2020, McCasker 2021). Such analyses may be valid in and of themselves, but the point is that the internal coherency of educational affordances, in addition to prior learning, can lead to some interpretations becoming more dominant than others.

Building on extensive knowledge of Japan, Hutchinson's interpretation of Sin's power as a

manifestation of Japan's nuclear discourse nevertheless also represents a viable analysis of the subject. In her analysis, Hutchinson relates Sin's vaporizing blast to similar visual imagery found in other pieces of Japanese media; such imagery echoing cultural anxieties related to the impact of the nuclear bombings of Hiroshima and Nagasaki. However, as Hutchinson notes, due to generational and cultural differences, even her own students may not be as quick to recognise Sin's blast as an allusion to nuclear power in the same way (Hutchinson 2013, 3).

Although Hutchinson's account represents a legitimate Japan-focused analysis, an analysis of the educational affordances of the game must nevertheless seek to understand such efforts as a part of wider range of potentialities—as a form of meta-analysis. This could be likened to a teacher assigning students an analysis without direct concern for the conclusion, as long as it fulfills the requirements of productive learning. In this way, players are invited to make sense of Japan-related signifiers in *Final Fantasy X* in different ways, provided that their analysis is sound.

In this case, alternative approaches could argue that Sin's blast has more to do with the self-referentiality of Japanese media, as opposed to a broader nuclear discourse, or that Sin should first and foremost be understood as a metaphor for natural disasters in Japan—as expressed by the director (Siliconera Staff 2014). Understandably, an analysis of educational affordances can not be expected to foresee every potential scenario, but it is nevertheless important to recognise such affordances as a gateway to such potentialities, instead of merely a springboard for aquiring preconfigured understandings.

Ultimately, *Final Fantasy X*'s Japan-related educational affordances lack the structure and internal coherency that might otherwise help players learn to make sense of Japan-related signifiers in the game. This is not a commentary on the quality of the game but rather on how the game is likely to be interpreted based on how the text makes itself readily understandable; the result being that non-Japan related interpretations may be privileged on account of accessibility to learning.

Conclusion

This article has attempted to establish an analytical framework intended to guide the analysis of educational affordances in Japan-related video games, as a way of examining how players might make sense of Japan-related signifiers during play. In doing so, it has adopted a theory of learning, in the way of Bloom's taxonomy, and defined the objectives of such learning via an appeal to the established and growing corpus of Japan-related scholarship. In addition, it has outlined how Japan-related signifiers in video games may be recognised, analysed, and evaluated productively, and provided a brief example of how the framework can be applied.

Although limited in scope, the analysis suggests that legitimately interpreting Japan-related signifiers, in a game like *Final Fantasy X*, requires a holistic approach which incorporates external knowledge and guidance to a significant degree. These findings are not surprising, but the advantage of the framework is that it allows analysts to pinpoint in what way the educational affordances of certain games can be said to lack coherency. Furthermore, it elucidates how certain non-Japan-related interpretations may be privileged as the game does not feature the educational affordances necessary to readily prompt a Japan-focused interpretation.

References

Alt, Matt. 2020. *Pure Invention: How Japan's Pop Culture Conquered the World*. New York: Crown.

Anderson, Lorin W., Krathwohl, David R., Airasian, Peter W., Cruikshank, Kathleen A., Mayer, Richard E., Pintrich, Paul R. Raths, James, and Wittrock, Merlin C. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Abridged Edition*. New York: Longman.

Anderson, Lorin. W., and Sosniak, Lauren. A. 1994. *Bloom's taxonomy: A forty year retrospective: Ninety-third Yearbook of the National Society for the Study of Education*. Chicago: University of Chicago Press.

Ashcraft, Brian. 2020a. "Ghost of Tsushima Is Being Praised by Japanese Critics." *Kotaku*. July 15, 2020. https://kotaku.com/ghost-of-tsushima-is-being-praised-by-japanese-critics-1844387298.

Ashcraft, Brian. 2020b. "*Yakuza* Director Praises *Ghost of Tsushima*, Says Japan Should've Made it." *Kotaku*. July 19, 2020. https://kotaku.com/yakuza-director-praises-ghost-of-tsushima-says-japan-s-1844541108.

Benedict, Ruth. 1947. *The Chrysanthemum and the Sword: Patterns of Japanese Culture*. London: Secker & Warburg.

Berger, R. 2018." Here's What's Wrong with Bloom's Taxonomy: A Deeper Learning Perspective". EducationWeek. Accessed October 23, 2022. https://www.edweek.org/education/opinion-heres-whats-wrong-with-blooms-taxonomy-a-deeper-learning-perspective/2018/03.

Bertucio, Brett. 2017. "The Cartesian Heritage of Bloom's Taxonomy." *Stud Philos Educ* 36, 477–497. https://doi.org/10.1007/s11217-017-9575-2.

Biggs, John B., Collis, Kevin F. 1982. *Evaluating the Quality of Learning: The SOLO Taxonomy*. New York: Academic Press.

Bloom, Benjamin ed. 1956. *Taxonomy of Educational Objectives*. Ann Arbor: Longmans.

Booker, Michael J. 2007. "A Roof without Walls: Benjamin Bloom's Taxonomy and the Misdirection of American Education." *Acad. Quest* 20: 347–355. Doi 10.1007/s12129-007-9031-9.

Brown, Harry J., 2008. *Video Games and Education*. New York: M.E. Sharpe.

Byrd, Christopher. 2019. "'Sekiro: Shadows Die Twice' Q&A: A glimpse into the stunning world of the one-armed ninja." *The Washington Post*, March 20, 2019. https://www.washingtonpost.com/technology/2019/03/20/sekiro-shadows-die-twice-qa-glimpse-into-stunning-world-one-armed-ninja/.

Cassar, Robert. 2013. "Gramsci and Games." *Games and Culture* 8, no. 5: 330–353. https://doi.org/10.1177/1555412013493499.

Chapman, Adam. 2016. *Digital Games as History: How Videogames Represent the Past and Offer Access to Histocal Practice*. New York and London: Routledge.

Chavez, Senobio V. 2019. "Serious Game Design Using MDA and Bloom's Taxonomy." MS diss., Air Force Institute of Technology.

Collins, A. and Halverson, R. 2018. *Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America*. New York: Teacher College Press.

Consalvo, Mia. 2016. *Atari to Zelda: Japan's Videogames in Global Contexts*. Cambridge: The MIT Press.

Consalvo, Mia. 2006. "Console Video Games and Global Corporations: Creating a Hybrid Culture." *New Media & Society* 8, no. 1: 117–137. https://doi.org/10.1177/1461444806059921.

Dark Horse. 2019. *Final Fantasy Ultimania Archive Volume 3*. Milwaukee.

DeHart, Jason D. 2022. *Affordances of Film for Literacy Instruction*. Hershey: IGI Global.

Ding, Yang, Semykina, Olena, Mykhailenko, Andriy, Ushakova, Olga, and Khliupin, Oleksandr. 2021. "Modern Chinese and Japanese Garden as a Symbol of National Identity in the Context of Globalism." *Landscape Architecture* 19, no. 19: 98–106. https://doi.org/10.22616/j.landarchart.2021.19.09.

Doi, Takeo. 1981. *The Anatomy of Dependence: The Key Analysis of Japanese Behavior*, New York: Harper & Row.

Donovan, Suzanne M., Bransford, John D., and Pellegrino, James W. 1999. *How People Learn: Bridging Research and Practive*. Washington DC: National Academy Press.

Dow, Douglas N. 2013. "Historical Veneers: Anachronism, Simulation and Art History in Assassin's Creed II." In *Playing with the Past: Digital Games and the Simulation of History*, edited by Matthew W. Kapell and Andrew B. R. Elliott, 215–228. London and New York: Bloomsbury.

Escande, Jessy. 2022. "Foreign Yet Familiar: J. L. Borges' Book of Imaginary Beings and Other Cultural Ferrymen in Japanese Fantasy Games." *Games and Culture* 0, no. 0: 1–24. https://doi.org/10.1177/15554120211060258.

Fewster, Derek. 2015. "The Witcher 3: A Wild and Modern Hunt to Medievalise Eastern and Northern Europe." *Gamevironments* 2, 159–178.

Fink, L. Dee. 2013. *Creating Significant Learning Experiences, Revised and Updated: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass

Gay, Elliot. May 12, 2017. "The Real Japan Behind Persona 5." Anime News Network. Accessed October 23, 2022. https://www.animenewsnetwork.com/feature/2017-05-12/the-real-japan-behind-persona-5/.116021.

Hemmann, Kathryn. 2021. "I Coveted That Wind: Ganondorf, Buddhism, and Hyrule's Apocalyptic Cycle." *Games and Culture* 16, no. 1: 3–21. https://doi.org/10.1177/1555412019865847.

Herfs, Laurence. 2021. "'We Will Take Your Heart': Japanese cultural identity in Persona V." *Replaying Japan* 3, no. 1: 43–54.

Hutchinson, Rachael. 2019. *Japanese Culture Through Video Games*. London and New York: Routledge.

Hutchinson, Rachael. 2013. "Teaching Final Fantasy X: Accounting for Nuclear Nostalgia." In *Between 'Cool' and 3.11: Implications for Teaching Japan Today*. 1–8.

Iwabuchi, Koichi. 2002. *Recentering globalization: Popular culture and Japanese transnationalism*. Durham: Duke University Press.

Iwabuchi, Koichi. 2010. "Undoing International Fandom in the Age of Brand Nationalism." *Mechademia* 5, no. 1: 87–96.

Juba, Joe. 2019. "Looking Back on Final Fantasy X With Producer Yoshinori Kitase." *Game Informer*, July 7, 2019. https://www.gameinformer.com/2019/07/07/looking-back-on-final-fantasy-x-with-producer-yoshinori-kitase.

Johnson, Steven. 2005. *Everything Bad Is Good for You: How Today's Popular Culture Is Actually Making Us Smarter*. New York: Riverhead Books.

Kirschner, Paul A. 2002. "Can we support CCSL? Educational, Social and Technological Affordances for Learning." In *Three worlds of CSCL: Can we support CSCL?*, edited by Paul A. Kirschner, 7–34. Heerlen: The Open Universiteit Nederland.

Kowner, Rotem, and Befu, Harumi. 2015. "Ethnic Nationalism in Postwar Japan: Nihonjinron and Its Racial Facets." In *Race and Racism in Modern East Asia: Interactions, Nationalism, Gender and Lineage*, edited by Rotem Kowner and Walter Demel, 389–412. Leiden and Boston: Brill.

Krathwohl, David R. 2002. "A Revision of Bloom's Taxonomy: An Overview," *Theory into Practice* 31, no. 4: 212–218. DOI: 10.1207/s15430421tip4104_2.

Krathwohl, David R., Bloom, Benjamin S., Masia, Bertram B. 1964. *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook II: Affective Domain*. New York: David McKay Co., Inc.

Lameras, Petros, Arnab, Sylvester, Dunwell, Ian, Stewart, Craig, Clarke, Samantha, and Petridis, Panagiotis. 2016. "Essential features of serious games design in higher education: Linking learning attributes to game mechanics." *British Journal of Educational Technology* 13, no. 4: 972–994. doi:10.1111/bjet.12467.

Lee, Yew-Jin, Kim, Mijung, Jin, Qingna, Yoon, Hye-Gyoung, and Matsubara, Kenji. 2017. *East-Asian Primary Science Curricula an Overview Using Revised Bloom's Taxonomy*. Singapore: Springer.

Lemov, Doug. 2017. "Bloom's Taxonomy—That Pyramid is a Problem", Teach Like a Champion. Accessed October 23, 2022. https://teachlikeachampion.com/blog/blooms-taxonomy-pyramid-problem/.

Lieber-Milo, Shiri, and Nittono, Hirosho. 2019. "From a Word to a Commercial Power– A brief introduction to the kawaii aesthetic in contemporary Japan." *Innovative Research in Japanese Studies* 3: 13–32.

Ma, Minhua, Oikonomou, Andreas, and Jain, Lakhmi C. 2011. *Serious Games and Edutainment Applications*. London: Springer.

Mangiron, Carme. 2021. "Found in Translation: Evolving Approaches for the Localization of Japanese Video Games." *Arts* 10: no. 9: 1–18. https://doi.org/10.3390/arts10010009

McAllister, Ken S. 2004. *Game Work: Language, Power, and Computer Game Culture*. Tuscaloosa: University of Alabama Press

McCasker, Toby. 2021. "Final Fantasy X's War on Organised Religion." *IGN*. August 16, 2021. https://www.ign.com/articles/2014/05/26/final-fantasy-xs-war-on-organised-religion.

McLelland, Mark. 2018. "Managing Manga Studies in the Convergent Classroom." In *Introducing Japanese Popular Culture*, edited by Alisa Freedman and Toby Slade. New York: Routledge.

Miller, Laura. 2017. "Scholar girl meets manga maniac, media specialist, and cultural gatekeeper." In *The End of Cool Japan: Ethical, Legal, and Cultural Challenges to Japanese Popular Culture*, edited by Mark McLelland, 51–69. New York: Routledge.

Nakane, Chie. 1970. *Japanese Society*. Berkeley: University of California Press.

Natale, Anna F. D., Repetto, Claudia, Riva, Giuseppe, and Villani, Daniela. 2020. "Immersive virtual reality in K-12 and higher education: A 10-year systematic review of empirical research." *British Journal of Educational Technology* 51, no. 6: 2006–2033. https://doi.org/10.1111/bjet.13030.

Peterson, Rolfe D., Miller, Andrew J., and Federko, Sean J. 2013. "The Same River Twice: Exploring Historical Representation and the Value of Simulation in the Total War, Civilization and Patrician franchises." In *Playing with the Past: Digital Games and the Simulation of History*, edited by Matthew W. Kapell and Andrew B. R. Elliott, 33–45. London and New York: Bloomsbury.

Picard, Martin. 2013. "The Foundation of Geemu: A Brief History of Early Japanese video games." *Game Studies: The International Journal of Computer Game Research* 13, no. 2. http://gamestudies.org/1302/articles/picard.

Qu, Chris. 2020. "An Indictment of Religion: "Final Fantasy X" and the Teachings of Yevon." *Level Skip*. September 16, 2020. https://levelskip.com/rpgs/An-Indictment-of-Religion-Final-Fantasy-X-and-The-Teachings-of-Yevon.

Rath, Robert. 2015. "Game Criticism as Tangential Learning Facilitator: The Case of Critical Intel." *Journal of Games Criticism* 2, no 1: 1–9.

Robertson, Judy. 2011. "The educational affordances of blogs for self-directed learning." *Computers & Education* 57, no. 2: 1628–1644. https://doi.org/10.1016/j.compedu.2011.03. 003.

Saito, Sayaka. 2015. "Ainu: "Homogenous" Japan's Indigenous People." In *Children's Images of Identity*, edited by Jill Brown and Nicola, F. Johnson, 131–147. Rotterdam, Boston and Taipei: Sense Publishers.

Seaman, Mark. 2012. "Bloom's Taxonomy: It's Evolution, Revision, and Use in the Field of Education." In *Curriculum and Teaching Dialogue*, edited by Flinders, David J., and Uhrmacher, P. Bruce, 29–43. Charlotte: IAP.

Siliconera Staff. "Why is the Final Fantasy X World Melancholy After Final Fantasy X-2?" *Siliconera*. March 24, 2014. https://www.siliconera.com/final-fantasy-x-world-melancholy-final-fantasy-x-2/.

Simpson Elizabeth J. 1972. *The Classification of Educational Objectives in the Psychomotor Domain*. Washington, DC: Gryphon House.

Squire, Kurt, and Jenkins, Henry. 2003. "Harnessing the Power of Games in Education." *Insight* 3, 7–33.

Sugimoto, Yoshio. 2009. "'Japanese Culture': An Overview." In *The Cambridge Companion to Modern Japanese Culture*, edited by Yoshio Sugimoto, 1–20. Cambridge: Cambridge University Press.

Takahashi, Mari. 2020. "Balancing history and fun in Ghost of Tsushima: An interview with Sucker Punch co-founder Brian Fleming." *Polygon*, July 15, 2020. https://www.polygon.com/interviews/2020/7/15/21324263/ghost-of-tsushima-research-interview-mari-takahashi.

Tyler, Ralph W. 1949. *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

Watson, Alex. 2016. "Is Japan Cool? The Japanese Government's Policies and its Creative Industries." *MEER*. November 28, 2016. https://www.meer.com/en/21635-is-japan-cool.

Wiggins, Grant, and Jay McTighe. 2011. *The Understanding by Design Guide to Creating High-Quality Units*. Alexandria: ASCD.

Wolf, Mark J. P., ed. 2015. *Video Games around the World*, Cambridge, MA and London: MIT Press.

Wolterink, Julian. 2017. "Authentic Historical Imagery: A Suggested Approach for Medieval Videogames." *Gamevironments* 6, 1–33.

Yang, Min, Tai, Mui, and Lim, Cher Ping. 2016. "The Role of E-portfolios in Supporting Productive Learning." *British Journal of Educational Technology* 47, no. 6: 1276–1286. https://doi.org/10.1111/bjet.12316.

Yoshino, Kosaku. 2019. "Rethinking Theories of Nationalism: Japan's Nationalism in a Marketplace Perspective." In *Consuming Ethnicity and Nationalism: Asian Experiences*, edited by Kosaku Yoshino, 8–28. London: Routledge.

Zagal, José P. 2010. *Ludoliteracy: Defining, Understanding, and Supporting Games Education*. n.p. ETC Press.