Digital storytelling in a Japanese university academic English course: Investigating the impact of a project-based language learning approach on students' critical thinking and motivation

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma. The word-length conforms to the permitted maximum (56,343 words).

Signature: _____

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Abstract

This single-case descriptive case study discusses the value of integrating a socially conscious project-based language learning (PBLL) digital storytelling (DST) project into a first-year Japanese university English for academic purposes (EAP) course. This thesis bridges an existing gap in the academic literature with improved understanding of digital narratives in an academic English context. The unique hybrid theoretical framework that is used to organize the study and scrutinize the data, namely the merger of Keller's (1987, 2010) ARCS model of motivational design and Thomas and Lok's (2015) critical thinking attributes model, can also be deployed by educators and materials makers to measure the motivational effectiveness and level of criticality in both 'in-house' instructional materials and 'remixed' resources. A qualitative case study methodology is utilized to analyse 63 student participants' perceptions and experiences creating a socially conscious digital narrative in their EAP class. This thesis highlights how I successfully integrated a PBLL DST initiative into a content-driven EAP course. It also shows how English language learners' digital competencies, motivation, and critical awareness of local and global sociocultural issues can be fostered through socially conscious multimodal projects. The results from the data analysis suggests that the participants generally held positive views about DST. However, I also discovered that elements such as social loafing, free riding, intragroup conflicts, problematic ICT issues, busy schedules, and time-crunch anxiety can have an adverse impact on students' confidence and satisfaction conditions (Keller, 2010) in a DST project. The findings from this study will reverberate with both English as an international language (EIL) educators and research practitioners who would like to integrate a PBLL DST approach into their professional practice. My thesis challenges the widely accepted 'digital native' narrative and urges administrators to provide Japanese EIL students with more DST training opportunities and space for self-directed English language learning.

Publications derived from work on the Doctoral Programme

Cripps, A., Sakamoto, F., & Toland, S. H. (2018). Active learning: Designing an academic English course. *Academia: Literature and Language, 103*, 43-61.

Toland, S. H., & Mills, D. (2018). Record, reflect, and present: Enhancing Japanese university students' presentation skills via carousel poster sessions and mobile videos. In G. Kessler (Ed.), *Voices from the TESOL classroom: Participant inquiries in online and hybrid classes* (pp. 79-88). TESOL Press.

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Acknowledgements

'*What a long strange trip it's been*'

– Grateful Dead (1977) –

The title of a compilation album by the American rock band *Grateful Dead* best encapsulates my doctoral journey. Although the thought of raising the white flag of surrender entered into my mind on numerous occasions, I was fortunate that the people on this page prevented that from happening.

My supervisor, Dr. Julie-Ann Sime, was a never-ending beacon of assistance and positive energy. More specifically, her insightful critical feedback helped me to focus my ideas and see things from a variety of different perspectives. I also benefited from the collective wisdom of the TEL instructors and students in Cohort 7. A big shoutout goes to my Cohort 7 classmate, Dr. Charles Barker, for his timely advice and comedic talents. The Department of Educational Research administrators' flexibility and understanding were also much appreciated. In particular, I would like to thank Professor Don Passey and Alice Jesmont.

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Abbreviations

A	Agree [questionnaire response]
AEA	Academic English A course
AE	Academic English
ARCS	Attention, Relevance, Confidence, Satisfaction – Keller's (1987, 2010) model of motivational design
BYOD	Bring our own device
CALL	Computer-assisted language learning
CLT	Communicative language teaching
CT	Critical thinking
D	Disagree [questionnaire response]
DC	Digital competence
DL	Digital literacy
DS	Digital story
DSs	Digital stories
DST	Digital storytelling
EAP	English for academic purposes
Eibei	Department of British and American Studies
EIL	English as an international language
e-learning	Electronic learning
ELLs	English language learners
ELT	English language teaching
FL	Flipped learning
HE	Higher education
HOTS	Higher-order thinking skills
ICTs	Information and communication technologies
LMS	Learning management system
L1	First language
L2	Second language
MALL	Mobile assisted language learning

MEXT	Japanese Ministry of Education, Culture, Sports, Science and Technology
NA	No answer [questionnaire response]
NIER	National Institute for Educational Policy Research
OECD	Organisation for Economic Cooperation and Development
PBL	Project-based learning
PBLL	Project-based language learning
P21	Partnership for 21st Century Learning
SA	Strongly agree [questionnaire response]
SD	Strongly disagree [questionnaire response]
SDT	Self-determination theory
SWA	Somewhat agree [questionnaire response]
SWD	Somewhat disagree [questionnaire response]
TA	Thematic analysis
TEL	Technology-enhanced learning
TESOL	Teaching English to speakers of other languages
TOEIC	Test of English for International Communication

Chapter 1: Introduction

1. Introduction

Throughout history, humans have been telling stories to one another to entertain, impart knowledge, and highlight acceptable social norms. Jo-ann Archibald (2008), an Aboriginal scholar and activist, argued that stories can educate the heart, mind, body, and spirit. Indigenous cultures in every corner of the globe have also used traditional folktales to resist colonial oppression, connect the past with the future, and reinvigorate endangered languages (Babalola & Onanuga, 2012; Hadaway & Young, 2014; Tuhiwai-Smith, 2012). In the English as an international language (EIL) teaching realm, storytelling has a long history of being utilized to engage learners and develop their communicative competencies. For example, Morgan and Rinvolucri's (1983) book, *Once upon a time: Using stories in the language classroom*, highlighted a number of 'ready-to-go' classroom activities that teachers could draw upon to foster their students' listening comprehension, creativity, and exposure to authentic language. More recently, the ubiquitous nature of mobile devices as well as their numerous 'affordances' (Kukulska-Hulme & Viberg, 2018) have paved the way for a growing number of EIL educators to view digital storytelling (DST) as an effective way to integrate new visual and technology-based literacies with more traditional ones such as reading and writing (Yang et al., 2020). Although the concept 'affordances' is often perceived by many researchers and teachers to be an essentialistic by-product of mobile learning, Wright and Parchoma (2011) reminded us that it is actually a highly contested notion that needs to be articulated with careful consideration.

This thesis explores the value of integrating a socially conscious collaborative DST project into a first-year Japanese university academic English course. In particular, it investigates the impact that collaborative digital narratives can have on Japanese tertiary students' critical thinking (CT), awareness of local and global sociocultural issues, digital competencies, motivation, and autonomous learning. The term 'socially conscious' is defined in this study as being mindful of social injustice (Kirkham et al., 2009) and having a "conscious awareness of being part of an interrelated community of others" (Schlitz et al., 2010, p. 18). This chapter provides the reader with a brief description of the context, institution, and the academic

English program in which this study takes place. It also outlines the rationale behind the study as well as the structure of the thesis.

1.2 Context

1.2.1 The Twenty-First Century Skills Movement

These days, the phrase 'twenty-first century skills' has become a ubiquitous mantra for educators and industrial leaders in every corner of the globe (Lucas, 2019). Proponents of the twenty-first century skills movement believe that it is essential for learners in our rapidly changing, technologically-saturated society to possess a wide range of abilities that go beyond literacy and numeracy (Care et al., 2016). For example, Geisinger (2016) argued that the evolving demands of work and commerce require graduates who have effective communication skills, technological acumen, digital skills, innovative thinking, and the ability to collaborate with others. Over the last two decades, various twenty-first century skills movement stakeholders such as the Organisation for Economic Cooperation and Development (OECD) and the Partnership for 21st Century Learning (P21) have created several frameworks which highlight key competencies that will help prepare students for the globalized workplace (OECD, 2018; P21, 2019). Although a definitive list of twenty-first century skills does not exist, there is nevertheless a considerable amount of overlap between the different organizations' frameworks. The following items have been identified as important twenty-first century skills: CT, communication, collaboration, creativity, curiosity, problem solving, ethical awareness, cultural awareness, global mindset, flexibility, autonomous learning, lifelong learning, digital literacy (DL), information and communications technology (ICT) skills, and media literacy (OECD, 2018; P21, 2019; van Laar et al., 2017, 2020).

The twenty-first century skills movement is often viewed through the lens of technological determinism and perceived to be something that is inherently beneficial. However, critics such as Lucas (2019) cautioned us against the "evangelical fervour" that has accompanied the twenty-first century movement and noted how it can seem "jingoistic, simplistic or distracting" to many thoughtful educators (p. 3). In a similar vein, Greenlaw (2015) contended that twenty-first century skills advocates have placed "too much emphasis upon the accumulation and manipulation of information," while minimizing the importance of students attaining

wisdom (p. 895). The words 'competence', 'competencies', and 'skills' are pervasive and often used interchangeably in the twenty-first century academic and professional training literature. However, these terms carry a wide range of meanings and are difficult notions to pin down. In a recent study, Aderson-Levitt and Gardinier (2021) argued that competencies can have divergent meanings and the fluidity surrounding the term can be used by organizations to strategically push their own agendas. Likewise, Clement (2021) claimed that opponents of competence-based educational reforms in France perceived competences to be "the Trojan horse of a utilitarian and neo-liberal conception of school" (p. 35). Greenlaw (2015) argued that the corporate undercurrents in the twenty-first skills century movement have emphasized digital pedagogies to justify the enormous amounts of money schools spend on ICT equipment and infrastructure. As noted previously, skills such as CT, creativity, information literacy and innovation are considered to be important in our modern-day world. However, critics have astutely noted that these competencies are not actually new or unique to the twenty-first century and have been emphasized by philosophers and educators throughout history (Anderson-Levitt & Gardinier, 2021; Häkkinen et al., 2017).

Elements from the twenty-first century movement have also filtered into the Japanese educational realm. In 2013, the National Institute for Educational Policy Research (NIER) introduced twenty-first century competencies as something that can enhance the school system's guiding principle *ikiru chikara* or 'zest for life' (Kimura & Tatsuno, 2017). According to the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the 'zest for life' concept incorporates academic ability, morality, as well as a healthy body and mind (MEXT, 2011). The NIER, as noted by Kimura and Tatsuno (2017), created their own twenty-first century framework which was divided into the following sections: (a) practical abilities to act for the world, (b) collaborative thinking and problem solving, and (c) literacy tools. This model also includes several of the aforementioned skills such as adaptability, autonomous learning, and CT. In the Japanese higher education (HE) context, many university English programs, including the one featured in this study, aim to foster students' twenty-first century abilities. Furthermore, two of the focal points of this investigation, namely CT and DL, are widely trumpeted by the twenty-first century

movement as being essential elements in the globalized labour marketplace (van Laar et al., 2020).

1.2.2 English Language Teaching Resources

In every corner of the globe, commercially produced textbooks and digital resources are a crucial component of many EIL courses. Kumaravadivelu (2012) believed that "center-based" or Western-oriented textbooks "have a magical hold on both teachers and learners most of whom just can not do without them" (p. 21). In a similar vein, Darici (2016) argued that "teachers and learners can be successfully and insidiously manipulated by professional global publishers and authors" (p. 33). When most English language teaching (ELT) materials are examined under a critical spotlight it becomes apparent that they are frequently filled with 'aspirational content' such as the lifestyles of affluent celebrities, cosmopolitanism, and travel (Gray, 2012), stereotypical racial images (Bori, 2018), Eurocentric biases (Kumaravadivelu, 2016), gender disparities (Lee, 2014) and superficial cultural representations (e.g., photos of food). There are also notable omissions of 'sensitive' or 'controversial' topics in a typical EIL textbook. Appleby (2018) argued that most ELT publishers strategically sidestep thorny items such as "economic disparity and exploitation or religious and cultural beliefs and practices in relation to gender and sexuality" (p. 17). Incorporating LGBT themes or racially charged content (e.g., The Black Lives Matter movement, White privilege) can be challenging, especially if these ideas contradict an educator's religious and moral convictions or the belief that a classroom should be a 'neutral' space. Appleby's (2018) research postulated that ELT publishers have a responsibility to design instructional materials that are not only inclusive, but also productive and respectful of the different identities and interests that can be found within a classroom.

Publishers would undoubtedly respond to the previously mentioned critical darts by noting that the global English language learning market is a multibillion-dollar industry (Adroit Market Research, 2019) and controversy does not sell; hence, the focus on creating 'neutral' and 'value-free' pedagogical materials that can be used in a wide range of instructional settings. According to Curdt-Christiansen and Weninger (2015), it is impossible for language learning materials to be impartial as they are shaped by the context in which they were created. This research duo argued

the following:

> As sociocultural materials, they are products of complex selective processes reflecting political decisions, educational beliefs and priorities, cultural realities and language policies. As such, language teaching and learning are not ideologically neutral practices; they are located within complex webs of political and historical contexts and sociolinguistic practices, all of which is mediated through the textual and visual worlds of textbooks. (p. 1)

A small, but growing body of researchers (e.g., Bori, 2018, 2020; Daghigh & Rahim, 2021; Xiong & Yuan, 2018) have claimed that commercially produced ELT textbooks and digital resources are underscored by neoliberal values.

Over the years, neoliberalism has spawned a myriad of interpretations and heated discussions across a range of academic disciplines. Not surprisingly, there is no universally accepted single definition of this concept. However, certain key characteristics such as individualism, consumption, profitability, economic competitiveness, privatization, and state-regulated capitalistic development have seeped into the descriptions (Block et al., 2012; Copley, 2018). According to Xiong and Yuan (2018), the tentacles of neoliberalism have "exerted a deep impact on all aspects of social life by magnifying individual responsibility to a maximum extent while erasing the increasingly uneven access to socioeconomic and linguistic resources in globalization" (p. 105). Likewise, Nikolakaki (2016) argued that neoliberalism is a "predatory system" that has had a detrimental effect on the environment, workforce, and school structure (p. 89). A brief overview of the ELT publishing industry is relevant to this study as the participants were exposed to English language print and digital resources in the public school system that were not only rooted in neo-liberal values, but also lacked cultural diversity and depth (Davidson & Liu, 2020).

1.2.3 The Research Context: English Teaching in the Japanese School System

Before entering university, most Japanese students study English for eight years in the public school system. Even though a tremendous amount of money has been invested into English language education over the last three decades, Seargeant (2019) argued that levels of fluency are quite low compared to other Asian nations (e.g., South Korea, Malaysia). As we shall see, the reality in most public

school English language classrooms is quite different from the curricular goals of the educational policymakers. Elementary and junior high school are compulsory in Japan; therefore, students are required to attend school until they are 15 years old. However, 98.8% of junior high graduates continue their studies and only 1.3% of these students fail to complete secondary school (MEXT, 2019a; MEXT, 2019b). In 2019, 54.7% of high school graduates were enrolled at a tertiary institution (MEXT, 2019c). An overview of the Japanese education system can be found in Appendix A.

English language teaching was first integrated into the Japanese public school system in 1854 as a means to acquire Western knowledge (Hosoki, 2011). From this period until the late 1980s, English language programs were constructed on a *yakudoku* or grammar-translation foundation. In 1989, major revisions were introduced to the English language curriculum via the 'Course of Study' directive and teachers were required to develop students' communicative abilities (Steele & Zhang, 2016). The focus on communicative language teaching (CLT) can also be found in the 2003 'Action Plan to Cultivate Japanese with English Abilities' and the 'English Education Reform Plan Corresponding to Globalization' which was released in 2014 (MEXT, 2003; MEXT, 2014). In 2020, MEXT introduced further curricular reforms in the elementary school system that coincided with the Tokyo 2020 Olympics Games.[1] Third- and fourth-year elementary school students were required to study English for 35 hours per year; whereas fifth- and sixth-graders had their English classes increased from 35 classes to 50 classes per year for a total of 70 instructional hours (General Union, n.d., para. 4).

The curricular changes, especially the push for a CLT approach, have been disconcerting for many Japanese public school educators. Okumura (2017) argued that elementary school 'generalist' teachers often lack confidence in their own English language abilities and failed to receive adequate pre- or in-service training on how they can integrate CLT into their classrooms. Further muddying the waters is the fact that CLT is a notoriously difficult concept to define, and critics have pointedly stated that: "nobody knows what it is" (Littlewood, 2011, p. 541). Richards and Rogers (1986) captured both the ambiguity and flexibility surrounding the term in

[1] The 2020 summer Olympic Games were postponed until 2021 due to the COVID-19 pandemic.

the following manner:

> Communicative Language Teaching is best considered an approach rather than a method. Thus although a reasonable degree of theoretical consistency can be discerned at the levels of language and learning theory, at the levels of design and procedure there is much greater room for individual interpretation and variation than most methods permit. (p. 83)

While Brown (2006) acknowledged the theoretical shortcomings of CLT, he also provided us with these four interconnected characteristics:

1. Classrooms goals are focused communicative competence and not just grammar or linguistic skills.
2. Language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes.
3. Fluency and accuracy are considered to be complementary principles underlying communicative techniques.
4. Students need to use the language productively and receptively, in unrehearsed contexts. (p. 214)

Although most Japanese public school teachers would agree that it is important to develop their students' English language communicative competence, the *yakudoku* or grammar translation methodology is still prevalent in the public school system. Several researchers (e.g., Asaoka, 2019; Thompson & Yanagita, 2017) have argued that contextual factors such as a lack of time, large class sizes, low proficiency and low motivated students, an unwillingness to disrupt the 'status quo' within schools, ineffective peer collaboration, and the teachers' own familiarity with *yakudoku* contribute the resistance of adopting a CLT approach. Likewise, Underwood (2017) claimed that many Japanese high school EIL educators feel that grammar teaching is essential to help students pass university entrance examinations. Students who are accustomed to teacher-centered, grammar focused English lessons often experience a certain amount of discomfort when they start university as most EIL instructors, including the researcher of this study, are required to utilize CLT pedagogy.

1.2.4 Technology-Enhanced Learning in the Japanese School System

In addition to emphasizing CLT methodology, policymakers want public school educators to integrate ICTs into their English classes (MEXT, 2014). While this

government initiative is worthwhile and looks great on paper, especially when one considers that the teaching English to speakers of other languages (TESOL) field is awash with acronyms such as CALL (computer assisted language learning), MALL (mobile assisted language learning), and e-learning (electronic learning), the reality on the ground is another story. Most teachers would agree that the 'pedagogy must go before the technology' and it takes a significant amount of time to effectively incorporate ICT tools into their teaching practice. Joyce and Showers (2002) discovered that a typical teacher requires an average of twenty separate practice sessions before she/he can master a new skill. Unfortunately, most Japanese educators do not have an abundance of free time to devote to technology-enhanced learning (TEL) initiatives due to their teaching, administrative, and extracurricular responsibilities. According to a 2018 international study that involved 6,889 schools from 48 countries, Japanese junior high school and elementary school teachers worked the longest at an average of 56 hours and 54.4 hours per week, respectively, compared to a combined average of 38.3 hours a week for teachers from the other featured nations (Kyodo News, 2019). The Japanese teachers' excessively busy schedules in conjunction with the government's top-down approach to in-service professional development (Hashimoto, 2018) has undoubtedly factored into the resistance from many teachers to use ICTs in their English classes.

There is another important reality that educational policymakers have also overlooked, namely that a significant number of schools across the country are antiquated and lack an effective ICT infrastructure. The digital divide that exists in Japan was magnified in the early stages of the 2020 COVID-19 pandemic. During the national state of emergency, the government urged schools to temporarily close and try to shift from a traditional classroom approach to a virtual learning environment. A 2020 MEXT survey that involved 1,213 local governments revealed the following: 100% public schools provided students with paper-based learning materials; 29% offered digital resources; 10% were able to provide asynchronous instruction; and only 5% held livestreamed lessons (MEXT, 2020). Not surprisingly, this data has been used as fodder by critics who felt that public school administrators were woefully unprepared when it came time to provide children with online lessons. For example, Kunio Ushioda, a retired telecommunications employee and the coordinator of a

local school support association in Tokyo stated: “I had repeatedly pointed out to the school that it needed to install an up-to-date IT system so it could offer classes online. But plead as I might, I wasn’t able to get the administration or teachers on board” (Suzuki, 2020, para. 8).

Japanese public school students’ exposure to ICTs, or lack thereof, is especially relevant to this study. Before I started teaching at the site of this investigation, I erroneously assumed that Japanese ‘digital natives’ would be comfortable using technology in my classroom because most university students seemed to have a smartphone permanently affixed to their hands. During the first writing assignment in an English for academic purposes (EAP) course, I quickly discovered that most of my students did not know how to properly format their papers with word-processing software (i.e., MS Word) and mainly used a PC to play online games or surf the internet. This situation was quickly resolved via an in-class tutorial and a visit to my department’s CALL classroom which provided students with some ‘hands-on’ practice. Several students commented that their high schools did not have a good computer lab, or they did not get much access to it, so they appreciated the training session. Another revelation occurred the very first time I had my students do a DST project. A few students questioned why they had to use technology in their English class; whereas others were noticeably frustrated when they became tangled up in problematic ICT issues. Thus, I concurred with Selwyn’s (2016) contention that incorporating technology into a classroom is often a ‘messy’ and complicated process. In addition, Stockwell’s (2016) claim that English language learners (ELLs) are not always willing and capable users of educational technology was another idea that resonated with me.

1.2.5 The Academic English A Program

The Academic English A (AEA) program was launched in February 2017 to accommodate the University’s move from a semester system to a quarter system. The researcher and a colleague were entrusted with the task of creating curricular materials and implementing a new EAP course for first-year students. During a meeting with the AEA course coordinator, we established the following curricular goals:

1. Facilitate the transition from the typically passive learning style of high school to a more active one.
2. Help students to realize and manage their thought processes.
3. Encourage open-mindedness and a willingness to share.
4. Build confidence as English users.
5. Foster strong bonds and a supportive atmosphere among peers (Cripps et al., 2018, p. 47).

As noted earlier in the chapter, there are a myriad of problems associated with most commercially produced ELT resources; thus, we decided to create our own textbooks. Tomlinson (2016) perceived materials development to be an effective way for educators to develop a critical awareness of the language learning process and their own teaching practices.

All first-year students must take the AEA course as it will help them write an English thesis during their fourth year of university and prepare them for further study in English, including other content courses in Japan and overseas. During each eight-week academic quarter, students were required to attend fifteen 90-minute lessons. Thus, there were a total of sixty 90-minute classes or ninety hours of instructional time throughout the academic year. The AEA program aimed to foster the learners' presentation skills, communication abilities, DL, intercultural awareness, and CT. There was a total of eight topics in the AEA course which focused on the *Eibei* faculty members' areas of expertise and research interests. The easier topics were taught in the first two quarters and more complex themes were examined later in the year as shown in Table 1.1.

Table 1.1

Design framework for Academic English A

Course	**Quarter**	**Unit 1 (Classes 1-7)**	**Unit 2 (Classes 8-15)**
AEA I	1	Language	Communication
AEA II	2	Culture	Education
AEA III	3	Literature	Sociology
AEA IV	4	History	Politics

The four AEA textbooks we created had a wide range of resources and student-centered activities (e.g., warm-up exercises) that encouraged active learning. Within each textbook unit, there was also a practical skills section that provided students with opportunities to develop their research, writing, and public speaking abilities. Instructors had a certain degree of autonomy and could select the activities they wanted to use depending on their learners' needs and individual teaching styles. Flipped learning (FL) was an important part of the AEA course. Chang and Lin (2019) defined FL as a combination of "asynchronous learning via out-of-class multimedia lectures and synchronous learning through in-class student-centered activities" (p. 193). Students were assigned certain tasks before each lesson (e.g., watch a TED Talk) and this helped to prepare them for the in-class discussion activities with their peers.

1.2.6 The Academic English A Collaborative Digital Storytelling Project

Each quarter, the AEA students were tasked with a collaborative TEL project that meshed communication and writing elements with a variety of ICT tools. During the first quarter, student dyads used MS PowerPoint to create slides for a class-fronted PechaKucha presentation. This presentation format requires presenters to tell a story with twenty images for a maximum time of 6 minutes and 40 seconds or twenty seconds per slide. Students were introduced to important design principles (e.g., simplicity) based on Reynold's (2012) book *Presentation Zen* and they also watched a model PechaKucha presentation which highlighted the ecological impact of shark finning (see Glasson et al., 2010). This first quarter assignment not only provided students with an opportunity to communicate, negotiate, and collaborate with their peers, it also dovetailed nicely with the DST project which is the focus of this study.

In the second quarter, students created a four-minute to seven-minute collaborative DS that highlighted a problematic sociocultural issue. When the assignment was first introduced, most of the participants found it to be an overwhelming prospect due to their lack of familiarity with video editing software. Therefore, I employed scaffolding strategies to break down the learning process into more digestible chunks. Peer scaffolding was another element that alleviated some of the trepidation that many students had toward the DST assignment. This was

observable during the student-led tutorial sessions on video editing software (e.g., iMovie). Scaffolding, as noted by van de Pol et al. (2010), is a contested metaphor that is used in educational circles to describe the temporary support that learners receive which can help them achieve a goal or complete a task that might otherwise be out of their reach. Instructional scaffolding can help ELLs reduce their anxiety levels as well as enhance their motivation, writing skills and public speaking performances (Alavi & Esmaeilifard, 2021; Boggs, 2019; Chen, 2020; Goh, 2017).

Student-generated instructional materials were especially beneficial at the beginning of the DST project. The class was shown two exemplary DST videos which were created by students from a previous cohort and provided with the video scripts. The students were also given a copy of the instructor's grading rubric and discussed the elements that they were expected to incorporate into their collaborative videos. Four 90-minute lessons were allocated for the DST project over a four week period, including two classes whereby students could meet with one another, provide other groups with critical feedback, and conference with the instructor. Reflective practice, both individual and collaborative, was an essential element in the DST assignment. Mathew et al. (2017) defined this concept as "the ability to reflect on an action so as to engage in a process of continuous learning. A key rationale for reflective practice is that experience alone does not necessary lead to learning; *deliberate reflection* [emphasis added] on experience is essential" (p. 126). Keeping these words in mind, I created a self- and peer-checklist in the hope that it would help students organize their ideas and provide one another with more meaningful feedback. The learners also submitted a self- and peer-evaluation form that included comments about their learning experiences and a grade for each of the group members.

1.2.7 The Academic English A Classroom Environment

The AEA students studied in a modern classroom that was connected to a campus wide wireless fidelity (Wi-Fi) network. Students were encouraged to bring their own mobile devices to support different types of in-class MALL activities. My university, like many others around the world, considered the 'Bring Your Own Device' (BYOD) model to be an effective way to reduce institutional costs (Clark et al., 2021). Although I had access to my department's CALL classroom, I elected not to

use it during the DST project as the PCs were not outfitted with video editing software and the fixed-desks were not conducive to collaborative learning. I specifically requested a classroom with moveable desks so that I could reconfigure the room from a traditional teacher-centered one into an environment whereby students could walk around the room unobstructed and actively interact with their classmates. At the start of each teaching day, I moved thirty-two desks into six to eight learning pods. The decision to establish cooperative learning pods is rooted in the notion that learning is both a social and cultural process (Kiss & Weninger, 2017; Vygotsky, 1978).

1.3 Situating the Teacher-Researcher

The terms 'objectivity' and 'neutrality' are frequently mentioned whenever graduate students discuss different types of research. Many critical theorists consider these two concepts to be somewhat illusionary as research is a politicalized process that is "inextricably linked to European imperialism and colonialism" (Tuhiwai-Smith, 2012, p. 1). The political nature of the education system is best captured in these words: "Since it is not possible to separate politics from education, a political act is pedagogical and the pedagogical is political" (Freire, 2004, p. 115). Absolon and Willett (2005) argued that researchers can avoid Eurocentric writing practices by revealing their "epistemological location" via a short autobiographical introduction at the start of any academic paper (p. 107). The words that you are reading come from the keyboard of a White male urbanite who grew up in a working-class environment and is now the father of three biracial children. A couple of my lived experiences have filtered into this thesis. First, I worked as a high school teacher in two geographically remote Inuit communities in Canada's far north. During my three years in the Arctic, I was perceived to be a familiar-faced cultural outsider. I witnessed the detrimental impact that bureaucratic apathy, funding and resource gaps, culturally irrelevant curricula, and neocolonial models had on my students' wellbeing. At the other end of the learning spectrum, I was impressed by the local people's ingenious ingenuity, sharing circles, efforts to revitalize their ancestral languages as well as their warmth and hospitality. My experiences living out of a backpack for two years as I travelled and volunteered in different parts of South-East Asia opened my eyes to the grim socioeconomic hardships that people in

developing countries must endure. Finally, the fact that I'm a White male who is writing this thesis as a requirement for a graduate degree discloses my privileged position in society.

1.4 Research Questions

Digital stories (DSs) have been around for over four decades and used in a wide variety of disciplines (StoryCenter, 2016). In the Japanese HE context, most DST studies have been small-scale, limited in duration, and situated in communicative EIL courses. The studies have primarily focused on ELLs' linguistic proficiency, foreign language anxiety, and motivation (e.g., Gobel & Kano, 2016; Kasami, 2018, 2021; Knight, 2018). Despite being a popular research area, there is a noticeable void in the academic literature in regard to the use of DST as a way to enhance Japanese university ELLs' CT, self-directed learning, and DL. Furthermore, there is an absence of DST studies that have been conducted in a Japanese HE EAP environment. This study will address these shortcomings by contributing theoretical knowledge to the TEL and TESOL fields and it will create a better understanding of the role that DSs can play in developing ELLs' CT, awareness of local and global sociocultural issues, digital competencies, and motivation. In addition, this research will add some practical insights to the pool of knowledge which can be used by educators who would like to integrate a DST project into their own EAP programs. To put it succinctly, the intended audience of this thesis is other TEL and TESOL researchers, and teachers who would like to foster their students' twenty-first century skills.

My social constructivist and critical theoretical perspectives have factored heavily into the design of the project as well as the analysis of the data. The following research questions guided this study:

1. What impact, if any, will digital narratives have on Japanese university EAP students' critical thinking about local and global sociocultural issues?
2. Does a project-based language learning digital storytelling initiative enhance Japanese EAP students' digital competencies? If so, how?
3. With regard to Keller's ARCS model of motivational design, what effect does a project-based language learning digital storytelling approach in an EAP course have on the participants' attention, relevance, confidence, and satisfaction conditions?

These three research questions were created on a theoretical foundation that consisted of Keller's (1987, 2010) ARCS model of motivational design and Thomas and Lok's (2015) CT operational framework. After critically reflecting on the results of the pilot study and my own classroom observations, I realized that a DST project has a lot of moving parts that can often generate a certain amount of discomforting friction such as intragroup disagreements and students who experience a pendulum of emotions during the video editing process. Thus, I adopted a qualitative case study methodological approach at it enabled me to highlight multiple perspectives and have a more comprehensive understanding of my individual research context (Simons, 2009). Moreover, the eclectic nature of case study research (Rossman & Rallis, 2011) coupled with data collection flexibility (Pearson et al., 2015) allowed me to incorporate pre- and post-project questionnaires, focus group interviews, video analysis charts, self- and peer-evaluation forms, and classroom observations into this study. The next section will highlight the flow of my investigation and provide the reader with a brief synopsis of each chapter.

1.5 Structure of the Thesis

Chapter Two: Literature Review

The second chapter pulls together several key areas of academic literature that are relevant to this study. TEL is an area that is rapidly evolving so the literature review covers the period before, during, and after my study in order to keep abreast of the latest developments in the field. The essential terms that are utilized throughout this thesis are identified and defined in chapter two. In addition, the significance of this terminology to the researcher is explored. Attention is first given to DL and DST, especially studies which are situated in an EIL context. Next, the scholarly literature closely connected to these areas, namely MALL and BYOD, is examined. The third section of the literature review comprises teaching strategies with special emphasis on FL and project-based language learning (PBLL). Finally, several different branches of learning such as motivation, independent language learning, creativity, and CT are examined. Creativity and CT are perceived by several researchers (e.g., Eggers et al., 2017) to be interrelated skills, especially in the area of problem solving. Chapter two also situates the framework that was utilized to theoretically investigate the value of telling socially conscious DSs in a Japanese

university EAP classroom. Against a backdrop of critical realism, I combine Thomas and Lok's (2015) CT operational framework with Keller's (1987, 2010) ARCS model of motivational design. The amalgamation of these two models provides me with a versatile theoretical instrument which I use to scrutinize each of my research questions.

Chapter Three: Research Design and Methodology

The third chapter focuses on the research design and methodology that is used in this investigation and how the theoretical framework factored into these two elements. The qualitative case study methodology is utilized in this research undertaking to get a better understanding of the participants' thoughts on creating a socially conscious DST project in the AEA course. This chapter also includes information about the participants, ethical considerations as well as the challenges that I experienced researching my own students. The chapter concludes with a description of the data analysis process.

Chapter Four: Research Findings and Discussion

Chapter four opens with a brief summary of the core findings of the study. Next, the six different sources of data are analyzed with special emphasis on how they factored into the thematic development process. In chapter four, the data that emerged from the pre- and post-questionnaires, focus group interviews, peer- and self-evaluation forms, video analysis charts, and classroom observations are presented and interpreted. The combined numeric and qualitative data sheds some light on the participants' experiences and perceptions of creating a DST project in their EAP class. This chapter scrutinizes the findings against the backdrop of the theoretical framework that is used in this study. The findings from the six data sources are discussed in relation to previous academic studies. Finally, this chapter answers each of the three research questions.

Chapter Five: Conclusion and Further Work

Chapter five starts off with an overview of the study as well as a summary of the findings. Next, it provides the reader with a review of the hybrid theoretical framework that is used in my thesis. The contributions of this research to the TESOL and TEL fields are then discussed with emphasis on both theoretical and practical contributions. DST is an underutilized pedagogical approach in busy content-driven

EAP programs as many teachers are concerned about becoming tangled up in time-consuming logistical and ICT issues. Chapter five introduces a pragmatic and versatile model which can help educators integrate a DST initiative into an EAP context. Attention then turns to the limitations of this research and areas for future researchers to explore. In the final section, I discuss my reflections on the challenges that I experienced completing this thesis and the ongoing nature of my research journey.

Chapter 2: Literature Review

2.1 Introduction

This chapter highlights the key concepts and scholarly literature that are pertinent to this research undertaking. The essential terms that are utilized throughout this thesis are defined and the significance of this terminology is discussed. Chapter two is divided into the following distinct sections: a) DL and DST, b) TEL, c) teaching strategies, d) essential learning elements, and e) theoretical framework. These five areas are crucial to this study as they enabled me to develop and address each of my research questions. Furthermore, they provide readers with important background information about the various moving parts that are present in a typical project-based language learning (PBLL) DST project. The literature review starts off by examining DL, a highly contested notion, and DST. Here, the benefits and challenges of a DST approach are explored, with special emphasis on the usage of DSs in EIL environments. In the TEL section, the concepts MALL and BYOD are examined as they are an integral component in the AEA course. Consideration then turns to studies that center on teaching strategies, namely FL and PBLL. Next, the essential learning elements part of the chapter focuses on important multidimensional concepts such motivation, engagement, creativity, and CT. Chapter two concludes with an examination of the theoretical framework that is utilized in this study, namely Thomas and Lok's (2015) CT operational framework and Keller's (1987, 2010) ARCS model of motivational design.

2.2 Digital Literacy and Digital Storytelling

2.2.1 Digital Literacy: Definitions and Components

The term 'digital literacy' was first popularized by Paul Gilster in his 1997 book of the same name. Gilster (1997) perceived DL to be "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers" (p. 1). Over the years, the term has evolved from this simplistic description to definitions that are much more complex and multifaceted. For example, Son (2015) claimed that:

> Digital literary is the ability to use digital technologies at an adequate level for creation, communication, collaboration, and information search and evaluation in a digital society. It involves the development of knowledge and

skills for using digital devices and tools for specific purposes. (para. 1)

Likewise, Ng's (2012) description of DL as a "multiplicity of literacies" that comprises "technical, cognitive and socio-emotional perspectives of learning with digital technologies, both online and offline" is more substantial than many of the earlier definitions (p. 1066). While DL has appeared in scholarly publications for over twenty-five years, it is nevertheless a challenging notion to pin down due to the emergence of new technologies (Falloon, 2020) and the rapidly changing nature of people's digital practices (Pangrazio, 2016). The existence of numerous frameworks (e.g., Wang et al., 2021) in conjunction with the fact that DL is sometimes used interchangeably with other terms (e.g., ICT literacy, media literacy) has further obscured the concept (Hockly, 2021; Nguyen & Habok, 2021). Furthermore, Hinrichsen and Coombs (2013) believed that the inherent friction that exists between individuals who view technology as either culturally situated or neutral has added to the "complexity, variation and disputation" of the concept (p. 2). Critics have claimed that the "jargon jungle" (Ferrari, 2012) or various definitions of DL are often technocentric and skills-based (Reynolds, 2016) and used to justify the vast amounts of money that schools spend on ICT equipment and infrastructure (Greenlaw, 2015).

Other researchers have shifted away from a technocentric definition and integrated the notions of cognitive skills and criticality into their portrayals of DL. For example, Chan et al. (2017) enhanced Gilster's (1997) earlier description by claiming that DL is "the ability to understand and use information in multiple formats with emphasis on critical thinking rather than information and communication technology skills" (p. 2). Likewise, Spires and Bartlett (2012) argued that a digitally literate person can locate, consume, create, and communicate digital content and evaluate this information with a critical eye. Avila and Pandya's (2013) provided us with this definition which is underscored by Freire's (1996) critical literacies praxis: "Critical digital literacies, then, are those skills and practices that lead to the creation of digital texts that interrogate the world; they also allow and foster the interrogation of digital, multimedia texts" (p. 3). Talib (2018) claimed that "critical pedagogy is a natural ally of digital literacy" as learners can foster their critical consciousness by examining digital media with a more discerning eye (p. 57). For the purpose of this

study, Hague and Payton's (2010) multifaceted portrayal of DL is adopted as it includes CT and a cultural component which are important elements for twenty-first century ELLs, especially in our current globalized era. Hague and Payton (2010) defined this concept in the following manner: "Digital literacy involves critically engaging with technology and developing a social awareness of how a number of factors including commercial agendas and cultural understandings can shape the ways in which technology is used to convey information and meaning" (p. 3).

2.2.2 Digital Competence: Definitions and Components

The terms 'DL' and 'digital competence' (DC) are often used synonymously even though they have different origins and meanings (Iordache et al., 2017; Martin & Grudziecki, 2006). While both concepts have been used to underpin one another (Spante et al., 2018) and are important 21st century skills, DC is more comprehensive and emphasizes a wider range of skills (van Laar et al., 2017). For example, Ferrari (2012) provided us with this definition:

> Digital competence is the set of knowledge, skills, attitudes (thus including abilities, strategies, values and awareness) that are required when using ICT and digital media to perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socialising, consuming, and empowerment. (pp. 3-4)

Calvani et al. (2009, as cited in Scutto & Morellato, 2013) believed that DC incorporates the ability to use technology in a flexible manner alongside cognitive skills which are needed to "critically evaluate data and information, to exploit technological potentials in order to represent and solve problems and build shared and collaborative knowledge, while fostering awareness of one's own personal responsibilities and respect of reciprocal rights/obligations" (p. 297). More recently, Wang et al. (2021) described DC in a HE environment as the "knowledge, skills and attitudes that are required for responsibly and effectively using digital technologies to evaluate, consume and produce learning information, and to communicate and collaborate with others for learning purposes" (pp. 1063-1064). Each of these three definitions integrate the notion of ethical and responsible use of digital technologies

in addition to ubiquitous technological elements such as ICT skills.

In 2006, the European Union Commission identified DC as one of the eight key competencies that are necessary for employability, active citizenship, social inclusion, and lifelong learning (Vuorikari et al., 2016). This same organization released the *Digital Competence Framework for Citizens* (DigComp) in 2013 and updated the framework three years later. The DigComp 2.0 model includes: (a) information and data literary; (b) communication and collaboration; (c) digital content creation; (d) safety; and (e) problem solving (Vuorikari et al., 2016). In 2017, the *European Framework for the Digital Competence of Educators* was released by the aforementioned organization to help teachers assess and develop their digital skills via a six-stage model (Redecker & Punie, 2017). According to Caena and Redecker (2019), this model can only be a catalyst for change if front-line teachers perceive it to be a useful and practical professional development tool. Calvani et al. (2008) believed that educators who use DC models must be sensitive to their sociocultural contexts and consider the specific educational setting in which the framework is being deployed. On a similar note, Pettersson (2018) suggested that concept of DC in an educational context is even more complex as teachers must utilize digital pedagogy. Likewise, Lütge and Merse (2021) argued that EIL educators require "digital flexibility" which includes "reflectivity and a general awareness for the necessity to adapt to rapidly changing conditions for learning and teaching languages" (p. 17). The next section highlights how the concepts DC and DL are used in second language (L2) educational environments as well as studies that are pertinent to my research.

2.2.3 Digital Literacy and Language Learning

The increasing emphasis on integrating ICTs into HE EIL programs has encouraged a growing body of researchers to analyze students' DL skills. For example, Pegrum (2016) identified seven distinct literacies (i.e., multimodal or multimedia, code, information, data, network, participatory, and remix) that are relevant to twenty-first century language learners. This researcher argued that these items must be taught in conjunction with traditional language and literacy skills. There are several studies that are especially relevant to my research investigation. Cowie and Sakui (2018) examined the impact that DSs had on their Japanese

university students' DL skills and communicative competencies. The 82 ELLs who were featured in this study were required to create four collaborative DST projects, including one that highlighted a Japanese social issue, over a 16-week semester. Cowie and Sakui (2018) reported that the participants enhanced their DL skills, showcased their creativity, and became more aware of ethical issues (e.g., plagiarism). In addition, many students' personal reflections indicated that the DSs helped them to improve their English communication skills. In a different context, Chen (2018) gauged the perceptions of 46 Taiwanese university students as it pertained to a multimodal video project. This researcher wanted to know if the video production and viewing process would develop the participants' 'digital empathy', a term Friesem (2016, as cited in Chen, 2018) defined as the "cognitive and emotional ability to be reflective and socially responsible while strategically using digital media" (p. 51). Chen (2018) believed that the DST project enabled many participants to have a heightened awareness of social issues (e.g., cyberbullying) and empathy towards the victims. In addition, most students experienced a sense of achievement after producing their collaborative videos and learned the importance of teamwork and active listening. In a similar study, albeit one conducted in China with 49 high school ELLs, Jiang and Gao (2020) claimed that the multi-modal video production process contributed to the participants' "digital empathetic development" and fostered their DL skills (p. 82). Likewise, Rahimi and Yadollahi (2017) reported that the 42 Iranian junior high school ELLs in their study improved their DL and communicative abilities after completing a DST project.

While the results of the aforementioned research are certainly encouraging, it must be remembered that the investigations were small-scale in nature and in three cases, the researchers studied their own students. According to Stockwell (2019), a significant amount of research that is generated in the CALL field is somewhat problematic as certain studies are limited in scale and take place within a single location with teacher-researchers examining the outcomes of their own classroom practices. In a more comprehensive study, Nguyen and Habok (2021) examined the DL levels of 1,661 ELLs at ten Vietnamese universities. This research duo reported that the participants demonstrated a good knowledge of DL and had positive attitudes about using ICTs in their English lessons. However, many students

did not regularly apply digital technologies when studying English. In another context, Roche (2017) investigated 125 international students taking an intensive EAP bridging course which emphasized DL at an Australian university. This researcher claimed that the EAP course helped the participants enhance their ICT skills and have a better understanding of academic integrity practices. Roche (2017) argued that DL and critical literacy should be core components of any HE EAP program. The importance of DL and the need for teachers to better prepare twenty-first century ELLs for the increasingly digitized global marketplace are themes that reverberated across the academic literary landscape. While the integration of ICTs into a language classroom can have "far-reaching effects," Stockwell and Reinders (2019) argued that the actual impact of digital technologies is often considerably less than educators' expectations (p. 43). In the next section, DL in Japan is explored with a special emphasis on how this concept impacts Japanese university ELLs. This is an essential part of the literature review as my investigation takes place in a Japanese HE context and the second research question focuses on Japanese EAP students' digital competencies.

2.2.4 Digital Literacy in Japan

Digital technologies are ubiquitous in Japanese society and deeply embedded in many people's professional and personal lives. Even though Japan is a technologically advanced nation, many young people lack adequate DL skills. According to Mizukoshi (2017), there is an "invisible illiteracy" in Japan due to the sharp decline in PC usage and growing popularity of smartphones. International and domestic companies who hire freshly graduated Japanese university students are often surprised that their new employees lack the necessary technological skills to operate different types of office productivity software on a PC (Mizukoshi, 2017; Paterson, 2017). Anecdotal evidence from front-line instructors suggests that many Japanese university ELLs are smartphone 'savants', but not always enthusiastic or competent users of technology in their scholastic endeavors (Marceau, 2019; Mehran et al., 2017). Several earlier studies conducted in Japan seem to support at least part of this popular narrative. A 2012 survey from the Organization for Economic Co-operation and Development revealed that 24% of Japanese people between the ages of 16-29 lacked basic ICT skills (OECD, 2015, p. 38). Other research

conducted in Japanese universities reported that students had low levels of DL (Lockley, 2011; Murray & Blyth, 2011) and were reluctant to use their personal mobile devices for educational purposes (Kondo et al., 2012; Stockwell, 2010).

More recently, Son et al. (2017) compared the DL rates of 100 undergraduates taking an EAP course at an Australian university with 70 ELLs enrolled in an EIL course at a Japanese university. While the ELLs had a lower self-rating of their digital abilities than their EAP counterparts, they also scored higher on the DL test. In addition, both the ELLs and EAP participants were interested in using digital technologies. The findings of Son et al. (2017) are promising as they challenge the previously mentioned earlier studies and anecdotal evidence; however, the fact that the Japanese university ELLs were recruited from computer science and engineering programs may have accounted for their higher levels of digital acumen and willingness to use ICTs in their English courses. Caldwell (2018) reported that the 44 Japanese university ELLs in his study had positive attitudes towards using digital technologies in their English classes. Although the participants were happy to use either PCs or digital devices in their lessons, they preferred mobile learning on their smartphones. This study also contradicts the widespread belief that Japanese university students are disinterested in using ICTs for anything other than entertainment or socializing purposes. It is possible that Caldwell's digital savviness and enthusiasm for using ICTs in his classroom may have seeped into his findings. Nguyen and Habok (2021) claimed that an educator's technological abilities can have a positive impact on ELLs' DL. Similarly, if an EIL teacher is dissatisfied with certain classroom technologies or distrusts them, it can have an adverse effect on the students' perceptions and overall learning environment (Stockwell & Reinders, 2019).

Cote and Milliner's (2017) findings echoed some of the earlier research conducted in Japanese HE EIL settings. This research duo discovered that most of the 115 first-year ELLs in their study "displayed very limited digital literacy" and were unable to use PCs for problem solving and CT tasks (p. 196). In another study, Mehran et al. (2017) investigated the 'e-readiness' of 299 Japanese undergraduate ELLs to take an online 'English for General Academic Purposes' course. This research team reported that most of the participants had a fair command of Web 2.0 tools for

daily life, but not for scholastic purposes. In addition, most of the students were apprehensive about taking an online EAP course. If the aforementioned studies were replicated today, it is likely that the participants would have higher levels of DL due to their increasing familiarity with video conferencing platforms (e.g., Zoom), learning management systems, and file sharing. While the 2020 COVID-19 pandemic disrupted the education of millions of Japanese students (Obe & Okutsu, 2020), it also forced a significant number of ELLs to improve their digital skills so that they could adapt to the 'new normal' (i.e., online learning).

2.2.5 Digital Storytelling: Background and Definitions

With the constant development of new types of video-mediated technologies, a person might be inclined to think that DST is a relatively recent phenomenon. In fact, DSs have been around for almost four decades (Lambert & Hessler, 2018) and used in a wide variety of scholarly disciplines (Quah & Ng, 2021). DSs, which are typically between three to ten-minutes in length, have also been deployed for a plethora of purposes such as the preservation of indigenous languages and cultural traditions (e.g., Shiri et al., 2021), community-based participatory research (e.g., Pratt, 2020), providing a voice to immigrants and refugees (e.g., McDonough & Colucci, 2019), therapeutic benefits for marginalized groups (de Jager et al., 2017), teacher development (e.g., Cetin, 2021), and English language learning (e.g., Yang et al., 2020). Clarke and Adam (2010) noted that DST started from a grass-roots movement of artists who were "committed to the democratization of culture: to empowering and giving voice to individuals and groups traditionally silenced, marginalized, or ignored by mainstream culture" (p. 159). DST has evolved due to the development of new types of digital technologies (Miller, 2020) as well as the proliferation of DSs in a wide array of educational circles. Teachers and students now use DST to inform, instruct, examine historical events, and showcase their own learning in addition to the original purpose of sharing personalized narratives (Bouchrika, 2021; Robin, 2008).

Over the years, DST has spawned a variety of different definitions. For example, Nishioka (2016) provided us with a techno-centric explanation by noting that DST is a "process of crafting multimodal narratives using video editing software or Web 2.0 applications" (p. 39). It involves combining and manipulating different

elements such as images, videos, animation, sounds, music, narration, written text, and transition effects into a cohesive digital story (DS) or short movie (Hung, 2019; Nishioka, 2016). Similarly, Barber (2016) perceived DST to be "a collision/collusion between the ancient traditions of orality and the instant information access of mass communication systems" (p. 11). According to Suwardy et al. (2013), DSs are "an amalgamation of education and entertainment with an element of adventure" (p. 111). Whereas, Fisanick and Stakeley's (2021) explanation probed deeper than mere 'edutainment' by claiming that DST is a process of "harnessing technology to empower people with limited multimedia skills and resources to tell and share powerful stories from their own perspectives and in their own words" (p. 2). Matthews and Sunderland (2017) provided us with another definition that is rooted in social consciousness by claiming that DST is "life-story telling in a variety of mediated forms deployed to prompt social change" (p. 4). Perhaps the most appropriate description of DST for the purpose of this study can be found in the words of Towndrow and Kogut (2020). This research duo claimed that it is a "social process that represents and offers opportunities for teachers and learners to explore, document and communicate their histories and personal growth in critical and reflective ways" (p. 148).

2.2.6 Digital Storytelling and Language Learning: The Benefits

Throughout the academic literary landscape there are numerous studies (e.g., Laina & Marlina, 2018) that appear to be constructed on a technological deterministic foundation which romanticize the seemingly never-ending benefits of DST. A careful examination of the relevant academic literature to this study revealed that there are in fact several potential advantages of integrating a DST project into a Japanese university AE course. The video-making process can help students cultivate important twenty-first century skills such as communication, collaboration, creativity, CT, and DL (Gedera & Zalipour, 2021; Quah & Ng, 2021). Likewise, Stanley (2018) believed that DST can improve ELLs' reading, writing, and researching abilities. Over the years, several studies conducted in Taiwan (e.g., Hwang et al., 2016; K-P Liu et al., 2018) have suggested that DSs had a positive impact on ELLs' oral communicative competence. While the results of many of these studies are promising, they have frequently featured elementary school participants and were

limited in scale and duration. More recently, Fu et al. (2021) investigated 100 Taiwanese ELLs who completed a DST project in a first-year university course. This research team reported that the DST project helped the participants improve their speaking competence as well as their organizational and speech delivery abilities. These findings might be attributed to the fact that students knew their classmates would view their DSs and they had an opportunity to use the target language during the video-making process in a "personalized and authentic manner" (Lee, 2014, p. 339).

On the cultural front, Kiss and Weninger (2017) argued that visual texts are the ideal resource to foster ELLs' intercultural communicative competence and cultural awareness. Kusumaningputri and Widodo (2018) reported that the 66 Indonesian university ELLs in their qualitative study improved their critical awareness of cultural issues after completing a seven-week digital photograph-mediated intercultural project. Likewise, Ribeiro (2016) claimed that the 140 participants who were in a 'translation and new technologies' course at a university in Portugal enhanced their intercultural awareness and digital and media literacy skills at the conclusion of a DST project. According to Xu and Knijnik (2021), the concept of intercultural awareness must be closely intertwined with criticality in an EIL teaching environment. Several studies have highlighted the value of using DSs to ignite ELLs' CT fires. In an earlier study, albeit one that still resonates today, Yang and Wu (2012) reported that the Taiwanese senior high school participants they examined made significant improvements in their CT skills and learner motivation at the completion of a twenty-week DST project. This detailed mixed methods study involved 110 students who were placed in either a lecture-oriented class (comparison group) or DST class (experimental group). More recently, Chan (2019) claimed that a Hong Kong-based DST project fostered the university-aged participants' CT dispositions and self-esteem. This researcher also reported that the participants in the DST intervention group had less ethnocentric viewpoints compared to that of the individuals in the control group. On a similar note, Huang (2019) argued that a multimodal approach can enhance ELLs' critical awareness of sociopolitical issues such as race, class, and gender. Even though Huang's (2019) study only involved 28 Taiwanese university ELLs, it is nevertheless of interest because she scrutinized each

of the participants' digital artifacts via a critical multimodal discourse analysis.

Gedera and Zalipur (2021) reminded us that the visual and audio components of video make it appealing to students with a wide variety of learning styles. DST can foster active and independent learning (Towndrow & Kogut, 2020) as well as ELLs' learner autonomy (Kim, 2014) and self-confidence (Kasami, 2021). Perhaps the most frequently mentioned benefit of DSs, especially in the Japanese EIL context, falls under the umbrella of student engagement and motivation. For example, Ono (2014) reported that a PBL DST project at a Japanese university created a high level of engagement, and it reduced the amount of foreign language anxiety that lower-proficiency ELLs experienced. Likewise, Kasami (2021) contended that DSs had a positive impact on lower-level Japanese university ELLs by improving their confidence and motivation to learn English. According to K-P Liu et al. (2018), the increased levels of extrinsic motivation that the Taiwanese ELLs in their DST investigation reported could be related to the fact the students wanted to perform and look better in front of their peers. The findings from this study are applicable to other contexts, especially ones that require ELLs to create collaborative DSs.

2.2.7 Digital Storytelling and Language Learning: The Challenges

Educators can reap several significant benefits by incorporating DSs into an EIL course; however, DST is not without its limitations. Critics have suggested that the traditional approach whereby individuals share highly personalized digital narratives is often 'sentimental tripe' or 'sentimental navel-gazing' (McWilliam & Bickle, 2017). Educators must be cognizant of the fact that certain DST topics may threaten their learners' cultural and personal values and not every student will be comfortable sharing their stories (Woodhouse, 2008, as cited in Duveskog et al., 2012). A reoccurring theme across the academic literature is that DSs can generate a certain amount of discomfort and frustration within a foreign language classroom. Oskoz and Elola (2016) reminded us that a DST project requires L2 learners to combine traditional language skills with ICT knowledge and this can be a time-consuming process, especially for students who are not proficient with technology. On a similar note, Kasami (2018) tells us that several of the Japanese university ELLs in her study felt that they did not have enough time to complete their DSs and they also had to overcome problematic ICT issues. Lee (2014) reported that the usage of

unfamiliar lexical items was a source of irritation for the participants in her study as they could not fully understand their classmates' DSs. Hwang et al.'s (2016) DST research with Taiwanese elementary school ELLs revealed that intragroup conflicts and off-task behaviors (e.g., chatting) resulted in wasted opportunities for speaking practice and friction within some of the collaborative groups.

Writing is a crucial component in the DST process (Ohler, 2013). Kim and Lee (2017) reported that most of the 50 Korean first-year university ELLs in their study wrote shorter DS scripts and frequently replaced text with multimedia options. This research duo believed that some students may have used the digital elements as a writing "avoidance strategy" (p. 8). Likewise, Barber (2016) claimed that students can spend too much time on the 'digital' (e.g., music, transitions) and overlook important elements from the 'story'. At the other end of the video-making spectrum, it is often challenging for digital storytellers to condense their scripts into a succinct video (Pratt, 2020).

Student anxiety towards DST was another theme that reverberated across the academic literary landscape. Sunderland et al. (2021) claimed that "fear and apprehension" are probably unavoidable as the DST process forces students outside of their comfort zones (p. 22). This research team also believed that this "pedagogy of discomfort" can result in a transformative learning experience for the digital storytellers (p. 22). The anxiety that is generated by a DST project is often exacerbated in an EIL environment. Horwitz et al. (1986) argued that communication apprehension, the fear of negative evaluation, and test anxiety can contribute to a learner's foreign language anxiety. A typical L2 DST project requires students to work collaboratively and eventually share and talk about their videos during a class 'film festival' or viewing session. Some ELLs are concerned about making mistakes in front of their peers and/or receiving a negative evaluation from their instructor or classmates so their progress during a DST project can be hindered (M-C Liu et al., 2018). In the Japanese HE context, Wroblewski et al. (2014) argued that the "act of speaking in front of an audience is thought to be one of the most feared context-based apprehensions in Japan, even when done in Japanese" (p. 59). Nishioka (2016) postulated that teachers should organize foreign language learners into groups of similar proficiency levels during DST projects so that students can retain more

language when they work amongst their peers. It is possible that this approach could also reduce some of the ELLs' intragroup communication apprehension and anxiety towards sharing their DSs.

Many EIL instructors can find DST projects to be a frustrating and even daunting endeavor, especially if they are resistant to using ICTs in their lessons. EIL teachers often do not receive adequate training on how to create DSs and implement a DST approach into their classes (Hung, 2019) so this lack of support can impede the students' learning outcomes (Thang et al., 2014). Further muddying the waters is that fact that schools might have obsolete ICTs or inadequate institutional resources that can accommodate the creation of DSs in the classroom (Hung, 2019). Incorporating a DST initiative into an EIL course is something that is much easier said than done. Selwyn (2016) asserted that the Australian undergraduate students in his large-scale study did not always perceive digital technologies to be advantageous as "technology use in the university context is inevitably complicated, 'messy', ambiguous and not wholly satisfactory" (p. 1019). On a similar note, Stockwell (2016) argued that integrating mobile devices into an EIL classroom is a "surprisingly complex" undertaking and teachers often erroneously believe that ELLs are competent and willing users of technology (p. 303).

Many EIL instructors automatically assume that their 'digital native' students will be able to produce a DS relatively easily without becoming tangled up in problematic technological issues because of the omnipresence of smartphones in their lives. Such a belief is highly misguided in the eyes of Kirschner and De Bruyckere (2017) because 'digital natives' and 'human multitaskers' are mythical creatures who do not exist even though the media and certain "educational gurus" would have us believe otherwise (p. 136). Even though technology is a ubiquitous part of the daily lives of millennials, Talib (2018) argued that many young people are not "effective digital citizens" because they have low levels of critical engagement and ICT proficiency (p. 56). Clearly, teachers should not take their students' digital acumen for granted. Furthermore, it takes a tremendous amount of time and carefully planning for an educator to successfully integrate a DST initiative into a foreign language classroom (Koelzer & Christiansen, 2016).

2.3 Technology-Enhanced Learning

2.3.1 Mobile Assisted Language Learning (MALL): Background

CALL has been used in L2 classrooms for over five decades (Beatty, 2010) and evolved from simplistic gap-filling tasks to highly interactive multimedia activities that can be accessed any time and in any place via networked digital systems (Otto, 2017). While MALL is closely aligned with CALL, it is a distinct research field and teaching approach with its own unique affordances and challenges (Palalas & Hoven, 2016). According to Kayaoğlu & Çetinkaya (2018), MALL is less reliant on teacher guidance and stresses more personalized and self-directed learning than CALL. Mobile learning in the foreign language field has been researched for almost 30 years and become an increasing popular area due to the ubiquitous and pervasive nature of mobile devices (Viberg & Grönlund, 2017). Like many other technologically-based concepts, it has spawned a host of definitions and pedagogical interventions. Kukulska-Hulme and Shield (2008) described MALL as "learning mediated via handheld devices and potentially available anytime, anywhere" (p. 273). Whereas, Palalas (2016) defined it as "learning across physical and virtual contexts which is enabled and supported by highly portable devices (both handheld and wearable) as well as communication and social network technologies" (p. v). This more comprehensive definition has been adopted for this study. Kukulska-Hulme et al. (2017) claimed that the affordances of digital devices have merged the traditionally separate spheres of informal and formal language learning. According to Melhuish and Falloon (2010), mobile devices provide educators with the following five important affordances:

1. Portability;
2. Affordable and ubiquitous access;
3. Situated, 'just-in-time' learning opportunities;
4. Connection and convergence;
5. Individualised and personalised experiences. (p. 4)

In addition, the multimedia capabilities (e.g., photos, videos, audio files) of digital devices allows teachers and students to create their own learning resources (Burston, 2016).

2.3.2 Mobile Assisted Language Learning (MALL): Benefits and Challenges

Over the last decade, the omnipresence of digital devices and development

of new smartphone applications (e.g., Twitter) have generated a multitude of MALL studies. Most of the research falls under the following three umbrellas: (a) language performance development; (b) collaborative learning; and (c) motivation and learner autonomy (Burston, 2016; Forsythe, 2021; Kukulska-Hulme & Viberg, 2018; Zain & Bowles, 2021). In Hsieh et al.'s (2017) study with 42 Taiwanese university ELLs, a MALL initiative which featured the smartphone application LINE resulted in improved English oral proficiency test scores. Chen and Lin (2018) also reported that the Taiwanese university students in their small-scale study felt that a task-based MALL project enhanced their English language skills. Other researchers have reported that a MALL approach can foster ELLs' vocabulary acquisition (e.g., Mohsen & Mahdi, 2021), listening abilities (e.g., Cavus & Ibrahim, 2017), grammatical development (e.g., Ghorbani & Ebadi, 2020), writing skills (e.g., Kessler, 2021) and presentation performances (e.g., Toland & Mills, 2018).

Ozdamli and Uzunboylu (2015) claimed that mobile devices have eliminated geographical borders and enabled foreign language students to have more cooperative learning opportunities. Likewise, Kukulska-Hulme and Viberg (2018) argued that the numerous affordances of mobile technologies such as timely feedback, active participation, and continuity of use support collaborative language learning. Jiang and Zhang (2020) reported that explicit socializing activities helped the 60 first-year Chinese graduate ELLs in their MALL study to actively participate and write a collaborative argumentative essay. The third theme that reverberated throughout numerous published MALL studies was the effect that mobile technologies had on students' motivational levels and self-directed learning. In Reynolds and Taylor's (2020) study, which involved 24 South Korean university ELLs and 15 EIL instructors, the Kahoot mobile application had a strong motivational impact on students as it was considered to be a refreshing change from the traditional rote learning drills they had experienced in the past. This research duo also believed that Kahoot nurtured the learning process by igniting the participants' "musical, visual-spatial, and kinesthetic intelligences" (p. 86). Mobile technologies are powerful tools that can facilitate informal and self-directed learning (Pegrum, 2014) as well as enhance ELLs' self-reflective competencies (Kessler, 2021).

At the other end of the MALL continuum, there are also several significant

barriers that can erode the effectiveness of mobile devices in a foreign language classroom. There are obvious technological constraints such smaller screen sizes and limited input methods (Stockwell, 2022), internet connectivity issues (Stockwell & Hubbard, 2013), slow processing speeds and dead or low batteries (Ozer & Kilic, 2018) as well as students who use antiquated or incompatible mobile devices (Kayaoğlu & Çetinkaya, 2018). Next, there are certain pedagogical implications that educators often fail to consider before launching a MALL initiative. There is a tendency by many teacher-researchers to "jump from digital bandwagon to digital bandwagon" in their quest to get the latest "affordances" instead of carefully considering the results of existing studies and impact that ICTs will have on their classroom practices (Levy et al., 2015, p. 5). Inserting a MALL initiative into a curriculum will not instantaneously result in ELLs becoming self-directed learners. Educators must scaffold learning and provide students with proper MALL training so that they can develop their self-regulated learning abilities (Garcia Botero et al., 2021). In Kayaoğlu and Çetinkaya's (2018) study with 26 Turkish university ELLs, noteworthy intragroup problems (e.g., irresponsible peers) emerged during collaborative MALL activities. Lower proficiency ELLs can also experience frustration and anxiety as Bailey (2019) noted in his research with 78 South Korean university participants. On the MALL academic literary front, there is a lack of replication and large-scale longitudinal studies (Burston, 2021; Morgana, 2021) as well as numerous research projects that remain firmly planted in the pilot testing stage (Burston, 2016).

2.3.3 Bring Your Own Device (BYOD): Background

The participants in this study did not have regular access to the department's two CALL classrooms as they were frequently reserved by other instructors. More importantly, the PCs did not have any video editing software and the desks were firmly affixed to the floor which somewhat hindered the collaborative PBLL approach featured in this research. Thus, I adopted a BYOD policy for the DST project and the AEA course. There is a scarcity of studies on BYOD in the foreign language education field; however, this concept is often an important element in many MALL investigations. The BYOD concept, which first appeared in 2009, is now firmly established in a wide array of business and education contexts (Cheng, 2018).

Pegrum (2014) pointed out that BYOD and 'Bring Your Own Technology' (BYOT) are "blanket terms to cover all situations where end users supply their own technology" (p. 64). More recently, Clark et al. (2021) described BYOD as when an "individual makes use of their personally-owned technological device (e.g., smartphone or tablet computer) in a workplace or educational setting, rather than using an institution-owned device, to perform work or education related tasks" (p. 1). Campo (2013) suggested that device neutral assignments, which allow students to select their own digital tools, should be integrated into BYOD learning environments. This educator provided us with these recommendations:

1. Allow choice of product. Students can showcase their learning in a variety of ways (e.g., video, website, presentation, screencast, essay).
2. Co-construct success criteria. Get students involved in the creation of grading rubrics.
3. Use generic descriptions. For example, use 'word-processing' instead of 'MS Word'.
4. Suggest cross-platform services. Many apps and services can be used on all devices.
5. Group students purposely. Match students up with similar devices or with different devices so that each group will have a laptop and smartphone. (Campo, 2013, para. 2)

2.3.4 Bring Your Own Device (BYOD): Benefits and Challenges

Incorporating a BYOD model into an EIL program can yield several significant benefits. Opportunistic learning can occur with the "anytime, anyplace *access to* [course] *content*" (Sundgren, 2017, p. 3083) and students can develop their twenty-first century skills (Falloon, 2015). The BYOD approach promotes student engagement and interaction as well as makes learning more personalized and independent (Al-Okaily, 2013; Cheng, 2018). Institutions can reduce costs by not needing to purchase and replace obsolete ICTs (Miller & Welsh, 2017) and it does not take much time to implement a BYOD model (Al-Okaily, 2013). BYOD is becoming increasingly popular in foreign language classrooms as a growing number of teachers are attempting to show their students that a mobile device is not just an entertainment gadget, but also a highly useful learning tool (Hockly & Dudeney,

2018). Thomas's (2020) research is especially relevant to this study as he investigated the impact that a BYOD initiative had on 135 Japanese university ELLs. This investigation, which was conducted in two different EAP courses over a 30-week period, generated a couple of interesting findings. First, the students used their digital devices for a wide range of purposes in the classroom (e.g., designing presentation visuals, problem-solving tasks, writing reports, sharing information). This finding challenges the widely held belief that Japanese university students only use their smartphones in class to check words on an online dictionary and surreptitiously look at social media sites. Next, Thomas (2020) reported that a large number of the participants were initially quite pessimistic about the BYOD policy; however, a lot of this negativity faded by the end of the second course and many students not only recognized the value of the initiative, but also felt that they *should* use their own digital devices in an EAP course. This discovery contradicts some of the earlier research (e.g., Stockwell, 2010) conducted in a Japanese HE EIL context.

There are also several thorny issues that EIL educators must consider before they interweave BYOD into their classroom practices. Nuhoğlu Kibar et al. (2020) reported that the biggest concern for the 60 Turkish university students in their BYOD study was the digital divide that existed "between the 'haves' and 'have nots' regarding the technical features and specifications of devices" (p. 476). Furthermore, the equipment inequities resulted in some students not being able to fully participate in certain in-class activities (Nuhoğlu Kibar et al., 2020). Students can incur additional costs in a BYOD environment if they don't have an extensive data plan as video files tend to be large and take time to download (Sundgren, 2017) or if their digital device gets accidentally damaged during an in-class activity (Clarke et al., 2021). There are also digital privacy concerns, especially the unintentional leakage of information (Bélanger & Crossler, 2019; Page Jeffery, 2022) as well as problematic ICT issues such as mobile devices with insufficient battery power or slow internet connectivity due to a large number of users overloading the classroom wireless network (Nuhoğlu Kibar et al., 2020). Thomas (2020) noted that the Japanese ELLs he investigated were worried about their smartphones impeding communication and becoming a distraction in class. Likewise, many teachers believe that a BYOD policy is an open invitation for students to engage in off-task multi-tasking activities such as

texting friends and checking social media sites (Wood et al., 2012). Other educators worry about having to provide tech support for a variety of different digital devices (Hockly, 2012) or launching a BYOD initiative without adequate training and support (Hockly & Dudeney, 2018). The next section focuses on two teaching approaches, namely FL and PBLL, that were an essential part of my study.

2.4 Teaching Strategies

2.4.1 Flipped Learning: Definitions and Benefits

Although FL typically involves merging pre-class online work with face-to-face in-class activities, the 2020 COVID-19 pandemic highlighted the value of this instructional approach in an emergency remote learning context. For example, Anggoro and Khasanah (2022) reported that a FL initiative helped 32 Thai university ELLs become more engaged and have a better understanding of the course content in their virtual classroom. In my study, FL was not only an important part of the AEA course, but also an essential element in the DST project as students were required to watch assigned videos (e.g., video editing, infographics) and visit websites that were relevant to their individual projects. For the last decade, researchers have examined FL in a wide variety of disciplines and generated a tremendous number of scholarly publications. However, there is an absence of comprehensive research on FL in the foreign language educational arena in spite of it becoming an increasingly popular area in recent years (Turan & Akdag-Cimen, 2020). Like many other technological concepts, there is a lack of agreement on an exact FL definition and model (Bond, 2020). Lage et al. (2000) asserted that FL occurs when "events that have traditionally taken place *inside* the classroom now take place *outside* the classroom and vice versa" (p. 32). Similarly, Mehring (2015) perceived it to be a "teaching technique that incorporates the use of traditional video or audio lectures as students' homework, typically viewed outside of class" (p. 2); whereas, the Flipped Learning Network (2014) defined the concept in the following manner:

> Flipped learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. (para. 2)

This is the most appropriate definition for the purposes of this study. The four essential components of the F-L-I-P framework are: (a) flexible environment, (b) learning culture, (c) intentional content, and (d) professional educator (Flipped Learning Network, 2014). More recently, Chang and Lin (2019) described FL as a combination of "asynchronous learning via out-of-class multimedia lectures and synchronous learning through in-class student-centred activities" (p. 193). A key element in most FL models is that the classroom time should be used for "the construction of knowledge" rather than "the transfer of information" (Nuhoğlu Kibar et al., 2020, p. 466).

There are several notable benefits of utilizing a FL approach in an EIL context. By its very nature, FL provides ELLs with the opportunity to learn at their own pace by enabling them to pause, rewind, or replay instructional videos as many times as they like. The repeated exposure to digital materials can lead to a deeper understanding of the course content (Chen & Hwang, 2020). Lee and Wallace's (2017) research seems to support this notion. This research duo conducted a rigorous study at a South Korean university that involved 79 ELLs who were divided into a FL group or CLT group. Lee and Wallace (2017) reported that the FL cohort achieved higher scores and appeared to be more engaged than their counterparts. It is worth noting that the participants in this investigation had a high level of English proficiency and were motivated students who had strong study skills. In a similar study, albeit one that featured 60 Iranian university ELLs, Haghighi et al. (2019) claimed that the FL group demonstrated higher academic achievements and were more motivated than students who were placed in the conventional learning group. Kong (2014) reported that a 13-week FL initiative that involved 107 students at a Hong Kong high school improved the participants' information literacy and CT skills. More recently, Chen and Hwang (2020) conducted a FL study at a Taiwanese university that featured 72 first-year ELLs. The researchers reported that a concept mapping-based FL approach had a positive effect on many of the participants' CT awareness and speaking performances and it led to a reduction in L2 speaking anxiety. In another small-scale study that involved 49 ELLs, Ozturk and Cakiroglu (2021) reported that the FL model they utilized at a Turkish university improved the participants' self-regulated learning strategies as well as their speaking, reading,

writing, and grammar test scores. Mehring (2015) believed that FL is an "exciting new alternative" for the Japanese education system as the student-centered approach can foster ELLs' CT skills and provide them with more opportunities to use the target language in authentic communicative situations (p. 6).

2.4.2 Flipped Learning: Challenges

At the other end of the FL continuum, teachers and students often need to overcome several noteworthy obstacles in a flipped classroom. Selwyn (2016) discovered that a significant number of the 1,658 Australian university undergraduates he researched became sidetracked and distracted with digital technologies (e.g., smartphones, YouTube) when they were supposed to be doing their course work which led to increased rates of procrastination. Mehring (2015) noted that the Japanese ELLs in his study felt that the increased workload and FL acclimatization process were notable challenges. In another EIL context, Chang and Lin (2019) suggested that shy ELLs' willingness to communicate and participate can even be more difficult in a FL setting. Thus, it is important for educators to establish a comfortable classroom atmosphere and provide appropriate in-class support for reticent learners (Chang & Lin, 2019). Other barriers can include students who prefer a traditional learning approach to a flipped classroom as well as learners who lack adequate household ICT resources to be able to complete pre-class activities (Lo & Hew, 2017). The FL model can also generate a certain amount of frustration for many teachers. A recurring theme across the literature is that FL increases educators' workloads (e.g., Aghaei et al., 2020) and it takes a lot of time and thought to prepare appropriate flipped instructional materials (Bond, 2020). There are also practical concerns such as teachers might not have adequate training to be able to effectively use FL (Lo & Hew, 2017) and it is difficult to confirm if students actually watched assigned videos in a flipped classroom (Chao et al., 2015).

2.4.3 Project-based Learning: Background

Project-based learning (PBL) is a student-driven, teacher-facilitated pedagogical approach that incorporates several key twenty-first century skills (Bell, 2010). It is rooted in John Dewey's experiential philosophy which focused on developing learners' skills (e.g., problem solving, CT) for life outside of the classroom (Beckett & Slater, 2018). Although teachers have utilized PBL for over a century, it

did not get introduced into foreign language educational circles until the early 1980s (Beckett, 2002). Over the years, PBL has generated a wide variety of frameworks and definitions. For example, Hedge (1993) described a project as "an extended task which usually integrates language skills work through a number of activities" (p. 276). Whereas, the Buck Institute for Education (2019) noted that PBL is a "teaching method in which students learn actively engaging in real-world and personally meaningful projects" (para. 1). Underpinned by previous studies, Greenier (2020) defined PBL as an "educational approach that aims to synthesize communicative interaction and imaginative thinking, promote peer collaboration, develop students problem-solving and critical thinking capacities, and stimulate affective and cognitive skills that contribute to intellectual and creative development" (p. 27). This comprehensive definition is the most appropriate one for the purpose of my study as several of these concepts (e.g., CT, collaboration) are an essential part of the DST project and AEA course. Boss and Larmer (2018) argued that "deep and meaningful learning" can occur if these essential design elements are incorporated into a PBL project:

1. A challenging problem or question;
2. Sustained inquiry;
3. Authenticity;
4. Student voice and choice;
5. Reflection;
6. Critique and revision;
7. Public product. (pp. 2-3)

Many educators often confuse PBL with task-based learning, content-based learning and problem-based learning, especially since the two concepts share the same acronym. Although each learning approach shares some similarities, there are important differences so they should not be used interchangeably (Laverick, 2019; Yamada, 2021). This study focuses on PBL in an 'other language' context; henceforth PBLL.

2.4.4 Project-Based Language Learning: Benefits and Challenges

EIL educators can reap multiple benefits by integrating PBLL into their classrooms. PBLL is an effective way for ELLs to improve their communicative abilities

(Kato et al., 2020), cognitive capacities (Kettanun, 2015), research skills (Yamada, 2021), academic content knowledge (Rugen, 2019), autonomous learning (Farouck, 2016), creativity (Bell, 2010), DL (Thomas, 2017), CT, decision making and collaborative work skills (Beckett et al., 2020). Social learning is an important ingredient in the PBLL approach. Fushino (2011) discovered that the 40 Japanese university ELLs in her study were able to broaden their cultural horizons and develop a sense of trust and cooperation within their project groups. A theme that echoed across the academic literature was that students found collaborative TEL projects to be engaging. For example, Morgana (2021) reported that the 24 Italian high school ELLs she researched felt that a PBLL DST project was enjoyable even though it required a great deal of time and energy. This researcher also claimed that it fostered the participants' autonomy and self-directed learning. It should be noted that Mogana's (2021) study was conducted during the 2020 COVID-19 pandemic 'lockdown' so the ELLs might have been extraordinarily engaged in this virtual project.

While research into technology-mediated PBLL is still in its "infancy," Beckett et al. (2020) argued that it "makes learning multimodal and dynamic, enabling students to learn and articulate their learning linguistically and visually in collaboration with their regional, national, and global peers, utilizing each other's strengths, and without limitations of time and space" (p. 9). Thomas's (2017) research is especially relevant to this study as he demonstrated that a technology-mediated PBLL approach can be effectively integrated into a Japanese university EIL environment. This researcher, who examined two different technology-based projects, reported that the participants demonstrated DL skills, autonomous learning, creativity, a sense of goal orientation, and belongingness within their groups. While Thomas's (2017) mixed methods study is small in scale, it is well-researched and challenges the widely held belief that Japanese ELLs are passive students who prefer a teacher-centered learning environment.

Even though students can prosper in a PBLL classroom, the approach and implementation process is not without potential pitfalls. ELLs who are partial to a more traditional learning environment can struggle and experience discomfort working on collaborative projects (Petersen & Nassaji, 2016). The paradigm shift to a

more open learning style takes time so both ELLs and instructors will require an acclimatization period (Greenier, 2020). While many students enjoy collaborative activities, they do not necessarily view PBLL as an effective way to improve their language skills (Beckett & Slater, 2018). This sentiment can be even more pronounced in a technology-mediated PBLL classroom as some students might perceive ICTs to be unnecessary (Beckett et al., 2020) and frustrating, especially if they become tangled up in problematic technical issues (Kato et al., 2020). Collaborative group work is an essential component of PBLL. Unmotivated students do not always work well with their peers (Laverick, 2019) and an unequal distribution of work amongst group members can generate resentment and stress (Gibbes & Carson, 2014). According to Lin et al. (2021), the two biggest problems students have with collaborative projects are the perceptions of 'social loafing' and unfair grades. Ferrari and Pychyl (2012) defined social loafing as a "reduction in effort within collective settings where individual performance is not identifiable" (p. 13). This research duo claimed that social loafing and procrastination can have an adverse impact on group projects. Likewise, Forehand et al. (2016) argued that 'free riding', the expectation that everyone will receive the same grade even though the work was unequally distributed, and concerns about the peer assessment process are other negative issues that can emerge during collaborative assignments.

Several researchers (e.g., Samarakoon et al., 2021; van den Herik & Benning, 2021) have suggested that the incidents of social loafing and free riding can be greatly reduced if educators incorporate an effective reporting system and peer evaluation model into group projects. Whereas, Harding (2018) suggested that the 'flocking method' is an effective strategy to reduce free riding and improve both group and individual learning outcomes. Teachers match students with one another after considering their schedule availability and willingness to devote time and effort to a project. In the end, the motivated and unmotivated students are grouped together just like the proverb 'birds of a feather flock together'. While students who free-ride or social loaf can create tension and disrupt the cohesiveness of a group, Jetten and Hornsey (2014) believed that deviants and dissenters can also have a positive impact on the intragroup dynamics. For example, a 'positive deviant' might do more work than her peers or a 'dissenter' might introduce ideas that are initially

unpopular but end up stoking the collective fires of innovation and creativity (Jetten & Hornsey, 2014). The next section examines two closely connected concepts which are an integral component in my study, namely engagement and motivation.

2.5 Essential Learning Elements

2.5.1 Engagement and Motivation: Background

Educational psychologists have been studying the engagement construct for over eight decades (Groccia, 2018). In recent years, learner engagement has become a more prominent feature in foreign language acquisition research (e.g., Mystkowska-Wiertelak, 2022) and TEL studies (e.g., Alioon & Delialioğlu, 2019). While this multidimensional psychological concept is closely related to motivation and used synonymously by many teachers, there are several important differences. Martin et al. (2017) claimed that engagement is usually represented in behavioral terms which reflects "more observable, evident, or external constructs" (p. 152); whereas, motivation is often perceived to be "an internal factor that has an energizing impetus" (p. 152). Oga-Baldwin (2019) believed that engagement should be viewed as a "flexible set of constructs with many measurement possibilities" because it is rooted in action (p. 2). The multifaceted nature of engagement means that researchers from various disciplines perceive it differently which has further obscured the concept.

Not surprisingly, there are numerous definitions of student engagement scattered throughout the academic literature which conceptualize it as either a process or an outcome (Christenson et al., 2012). For example, Axelson and Flick (2011) described it as "how *involved* or *interested* students appear to be in their learning and how *connected* they are to their classes, their institutions, and each other" (p. 38). Likewise, Shernoff (2013) defined learner engagement as the "heightened, simultaneous experience of concentration, interest, and enjoyment in the task at hand" (p. 12). According to Reinders and Nakamura (2021), engagement is a "state of heightened attention and involvement, in which participation is reflected not only in behavior but also in manifestations of cognitive and social dimensions, as well as in affective dimensions of learners' emotions and responses to tasks" (p. 140). For the purposes of this study, Reinders and Nakamura's (2021) depiction of engagement, which is underscored by previous studies (i.e., Lambert et al., 2017; Philp & Duchesne, 2016), is most appropriate as it aligns well with my theoretical framework. Furthermore, this research duo's model includes a social

engagement element, which is essential part of the PBLL DST project featured in my thesis. Earlier engagement frameworks (e.g., Skinner & Pitzer, 2012) included a behavioral, emotional, and cognitive component. Whereas, Reinders and Nakamura's (2021) multidimensional model is more comprehensive and flexible as it recognizes the overlap and interplay amongst the different dimensions. The following four interconnected dimensions are part of this research team's model:

1. **Behavioral engagement** – refers to the amount and quality of students' participation. It includes the learners' effort, perseverance, determination, and active involvement.
2. **Cognitive engagement** – involves sustained attention, focus, and readiness.
3. **Social engagement** – concerns relationships amongst the learners and their interactions with one another.
4. **Affective engagement** – encompasses different types of positive and negative emotions (e.g., boredom, anger, frustration) as well as affective constructs such as interest, enthusiasm, enjoyment, excitement, curiosity, value, and resolve. (pp. 140-141).

Engagement is not only an essential element in the learning process, but also a "metaconstruct" that can provide researchers with "a richer picture of how students think, act, and feel in school than research on any single dimension can offer" (Fredericks et al., 2019, p. 2).

For the last century, researchers from a wide range of disciplines have investigated motivation. In the language learning realm, motivation is a popular research area as the psychological concept is considered to be a crucial component in the successful acquisition of a foreign language (Kormos & Wilby, 2020). Not surprisingly, there are numerous definitions and motivational theories sprinkled throughout the academic literary landscape. Dörnyei (2020) believed that the only thing most scholars would agree upon is that this concept "determines both the *direction* and the *magnitude* of human behaviour, that is, the *choice* of a particular action, the *effort* expended on it and the *persistence* with it" (p. 136). In an earlier study, Dörnyei (2001) described motivation as "the choice of a particular action, the persistence with it, and the effort expended on it" (p. 8). Similarly, Martin et al. (2017) defined it as the "inclination, energy, emotion, and drive relevant to learning,

working effectively, and achieving" (p. 150). Whereas, Paiva (2011) perceived it to be a "dynamic force involving social, affective, and cognitive factors manifested in desire, attitudes, expectations, interests, needs, values, pleasure and effort" (p. 63). This definition has been adopted for the purposes of this study as it aligns well with my theoretical model and the notion that learning is a social process (Vygotsky, 1978). However, I also concur with Dörnyei and Ushioda's (2011) contention that motivation is a multidimensional construct that cannot be reduced into a single universally accepted definition or accurately represented on a simplistic linear model.

Over the years, motivation has been studied with a variety of different theoretical frameworks such as the socio-educational model (Gardner, 1985), attribution theory (Weiner, 1985), self-efficacy (Bandura, 1977), expectancy-value theory (Wigfield & Eccles, 2000), and self-determination theory (Deci & Ryan, 1985; Noels et al., 2020; Ryan & Deci, 2017). Keller's (1987, 2010) ARCS model, which is one of the the theoretical pillars in this thesis, is grounded in several theories of motivation. Furthermore, my third research question focuses on the motivational effectiveness of a PBL DST approach in an EAP course. Thus, there was the need for conceptual clarity as motivation was an essential element in this study. Self-Determination Theory (SDT) (Deci & Ryan, 1985) is a useful framework to understand the motivational features in the language learning process (Noels et al., 2020) and people's engagement with digital technologies (Henry & Lamb, 2020). According to Ryan and Deci (2017), SDT is focused with how "social-contextual factors" support or negatively impact people's well-being through the satisfaction of these three psychological needs: a) competence, b) relatedness, and c) autonomy (p. 3). Deci and Ryan's (1985) study differentiates between intrinsic and extrinsic motivation. Individuals who are intrinsically motivated partake in an activity because it is interesting or enjoyable; whereas, extrinsically motivated people do something because of an external force or reward (Ryan & Deci, 2000). This research duo believed that intrinsic motivation can lead to more effective learning as it satisfies a person's psychological need for competence and autonomy (Ryan & Deci, 2000). Noels et al. (2020) added amotivation, which is a third motivational orientation, to their language learning SDT framework. In this model, amotivated students will

probably not perceive a language course to be of much value if they only enroll in it because of a program requirement. Although the notions of intrinsic and extrinsic motivation are often presented in separate realms, Keller (2010) believed that the "complexity of human beings and tasks" means that it is "probably more common to find that there are elements of both that are intertwined in any particular situation" (p. 18). On a similar note, Ushioda (2009) argued that motivation models must take into account the fact that L2 students are self-reflective agents who bring their own unique identities, personalities, histories, and intentions into any social learning environment. The next section examines learner autonomy, an important offshoot of motivation, and technology-mediated autonomous language learning.

2.5.2 Autonomy and Technology-Mediated Autonomous Language Learning

Motivation is considered by many researchers and teachers to be an important and interconnected component of autonomous language learning (Gao & Lamb, 2011). For example, Stockwell (2022) claimed that language learners need a reasonable amount of motivation and skills before autonomous behavior can take place. The ability to learn independently and throughout an entire lifetime are considered to be important twenty-first century skills (van Laar et al., 2017, 2020). For over forty years, language learning researchers have studied learner and teacher autonomy in a variety of different contexts. Autonomy is a complex and multifaceted concept that includes other elements such as motivation, self-directed learning, dimensions of control, and technology (Benson, 2011a, 2013). Holec (1981) perceived learner autonomy to be "the ability to take charge of one's own learning" (p. 3). This seminal study filtered into Little's (2000) belief that "autonomous [language] learners assume responsibility for determining the purpose, content, rhythm and method of their learning, monitoring its progress and evaluating its outcomes" (cited in Benson, 2007, p. 23). More recently, Little (2022) provided us with this more comprehensive definition:

> [It is] a teaching/learning dynamic in which learners plan, implement, monitor and evaluate their own learning … by exercising [individual and collective] agency in the target language they gradually develop a proficiency that is reflective as well as communicative, and the target language becomes a fully integrated part of the plurilingual repertoire and identity. (p. 64)

However, Dam's (1995) depiction of learner autonomy is the most appropriate one for this study as she incorporates the notion of social responsibility into her definition. This researcher claimed that learner autonomy is "characterized by a readiness to take charge of one's own learning in the service of one's needs and purposes. This entails a capacity and willingness to act independently and in cooperation with others, as a socially responsible person" (Dam, 1995, p. 5).

According to Lai et al. (2016), most researchers would agree that learner autonomy includes these two key features: (a) self-regulation and being able to take advantage of opportunities in one's learning environment and (b) the willingness to self-direct one's learning in different contexts. Benson (2011b, as cited in Reinders & Benson, 2017) believed that autonomy incorporates these four elements:

1. Location – where and when the learning takes place;
2. Formality – the degree to which learning is linked to qualifications or structured by educational institutions;
3. Pedagogy – the degree to which teaching is involved;
4. Locus of control – how decisions are distributed between the learner and others. (p. 562)

In an earlier study, Kumaravadivelu (2001) expanded the notion of learner autonomy to include a social and liberatory component in addition to the traditional academic aspect. The academic element is individualized and focuses on students developing effective study skills. Whereas, social autonomy enables students to work effectively with their peers in a collaborative learning environment and liberatory autonomy empowers them to be critical thinkers. Benson (2011a) pointed out that many educators erroneously assume that autonomy entails learning in isolation without any input from an instructor. In actuality, scaffolding and teacher guidance are important factors that help ELLs develop autonomy, especially in TEL environments (García Botero et al., 2021; Lai et al., 2016).

The technology-mediated PBLL approach used in this study is a suitable 'pedagogy for autonomy' (Jiménez Raya & Vieira, 2015) because it incorporates self-regulation, self-directed learning, flexible choice, collaboration, and critical reflection. Benson (2013) argued that the development of ICTs has had a profound impact on autonomy as language students' "learning is more likely to be self-initiated

and carried out without the intervention, or even knowledge, of language teachers" (p. 840). Likewise, Reinders and White (2016) claimed that the distinct boundaries that once existed between autonomy research and technology research as well as formal and informal learning are becoming increasingly blurred. Nowadays, ELLs can use their mobile devices to access authentic language resources and communicate with other students or native speakers whenever and wherever they like (Godwin-Jones, 2019). The multimedia features of these tools allow students to generate their own digital content which has further facilitated new autonomous learning opportunities. An excellent example of this can be found in Hafner and Miller's (2011) study that involved 67 science ELLs at a Hong Kong university. While this research is small in scale and somewhat dated, it nevertheless still resonates over a decade later. This research duo reported that a DST project fostered the participants' independent learning skills, collaborative abilities, and reflective competencies. Another interesting finding was the importance of peer teaching in the autonomous learning process. Hafner and Miller (2011) noted that students would help one another write scripts, practice voiceovers, and even hold impromptu ICT mini-workshops. Furthermore, many groups adopted specialist roles (e.g., tech-guru) and students were observed providing non-group members with different types of support.

More recently, Kohnke (2019) reported that the integration of a multimodal video project into a Hong Kong university EAP course fostered the students' motivation and learner autonomy. While this study only involved 10 participants, it is nevertheless relevant to this study as it was conducted in an EAP setting and the ELLs' DSs featured local social issues. In another context, Lee and Mori (2021) claimed that peer feedback and reflective practices helped the 25 Japanese university ELLs they researched improve their self-directed learning competencies. It should be noted that 12 of the participants in this study were international students and that may have slightly skewed the findings. Anecdotally speaking, many international students in Japan are motivated and hard-working because their families have made great sacrifices for them to study abroad, or they need to maintain a relatively high GPA to keep receiving a scholarship. While an increasing number of teachers and researchers (e.g., Lai, 2019) consider ICT resources to be

essential in the autonomous learning process, there are a couple of notable caveats. First, language learners who come from underprivileged socioeconomic backgrounds often cannot afford to purchase a contemporary digital device and this can have an adverse impact on their self-directed use of technology (Ghorbani & Golparvar, 2020). Next, Stockwell and Reinders (2019) reminded us that educators need to be flexible and realistic because "technology in itself is highly unlikely to lead to autonomy" (p. 43).

2.5.3 Creativity

In recent years, a small but growing number of researcher-practitioners (e.g., Cleminson & Cowie, 2021) have examined creative thinking in EIL environments. Creativity is a slippery construct to pin down because it is subjective and influenced by a host of different elements (Guo & Woulfin, 2016). Jones and Richards (2016) perceived creativity to be the process of "*using* language in creative ways to solve problems, to establish or maintain relationships, and to get people to act, think or feel in certain ways" (p. 5). For the purposes of this study, this definition has been adopted because it aligns well with CT and collaborative learning. Over the years, several researchers (e.g., Glăveanu, 2013) have created different frameworks to shed light on the murky concept of creativity. Densky's (2016) model is a particularly useful one to better understand the interconnected creative strands that are present in most PBLL DST projects. This model is comprised of these three components:

1. **Person** – the knowledge, skills, innate abilities, heritage, traditions, and relationships;
2. **Process** – behaviors that demonstrate fluency, imagination, critical thinking skills and risk taking;
3. **Product** – creative output that includes novelty and originality, political acceptance, adherence to tradition, and quality. (pp. 51-59)

While the phrase 'enhances creativity' was found in several of the DST studies (e.g., Duveskog et al., 2012) reviewed in this chapter, not many researchers specifically investigated creativity.

In Schmoelz's (2018) research with 125 Austrian high school students, the participants demonstrated "co-creative flow" during the DST writing phase and video

production phase (p. 11). In another study that featured 244 Spanish university education students, Belda-Medina (2021) reported that the DST process had a positive impact on many of the participants' creativity, CT, and receptiveness of "transformative technology pedagogy" (p. 12). Creativity is not something that naturally occurs in language learning classrooms (Li, 2020) so educators must implement activities such as DST that will harness ELLs' creative abilities. Developing students' creativity can lead to improved self-esteem, self-awareness, confidence, motivation, cooperation, and academic work (Densky, 2016; Maley & Peachey, 2015).

2.5.4 Critical Thinking: Background

For over twenty years, the twenty-first century skills movement has touted CT as an essential ability that university students need to become more employable in the competitive globalized marketplace (Luk & Lin, 2015). In actuality, CT is not a twenty-first century development as it dates back thousands of years ago to Socrates' time and was also present in John Dewey's work on reflective thinking during the early 1900's (Fisher, 2001). Defining higher-order thinking skills (HOTS) is one of the "major unsolved problems of pedagogy" (Kuhn & Dean, 2004, p. 269) and a task that leaves many researchers feeling like they are bogged down in a "conceptual swamp" (Cuban, 1984, p. 676). Not surprisingly, there are a wide variety of CT definitions that can be found in the academic literature. Ennis (1985) defined CT as "reflective and reasonable thinking that is focused on deciding what to believe or do" (p. 45). Whereas, Moore and Parker (2009) argued that it is the "careful application of reason in the determination of whether a claim is true" (p. 3). Terblanche and De Clercq (2021) provided us with this more comprehensive definition after examining several of the more established CT competencies frameworks:

> Critical thinking involves purposeful and reflective judgement generally aimed at making informed decisions. It involves certain cognitive skills (e.g., the ability to interpret, analyze, evaluate, infer, explain and self-regulate) and also certain dispositions (e.g., being inquisitive, self-confident, open-minded, ethical, orderly and systematic, and having intrinsic motivation and a positive attitude). (p. 349)

However, Brookfield's (2012, 2017) portrayal of CT as an ongoing reflective process is the most suitable one for this study. He believed CT incorporates these features:

1. identifying the assumptions that frame our thinking and determine our actions;
2. checking the validity and accuracy of these assumptions;
3. examining our ideas and decisions (intellectual, organizational, and personal) from several different perspectives;
4. taking informed action. (Brookfield, 2012, p. 1)

Irrespective of how one defines CT, Simpson and Courtney (2002) noted that the concept is closely linked with elements such as knowledge, active argumentation, reasoning, identification of problems, and making value judgements.

2.5.5 Critical Thinking and Language Learning

The growing popularity of social networking sites in conjunction with the omnipresence of digital devices means that many university students process a tremendous amount of digital content on a daily basis (Matthes et al., 2020). Not surprisingly, Romero and Bobkina (2021) argued that educators must put more emphasis on fostering ELLs' CT and "critical visual literacy reading skills" (p. 10). While CT has been recognized as an important twenty-first century skill by the Japanese MEXT, teachers do not receive any training on how they can develop their students' CT (Mineshima & Imai, 2021). Critics of the Japanese education system believe that the focus on high-stakes exams and a drill-oriented, teacher-centered learning environment have had an adverse impact on students' CT and creativity (Komatsu & Rappleye, 2018; Park, 2013). Similarly, Lai (2015) argued that numerous studies contain essentialist assumptions such as Asian ELLs' passivity and the "cultural inappropriateness" of task-based language teaching in Confucian-heritage classrooms (p. 12). Even though CT is not an official part of the Japanese high school curriculum (Bullsmith, 2020) and English textbooks contain biases and stereotypes (J. Lee, 2018), it does not mean that students cannot or will not use their HOTS. Several studies have demonstrated that Japanese and other Asian ELLs can benefit when criticality is integrated into their English lessons.

In Kusumoto's (2018) research with 134 first-year Japanese university ELLs, the participants were required to partake in a variety of student-centered learning

activities (e.g., role-plays, PBLL projects) over a 30-week period. Kusumoto (2018) reported that the active learning approach she used helped students to improve their CT disposition scores. In a similar context which featured 22 Japanese high school ELLs, Akatsuka (2019) claimed that a HOTS initiative fostered the participants' CT attitudes and English speaking abilities. Li et al. (2020) noted that the integration of a debate instruction model helped 162 Chinese university ELLs' sharpen their comprehensive thinking skills and overall quality of their discussions. According to Lin (2018), the Chinese high school ELLs in his small-scale study felt that CT activities were a valuable way to study English even though the tasks were more linguistically challenging than their usual classroom work. In another context, H-C Lee (2018) researched the effect that a HOTS telecollaborative project had on 18 Taiwanese university ELLs' writing skills. H-C Lee (2018) reported that the Taiwanese ELLs demonstrated enhanced evaluation and analysis in their written work after responding to a variety of images that were posted to a group wiki by their American college 'tele-partners'. Chen and Chaung (2021) also explored the impact that an ICT tool had on 46 Taiwanese high school students' CT. This research duo discovered that a DST software stimulated the participants' CT abilities and developed their problem-solving skills, media literacy, and communication competencies.

After conducting a systematic review of the educational DST literature, Wu and Chen (2020) posited that a DST approach can develop students' criticality and creative thinking. While the findings of each of the studies examined in this section are promising and challenge the previously mentioned essentialist beliefs about Asian ELLs, most of the investigations were limited in scale and duration. However, it should also be noted that CT is a difficult concept to teach (Willingham, 2008), assess (Liu et al., 2014), and study due to problematic cultural compatibility issues with various research tools and approaches (Sahin et al., 2014; Tan, 2017). A case in point concerns Hirayama and Kusumi (2004) who developed their own 'Critical Thinking Disposition Scale' instead of using existing Western models to better understand Japanese university students' HOTS (cited in Kusumoto, 2018).

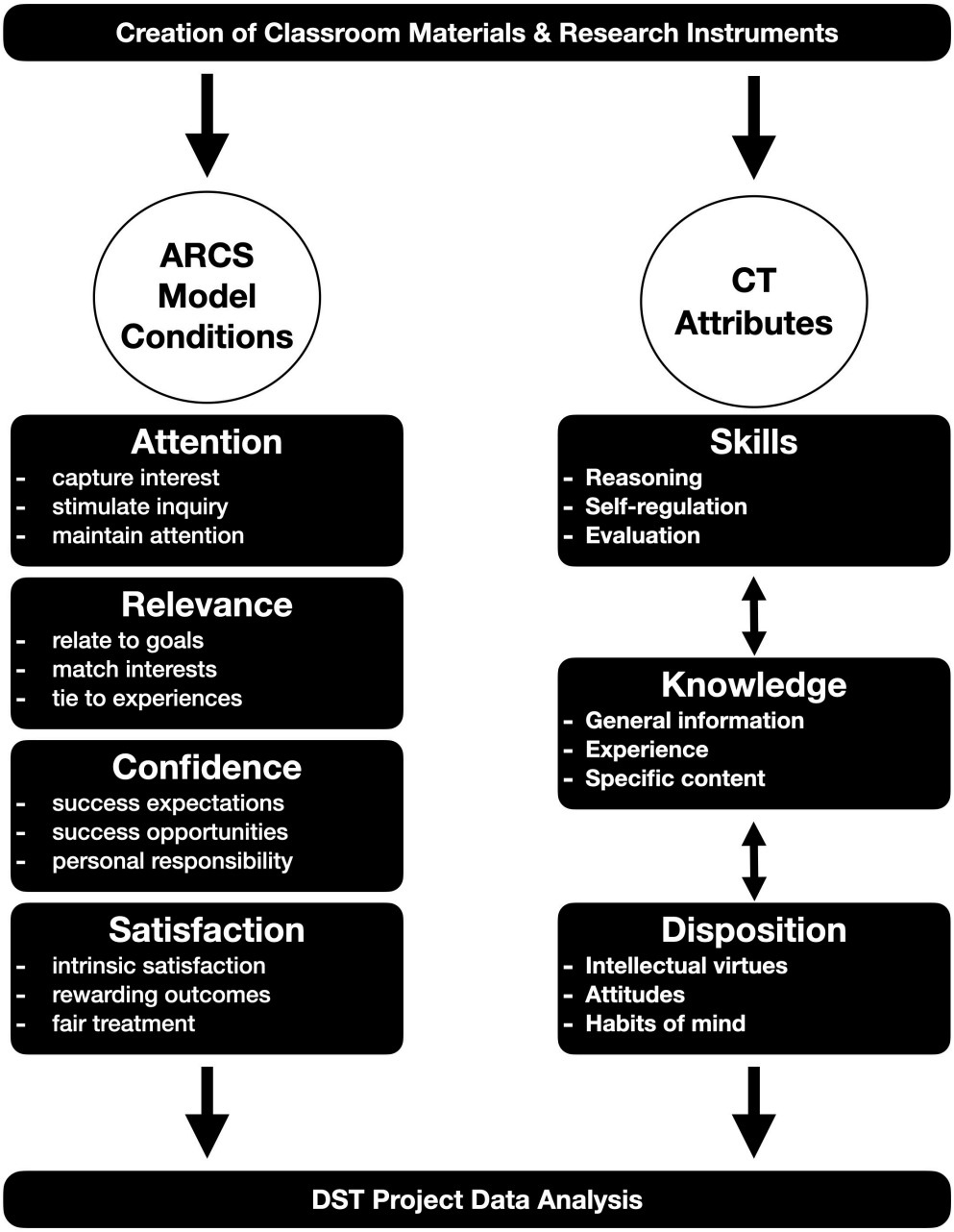
2.6 Theoretical Framework

Thomas and Lok's (2015) CT attributes framework and Keller's (1987, 2010) ARCS model of motivational design are merged into a hybrid theoretical framework

so that I could have a versatile theoretical instrument to formulate my study and scrutinize the data (see Figure 2.1).

Figure 2.1

A hybrid theoretical framework (Adapted from Thomas & Lok, 2015; Keller, 1987, 2010)



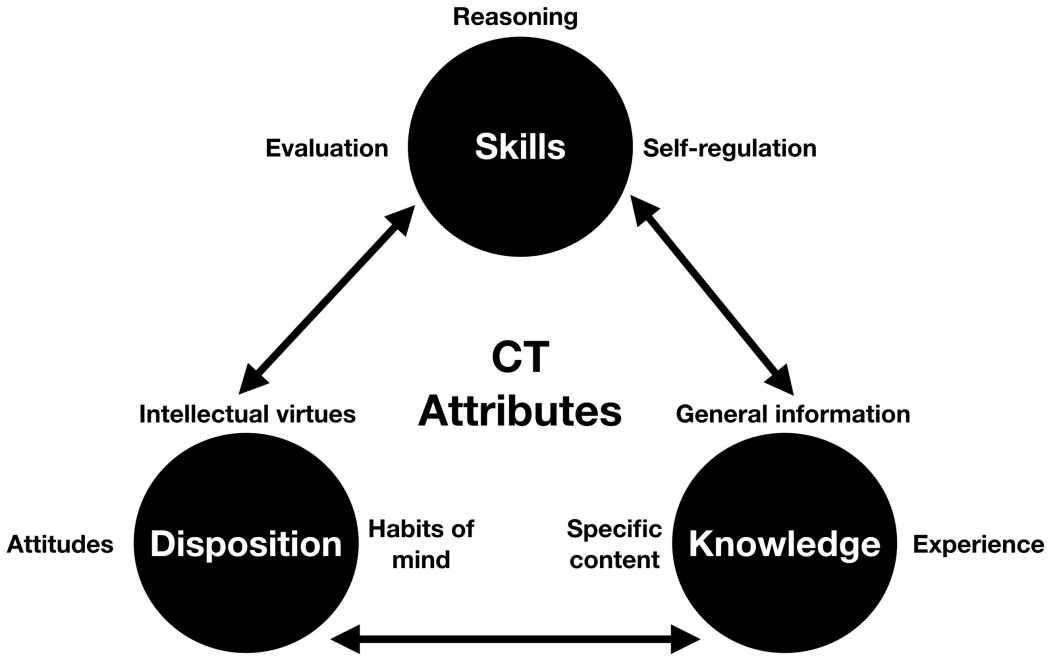
Thomas and Lok's (2015) attributes framework is used to address the first research question; whereas, Keller's (1987, 2010) ARCS model enabled me to answer research questions two and three. In the sub-sections that follow, a description of each part of the hybrid theoretical framework is provided.

2.6.1 Theoretical Framework: Critical Thinking

Over the years, the disconnect that often exists between educators and researchers has been well documented (Kempe, 2019). While most teachers would probably find a typical theoretical framework to be interesting, they would also question the relevance and practicality of embedding it into their classroom practice. If the said model focused on CT, the concerns would be exacerbated because CT is a complex concept that means different things to different people (Davies & Barnett, 2015). Thomas and Lok (2015) recognized the importance of conceptual clarity and thus developed a practical framework that can be used by both teachers and researchers. The model is based on a careful review of 16 respected and established CT studies over a 100-year period. Thomas and Lok's (2015) model consists of these three interconnected parts: (a) skills, (b) dispositions, and (c) knowledge (see Figure 2.2).

Figure 2.2

An operational framework (Thomas & Lok, 2015, p. 98)



The skills component encompasses these items:

1. **Reasoning** – identify and explore evidence with traditional approaches (e.g., reading, discussion, inference, explanation);
2. **Evaluation** – skills of interpretation and analysis, including technical analysis using appropriate tools;

3. **Self-regulation or reflection** – minimize assumptions and biases in one's own thinking.

The disposition section comprises:

1. **Attitudes** – being open-minded and fair-minded;
2. **Intellectual virtues** – truth seeking and curiosity;
3. **Habits of mind** – cultural or trait-induced bias, tendency of 'black-and-white' thinking.

The knowledge component includes:

1. **General information and basic facts** – enable valid evaluation;
2. **Specific content-based knowledge** – related to discipline-specific and contextual information;
3. **Experience** – intellectual development and knowledge from life and work experiences.

Thomas and Lok (2015) envisioned their CT operational framework to be "three interconnected composite attributes" that can be used in a variety of educational and workplace environments (p. 104).

There are several reasons why Thomas and Lok's (2015) model has been integrated into this study's theoretical foundation. First, the model is highly versatile and can be adapted to different cultural contexts. For example, Muniroh (2021) deployed the CT operational framework to scrutinize the Indonesian government's education policies and a public university's EIL program. The operational framework helped Muniroh (2021) notice that there were "inconsistencies" in the level of criticality articulated in the two documents she examined, and CT elements were in fact present in the university's English courses (p. 39). Next, Thomas and Lok's (2015) model can help educators develop an appropriate grading rubric and 'self-checklist' for students to reflect upon their own CT performances during an in-class activity or group project. This research duo believed that CT requires not only self-discipline, self-awareness, and ethical competence, but also focused action. The importance of CT performance can be found in these words: "Being a purposeful and goal-directed activity, it involves a *Doing* component. Incorporating an internalized ability for reflective awareness, it also involves a less tangible internal journey of 'becoming' a critical thinker – a *Being* component (Thomas & Lok, 2015, p. 101).

The CT operational framework is a highly beneficial tool that helped me create the classroom materials (e.g., DST checklist) and research instruments that are used in this study. More specifically, Thomas and Lok's (2015) work filtered into my pre- and post-project questionnaires, focus group interview questions, and DST video analysis rubric. Next, the CT framework meshed well with Keller's (1987, 2010) ARCS model of motivational design, which is the second support beam in this investigation's theoretical foundation. The final and perhaps most important reason for integrating the CT operational framework into this study is that it enabled me to answer the following research question: 'What impact, if any, will digital narratives have on Japanese university EAP students' CT about local and global sociocultural issues?' As noted previously, Thomas and Lok (2015) perceived CT attributes to include these three interconnected elements: (a) skills, (b) dispositions, and (c) knowledge. The skills and dispositions components were especially relevant to the DST project because students were required to select a local or global sociocultural issue, identify and explore evidence, evaluate the evidence, self-reflect, and be mindful of their own personal and cultural biases. While Thomas and Lok's (2015) model is 'generic' and has yet to be widely adopted, it was nevertheless a valuable resource as it provided me with some much needed 'conceptual clarity' in regard to the CT components that were built into my study.

2.6.2 Theoretical Framework: ARCS Model

Motivation is not only a notoriously difficult concept to define (Dörnyei, 2020), it is also a constant concern for educators, especially getting students to stay engaged during learning activities (Kim & Keller, 2010). In the late 1970's, educational psychologist John Keller recognized this reality and thus developed a motivational model grounded in expectancy-value theory (Keller, 1987). Wigfield (1994) described expectancy-value theory as when "individuals' expectancies for success and the value they have for succeeding are important determinants of their motivation to perform different achievement tasks" (p. 50). The original ARCS model of motivational design that Keller (1987) created included the following conditions:

1. **Attention** – catch and sustain the interest of learners; stimulate their curiosity to keep learning;

2. **Relevance** – explain why the content needs to be learn; meet the goals of the learner to foster a positive attitude;
3. **Confidence** – help the learners believe they will succeed with a reasonable amount of effort; they can control their success;
4. **Satisfaction** – reinforce accomplishments with internal and external rewards.

Each of the four conditions include three subcategories, which Keller modified in 2000. An overview of the component parts can be found in Table 2.1.

Table 2.1

Subcategories of the ARCS model (Keller, 2000, p. 4)

Condition	Subcategory
Attention	capture interest (Perception arousal) stimulate inquiry (Inquiry arousal) maintain attention (Variability)
Relevance	relate to goals (Goal orientation) match interests (Motive matching) tie to experiences (Familiarity)
Confidence	success expectations (Learning requirements) success opportunities (Learning activities) personal responsibility (Success attributes)
Satisfaction	intrinsic satisfaction (Self-reinforcement) rewarding outcomes (Extrinsic rewards) fair treatment (Equity)

Attention, relevance, confidence, and satisfaction all need to be present so that learners will become interested in an activity and stay motivated. There is also a systematic design process embedded in Keller's (1987) ARCS model which includes these four stages:

1. **Define** – classify the problem. Analyze the audience motivation and prepare motivational objectives;
2. **Design** – brainstorm potential strategies and select appropriate strategies;
3. **Develop** – prepare motivational elements and integrate them with instruction;

4. **Evaluate** – conduct a development try-out and assess motivational outcomes.

Keller (2008) explored the theory of motivation, volition, and performance (MVP) and subsequently expanded his original ARCS model to include a volition construct. Keller (2010) believed that volition has these phases: (a) commitment or pre-action planning and (b) self-regulation or action control. While numerous researchers (e.g., Ucar & Kumtepe, 2019) have deployed the revamped ARCS-V model to investigate motivation in TEL environments, I elected to use the original model because the participants in my study had external factors (e.g., submission deadlines, group members) to keep them motivated.

There are four reasons why Keller's (1987, 2010) ARCS model of motivational design was utilized in this study. First, the cross-disciplinary model has been validated for over three decades in a wide variety of learning environments (Li & Keller, 2018). This reality helped to counterbalance the fact that Thomas and Lok's (2015) CT operational framework is relatively new and not as established as the ARCS model. Second, Keller's (1987, 2010) work has helped to improve the motivational outcomes of students in e-learning and EIL environments (Keller & Suzuki, 2004; Min & Chon, 2021). Researchers have also used the ARCS model to gauge the motivational effectiveness of technological interventions such as blended learning (e.g., Ma & Lee, 2021) and digital game-based language learning (e.g., Hao, 2021). Likewise, Kasami (2021) deployed the ARCS model to examine the motivational impact that a DST initiative had on 27 Japanese ELLs who had low proficiency and confidence in English. Third, Keller's (1987, 2010) work is particularly valuable to materials makers and course designers. For example, Kato and Nagayama (2021) deployed the ARCS model to assess the value of a self-study system they developed for instructors and students in a Japanese fisheries high school programme. In the first chapter, I identified a host of problems (e.g., Eurocentric biases) associated with most commercially produced ELT textbooks and digital resources; thus, I elected to create my own resources for the AEA course. Keller's (2000) ten step model aided me in assessing the motivational value of the instructional materials that I used in the DST project (see Appendix B for a description of the model). Lastly, Keller's (1987, 2010) work helped me to answer research questions two and three. Keller (1987) believed that the ARCS model can "easily be adapted" and used to teach

"meta-cognitive strategies for self-motivation" (p. 6). Stockdale et al. (2019) applied the ARCS model to measure the motivational elements in midwifery students' autonomous knowledge acquisition behaviors. The four conditions of the ARCS model, namely attention, relevance, confidence, and satisfaction, and the various subcategories (see Table 2.1) enabled me to effectively gauge the participants' perceptions of a PBLL DST initiative in an EAP context.

While Keller's (1987, 2010) ARCS model has been widely used by teachers and researchers, it is definitely not a 'one-size-fits-all' theoretical instrument. Li and Keller (2018) reminded us that contemporary ICTs, cultural beliefs, and learning strategies have all changed a great deal from the late 1970s when Keller first developed his model. Fortunately, Keller's (2010) ARCS model is a versatile one so research practitioners can make adaptations to better suit their own instructional contexts.

2.7 Summary

This chapter examined several key concepts and studies that are relevant to this research undertaking. There were a lot of moving parts in the PBLL DST approach featured in this study; thus, chapter two is divided into these five distinct sections: a) DL and DST, b) TEL, c) teaching strategies, d) essential learning elements, and e) theoretical framework. The literature review examined the following: DST, DL, MALL, BYOD, PBLL, FL, engagement, motivation, autonomy, creativity, and CT. The significance of each of these terms to my thesis was discussed and scrutinized. Two of the focal points of my research were the motivational value of DSs and the participants' CT dispositions after completing a socially conscious collaborative DST project. Therefore, chapter two concluded with an examination of Thomas and Lok's (2015) CT attributes framework and Keller's (1987, 2010) ARCS model and how the work of these scholars factored into this study's hybrid theoretical framework.

Chapter 3: Research Design and Methodology

3.1 Introduction

The two-pronged theoretical framework that I utilize, namely Keller's (1987, 2010) ARCS model of motivational design and Thomas and Lok's (2015) CT operational framework, filtered into both the design of the study and analysis of the data. This chapter highlights the methodological approach that was undertaken to answer the following research questions:

1. What impact, if any, will digital narratives have on Japanese university EAP students' critical thinking about local and global sociocultural issues?
2. Does a project-based language learning digital storytelling initiative enhance Japanese EAP students' digital competencies? If so, how?
3. With regard to Keller's ARCS model of motivational design, what effect does a project-based language learning digital storytelling approach in an EAP course have on the participants' attention, relevance, confidence, and satisfaction conditions?

My decision to adopt a qualitative research paradigm was influenced by my critical realist ontological and epistemological assumptions. Critical realism-based research can act as a launching pad for social change (Rafe et al., 2021) and enable researchers to "develop explicit causal explanations of the complex social, organizational, interorganizational phenomena" within the ICT field (Wynn & Williams, 2012, p. 805).

In this chapter, I first discuss the benefits of the qualitative case study methodology and why it was the best fit for this research project. I also identify potential case study pitfalls that researchers need to overcome. Next, I focus on the research procedure and data collection instruments that were implemented in this investigation. In this section, I also highlight the research site and participants, and the data analysis methods that were utilized. The chapter concludes by examining the following important but often tricky concepts: privacy and ethics. In this section, I discuss the problematic ethical issues that arose as a result of my role as an insider-researcher investigating my own students as well as the protocols that were in place to mitigate these concerns.

3.2 The Case Study Approach: Background and Definitions

Over the years, researchers have frequently utilized case study methodology to investigate a plethora of issues in a wide variety of disciplines such as law (e.g., Holder & McGillivray, 2017), business (e.g., Lee & Saunders, 2017), psychology (e.g., Lomas, 2020), healthcare (e.g., Peddle et al., 2019), and EIL education (e.g., Meşe & Sevilen, 2021). While case studies are a popular qualitative research approach, they can also be found in quantitative and mixed methods studies (Starman, 2013). Even though scholars have conducted case study research for more than 150 years (Tellis, 1997a), it is a challenging notion to pin down and one that can leave researchers feeling like they are stuck in a "definitional morass" (Gerring, 2004, p. 342). Likewise, Yazan (2015) argued that case study is a "contested terrain" that has spawned a variety of different perspectives and it is a methodology that lacks a universally accepted agreement on the design features and implementation process (p. 134).

There are an abundance of case study definitions scattered across the academic literary landscape which range from the simplistic to the highly complex. Perhaps the most appropriate place to start is by examining the words of Sharan Merriam, Robert Stake, and Robert Yin, the triumvirate of influential case study research methodologists (Yazan, 2015). According to Merriam (1988), "the case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon" (p. 41). Almost three decades later, Merriam and Tisdell (2016) described case study research as "an intensive, holistic description and analysis of a single, bounded unit" (pp. 232-233). Elements from this definition can be found in Stake's (1995) earlier depiction: "[it is] the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). Whereas, Yin (2014) defined a case study as "an empirical inquiry that investigates a contemporary phenomenon (the 'case') in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p.16). The notion of 'boundaries' or 'bounded unit' appear in several case study definitions. Crowe et al. (2011) argued that it is essential for researchers to establish clear boundaries (e.g., time frame, geographical area, types of data to be collected) whenever they conduct case study research. Other researchers such as VanWynsberghe and Khan (2007) provided us with a precise, albeit a more complex

definition of case study by claiming that it is a "transparadigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process, etc.)" (p. 80). The most appropriate definition for the purpose of this research investigation can be found in Simons' (2009) work as my research investigation focused on a particular project (i.e., DST in an EAP course) and incorporated different perspectives. According to Simons (2009), a case study is "an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme or system in a 'real life' context" (p. 21).

While researchers have churned out a wide variety of definitions over the last four decades, they have also identified different types of case studies. For example, Stake (1995) used these three categories: (a) intrinsic case study, (b) instrumental case studies, and (c) collective case studies. An intrinsic case is deployed when a researcher wants to gain a better understanding of a single case. Johnson and Christensen (2012) noted that this type of case study is popular in many educational circles and exploratory studies. Instrumental case studies are used when a researcher seeks to refine a theory or comprehend something more than just the particular case that is being examined (Stake, 1995). The collective approach is utilized when a researcher analyzes several cases in the same study (Stake, 1995). Yin (2014) also identified three other types of case studies: (a) exploratory, (b) explanatory, and (c) descriptive. An exploratory case helps a researcher develop the research questions or procedures that will be used in the next study. Yin (2014) believed that an explanatory case sheds light on how or why a certain condition occurred; whereas a descriptive case depicts a "phenomenon in its real-world context" (p. 238). Finally, Bassey (1999, as cited in Simons, 2009) added more categories when he argued that educational case studies can be: (a) theory-seeking, (b) theory-testing, (c) storytelling and picture drawing, and (d) evaluative.

After carefully considering the aforementioned designs, I elected to conduct a single-case descriptive case study (Yin, 2014) as it aligned well with my critical realist philosophical orientation (Wynn & Williams, 2012) and allowed the participants to provide a more in-depth portrayal of their various experiences (Schwandt & Gates, 2018; Simons, 2009) throughout the duration of the DST project. The pilot study that

I conducted acted as an exploratory case (Yin, 2014) which helped me to develop the research questions and protocols that were used in this investigation. I also established clear boundaries within my case study such as specific dates and the types of data to be collected (Crowe et al., 2011) so that my research would be more focused and I would not be overwhelmed by a sea of superfluous data (Meriam & Tisdell, 2016; Stake, 1995).

3.2.1 The Case Study Approach: Strengths and Weaknesses

Regardless of whatever case study type or definition that one gravitates towards, there are several notable benefits of using this methodological approach for educational researchers. Case studies are considered to be "methodologically eclectic" (Rossman & Rallis, 2011, p. 118) because researchers can utilize a wide range of data sources such as questionnaires, semi-structured interviews, focus group interviews, observations, archival records, and audio-visual artefacts. Pearson et al. (2015) contended that data collection flexibility is one of the greatest benefits of case study research because researchers are not handcuffed by any rigid methodological traditions. According to Baxter and Jack (2008), the case study design principles, including the integration of various strategies, enhance the "data credibility or truth value" (p. 556). Likewise, Crowe et al. (2011) argued that the use of data triangulation or multiple sources of data is another strength of the case study approach as it helps to foster the internal validity of a research investigation. Simons (2009) believed that case studies can provide researchers with a more complete portrait of a situation because they highlight multiple perspectives as well as the interactions and disagreements amongst key players. Next, case studies can help to explore the power dynamics within a system and "give a voice to the powerless and voiceless" (Tellis, 1997b, p. 2). Finally, case studies are often written in a straightforward and easy to understand manner so the results can be disseminated to a much wider audience than a typical scholarly report (Nisbet & Watt, 1984, as cited in Cohen et al., 2011).

Researchers who deploy a case study approach will need to circumvent several significant pitfalls during their investigations. Critics have claimed that case studies lack scientific rigour, and the findings are not applicable to other research contexts (Crowe et al., 2011). While Yin (2014) acknowledged that sloppy case

studies have occurred, he believes that this concern can be alleviated if researchers are transparent and follow systematic research procedures. Flyvbjerg (2006) challenged the notion that case studies cannot be generalized in the following words:

> One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas "the force of example" is underestimated. (p. 228)

Another criticism revolves around the personal involvement and subjectivity of the researcher (Simons, 2009). Flyvbjerg (2006) argued that is a misconception as the case study approach "contains no greater bias toward verification of the researcher's preconceived notions than other methods of inquiry" and there is actually "a greater bias toward falsification of preconceived notions than toward verification" (p. 237). As noted previously, case studies frequently incorporate multiple sources of data which may leave some researchers feeling like they are on the verge of drowning in a sea of data. Meriam and Tisdell (2016) reminded us that a tremendous amount of data can be generated from a single case study and researchers "can be seriously challenged in trying to make sense out of the data" (p. 233). Yin (2014) advised researchers to establish a case study database to keep their data organized and easy to access.

Even though the qualitative case study approach is "fuzzy around the edges" (Gerring, 2004, p. 346) and not without its limitations, it seemed to be the best way for me to get a more in-depth understanding of the issues surrounding the integration of a PBLL DST project into an AE course. In addition, it was a suitable match for my own social constructivist and critical theoretical perspectives, especially in comparison to other research designs.

3.2.2 Qualitative Research: Quality and Trustworthiness

This qualitative study draws upon the principles of naturalistic inquiry to enhance the trustworthiness of the research process and findings. Carl and Ravitch (2018) described naturalistic inquiry as a "methodological pursuit of understanding the ways individuals view, approach, and experience the world and make meaning of their experiences" (p. 2). Researchers Yvonna Lincoln and Egon Guba identified the

following four elements in the naturalistic inquiry paradigm which can measure the quality of a study:

1. **Credibility** – establish confidence that the results are truthful and credible. This can be done via prolonged engagement, persistent observation, triangulation, and external checks (e.g., peer debriefing, member checks).
2. **Transferability** - provide a 'thick description' of the research context, methods, and participants so that readers can gauge if aspects of a study are transferable to other research settings.
3. **Dependability** – helps to ensure the findings can be replicated. The study must be well-documented through overlap methods, stepwise replication, and an 'inquiry audit'.
4. **Confirmability** – the extent to which the results can be shaped by the participants and corroborated by other researchers. Triangulation, journaling, and unveiling one's epistemological assumptions (i.e., 'practicing reflexivity') can help to reduce a researcher's biases (Guba, 1981; Guba & Lincoln, 1982; Lincoln & Guba, 1985).

I used several "verification strategies" (Morse, 2018) such as external checks, peer review, triangulation, and audit trails from the naturalistic inquiry approach to enhance the overall quality and trustworthiness of my study.

During the pilot study, I received insightful critical feedback from both my students and two former colleagues in regard to the pre- and post-project surveys and focus group interview questions. Immediately after the transcription process was completed, I invited the participants to do a member check of their focus group sessions. Two out of the eight participants agreed to examine their transcripts and verified the accuracy of their words. Throughout the duration of the DST project, my colleague and I would regularly debrief and brainstorm ideas to help us reduce the various problematic issues (e.g., intragroup conflicts, ICT barriers) that arose in our AEA classes. I utilized "data triangulation" (Crowe et al., 2011) and provided readers with a "thick description" (Lincoln & Guba, 1985) of the research process to make it more transferable and dependable. Finally, I practiced "reflexivity" (Guba, 1981) by keeping a reflective journal of my classroom practices and revealing my epistemological location in an attempt to reduce the adverse impact that my own

inherent biases would have on this study.

3.3 The Teacher-Researcher: Philosophical Considerations

Kincheloe et al. (2018) believed that researchers must engage in "self-conscious criticism" so that everyone is aware of the "epistemological and political baggage they bring with them to the research site" (p. 243). This type of disclosure is vital as epistemological beliefs factor into the way researchers harness knowledge, evaluate information, and compare their findings with existing knowledge sources (Wynn & Williams, 2012). Keeping these notions in mind, this section will attempt to unveil my own conceptual baggage and highlight other elements that have seeped into this study. As noted earlier in the chapter, my critical realist ontological and epistemological assumptions influenced the design of the study as well as the data analysis process. Allen et al. (2013) believed that critical realism-inspired research is valuable in a TEL context as it can help to counterbalance the dual forces of technological determinism and socio-cultural determinism. Furthermore, it can dovetail nicely with more emancipatory-type research (e.g., critical pedagogy) as critical realistic researchers (e.g., Fletcher, 2017) will often explore and critique social conditions.

Over the years, I have also been drawn both personally and professionally to many concepts generated in the critical pedagogical tradition, especially the work of Brazilian educator and theorist Paulo Freire (1921-1997). Several of Freire's ideas such as 'education as the practice of freedom' and the 'problem-posing method' act as a strong support beam in the philosophical foundation of this study. Freire (1996) highlighted his concept of education in the following manner:

> Education as the practice of freedom – as opposed to education as the practice of domination – denies that man is abstract, isolated, independent, and unattached to the world; it also denies that the world exists as a reality apart from people. (p. 62)

Even though these words were first published over fifty years ago, critical theorists such as Giroux (2020) believe they resonate even more today, especially when one considers the negative impact that "commercialization, commodification, privatization, and militarization" are having on the public and HE systems (p. 11). Throughout the globe, many EIL programs are constructed on the 'banking' model of

education. Freire (1996) tells us that this model perceives learners to be "empty" containers and it is the teacher's responsibility to deposit knowledge which "students patiently receive, memorize, and repeat" (p. 53). The banking model stifles students' creativity and CT abilities. Freire believed that teachers have a responsibility to nurture their learners' *conscientização* or critical awareness. *Conscientização* allows individuals to identify social, political, and economic contradictions and take action against injustice (Freire, 1996).

One of the key aims of the DST project was to foster my students' awareness of local and global sociocultural issues. I felt that ELLs would generate more critical ideas and have a better understanding of important social topics in a collaborative learning environment. Thus, I adopted Freire's (2009) problem-posing approach which he described in the following words: "the problem-posing educator constantly re-forms his reflections in the reflection of the students. The students – no longer docile listeners – are now co-investigators with the teacher" (p. 57). According to Freire (2009), the problem-posing method "involves a constant unveiling of reality" and "strives for the emergence of consciousness and critical intervention in reality" (p. 57). Freire (2008) perceived knowledge to be something that is created in "the relations between human beings and the world, relations of transformation, and perfects itself in the critical problematization of these relations" (p. 99). The Freirean idea that new knowledge can be co-created through the process of authentic dialogue, critical reflection, and action is something else that resonated with me not only during this research project, but also throughout my entire teaching career.

3.3.1 Insider-Research

According to Chammas (2020), a researcher's positionality is an important consideration in any qualitative study as it can have a direct bearing on the entire research process. Keeping these words in mind, it is essential that I properly situate myself in this study. First, I was a teacher-researcher or research-practitioner who was tasked with co-creating instructional materials (i.e., textbooks) for the AEA course. I also designed supplementary learning materials which were customized for my own classes and incorporated exemplary student work (e.g., DST videos, scripts) from previous cohorts into the DST unit. Thus, my familiarity with the AEA course teaching materials in conjunction with the fact that I have taught DST for seven years

meant that I was quite comfortable integrating TEL projects into my lessons. Next, I was responsible for teaching a total of 73 first-year university students spread over three classes. The participants were recruited from my three AEA classes, so I was an 'insider-researcher' who studied my own students. Brannick and Coghlan (2007) defined insider-researchers as individuals who conduct studies in and on their own organizations. Numerous studies (e.g., Dhillon & Thomas, 2019) over the years have explored the insider-outsider dichotomy. At one end of the research continuum are scholars who believe that 'outsiders' will be more objective and ask more poignant research questions because of their lack of familiarity with the context of the study (Aiello & Nero, 2019). At the other end are advocates of insider-led studies who perceive insiders to be less invasive (Finefter-Rosenbluh, 2017) and have a firmer grasp on an issue because of their "insider knowledge" and "easy access" to information, resources, and people (Costley et al., 2010, p. 3). Insider-researchers often have a better understanding of an institution's formal and informal power structure (Unluer, 2012) and can obtain richer data during interviews because of their familiarity with the participants and organization (Brannick & Coghlan, 2007).

I concur with the findings the aforementioned scholars (e.g., Brannick & Coghlan, 2007; Costley et al., 2010; Finefter-Rosenbluh, 2017; Unluer, 2012) who argued that the positionality of insider-researchers can be advantageous. More specifically, my insider status made me more aware of the organizational and political dynamics that existed in my university's research office. This knowledge enabled me to dodge most of the bureaucratic landmines and conduct my study in a relatively straightforward manner. The flipside to the insider-researcher dynamic is that my role created several problematic logistical and ethical issues. I had to be cognizant of the adverse impact that power and influence (Creswell, 2014) and personal bias (Burns, 2005; Simons, 2009) can have on a research investigation. The challenges that I encountered and the ethical protocols that were established will be explored in the last section of this chapter.

3.4 Research Site and Participants

The study was conducted in the Department of British and American Studies (*Eibei*) at a private university in the central part of Japan. The institution in which the research participants studied at was established in 1946 as a college of foreign

languages. Today, there are eight faculties, 18 departments, and 14 programs, including a Japanese Studies program for international students. Visitors to the University's website can access information in Japanese, English, Chinese, and Korean. Images of international students are liberally sprinkled throughout the website and words such as 'global mindset' and 'cross-cultural understanding' can also be found in four different languages. These days, most university administrators are cognizant of the fact that eye-catching websites which emphasize internationalization are a useful recruitment tool for both domestic and international students. Throughout Japan, HE administrators are concerned about the demographic decline of the university-aged population (Yonezawa, 2020) and more recently, the detrimental impact that the 2020 COVID-19 pandemic has had on student enrolment rates (Kakuchi, 2021). The institution featured in this study frequently hosts public relations events (e.g., online demonstration lessons) to attract and recruit potential students. Many *Eibei* students study abroad for a year in the United States, Canada, England, or Australia at some point during their academic journey. The *Eibei* Department's emphasis on preparing graduates for the globalized workforce can be seen on the University's website:

> The study of the language, culture, and society of the world's most powerful nations allows our students to prepare themselves not only for a future career in international business, but also to avail themselves of a wide range of career options both domestically and abroad. (n.d.)

The *Eibei* Department had 768 undergraduate students enrolled at the start of the 2019 academic year; females comprised 77.2% (n=593) of this number and males accounted for 22.8% (n=175). The students who are accepted into the *Eibei* program must pass a rigorous screening process that includes a placement test and oral interviews in both English and Japanese. Furthermore, they are fully aware that it is a demanding content-driven program that includes many classes where English is the language of instruction. Thus, the majority of *Eibei* students are more motivated to learn and have better study habits than a typical Japanese ELL in a communicative English language course. There were 152 first-year students enrolled in the compulsory AEA course; 115 females (75.7%) and 37 males (24.3%) were divided into six different classes. The participants in this study were recruited from the three AEA

classes that I taught. All of my students (n=73) were invited to participate in the study during class time. Sixty-four students completed the pre-DST project questionnaire for a response rate of 87.7%. Whereas, the response rate for the post-DST project questionnaire was 86.3% (n=63). The participants' age ranged from 18 to 20 years old (M=18.42). Most of the participants were 18 or 19 years old (96.8%). First-year undergraduate students comprised 100% of the participants; several 'repeaters' or students who had failed the course previously did not participate in the study. Forty-eight (75%) of the participants were female, fifteen (23.4%) were male, and one (1.6%) student preferred not to reveal her/his gender. Sixty-one (95.3%) of the participants identified as Japanese in nationality; whereas two (3.1%) students considered themselves to be 'Japanese-American' and one participant (1.6%) identified as 'Filipino'.

The participants in this study had a range of different high school experiences and comfort levels learning in an all-English environment. At one end of the proficiency spectrum were students who were quite fluent in English as they had studied overseas or graduated from a secondary school that emphasized communicative skills. At the other end, there were ELLs who were more reticent in class as their previous experiences learning English revolved around translation-type activities without many opportunities to practice their communicative abilities. Overall, however, most of the participants in this study had a stronger willingness to communicate in English compared to a typical Japanese university ELL. This assessment is based on anecdotal evidence from the instructors who taught the AEA course in conjunction with the fact that many *Eibei* students wanted to improve their speaking abilities so that they would be better equipped to live in an English speaking country during their study abroad placement.

3.4.1 Inviting the Research Participants

The majority of the participants spoke Japanese as their first language (L1) and English was either an L2 or even subsequent language. Jonbekova (2020) argued that educational researchers often need to overcome several methodological and ethical barriers whenever they conduct studies outside of their linguistic and cultural comfort zones. If a researcher lacks adequate proficiency in the participants' L1, Eaton (2020) suggested that translators and other intermediaries can help to bridge

the language gap. Since I lacked sufficient proficiency in Japanese to translate documents and fully explain the purpose of my study, I elected to use translators. A Japanese colleague who did not know my students visited my classroom to recruit participants and highlight important concepts such as 'informed consent' and 'rights of a research participant'. I physically excused myself from the classroom during his visit so that students would feel more comfortable to ask questions or decline the invitation to participate in my study. The participants were also informed in their L1 that they could withdraw from the study at any point and for any reason and it would not impact their grade. During the recruitment process, each student was also provided with a 'participant information sheet' that was translated into Japanese. These three steps were undertaken so that I could adhere to ethical practices throughout each stage of the research process (Creswell, 2014).

3.4.2 The Translation Process

Translating documents and audio files from one language to another one is a demanding endeavor at the best of times. This reality is even more pronounced whenever research instruments such as questionnaires and interview transcripts are translated. Sperber (2004) pointed out that translators need to go beyond literal translations of surveys and make sure they are adapted "in a culturally relevant and comprehensible form while maintaining the meaning and intent of the original items" (p. 124). Translated questionnaires also need to be field-tested and validated (Banville et al., 2000). After careful consideration, I elected to use the 'translation by committee' approach (Sperber, 2004) which involved two translators working separately, cross-checking each other's work, and eventually coming to an agreement. Hall et al. (2018) believed that the translation committee members need to have "local language expertise, in-depth knowledge of the field, and expertise with the research methodology and translation process" (p. 170). The first or primary translator is a Japanese female who has a high level of proficiency in English and over ten years of experience translating documents from Japanese into English. She translated the following research documents: (a) information sheet, (b) consent form, (c) pre-project questionnaire, (d) post-project questionnaire, and (e) focus group questions. In addition, this individual listened to the Japanese sections from the focus group interviews and translated these audio clips into English. The second

translator is a Japanese male professor who was educated in the UK and has a 'native' or bilingual proficiency. This individual was cognizant of the ethical considerations that go into a study and the importance of properly translated research instruments. In addition to visiting my class during the recruitment stage, the second translator also listened to the Japanese audio clips and verified the primary translator's work. He made a small number of changes to each of the documents. The first translator agreed with all of the suggested changes. Both translators signed a confidentiality agreement.

3.4.3 The Pilot Study

According to Kim (2011), a pilot study or "small-scale methodological test" can help researchers to make sure their ideas and methods will function effectively in the field (p. 191). Likewise, Johnson and Christensen (2012) argued that pilot tests are a "cardinal rule" in research circles as they enable researchers to try out their instruments (e.g., questionnaires) before a study commences (p. 183). A well-organized pilot study can enhance the overall quality of the data in the main investigation (Malmqvist et al., 2019) and provide researchers with an opportunity improve research protocols and address any problematic data collection issues that might arise (Williams-McBean, 2019). Yin (2014) reminded us that a protocol includes not only the research instruments, but also the procedures and rules that need to be followed. Prior to starting my DST research project, I conducted a small-scale pilot study with eight students from another class who were not involved with the main study. These participants were in their third year and were much more comfortable using ICTs in their English classes than the first-year students in the main study. As a result of this pilot test, I was able to modify my questionnaires and focus group questions. I was also able to correct a couple of research protocol oversights. For example, I realized that the students needed more time to complete the two paper-based questionnaires as well as a secure or private place to deposit their completed surveys. Thus, the participants in the main study were provided with as much time as they needed, and I created a sealed cardboard box for them to deposit their questionnaires. The pilot study also allowed me to consider other tricky logistical issues such as the focus group interview recruitment process.

3.5 Data Collection

The data for this study were collected over a four-week period during the 2019 academic year. The 30 steps in the research procedure are highlighted in Table 3.1.

Table 3.1

AEA digital storytelling project: An overview

Steps
1. I created consent documents (e.g., 'participant information sheets') and research instruments (e.g., questionnaires, focus group questions) based on the theoretical framework.
2. The first translator translated the consent documents and research instruments from English into Japanese.
3. The second translator checked the work of the first translator.
4. A Japanese colleague invited participants to join my study and distributed the information sheets and consent forms.
5. The participants completed the consent forms and pre-project questionnaire.
6. The class brainstormed local and global social issues (e.g., homelessness in Japan).
7. The class watched two exemplary DST videos and examined model scripts.
8. The students organized their own teams (i.e., 3-4 students per group) and selected topics.
9. The students researched their topics.
10. The students found appropriate high-resolution images and video clips.
11. The students wrote the first draft of their video scripts.
12. The students created a storyboard which helped them to organize images, video clips, and audio files.
13. Each group edited their own storyboards and another group's storyboard. The students completed a self- and peer-reflection checklist.
14. Each group revised their scripts (2nd draft) and storyboard plans.
15. The students recorded the video narration.

16. The students used video editing software (e.g., iMovie) to create a four-minute to seven-minute DS.
17. Each group examined another group's 'rough cut' video and provided critical feedback.
18. The students revised their videos and saved their 'final cut' videos on a USB.
19. The students shared their videos during a class 'film festival'.
20. The student presenters asked questions and discussed the sociocultural issues featured in their videos.
21. The students completed the post-project questionnaire.
22. The students submitted a self- and peer-evaluation form.
23. I conducted three focus group interviews (note: one for each class).
24. I transcribed the English sections of the focus group audio files.
25. The first translator transcribed the Japanese sections of the focus group audio files.
26. The second translator checked the work of the first translator.
27. I invited the focus group participants to check the transcription of their interviews.
28. I graded the students' DST projects and provided each group with critical feedback.
29. I analyzed 23 video artefacts with the video analysis chart.
30. I organized and coded all the data.

3.5.1 Pre- and Post-Study Questionnaires

Johnson and Christensen (2012) reminded us that a questionnaire is a "self-report data-collection instrument" that researchers use to gather information about their research participants' thoughts, feelings, attitudes, perceptions as well as a host of other items (p. 162). Surveys became a standard data-collection tool for social science researchers during the 1930s (Nayak & Narayan, 2019) and these days, researchers in a wide range of disciplines believe that online questionnaires are a "great way to obtain rich and abundant data while sitting behind one's desk" (Dewaele, 2018, p. 284). Even though surveys are a popular data-collection tool in

many research circles, Dörnyei (2007) argued that most questionnaires which are used in applied linguistics studies are “ad hoc instruments” that lack reliability and validity (p. 102). Dörnyei’s (2007) words resonated with me as the questionnaire situation was probably one of my greatest concerns during the initial stages of my research project. Thus, I thought it would be best to use an existing instrument and modify it for my own research context. I was going to get the questionnaire translated into Japanese and pilot tested to ensure that it had a respectable internal reliability. Other researchers (e.g., Kusumoto, 2018; Sahin et al., 2014) have successfully utilized instruments such as the Cornell Critical Thinking Test (Ennis & Millman, 2005) with students in Japan and Turkey after making certain cultural and linguistic adaptations. However, it became apparent after an extensive search that none of the established questionnaires would be suitable for my study. Therefore, I followed Cohen et al. (2011) ‘guide for questionnaire construction’ and developed my own instruments which were pilot tested and modified. The theoretical model that I used in this study in conjunction with my classroom observations, teaching experiences, and critical reflections filtered into the design process.

The pre-project questionnaire and post-project questionnaire each comprised eight questions and a total of 54-items. These two surveys were divided into the following sections: (1) demographics, (2) multiple choice questions, and (3) open-ended questions. Dobosh (2017) claimed that researchers who know the demographic characteristics of their participants will be able to better understand the collected data. The multiple-choice section of the questionnaire required students to evaluate certain ICT skills (e.g., familiarity with video editing software) and provide their opinions on a wide variety of statements (e.g., ‘watching DST projects in my AEA class will help students discuss important local and global sociocultural issues’). Four negatively worded items were included so that the participants would be more focused when they answered the survey questions (Irions, 2017). The participants used a 6-point Likert-type scale to record their answers and could select from the following responses: 1 (strongly agree), 2 (agree), 3 (somewhat agree), 4 (somewhat disagree), 5 (disagree), and 6 (strongly disagree). The 6-point scale was used for two reasons. First, it was culturally appropriate as many Japanese respondents have a tendency to select the neutral middle ground

options on questionnaires (Onodera, 2014) and it can result in enhanced measurement precision (Nemoto & Beglar, 2014). There was a strong possibility that a 5-point scale would have resulted in more noncommittal responses and a reduced level of data accuracy. The third part of the questionnaire asked two open-ended questions that explored the participants' perceptions as it related to the benefits and challenges of creating a DST project in an academic English course. Integrating open-ended questions into a survey can provide participants with a sense of individuality and an opportunity to share their personal experiences which in turn can result in a researcher having a more pronounced awareness of the topic being researched (Albudaiwi, 2017).

In recent years, web-based questionnaires have become increasing popular because they are shorter, and respondents find them more convenient to complete (Nayak & Narayan, 2019). Researchers who use web-based surveys or cloud-based platforms (e.g., SurveyMonkey) can reduce data collection costs (Ebert et al., 2018) and save time as they do not need to transfer paper-based Likert scale responses onto a MS Excel file (Dewaele, 2018). Online surveys also have a couple of notable disadvantages. Nayak and Narayan (2019) claimed that the response rate for a digital questionnaire can be significantly lower compared to that of the offline counterpart. There are also concerns about data confidentiality and privacy whenever researchers use cloud-based applications (Mishra et al., 2021). My own classroom observations over the years support the findings of Nayak and Narayan (2019). At the end of each academic term, Japanese university students are usually asked to complete an *ankēto* or end-of-course evaluation on their mobile devices. A significant number of students either totally ignore the request or complete the questionnaire as fast as humanly possible by selecting the Likert scale middle or neutral options for each of the questions. More often than not, the open-ended responses only get entered if a student does not like the teacher or is disgruntled about some aspect of the class. After considering the potential for a poor response rate as well as data confidentiality concerns, I elected to use two paper-based questionnaires in the hope that I would be able to obtain richer and more meaningful data.

3.5.2 Focus Group Interviews

Liamputtong (2011) defined a focus group interview as a "dynamic

discussion" that involves "6-8 people who come from similar social and cultural backgrounds or who have similar experiences or concerns" (p. 3). I selected this methodological tool because it would help me interpret the results from the questionnaires and enable me to see the value of a DST project "through the eyes and hearts of the target audience" (Krueger & Casey, 2009, p. 8). The focus group questions were developed with the theoretical framework in mind and critically scrutinized by two former colleagues. After making a couple of minor revisions, the research instrument was translated into Japanese, and pilot tested with students who were not part of the main study. I planned on conducting three focus groups or one for each class with approximately six participants in each session. The students were recruited at the beginning and conclusion of the DST project and a 'participants needed' poster was also distributed in class and taped to the classroom door. Many first-year Japanese university students often have long commutes and need to juggle several commitments such as homework from twelve to fifteen classes, extracurricular activities, and part-time job schedules. Thus, it was challenging, if not impossible to get six Japanese university students together in the same room for an hour on their 'free time'.

Smaller focus groups have traditionally been discouraged by many researchers out of concern that the discussions will be quite limited in scope (Prior, 2018). However, smaller group sizes can give people more room to talk (Morgan, 2019) and are valuable if the topic being discussed is sensitive in nature (Hopkins, 2007). While I was initially discouraged that my recruitment efforts failed to yield a larger pool of volunteers, I felt that the smaller interviews could still generate meaningful data as the participants already knew each other and appeared to be comfortable communicating with one another during the weekly in-class group discussion activities. Prior to this study, I had moderated two focus group sessions as part of my doctoral program course work and discovered that spearheading this type of qualitative interview was a challenging endeavor. According to Jenkinson et al. (2019), the success of a focus group interview hinges upon the moderator being able to manage group dynamics such as individuals who monopolize the conversation or remain silent so that there is balanced participation amongst all members of the session.

From my three classes, 73 students were invited to participate in a focus group interview outside of class time. A total of nine participants initially agreed to partake; however, one student failed to turn up at one of the interviews providing a response rate of 10.9%. Two days prior to the scheduled interview, the participants were emailed the questions that they would be asked (see Appendix C). As noted previously, the focus group questions were translated into Japanese. Before the start of each interview, informed consent was obtained via the 'Participant consent form: Focus group interview' and the participants were instructed to answer the questions in whatever language they felt most comfortable. The interviews were audio recorded with two digital voice recorders. Two students participated in the first session and it lasted 53.4 minutes; whereas four participants talked for 1 hour and 20 minutes during the second interview. The final interview consisted of two participants, and they talked for 31.8 minutes. Combined, the three interviews lasted 165.2 minutes or 2.8 hours (M=55.06 minutes). The participants were provided with a ¥1,500 (9.5 GBP) gift card to cover their commuting costs at the end of each of the interviews. I recorded my thoughts on a digital voice recorder at the conclusion of each focus group session and this information was eventually transferred into my reflective journal. Sagoe (2012) argued that the quality of the data analysis will be enhanced if researchers do their own transcription work. With this thought in mind, I elected to transcribe the English portions of the audio files. The Japanese sections, which accounted for 29.1 minutes or 17.6% of the combined audio files, were translated into English by a qualified translator and her work was cross-checked by a second translator. Two of the focus group interviewees agreed to do a "member check" (Neuman, 2014) to ensure that the transcription was an accurate portrayal of their actual words.

3.5.3 Observational Data: Classroom Observations and Video Artefact Analysis

Merriam and Tisdell (2016) believed that combining observation with other research methods such as interviewing, and document analysis can provide researchers with a "holistic interpretation of the phenomenon being investigated" (p. 161). I decided to follow this suggestion, so I journaled my classroom observations in a notebook and eventually transferred this information into a MS Excel file which was housed in the qualitative software NVivo 12 for Mac. According

to Richards and Farrell (2005), a teaching journal is “an ongoing account of observations, reflections, and other thoughts about teaching” and the entries serve as “a source of discussion, reflection, or evaluation” (p. 82). I wrote down my thoughts immediately after each lesson and sometimes in between classes if I received an email or visit from a member of one of the DST groups. I included “concrete sensory details” and tried to describe events with neutral language so that I could recollect things with a more open mind when it came time to analyze my observations (Copland, 2018, p. 256). Reflective writing is a worthwhile practice for EIL educators because it allows them to have a more pronounced understanding of a situation by seeing it on a piece of paper or PC screen (Farrell, 2013; Mann & Walsh, 2017).

Over the years, many researchers (e.g., Nagro et al., 2017) have suggested that video analysis rubrics can cultivate pre-service teachers’ reflective competencies. Keeping this notion in mind, I decided to create a DST analysis rubric so that I could scrutinize the students’ videos with a more discerning eye (see Appendix D). The theoretical framework that I used in this study helped me to design the rubric. The video analysis instrument had ten items and a 4-point Likert-type scale with these options: 1 (incomplete), 2 (partially proficient), 3 (proficient) and 4 (exemplary). I also recorded the following items during the video viewing sessions:

- DST project title;
- Sociocultural issue(s) – local, global, or both;
- Length of video;
- Total number of ‘critical visuals’ (i.e., images, video clips, graphs, infographics);
- Open-ended comments.

Combined, the participants created a total of 23 videos which lasted 122.8 minutes or 2 hours and 5 minutes (M= 5:34 minutes). The complete list of the DST topics can be found in Appendix E. The students saved their MP4 video files on a USB and transferred the data directly onto a PC which was located in an unobtrusive part of the classroom. I opted to not receive the video files electronically due to privacy concerns (Mishra et al., 2021) and a practical consideration, namely my university’s

LMS had limited storage space.

I watched the videos on three separate occasions. The first viewing session occurred during the in-class 'film festival' whereby the students shared their collaborative creations and talked about the social issues that were featured in the DSs. I did not take any notes or grade the students' work as it might have proven to be a distraction. Instead, I wanted the participants to feel relaxed and comfortable so that they could lead their classmates in a post-video discussion. During the second viewing, I graded the videos with the rubric that was highlighted in the AEA textbook. My grade was combined with the students' scores on the self- and peer-evaluation forms. I did not want my study to have any bearing on the students' marks, so the third viewing session did not take place until all of the graded projects were returned. The final viewing was quite time-consuming as I had to regularly pause each video to record information on the DST video analysis rubric.

At the end of the 'film festival' class, I distributed the 'AEA video project: Self and peer evaluation' form to each of the students. The class was informed in both English and Japanese that this form was confidential, and I was the only one who would read it. They were instructed that they could write their comments in either English or Japanese and deposit the completed forms in a sealed cardboard box during the next lesson. The peer- and self-evaluation forms generated a surprising amount of data, especially from students who considered their partners to be 'social loafers' (Ferrari & Pychyl, 2012) or 'free riders' (Forehand et al., 2016).

3.6 Coding the Data: Thematic Analysis

The data that were generated in this study was voluminous and multifaceted, so I used Nvivo 12 for Mac, a qualitative software package, to organize and analyze the data. After exploring different types of coding such as open, axial, and selective (see Corbin & Strauss, 2015), I decided to use a thematic analysis (TA) approach as it was the best fit for my study. Clarke and Braun (2017) defined TA as a "method for identifying, analyzing, and interpreting patterns of meaning ('themes') within qualitative data" (p. 297). This analytic method is "theoretically flexible" (Braun & Clarke, 2006) and well-suited for researchers with either an experiential (e.g., critical realism) or critical orientation (Braun & Clarke, 2021). Likewise, Xu and Zammit (2020) argued that TA is a valuable tool for teacher-researchers as it provides them

with an “accessible and flexible method to analyze qualitative data collected in the natural classroom setting” (p. 2).

The aforementioned benefits in conjunction with the fact that TA is relatively easy to learn (Braun & Clarke, 2006) have made it the most popular method for analyzing data in qualitative studies (Wiltshire & Ronkainen, 2021). However, not everyone views TA as an advantageous and straightforward analytical tool. Critics have claimed that the approach has “limited underpinnings and effectiveness” and qualitative data can remain a mystery if researchers are unable to properly apply TA (Ozuem et al., 2022, p. 143). After considering these cautionary words, I followed these six steps highlighted in Braun and Clarke’s (2021) TA model:

1. Data familiarisation and writing familiarisation notes;
2. Systematic data coding;
3. Generating initial themes from coded and collated data;
4. Developing and reviewing themes;
5. Refining, defining, and naming themes;
6. Writing the report. (p. 331)

I familiarized myself with the data by carefully examining and re-examining the focus group interview transcripts, audio files, questionnaire responses, video analysis charts, and reflective journal notes so that I would have a better understanding of the participants’ experiences during the DST project. During the second stage, I organized and coded different concepts that emerged from the data. According to Saldaña (2016), a code is a “word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (p. 4). Next, I created a list of initial themes from the coded data. These themes were further developed (e.g., primary and secondary themes) and inserted into MindNode, a mind mapping software. During the fifth step, I refined the previous list, color-coded the latest iteration, and created definitions for each theme. Saldaña (2016) highlighted the cyclical nature of the coding process by stating that “data are not coded – they’re recoded” (p. 68). Keeping this notion in mind, I completed two separate cycles so that my TA would capture the essence of the data. Once I had firmly established my themes, I proceeded to the ‘writing the report’ step.

3.6.1 Presenting and Analyzing the Data

The data from the pre- and post-project questionnaires are presented as percentages in 13 different tables to make it easier to compare and analyze the data. McConnell (2006) believed that the calculation of simple percentages and the redistribution of certain Likert scale responses (e.g., 'not sure') can help researchers assimilate their data. Keeping these words in mind, I utilize simple percentages and group selected responses (e.g., 'agree' and 'strongly agree') together in the next chapter. Statistical tests (e.g., t-test) were not conducted on the six-point Likert-type scale questionnaire responses as I considered them to be ordinal data. Wu and Leung (2017) argued that the Likert scale is "usually treated as an interval scale, but strictly speaking it is an ordinal scale, where arithmetic operations cannot be conducted" (p. 527). Furthermore, this research team suggested that researchers who want to analyze interval data need to use an 11-point Likert scale. Other researchers believed that the descriptors in a rating scale need to have the same "psychological distance" between two points (Friedman & Amoo, 1999, p. 114) and if they are not equivalent the Likert scale should not be viewed as an interval scale (Joshi et al, 2015).

3.7 Ethics and Privacy

The ethical guidelines of Lancaster University were adhered to in all respects and approval for my study was granted on June 6, 2019. Three weeks later, I received institutional permission after submitting the necessary documents to my university's Ethics Screening Committee. There were several notable ethical issues that I needed to address, and these items were clearly identified on the ethics related documentation that I submitted to both institutions. First and foremost, I was an 'teacher-researcher' or 'insider-researcher' who wanted to study my own students. Unluer (2012) believed that this 'role duality' can be a difficult balancing act. The over-involvement of a researcher can lead to personal bias (Burns, 2005) as well as a shift in the power and influence dynamics (Creswell, 2014). There were also linguistic and cultural considerations that I needed to carefully consider such as the translation protocols. Woodin (2016) reminded us that ethics are especially important whenever researchers work in another cultural setting as the participants' value systems can be quite different from their own. My study had the potential to be a disruptive force if certain precautions were not taken. The students were able to read the information

sheet and various consent forms in their L1. They were also informed in both Japanese and English that participation in the study was voluntary and confidential and they could withdraw at any time and for any reason and their grades would not be affected.

Privacy, anonymity, and confidentiality are important concepts that researchers must carefully consider before they can launch any research investigation (Johnson & Christensen, 2012). The participants' data in this study were stored in encrypted files on a password-protected computer and pseudonyms were used. Paper consent forms (i.e., pre- and post-project questionnaires, focus group interview, video analysis) and hard copies of data were stored in a locked filing cabinet in a locked office. Both translators signed a confidentiality agreement, and all relevant documents were returned after they completed their transcription duties. The importance of confidentiality and anonymity were emphasized to the participants in the focus group interviews and they agreed to not disclose anything that was discussed during their session. Focus group participants who are given assurances about these two items are more inclined to be honest during the interview (Gill et al., 2008) and this reality can enhance the quality of the data.

3.8 Conclusion

This chapter examined the benefits and drawbacks of the qualitative case study methodology. I discussed why it was the best fit for this study as well as my critical realist ontological and epistemological assumptions that filtered into the design process. I highlighted the research instruments that I utilized as well as the linguistic and cultural adaptations that I needed to make during the data collection phase. The chapter concluded with an examination of the insider-researcher dynamic and how it created a few significant ethical issues. I discussed the protocols that were in place which helped me to mitigate these concerns as well as the steps that were taken to protect the participants' privacy.

Chapter 4: Research Findings and Discussion

4.1 Introduction

As noted in the preceding chapter, I conducted a single-case descriptive study (Yin, 2014) as it meshed well with my critical realist philosophical orientation (Wynn & Williams, 2012). More importantly, this qualitative methodological approach provided me with a more complete portrayal of the participants' experiences (Schwandt & Gates, 2018; Simons, 2009) at different stages of the AEA DST project. Table 4.1 highlights the six research instruments that were integrated into my thesis. The two questionnaires, focus group interviews, and self- and peer-evaluation forms captured the students' voices. Whereas, the 10-item video analysis rubric (see Appendix D) helped me to scrutinize the participants' multimodal artefacts with a more decerning eye. Likewise, the observational journal enabled me to critical reflect on the face-to-face and digital discussions that I had, pedological practices that were utilized as well as the peer-to-peer and group interactions I witnessed in the classroom. Combined these six items generated a tremendous amount of data. In fact, my own experiences conducting qualitative case study research supports Merriam and Tisdell's (2016) belief that a single case study can produce a plethora of data and researchers might find themselves "seriously challenged in trying to make sense out the data" (p. 233).

Table 4.1

Primary Sources of Data and Details

Research instrument	Details
1. Pre-project questionnaire	- 54 items; 64 participants (87.7% response rate)
2. Post-project questionnaire	- 54 items; 63 participants (86.3% response rate)
3. Focus group interviews	- eight participants in three focus group sessions (10.9% response rate); 2.8 hours in total
4. Self- and peer-evaluation forms	- 63 forms submitted; 27 participants wrote significant comments (1,178 words in total)

5. Video analysis rubric	- 23 videos (M= 5:34 minutes) analyzed with a rubric based on my theoretical framework
6. Observational journal	- eight 90-minute class observations (12 hours in total); several emails and informal conversations with students and colleagues

In this chapter, I elucidate the meaning of the qualitative data that emerged from the aforementioned research instruments. Chapter four is divided into two distinct overarching sections, namely the research findings and discussion. Within each of these foundational parts, there are several subsections which are guided by the theoretical framework that is discussed in chapter two and thematic categories that were developed during the coding process. Chapter four opens with a brief summary of the core findings of my study. Next, the themes for the first research question are identified alongside the sources of data which were most useful generating these themes. Attention then turns to the questionnaire data. A total of 50 items, which includes both the pre- and post-project numeric data, are presented in 13 tables which enable readers to take in a large amount of detail and make comparisons between the two data sets without becoming overwhelmed. The open-ended survey responses, focus group data, and self- and peer-feedback forms are presented immediately after the numeric data. Next, the researcher-generated data (i.e., video analysis, observational journal) are highlighted. The subsequent sections for research questions two and three are organized in the same manner. The second foundational part of this chapter is the discussion. Here, the findings are scrutinized against that backdrop of the theoretical framework that I used in this study. In addition, the data that were generated from the various research instruments are discussed in relation to previous academic studies. The purpose of chapter four is to present the research findings and my interpretation of the data. Furthermore, I show how the findings answer each of the three research questions. Pseudonyms are used to protect the identities of the focus group participants as well as students who wrote comments in their questionnaires, and self- and peer-evaluation forms.

4.2 Findings

4.2.1 Key Findings: Overview

The following research questions were addressed in this thesis:

1. What impact, if any, will digital narratives have on Japanese university EAP students' critical thinking about local and global sociocultural issues?
2. Does a project-based language learning digital storytelling initiative enhance Japanese EAP students' digital competencies? If so, how?
3. With regard to Keller's ARCS model of motivational design, what effect does a project-based language learning digital storytelling approach in an EAP course have on the participants' attention, relevance, confidence, and satisfaction conditions?

Research question one is underpinned by the work of Thomas and Lok (2015); whereas, Keller's (1987, 2010) ARCS model is used to answer research questions two and three. Table 4.2 highlights the key findings from my study.

Table 4.2

AEA Digital Storytelling Project: Key Findings

Item	Details
1. Critical thinking	- DST had a positive impact on each of the three domains (i.e., skills, knowledge, disposition) in Thomas and Lok's (2015) CT attributes model.
2. Awareness of local and global sociocultural issues	- DST fostered the participants' awareness of sociocultural issues; some students developed 'digital empathy' after watching and discussing their classmates' DSs.
3. Higher-order thinking skills	- activities that required HOT skills were considered to be challenging; however, many participants felt that they were an enjoyable and valuable way to study AE.
4. Digital native narrative	- my study repudiates the well-established digital native narrative; most participants became tangled up in problematic ICT issues and were not overly enthusiastic about using technology in an AE course.
5. Digital divide	- there was a digital gap between the 'haves' and 'have nots'; it generated frustration in some groups.
6. 'How to videos' on YouTube	- most of the participants did not find 'how to' videos in either their L1 or English to be helpful for learning new ICT skills (e.g., video editing).

Item	Details
7. Peer teaching and intragroup support	- the DST project fostered the students' independent learning competencies and generated feelings of comradery in many groups.
8. Engagement	- overall, DST had a positive impact on the participants' behavioral, cognitive, social, and affective engagement dimensions (Reinders & Nakamura, 2021).
9. Motivational effectiveness	- 60.3% of the participants wanted to work independently on the next DST project; elements such as social loafing, free riding, intragroup conflicts, time-crunch anxiety had an adverse impact on many participants' confidence and satisfaction conditions (Keller, 1987, 2010).

4.3 Research Question One: CT about Local and Global Sociocultural Issues

In this section, Thomas and Lok's (2015) CT attributes model is used to address the first research question. The three interconnected spheres (i.e., skills, knowledge, disposition) in this theoretical model in conjunction with the data from the aforementioned research instruments helped me generate five distinct thematic categories for the first research question. The following themes are derived from students creating and watching DSs with a sociocultural focus:

1. Awareness of sociocultural issues;
2. Critical thinking skills;
3. Opinions of my classmates' videos;
4. Learning from my peers;
5. Intercultural tolerance.

In each of the sections that follow, the six-point Likert scale responses from both the pre- and post-project questionnaires are highlighted first. The rest of the student-generated data, namely the open-ended survey responses, focus group comments, and feedback on the self- and peer-evaluation forms are shown next. The researcher-generated data (i.e., video analysis, observational journal) are presented last.

4.3.1 Awareness of Sociocultural Issues: Theme One

To identify how the participants perceived sociocultural issues in their AE class, I examined selected questions from the two questionnaires. Table 4.3 highlights the numeric data which focuses on the first theme.

Table 4.3

Awareness of local and global sociocultural issues: Questionnaire data

1. It is important for Japanese university students to think critically about local and global social issues in their AE class.							
Survey	**Strongly disagree (SD)**	**Disagree (D)**	**Somewhat disagree (SWD)**	**Somewhat agree (SWA)**	**Agree (A)**	**Strongly agree (SA)**	**No answer (NA)**
Pre-project	0%	0%	4.7%	25%	39.1%	31.3%	--------
Post-project	0%	1.6%	1.6%	36.5%	34.9%	25.4%	--------
2. When I see a news report on a sociocultural issue (e.g., homelessness, refugees), I consider it without prejudice.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	10.9%	21.9%	37.5%	18.8%	7.8%	--------
Post-project	0%	4.8%	19%	36.5%	33.3%	6.3%	--------
3. Finding the most current information on a social issue will help you have a better understanding of the issue.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	0%	1.6%	25%	31.3%	42.2%	--------
Post-project	0%	1.6%	4.8%	14.3%	36.5%	42.9%	--------

As illustrated in Table 4.3, item one shows that the majority (96.8%) of the university student participants in this study believed that it is important for Japanese ELLs to think critically about local and global sociocultural issues in an EAP course. A closer look at the data reveals that 70.4% of the participants agreed or strongly agreed about the importance of studying sociocultural issues at the beginning of the DST project; whereas, this number decreased to 60.3% in the post-project

questionnaire. The next item (2) in Table 4.3 focuses on the ability to consider a social issue news report without prejudice. In the pre-project questionnaire, over a quarter (26.6%) of the participants agreed or strongly agreed that they could ruminate about a news report without bias. This number increased to 39.6% in the post-project questionnaire which indicates that some of the students' critical awareness of social issues may have been sharpened during the DST project. The final item (3) in Table 4.3 highlights the value of obtaining the most current information on a social issue. In the pre-project survey, 73.5% of the participants agreed or strongly agreed that getting up-to-date information would help them better understand social issues. This number increased to 79.4% at the conclusion of the DST project.

The focus group interviews provided more context to the numeric data in Table 4.3. Chie highlighted the value of studying sociocultural issues:

> *I think it is very important and necessary for Japanese students to think critically about social issues. If we don't think critically, we won't have our own opinion. It's not step-by-step physical labor anymore, especially with advancing technology and whatnot. It's more critical thinking, being creative. We need to focus on things we humans can do which is critical thinking. Otherwise, we won't be able to keep up with the advances in most workplaces.*

Yui shared a similar sentiment:

> *We need to study social problems. If it's just conversations about family, boyfriends, shopping, movie stars, it's not enough. To change the world for the better we need to have our own opinions about social problems so it's important.*

However, several of the open-ended responses on the post-project questionnaire indicated that there was a certain amount of cumulative fatigue and frustration that was generated during the video-making process which may have dampened some of the participants' enthusiasm towards examining social issues. For example, Jun wrote: "*I could learn about problems in other countries. But I was tired making our video and talking about social problems … one member in my group did not do much work.*"

4.3.2 Critical Thinking Skills: Theme Two

To gauge the students' perceptions of CT, I examined seven items from the pre- and post-project questionnaires that are based on Thomas and Lok's (2015) CT attributes framework. Table 4.4 highlights the numeric data which focuses on the second theme.

Table 4.4

Critical thinking skills: Questionnaire data

4. Creating a DST project in an AE class will help me to improve my CT skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	6.3%	32.8%	32.8%	18.8%	7.8%	--------
Post-project	1.6%	7.9%	23.8%	42.9%	14.3%	9.5%	--------
5. I'm not good at solving problems and making deductions.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	4.7%	21.9%	25%	29.7%	14.1%	4.7%	--------
Post-project	3.2%	14.3%	28.6%	36.5%	17.5%	3.2%	--------
6. I can organize my ideas logically.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	9.4%	15.6%	23.4%	31.3%	12.5%	7.8%	--------
Post-project	0%	7.9%	31.7%	30.2%	22.2%	7.9%	--------

7. I have the ability to compare and contrast ideas.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	14.1%	20.3%	37.5%	20.3%	6.3%	--------
Post-project	0%	3.2%	28.6%	31.7%	30.2%	6.3%	--------
8. I'm willing to change my position on a matter when presented with new valid information.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	4.7%	7.8%	35.9%	39.1%	12.5%	--------
Post-project	0%	1.6%	7.9%	38.1%	34.9%	17.9%	--------
9. University students should be able to clearly present their arguments and defend their positions in an AE course.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	3.1%	7.8%	31.3%	40.6%	15.6%	--------
Post-project	1.6%	3.2%	6.3%	41.3%	31.7%	15.9%	--------
10. I can identify gaps in my knowledge and find information to fill those gaps.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	12.5%	31.3%	26.6%	18.8%	7.8%	--------
Post-project	3.2%	1.6%	17.5%	49.2%	20.6%	7.9%	--------

As highlighted in Table 4.4, item four shows that over a quarter (26.6%) of the participants agreed or strongly agreed in the pre-project questionnaire that creating a DS could enhance their CT skills. While this number dipped slightly to 23.8% at the conclusion of the project, there was an overall increase from 59.4% to 66.7% of students who somewhat agreed, agreed, or strongly agreed that making a DST

project had a positive impact on their CT abilities. Item five, which was negatively worded, examined problem solving skills and making deductions. In the pre-project survey, over a quarter (26.6%) of the students disagreed or strongly disagreed that they were not good at problem solving and making deductions; whereas, this number dropped to 17.5% in the post-project questionnaire. Items six and seven had a similar tendency, albeit in the opposite direction. Before the DST project started, 20.3% of the participants agreed or strongly agreed that they could organize their ideas logically; however, this number increased to 30.1% in the post-project questionnaire. Item seven focused on the ability to compare and contrast ideas. In the pre-project survey, 26.6% of the students felt that they possessed this skill; whereas, this number grew to 36.5% at the end of the DST project. The next item (8) on Table 4.4 looked at the willingness to change one's position on a matter when presented with valid new information. Over half (51.6%) of the participants agreed or strongly agreed in the pre-project questionnaire that they would have no problem changing stances if they received compelling new information on a contentious topic. At the conclusion of the DST project, this number increased slightly to 52.8%. Item nine examines reasoning and evaluation from the skills sphere in Thomas and Lok's (2015) CT attributes model. In the first questionnaire, 56.2% of the participants agreed or strongly agreed that university students should be able to clearly present and defend their positions in an EAP course. While there was an unexpected drop to 47.6% in the post-project survey, there was also a slight overall increase from 87.5% to 88.9% when the somewhat agreed statistics were factored into the data set.

Specific content-based knowledge, which is an essential element in Thomas and Lok's (2015) CT attributes framework, was the last item (10) examined in Table 4.4. At the beginning of the study, over a quarter (26.6%) of the participants agreed or strongly agreed that they could identify gaps in their knowledge and locate information to fill those breaches. By the end of the DST project, there was a slight increase to 28.5%. However, when the somewhat agreed numbers were tallied up alongside the aforementioned categories, there was a sharp jump from 53.2% to 77.7%. While this result was not anticipated, it nevertheless demonstrates that the participants were cognizant of the fact that they needed to enhance their knowledge base in order to make an effective DS about a sociocultural issue.

In six out of seven items in Table 4.4, the participants had a higher percentage score in the post-project questionnaire which would indicate that the DST had a positive impact on the participants' CT skills. However, the negatively worded item five appears to be an outlier as there was a notable drop of 9.1% in the post-project questionnaire. When I designed the two questionnaires, I included four negatively worded items to ensure that the participants would be more focused when they answered the questions (Irions, 2017). It is possible that this maneuver backfired as the inclusion of negative statements may have caused some of the participants to misread certain parts of the questionnaires. Roszkowski and Soven (2010) recommended that educational researchers avoid inserting a small number of negatively worded items into a predominantly positively stated survey as it can lead to "respondent carelessness" and an "ambiguity of results" (p. 117).

The open-ended questionnaire responses and focus group interview data shed more light on the second theme. The majority (87.5%) of the focus group participants did not discuss sociocultural issues in either English or Japanese in their high school classes. Akari commented: "*We had to study for our entrance exams, so we didn't talk about social problems. Most Japanese students don't have enough time to consider these problems*." Mio noted: "*I went to a girl's school, so we thought about gender issues but not any other social problems*." The majority (87.5%) of the focus group participants indicated that the CT tasks they did in the AEA course were interesting; albeit with the caveat that they were also challenging. Yui commented: "*I'm interested in this class because I haven't thought much about social problems before. Making a video was also interesting, but really difficult*." Kaori also shared a similar sentiment: "*The DST project was great at least for me because I had to read many things before I could make a video. I think it increased my knowledge and helped my problem-solving skills*." Mari stated:

> *Through the video project, I could learn more information and it became part of my knowledge. If my high school English teacher asked me to talk about social problems, I could not say anything. Now, I can give my opinion, so it was good for me*.

Chie highlighted her ability to compare and contrast information:

> *We did a lot of research and some of the websites had opinions that*

contradicted each other. I had to do even more research to figure out what they were trying to say and come to my own conclusion. I had to look at evidence like background statistics and things like that to figure out which opinions were more accurate.

Taiki commented: "*I'm not sure if I got a broader vision or more clear vision, but I could think more critically about things that I watched or read on a website*." Reina wrote: "*I was able to deepen my research skills and knowledge of my topic in a more effective way than writing a report*."

Hiro was the lone dissenting voice: "*The video project was difficult, and I'm not interested in thinking critically about social issues. I'd rather study English linguistics or business English topics in this class*." After being prodded to provide more detail, Hiro added:

> *Watching the other videos did not make me think critically. But I learned things that happen in other places in the world. Our video was on the ocean plastics problem. I did not know much about the problem, so it was good for me. But it didn't change how I use PET bottles, straws, and other plastics. So, I don't think the project has had a strong influence on my real life*.

4.3.3 Opinions on my Classmates' DST Videos: Theme Three

This section examines the impact the video-viewing process had on the participants' ability to understand and discuss sociocultural issues. There were a wide range of opinions that were reflected in the questionnaires, focus group interviews, and self- and peer evaluation forms. I also compared this data to my classroom observations and analysis of the DSs. Table 4.5 highlights the numeric data from the third theme.

Table 4.5

Opinions on my classmates' DST videos: Questionnaire data

11. Watching my classmates' DST projects will make me more aware of global and local sociocultural issues.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	1.6%	12.5%	31.3%	25%	26.6%	--------
Post-project	1.6%	1.6%	11.1%	39.7%	23.8%	22.2%	--------
12. Watching DST projects in my AE class will help students discuss important local and global sociocultural issues.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	3.1%	10.9%	31.3%	31.3%	21.9%	--------
Post-project	4.8%	1.6%	11.1%	38.1%	27%	17.5%	--------

As shown in Table 4.5, item 11 shows that over half (51.6%) of the participants agreed or strongly agreed in the pre-project questionnaire that watching their classmates' DSs could help them be more aware of sociocultural issues. This number dipped slightly (46%) in the post-project questionnaire; but there was actually a slight increase from 82.9% to 85.7% when the data for the somewhat agreed category was added in. The next item (12) in Table 4.5 focuses on the impact watching DST projects had on the participants' discussions. At the conclusion of the project, most (82.6%) of the students indicated that watching DSs helped their in-class discussions. When the study started, 53.2% of the participants agreed or strongly agreed that their discussions would be enhanced after watching their classmates' videos; whereas this number dropped to 44.5% in the post-project questionnaire.

The focus group interviews and open-ended survey responses provide more insight into the decrease in Table 4.5. Taiki made the following observation during his focus group interview:

> *Some of the video scripts were too difficult or they were all over the place. It's important to stick to a point. They should have used their own words – adlib it. That would make it* [video viewing] *more interactive and helpful – I think*.

Likewise, Mari wrote this on her post-project questionnaire: "*There were some parts of the videos we watched that I couldn't catch the words or meanings. The speakers should use easy English and speak more clearly and calm down*." Shodo wrote: "*It's difficult to convey your thoughts and the social issue you have researched in an easy-to-understand manner*." Whereas, Momone noted: "*I had to use an easy-to-understand explanation for the audience. I learned how to explain things in an easy-to-understand manner using English through the video editing process*." While paraphrasing was perceived by several students to be a challenging skill to master, all of the focus group participants agreed that it was an essential part of the DST project.

Another element that was a source of frustration for the audience and video-editors themselves was poor sound quality. Chie, a tech savvy student who organized several impromptu video editing workshops for her classmates during the DST project, made this observation:

> *I've helped edit my friend's YouTube videos, so I've had a couple of problems in the past with the sound. I think some teams didn't use a microphone or even the earphones you get from Apple … some of the voice recordings didn't work out very well*.

Miho highlighted her group's sound quality troubles: "*It was difficult to adjust our voices and music, so some parts of the video were too loud or too soft*." The use of critical visual texts was another theme that emerged during the data analysis process. Sara wrote: "*I think we were able to share many interesting facts about LGBT issues. The script was done early, and we were able to match it with good images. I think our pictures helped them to understand our script*." Likewise, Kaori noted: "*We did a lot of research on our social issue and summarized the findings really well. Our picture choices were also really good*." Yui highlighted one of her classmates' videos: "*I thought the pictures of the animals were pitiful. The* [animal testing] *video made me think about the cosmetics that I buy and my dog*." Shiomi wrote: "*Using videos and photos has the effect of deepening our understanding of a*

topic." Likewise, Mari stated: "*I think the impact of social issues became stronger for the me because of the images and videos.*"Taiki also touched on the usage of visuals: "*I think most of the videos were good and helped us learn about social issues. One of the videos I watched – I can't remember which one – had lots of pictures and music but not a lot of words*."

The problematic issues that the participants identified, namely the difficult language, poor sound quality, and focus on the 'digital' (e.g., music, transitions) instead of the story, were evident when I first watched several of the videos during the class 'film festival' as well as afterwards during the video analysis process. A case in point concerns the difficult words that were used in the whaling video:

> *However, there are some exceptions, by the way, IWC is short for international whaling commission which was established in 1946. Every year a general meeting is held to discuss ways to use resources based on a report of the whales' ecosystems … another reason Japanese whaling meets with opposition from so many countries is mainly because some people consider that whales are an endangered species, and the Sea Sheppard environmental group sees whaling as barbaric*.

Clearly, the whaling team did not put enough emphasis on paraphrasing and using simpler language which generated a certain amount of frustration amongst the viewers. The analysis of the DSs revealed that 73.9% (17 out of 23) of the groups used audience appropriate language. The video analysis also revealed that not all of the DSs were completely effective in creating a heightened understanding of social problems. For example, the 'smoking and vaping' DST project had inappropriate visuals which actually detracted from the team's main message. More specifically, five images of young female models who were either glamorizing or sexualizing vaping appeared on the screen at the exact same time as the narrator was discussing the health risks of e-cigarettes. Likewise, two of the videos that were analyzed (i.e., 'over-fishing'; 'water shortage') had eye-catching visuals and effective transitions but failed to provide the audience with enough information about the topic.

4.3.4 Learning from my Peers: Theme Four

To identify how the participants functioned in a small group setting discussing sociocultural issues, I examined the previously mentioned sources of student-

generated data as well as my own classroom observations. Table 4.6 shows the numeric data from the pre- and post-project questionnaires which highlights the peer learning theme.

Table 4.6

Learning from my peers: Questionnaire data

13. Working in a small group helps students to better understand social issues (e.g., racism, poverty).							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	4.7%	10.9%	32.8%	31.3%	20.3%	--------
Post-project	0%	3.2%	6.3%	46%	22.2%	22.2%	--------
14. Working in a small group does NOT help students to better understand cultural differences.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	18.8%	35.9%	26.6%	12.5%	4.7%	1.6%	--------
Post-project	20.6%	25.4%	36.5%	9.5%	6.3%	1.6%	--------

As illustrated in Table 4.6, item 13 shows that over half (51.6%) of the participants agreed or strongly agreed in the pre-project questionnaire thought that working in a small group would help them to have a better understanding of social issues such as racism and poverty. This number dipped to 44.4% in the post-project survey. However, the majority (90.4%) of students somewhat agreed, agreed, or strongly agreed that a small group discussion helped them to better understand social issues in the post-project questionnaire; which represented a 6% increase from the initial survey. Item 14, which was negatively worded, examined if students can better understand cultural differences if they work in a small group. In the pre-project questionnaire, 54.7% of the participants disagreed or strongly disagreed that they would have a firmer grasp of cultural issues in a small group context; whereas this number dropped to 46% in the final survey. When the strongly disagreed,

disagreed, and somewhat disagreed categories were tallied, there was a slight increase from 81.3% to 82.5% in the post-project questionnaire.

The focus group interviews and open-ended survey comments provided more context to the numeric data in Table 4.6. Mari stated: "*The group work was fun. It was enjoyable to be exposed to other fields that I didn't know much about because I did it with other people*." Kaori commented: "*I was able to broaden my mind by listening to the opinions of the other people on my team, without being bound by my own views.*" Yako noted: "*I could clarify my own thoughts, present an agenda for a problem, and exchange my opinions with other students*." However, not every student was enthusiastic about collaborative learning. Ryosuke stated: "*It was hard to discuss social issues and make decisions in a group. One of my teammates was really bossy*." My own classroom observations support both of these views. Throughout the DST project, I noticed that many students were highly engaged with their peers during the various in-class conversation and brainstorming activities. At the other end of the learning continuum, there were also some students who would spend a lot of time surreptitiously checking their smartphones or be completely silent during the group discussion and planning activities.

4.3.5 Intercultural Tolerance: Theme Five

Proponents of the twenty-first century skills movement have frequently touted the importance of having a global mindset and cultural awareness for our modern-day university graduates (OECD, 2018; P21, 2019; van Laar et al., 2017, 2020). To identify how students perceived these two skills, I examined a question from the pre- and post-project questionnaires and the focus group interviews. Table 4.7 highlights the numeric data which focused on the theme of intercultural tolerance.

Table 4.7

Intercultural tolerance: Questionnaire data

15. I'm tolerant of different cultural beliefs even though they might contradict my own.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	1.6%	10.9%	37.5%	31.3%	18.8%	--------
Post-project	1.6%	1.6%	4.8%	47.6%	31.7%	12.7%	--------

As noted in Table 4.7, item 15 shows that a little over half (50.1%) of the participants in the pre-project questionnaire agreed or strongly agreed that they were tolerant of different cultural beliefs even though they might contradict their own values. This number dropped to 44% at the completion of the DST project. However, when the somewhat agreed data is included, there was an overall increase from 87.6% to 92% in the second questionnaire. It should also be noted that the majority (91.3%) of the DST projects focused on either a global sociocultural issue (e.g., 'starvation in the developing world') or a topic that was both local and international (e.g., 'air pollution'). The focus group interviews and comments on the self- and peer-evaluation forms provide more context to the numeric data. Kaori stated: "*If we think about social problems in English class, we look at other countries and think differently about our own country*." Likewise, Yui commented: "*When I looked at the world's child-rearing policies, I realized that Japan's child-rearing policies are not good. I became more critical making our video* [social pressure on Japanese working mothers]." Keiko wrote: "*Although I've lived in Japan for 20 years, I never thought we had so many social problems. We have the same problems as developing countries*."

4.4 Research Question Two: Digital Competencies

In this section, the following research question is explored: 'Does a PBLL DST initiative enhance Japanese EAP students' digital competencies? If so, how?' An examination of the participants' questionnaire responses, focus group interviews, self- and peer evaluation comments, and my own classroom observations generated the following thematic categories for the second research question:

1. Familiarity with ICT tools;
2. The benefits of ICTs in an EAP course;
3. The challenges of ICTs in an EAP course;
4. DST and peer support;
5. DST and self-directed learning.

4.4.1 Familiarity with ICT Tools: Theme One

To assess the participants' familiarity with the different ICT tools that were used in the DST project I examined four items from the questionnaires in conjunction with other sources of student-generated data (i.e., open-ended responses, focus group interviews, evaluation forms) and my own classroom observations. Table 4.6 highlights the numeric data which focused on the theme of ICT familiarity.

Table 4.8

Familiarity with ICT tools: Questionnaire data

16. Familiarity with desktop or laptop PC.						
Survey	**Not at all**	**Uncomfortable**	**Okay**	**Very comfortable**	**No problem**	**NA**
Pre-project	18.8%	26.6%	37.5%	14.1%	3.1%	--------
Post-project	17.5%	23.8%	34.9%	15.9%	7.9%	--------
17. Familiarity with digital devices (e.g., smartphone, tablet).						
Survey	**Not at all**	**Uncomfortable**	**Okay**	**Very comfortable**	**No problem**	**NA**
Pre-project	12.5%	12.5%	31.3%	35.9%	7.8%	--------
Post-project	7.9%	17.5%	36.5%	25.4%	11.1%	1.6%

18. Familiarity with word processing software (e.g., MS Word, Apple Pages).						
Survey	**Not at all**	**Uncomfortable**	**Okay**	**Very comfortable**	**No problem**	**NA**
Pre-project	18.8%	29.7%	31.3%	14.1%	6.3%	--------
Post-project	15.9%	23.8%	36.5%	15.9%	7.9%	--------
19. Familiarity with video editing software (e.g., iMovie, Movie Maker).						
Survey	**Not at all**	**Uncomfortable**	**Okay**	**Very comfortable**	**No problem**	**NA**
Pre-project	45.3%	32.8%	15.6%	4.7%	1.6%	--------
Post-project	22.2%	28.6%	30.2%	14.3%	3.2%	1.6%

As highlighted in Table 4.8, item 16 shows that only 17.2% of the participants indicated in the pre-project survey that they were very comfortable or had no problem operating a PC. This number increased to 23.8% at the conclusion of the project. The next item (17) examined students' familiarity with digital devices. In the first survey, 43.7% of the students felt that they were very comfortable or had no problem using a digital device; whereas this number dipped to 36.5% in the post-project questionnaire. Item 18 highlighted the participants' comfort level with word processing software. There was a slight increase from 20.4% to 23.8% between the two questionnaires. The final item (19) on Table 4.8 focused on the participants' familiarity with video editing software. In the first survey, only 6.3% of the students were very comfortable or had no problem editing a DS; whereas this number jumped to 17.5% at the end of the project. When the okay category is included in the data, there was a sharp increase from 21.9% to 47.7% in the post-project questionnaire.

The other student-generated data sources provide more context to the numeric data. Yuto noted the following on his self- and peer-evaluation form: "*We couldn't agree on a good software to make a video for Windows, so we ended up doing it with an iPhone app. Editing was hard because the screen was small*."

Likewise, Rina wrote: "*It was hard to make a smartphone video and edit it.*" It was evident during the classroom observations that several of the participants appeared to be frustrated making a video on a smartphone. Towards the end of the project, I watched six of the students' 'rough cut' videos on a smartphone. It was definitely much easier to provide critical feedback if I watched a DS on a laptop PC versus a smartphone. To get more insight into the participants' experiences using video editing software on a digital device, I made a short video on my smartphone with the iMovie app. I noted the following observations in my reflective journal: "*the app has less features than the desktop version … the smaller screen makes it more difficult to navigate and edit.*"

4.4.2 The Benefits of ICTs in an EAP Course: Theme Two

The DST project and textbooks that the participants utilized in the AEA course were designed to cultivate their CT, DL, and self-directed learning. This section examines the advantages of using ICTs to study English. Table 4.9 highlights the numeric data which focused on the benefits of ICTs theme.

Table 4.9

The benefits of ICTs in an EAP course: Questionnaire data

20. I believe that it is important for me to learn how to use ICTs in my English classes.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	1.6%	7.8%	35.9%	26.6%	21.9%	3.1%
Post-project	0%	0%	9.5%	39.7%	27%	23.8%	--------
21. I believe that my language learning has improved by using ICTs in my AE class.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	7.8%	17.2%	42.2%	20.3%	9.4%	--------
Post-project	0%	4.8%	27%	42.9%	14.3%	11.1%	--------

22. I feel comfortable using a digital device to complete homework assignments in my AE class.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	10.9%	10.9%	15.6%	35.9%	15.6%	10.9%	--------
Post-project	3.2%	11.1%	17.5%	33.3%	19%	15.9%	--------
23. I feel comfortable using computers to complete homework assignments in my AE class.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	12.5%	12.5%	18.8%	29.7%	15.6%	10.9%	--------
Post-project	4.8%	9.5%	23.8%	25.4%	20.6%	15.9%	--------

As shown in Table 4.9, item 20 notes that 48.5% of the participants in the pre-project survey agreed or strongly agreed that it was important for them to learn how to use ICTs in their English classes. This number increased to over half (50.8%) in the second questionnaire and by 6.1% to 90.5% when the responses for the somewhat agreed category were included. The next item (21) focused on the effectiveness of ICTs at improving students' foreign language skills. In the first survey, 29.7% agreed or strongly agreed that ICTs had a positive impact on the students' language learning; whereas this number dipped to 25.4% at the conclusion of the DST project. Item 22 examined the participants' comfort levels using digital devices to complete homework assignments. At the beginning of the DST project, over a quarter (26.5%) of the participants agreed or strongly agreed that they were at ease; whereas this number increased to 34.9% in the final questionnaire. The last item (23) had a similar focus and increase. In the first survey, 26.5% of the students agreed or strongly agreed that they were comfortable completing homework tasks on a PC. This number jumped to 36.5% by the end of the study.

The majority (90.5%) of the students recognized the importance of DL which is evident in Aya's comment on her pre-project survey: "*I think I will need to use lots*

of ICTs when I start working. I will be able to use the things that I learned in academic English." Likewise, Yui stated in the focus group interview: "*If you look at overseas internships, ICT skills are required. Those skills are important if you want to play an active role in the world so I think it's good that we have an opportunity to use technology in this class.*" Several of the focus group interviewees commented on becoming more comfortable with technology in the AEA course. For example, Mio noted: "*When I entered university, I bought a PC. Thanks to this class, I got accustomed to using my PC and improved my ICT skills*."

4.4.3 The Challenges of Using ICTs in an EAP Course: Theme Three

The participants highlighted several significant ICT challenges that they encountered in the AEA course in their questionnaires and other sources of student-generated data. Table 4.10 highlights two technological themes that emerged during the coding process which were considered to be problematic, namely video editing and TEL within a small group environment.

Table 4.10

The challenges of ICTs in an EAP course: Questionnaire data

24. Using video editing software in a DST project will be difficult.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	3.1%	9.4%	25%	26.6%	34.4%	--------
Post-project	6.3%	1.6%	19%	28.6%	27%	17.5%	--------
25. Working in a small group can help me to improve my ICT skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	12.5%	17.2%	43.8%	14.1%	10.9%	--------
Post-project	0%	3.2%	20.6%	38.1%	27%	11.1%	--------

As illustrated in Table 4.10, item 24 shows that 61% of the participants in the pre-project survey agreed or strongly agreed that video editing would be difficult. When the somewhat agree data is included, this number shoots up to 86%. Although

the data from these three categories decreased to 73.1% in the second survey, it indicates that almost two-thirds of the students still considered video editing to be challenging. The next item (25) examines ICT skills in a PBLL environment. In the first questionnaire, a quarter (25%) of the participants agreed or strongly agreed that working in a small group could help them improve their ICT abilities; whereas this number increased to 38.1% by the end of the project.

While the numeric data shows that students generally benefited by working alongside their classmates on TEL activities, a closer look at the open-ended survey responses, self- and peer-evaluation forms, and focus group comments reveals that many participants felt handcuffed by their partners. For example, Misaki wrote this on her post-project questionnaire:

> *My teammates did not know how to use technology. I had to waste lots of time teaching them how to make a video. This should have been done by the teacher, not by me. I often wondered if I was in a computer class or English class*.

On a similar note, Nanako noted: "*Students who do not know how to use technology get left behind in this class and rely on other people to do the work*." There was also a noteworthy digital rift between the 'haves' and 'have nots'. For example, Emi wrote the following on her evaluation form: "*It was a lot of work for me. Mizuho could not install the app because her smartphone is old so we could not edit the video together*." Several students also commented on the financial repercussions of the DST project in both the post-project questionnaire and focus group interviews. Kana wrote: "*I had to buy video editing software. My teammates did not want to use a free software*." Akari commented: "*One member of my group did not have Wi-Fi in her apartment. I had to travel to school for group meetings, so it cost me extra money*." Chie shared a similar thought during her focus group interview:

> *We need Wi-Fi to do pretty much anything online. It was hard to work on group projects at my house. It's kind of a strange structure and the Wi-Fi is super old so it's not always connecting. We can't afford an upgrade, so I had to be at the university while my teammates were at their own homes doing their own things. It was not convenient, especially since it takes me two hours to get to the school*.

4.4.4 Digital Storytelling and Peer Support: Theme Four

Peer support was considered by many of the participants to be an essential ingredient in an effective DST project as there were a variety of moving parts and lots of complexities. Within most of the groups, the students negotiated different roles (e.g., researcher, ICT specialist) and helped one another learn. This reality was evident during the focus group interviews. Taiki discussed his role:

> *I think in each group there was at least one member who was good at editing videos. I did teach my team the basic know-hows. Some of the other teams asked me 'how do I do this', 'how do I do that' so I also helped them out*.

Peer teaching during the DST project also extended outside the ICT domain as Chie noted:

> *We had to communicate a lot with our teammates and help each other out. When we were making the scripts, we listened to each other and tried to make things more natural and easier to understand. I think it helped with our communication skills.*

Miki highlighted her experiences: "*My partners were cooperative. We helped each other a lot and had fun making our video*." Likewise, Akari stated: "*I think our video is pretty creative. The video has everyone's ideas. If I made it alone, it would be so-so.*" Several other students also commented on the concept of creativity in the post-project survey. For example, Riki wrote: "*I think making a video helped to train my communication skills and creativity*."

My own classroom observations and analysis of the DSs support these participants' comments. Throughout the duration of the DST project, certain students from each of my classes organized impromptu mini-workshops on the following topics: (a) cropping photos, (b) removing image backgrounds, (c) InShot video editor smartphone app, (d) iMovie video editing software, (e) Movie Maker video editing software, and (f) transferring a smartphone audio file to a PC. The peer teaching sessions reminded me of an 'unconference' presentation format whereby the agenda is established by the attendees and people can talk about whatever they like (Terry, 2017). During the in-class peer-editing activities and 'rough cut' video viewing session, there was a noticeable "co-creative flow" (Schmoelz, 2018) amongst several of the groups. Although the concept of creativity was not specifically

analyzed during the video analysis process, it was evident that many teams' storyboards, images, and transitions were quite resourceful and innovative.

4.4.5 Digital Storytelling and Self-directed learning: Theme Five

The FL approach that was used in the AEA course and DST project required students to study certain things outside of class (e.g., video editing) and interact with their classmates during face-to-face learning activities. To assess the participants' capacities as self-directed learners, I examined selected items from the questionnaires, peer- and self-evaluation forms, and focus group interviews. Table 4.11 highlights the numeric data which focused on DST and self-directed learning.

Table 4.11

Digital storytelling and self-directed learning: Questionnaire data

26. It is important for Japanese university students to take responsibility of their own English language learning outside of the classroom.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	0%	12.5%	25%	35.9%	26.6%	--------
Post-project	0%	0%	6.3%	34.9%	27%	31.7%	--------
27. Watching 'how to' videos on YouTube can help me to overcome the difficulties in using video editing software.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	6.3%	10.9%	37.5%	23.4%	20.3%	--------
Post-project	1.6%	4.8%	22.2%	46%	17.5%	7.9%	--------
28. Working on a DST project can help me to learn English on my own time.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	4.7%	10.9%	45.3%	18.8%	20.3%	--------
Post-project	0%	3.2%	15.9%	34.9%	31.7%	14.3%	--------

As highlighted in Table 4.11, item 26 shows that 62.5% of the participants agreed or strongly agreed in the pre-project questionnaire that it is important for Japanese university students to take responsibility for their own English language learning outside of the classroom. In the second survey, this number dipped to 58.7%; but actually increased by 6.1% to 93.6% when the somewhat agreed statistics were included. The next item (27) focuses on the impact YouTube tutorials had on the participants' video editing skills. Before the project started, 43.4% of the students agreed or strongly agreed that YouTube content could help them to overcome any tricky video editing issues. In the final questionnaire, there was a steep drop to 25.4% and over a quarter (28.6%) of the participants had negative feelings about the effectiveness of the 'how to' videos. Item 28 focuses on the connection that DST has to self-directed learning. At the beginning of the project, 39.1% of the participants agreed or strongly agreed that working on a DS can help them to learn English on their own time. Although there was a 6.9% increase in the second survey, the overall number dropped from 84.4% to 80.9% when the somewhat agreed numbers were factored into the data set. This number still indicates that the majority of the participants felt that the DST project enhanced their self-study skills.

The other sources of student-generated data provided more context to the numeric data in Table 4.11. During the focus group interview, Yui stated: "*The textbook QR codes are helpful. I usually watch the videos more than once. It helps me prepare for the group talks*." Several of the post-project questionnaire comments highlighted positive features which fall under the umbrella of self-directed learning. For example, Ayana noted: "*I was able to take the initiative and make a video by myself. I'm happy that I learned how to do this.*" Yudai wrote: "*Making the video was tough and took a long time. We shared our ideas, fixed problems, and made it together.*" At the other end of the self-directed learning spectrum, there were also a number of negative comments, especially in regard to the increased workloads and video-sharing site YouTube. Emi stated: "*Our team was not familiar with computers, so we had a hard time producing a good video. We had too much homework and the deadline was too fast*." Moka wrote: "*I wanted to learn how to actually use a computer in class, not for homework*." Aya noted: "*I had a hard time using the Movie*

Maker software. I didn't understand much when I watched the videos on YouTube." Likewise, Kaori commented: "*I watched YouTube videos, but I couldn't understand them, so I stopped. It was easier for me to just use the app. I gradually learned how to use it*." Whereas, Taiki stated: "*I learned some video editing shortcuts on YouTube. It's pretty easy to find videos that will show you exactly what you need to do on YouTube."*

4.5 Research Question Three: ARCS Model Analysis of a PBLL DST Project

In this section, the third research question is addressed: 'With regard to Keller's ARCS model of motivational design, what effect does a PBLL DST approach in an EAP course have on the participants' attention, relevance, confidence, and satisfaction conditions?' Keller's (1987, 2010) ARCS model was utilized in this study to gauge the students' perceptions and motivational effectiveness of a PBLL DST project in an EAP course. The following conditions from the ARCS model were used as thematic categories:

1. Attention;
2. Relevance;
3. Confidence;
4. Satisfaction.

4.5.1 ARCS Model Analysis: Attention Condition

The first item in the ARCS model is attention. Keller (2010) perceived this condition to be a "synthesis of several related concepts including arousal theory, curiosity, boredom, and sensation seeking" (p. 76). The attention condition includes the following three subcategories: (a) capture interest, (b) stimulate inquiry, and (c) maintain interest (Keller, 2000, 2010). In this section, I discuss how these three elements were used as thematic categories to assess if the DST project sparked the participants' curiosity, stimulated inquiry, and maintained their interest. Table 4.12 highlights the numeric data that focuses on the attention condition.

Table 4.12

Attention condition: Questionnaire data

29. I believe that ICTs can make English language learning interesting.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	10.9%	9.4%	43.8%	18.8%	14.1%	--------
Post-project	0%	3.2%	14.3%	44.4%	20.6%	17.5%	--------
30. It will be easier to express myself with a DST project than it would be in a writing assignment.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	12.5%	20.3%	29.7%	21.9%	12.5%	3.1%	--------
Post-project	9.5%	7.9%	39.7%	20.6%	15.9%	6.3%	--------
31. Working with classmates on a project can help me become more motivated to learn than working alone.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	6.3%	3.1%	37.5%	32.8%	20.3%	--------
Post-project	0%	7.9%	9.5%	49.2%	22.2%	11.1%	--------
32. I will be motivated to make a quality DST project because I know that my classmates will watch it.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	3.1%	7.8%	34.4%	26.6%	26.6%	--------
Post-project	0%	3.2%	11.1%	27%	31.7%	27%	--------

33. I will be motivated to make a quality DST project because I know that my instructor will watch it.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	0%	7.8%	29.7%	39.1%	21.9%	--------
Post-project	1.6%	0%	11.1%	34.9%	28.6%	23.8%	--------

As highlighted in Table 4.12, item 29 shows that 32.9% of the participants agreed or strongly agreed in the pre-project questionnaire that ICTs can make English language learning interesting. This number rose to 38.1% in the second survey and by 5.8% to 82.5% with the inclusion of the somewhat agreed data. The next item (30) notes that only 15.6% of the students agreed or strongly agreed that it would be easier to express themselves with a DS than it would be in a writing assignment; whereas, this number grew to 22.2% in the post-project questionnaire. When the somewhat agreed data is included, this figure almost doubles (42.8%) but still remains relatively low. Item 31 shows that 53.1% of the participants initially agreed or strongly agreed that they would be more motivated to learn working alongside a classmate on a project rather than completing it alone; whereas, this number dropped sharply to 33.3% in the second survey. However, when the somewhat agreed figures are included, the difference between the two surveys is not as pronounced; 90.6% for the first one versus 82.5% for the final questionnaire. The next item (32) shows that 53.2% of the students agreed or strongly agreed that they would be motivated to make a quality DS because their classmates would watch it; whereas, this number increased to 58.7% in the second survey. With the addition of the somewhat agreed data, there was a slight decrease from 87.6% to 85.7% at the conclusion of the project. The final item (33) focuses on the impact that the teacher had on the participants' motivation. In the pre-project questionnaire, 61% of the participants agreed or strongly agreed that they would be more motivated to make a quality DS because their teacher would view it; whereas, this number dropped to 52.4% in the second survey. Overall, there was not much a difference between the initial responses (90.7%) and post-project answers (87.3%) when the somewhat

agreed numbers were included in the data set.

Several of the comments on the pre-project questionnaire provide more context the numeric data in Table 4.12. Yusei wrote: "*I will get motivated because making a video looks interesting and it's better than writing on a paper*." Likewise, Keitaro noted: "*Writing assignments are a little boring. Making a video is hard but fun*." Whereas, Sakura wrote: "*I don't think making a social problem video will motivate me. It might be ok, but there are better ways to study English.*" The majority (82.5%) of the respondents in the post-project questionnaire indicated that they were more motivated to collaborate with peers on a project rather than work independently (see Table 4.12). This sentiment reverberated in many of the students' pre-project questionnaire comments. For example, Misaki noted: "*I think it will be fun working towards the same goal and sharing ideas*." Likewise, Shunta wrote: *"We can actively participate and produce better things working in a group than alone."* There were also practical considerations which can be found in Kai's words: "*Making a video in a group will reduce the individual burden. We can share resources and save time*." Several of the focus group interviewees were also motivated to make a high-quality DS because they knew their classmates would watch it. For example, Yui commented: *"I'm conscious of what other people will think so I want to make a good video."* Likewise, Taiki stated: "*I wanted to show them* [classmates] *that I'm capable of making a good video so that motivated me. I guess it's a competitive thing, but I did not want to lose to them … I enjoyed showing people my video."* On a similar note, Hiro commented: "*I was not embarrassed when the class watched our video … I wanted to get a high score so that motivated me*." Whereas, Chie had a different rationale for making an engaging DST project:

> *It was definitely a good thing that we were showing the videos to our classmates. I was quite shy in the past, so I was a bit scared of disappointing everyone. I knew my classmates were going to watch it so that's why I wanted to make sure I did not mess anything up*.

4.5.2 ARCS Model Analysis: Relevance Condition

The second condition in the ARCS model is relevance. This condition examines whether or not the learners feel that an activity has satisfied their 'desired outcomes' or personal goals and if it is applicable in the pursuit of other learning

objectives (Keller, 2010). If students perceive a task to be personally relevant, Keller (2010) claimed that they will "process information much more effectively and efficiently" and be more motivated to learn (p. 133). The relevance condition includes these three subcategories: (a) relate to goals, (b) match interests, and (c) tie to experiences. In this section, I highlight how these three elements were used as thematic categories to gauge if the participants felt that the DST project was a relevant learning activity. Table 4.13 showcases the numeric data that focuses on the relevance condition.

Table 4.13

Relevance condition: Questionnaire data

34. Creating a DST project in an AE class will help my reading skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	4.7%	17.2%	45.3%	20.3%	10.9%	--------
Post-project	4.8%	6.3%	23.8%	39.7%	15.9%	9.5%	--------
35. I will be able to improve my research skills by making a DST project.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	0%	6.3%	42.2%	31.3%	20.3%	--------
Post-project	0%	1.6%	6.3%	38.1%	38.1%	15.9%	--------
36. Creating a DST project in an AE class will not help me to improve my speaking skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	10.9%	17.2%	53.1%	12.5%	4.7%	1.6%	--------
Post-project	7.9%	15.9%	33.3%	23.8%	9.5%	7.9%	--------

37. Sharing my DST project will help me to improve my presentation skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	1.6%	17.2%	32.8%	20.3%	26.6%	--------
Post-project	0%	6.3%	14.3%	38.1%	15.9%	25.4%	--------
38. Creating a DST project in an AE class will help improve my listening skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	4.7%	17.2%	50%	15.6%	9.4%	--------
Post-project	4.8%	9.5%	22.2%	39.7%	12.7%	11.1%	--------
39. Creating a DST project in an AE class is a suitable way to improve my ICT skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	1.6%	21.9%	29.7%	25%	21.9%	--------
Post-project	0%	3.2%	14.3%	39.7%	20.6%	20.6%	1.6%
40. Working in a small group helps students develop better English language communication skills.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	3.1%	3.1%	28.1%	39.1%	26.6%	--------
Post-project	0%	1.6%	4.8%	33.3%	38.1%	22.2%	--------

41. Making a DST project in a small group will be more useful for my learning than doing it by myself.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	3.1%	6.3%	9.4%	35.9%	21.9%	23.4%	--------
Post-project	0%	6.3%	4.8%	42.9%	25.4%	20.6%	--------

As shown in Table 4.13, item 34 notes that 31.2% of the participants initially agreed or strongly agreed that creating a DS in an EAP course could improve their reading skills. This number dropped to 25.4% in the second questionnaire and by 11.4% to 65.1% with the inclusion of the somewhat agreed data. The next item (35) shows that over half (51.6%) of the students agreed or strongly agreed in the pre-project survey that DST would enhance their researching abilities; whereas, this number rose to 54% at the end of the project. There was also a slight dip of 1.7% to 92.1% in the second questionnaire when the somewhat agreed numbers were included in the data set. The negatively worded item 36 notes that only 6.3% of the participants agreed or strongly agreed that a DST project would not have a positive impact on their speaking abilities compared to 17.4% in the second survey. When the somewhat agreed numbers are included, there was a steep jump from 18.8% in the first survey to 41.2% in the final one. Item 37 shows that 46.9% of the participants agreed or strongly agreed at the start of the project that DST would help their presentation skills; whereas, this number dipped to 41.3% in the second survey. However, when the somewhat agreed data were tallied up there was virtually no change between the initial questionnaire (79.7%) and post-project one (79.4%).

The next item (38) looks at the effect that DST has on ELLs' listening abilities. When the project started, a quarter (25%) of the students agreed or strongly agreed that a DST project could help their listening skills and this figure tripled to 75% with the inclusion of the somewhat agreed numbers. While there was a slight dip (23.7%) in the second survey when the first two categories were examined, there was also a much more pronounced drop to 63.5% when the somewhat agreed figures were included. Item 39 shows that 46.9% of the participants initially agreed or strongly

agreed that creating a DS could enhance their ICT skills; whereas, this number decreased to 41.2% in the second questionnaire. However, there was an overall increase from 76.6% to 80.9% with the inclusion of the somewhat agreed data. The next item (40) focuses on the impact cooperative learning has on the students' communicative abilities. In the first questionnaire, 65.7% of the participants agreed or strongly agreed that working in a small group could help them develop their L2 communication skills; whereas, this number dropped to 60.3% at the end of the project. When the somewhat agreed numbers are included, the totals are almost identical; 93.8% in the first survey and 93.6% in the second one. Item 41 shows that 45.3% of the participants initially agreed or strongly agreed that collaborating on a DST project in a small group would be more useful for their learning than creating an independent DS. While this number remained almost the same (46%) in the second survey, there was a notable increase from 81.2% to 88.9% at the conclusion of the project with the inclusion of the somewhat agreed data.

An examination of the data in Table 4.13 in conjunction with the participants' open-ended survey responses and focus group comments revealed that peer collaboration, researching, presenting, and ICT skills were considered to be highly relevant parts of the DST project. The majority (93.6%) of the students felt that working in a small group helped their communicative abilities. Similarly, most (88.9%) participants believed that making a collaborative DS is more useful for their learning than doing it independently. For example, Jun noted this on his pre-project questionnaire: "*I think most companies make people work in a team … we can actively participate and produce better things working in a group than alone*." Soma wrote: "*You need to have cooperation to work with your group. You will cause trouble to other people if you don't talk or do your work*." The majority (92.1%) of the students reported that completing a sociocultural issue-themed DS helped their research skills. Likewise, most (79.4%) of the participants felt that their public speaking abilities improved through the process of publicly sharing their DSs and leading a post-viewing discussion session. During the focus group interview, Kaori remarked:

> *In my high school English class, we only read sentences and answered questions. We did not make any group presentations or speeches … We had to*

introduce our video and lead a discussion so that was good practice. I feel like my presentation skills and listening skills improved through this video project.

Several of the post-project questionnaire comments indicated the DST project had a positive impact on the participants' pronunciation. For example, Wakana wrote: "*I practiced my pronunciation, and it sounded more clear because I could redo the audio recording*." Haruna noted: "*I think most people were not as nervous making a video than talking in front of the class. They spoke a little bit slower so I could understand what most students were saying*."

However, the focus group interviews made me second guess myself and consider if the post-project questionnaire data were in fact correct. After being prodded for more detail, Yui commented:

> *I didn't think that the video project helped my English communication skills because to improve your English skills you need to speak a lot of time. But to make our video we didn't need to speak much English. When my team talked, we spoke Japanese and on LINE we communicated in Japanese. There were not enough chances to speak English … so I think small group discussions are a better way to improve my English communication skills*.

Likewise, Miho stated: "*I don't think this project was that useful for studying English if you have low skill, but it makes a lot of sense for students who can speak English really well*." The majority (87.5%) of the focus group interviewees spoke "*mainly Japanese*" whenever they needed to communicate with their teammates. Even Chie, the lone exception, noted: "*we spoke around 50% Japanese and 50% English*."

4.5.3 ARCS Model Analysis: Confidence Condition

The third condition in the ARCS model is confidence. Keller (2010) believed that this condition is important because "anxiety and fear are much greater parts of students' lives than teachers realize" (p. 137). Therefore, it is crucial for students to feel like there is a certain degree of control and predictability in the learning process. The confidence condition includes the following three subcategories: (a) success expectations, (b) success opportunities, and (c) personal responsibility. In this section, I discuss how these three elements were used to examine the participants' 'perceived control' (Keller, 2010) and the impact it had on their confidence to complete a DST project in the AEA course. Table 4.14 highlights the numeric data

that focuses on the confidence condition.

Table 4.14

Confidence condition: Questionnaire data

42. I will feel more confident about my ICT skills if I can make a DST project.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	1.6%	7.8%	31.3%	32.8%	25%	--------
Post-project	1.6%	6.3%	15.9%	31.7%	27%	17.5%	--------

43. I prefer working independently than working with my classmates in a small group.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	6.3%	25%	29.7%	14.1%	18.8%	6.3%	--------
Post-project	3.2%	9.5%	27%	30.2%	22.2%	7.9%	--------
44. It will be stressful to create a DST project.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	4.7%	4.7%	25%	29.7%	18.8%	17.2%	--------
Post-project	4.8%	12.7%	20.6%	25.4%	23.8%	12.7%	--------
45. Sharing my DST project with my classmates will be stressful.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	15.6%	20.3%	45.3%	7.8%	4.7%	6.3%	--------
Post-project	30.2%	23.8%	30.2%	9.5%	1.6%	4.8%	--------

46. My classmates will be more likely to make positive comments about my DST project than they would if they read my report.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	7.8%	20.3%	51.6%	14.1%	6.3%	--------
Post-project	3.2%	1.6%	28.6%	41.3%	22.2%	3.2%	--------

As highlighted in Table 4.14, item 42 shows that 57.8% of the participants initially agreed or strongly agreed that they would be more confident about their ICTs skills if they could successfully create a DS. This number dropped to 44.5% in the second questionnaire and by 12.9% to 76.2% with the inclusion of the somewhat agreed data. The next item (43) notes that over a quarter (25.1%) of the students initially agreed or strongly agreed that they would prefer working alone than in a small group; whereas, this number rose to 30.1% at the end of the project. There was a steep increase between the first (39.2%) and second (60.3%) surveys when the somewhat agreed figures were factored into the data set. Item 44 shows that 36% of the participants initially agreed or strongly agreed that it would be stressful to make a DS. While this number was almost identical (36.5%) in the second questionnaire, there was a drop from 65.7% to 61.9% at the end of the project. The next item (45) notes that only 11% of the students initially agreed or strongly agreed that it would be stressful to publicly share their DSs in front of their peers; whereas, this number decreased to 6.4% in the final survey. Likewise, the inclusion of the somewhat agreed numbers also resulted in a drop from 18.8% to 15.9% in the post-project questionnaire. The last item (46) in Table 4.14 shows that 20.4% of the participants agreed or strongly agreed in the first questionnaire that their classmates would be more likely to provide them with positive feedback after watching a DS than reading a report. Although this number increased by 5% in the second survey, there was an overall drop from 72% to 66.7% when the somewhat agreed data were included.

Many of the comments in the pre-project questionnaire revealed that the participants still had a great deal of trepidation even after they studied the DST project materials (e.g., detailed checklist, model scripts, etc.) and watched exemplary

DST videos from a previous cohort. For example, Keiya wrote this on his pre-project questionnaire: "*This assignment will be stressful and take too much time. Most students aren't used to making videos*." Outwardly, many participants appeared to be less anxious about making a DS as the project progressed. However, 61.9% of the students still felt that DST was a stressful undertaking in the post-project questionnaire (see Table 4.14). While the DST project generated a fair amount of frustration, it also provided the students with success opportunities (Keller, 2010). Over three quarters (76.2%) of the participants in the post-project survey indicated that they were more confident in their ICT abilities after successfully creating a DS. The notion of enhanced confidence reverberated in the focus group interviews and post-project questionnaire comments. For example, Mio stated:

> *Many Japanese students don't have the opportunity to make videos in high school and college. Until now, I thought that I couldn't do it because it was difficult to make a video. But since I had to make one in this class, I tried my best and improved my technology skills. This gave me confidence … I just made another video for my literacy class*.

Likewise, Yui commented: "*The experience of being able to try something I've never done before as a team gave me a lot of confidence. I think that was a good thing about the project*." Rinako wrote: "*I'm happy that I learned how to use iMovie. My ICT skills improved so now I'm able to make my own videos*." However, a significant number of students were not overly enthusiastic about working in a group. For example, Taiki made this comment during his focus group interview:

> *I think DST itself is a good project. We only made videos in groups. Of course, there are merits of working in pairs and groups. But sometimes it is important to make a video and present by yourself because these skills are necessary. One member in my team was lazy so the other two people had more stress and burden … if we can't work individually, maybe the next time the video project can be split into three different parts. Each person will be graded on his own part*.

Likewise, Ayana wrote the following on her self- and peer-evaluation form: "*It was difficult to work with my team. I regretted that I wasn't confident and couldn't say my real opinion to the other members. I just nodded my head and rarely expressed*

my opinion."

4.5.4 ARCS Model Analysis: Satisfaction Condition

The final condition in Keller's (1987, 2010) ARCS model is satisfaction. This condition includes the following three components: (a) intrinsic satisfaction, (b) rewarding outcomes, and (c) fair treatment (Keller, 2000). In this section, I discuss how these elements were utilized as thematic categories to assess the participants' feelings about the outcomes of the DST project. More specifically, I examine if the students found the PBLL assignment to be meaningful, appropriately challenging and equitable. Table 4.15 highlights the numeric data which focuses on the satisfaction condition.

Table 4.15

Satisfaction condition: Questionnaire data

47. It will be enjoyable to create a DST project with my classmates.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	7.8%	10.9%	25%	26.6%	28.1%	--------
Post-project	3.1%	4.7%	9.4%	25%	29.7%	28.1%	--------
48. Sharing my DST with my classmates will be enjoyable.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	4.7%	10.9%	32.8%	23.4%	26.6%	--------
Post-project	1.6%	1.6%	9.5%	28.6%	27%	31.7%	--------
49. I will feel good about myself if I'm successfully able to create a DST project.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	0%	0%	7.8%	21.9%	32.8%	37.5%	--------
Post-project	0%	1.6%	3.2%	20.6%	38.1%	36.5%	--------

50. It takes a lot of time and effort to create an effective DST project.							
Survey	**SD**	**D**	**SWD**	**SWA**	**A**	**SA**	**NA**
Pre-project	1.6%	1.6%	1.6%	14.1%	37.5%	43.8%	--------
Post-project	0%	1.6%	3.2%	23.8%	28.6%	42.9%	--------

As highlighted in Table 4.15, item 47 shows that 54.7% of the participants agreed or strongly agreed in the pre-project questionnaire that creating a collaborative DS would be enjoyable. This number rose to 57.8% at the end of the project and by 3.1% to 82.8% when the somewhat agreed numbers were included. The next item (48) examines the students' thoughts on publicly sharing their DSs. In the first survey, half (50%) of the participants agreed or strongly agreed that it would be enjoyable if other students watched their videos. This number rose to 58.7% in the post-project questionnaire and by 4.5% to 87.3% with the inclusion of the somewhat agreed data. Item 49 notes that 70.3% of the participants initially agreed or strongly agreed that successfully completing a DST project would make them feel good; whereas, this number increased to 74.6% in the post-project questionnaire. There was also an overall increase from 92.2% to 95.2% between the two surveys when the somewhat agreed numbers were included. The final item (50) shows that 81.3% of the students agreed or strongly agreed at the beginning of the study that creating an effective DS would require a lot of time and energy. While this number dropped by almost 10% to 71.5% in the second survey, the figure jumped to 95.3% with the inclusion of the somewhat agreed data which was almost the exact same number (95.4%) as the first questionnaire.

The open-ended survey responses, self- and peer-evaluation forms, and focus group interviews provided more depth to the numeric data that were highlighted in Table 4.15. As noted in Table 4.15, the majority (82.8%) of the students enjoyed the collaborative DST project and this was also evident in their words. For example, Taiki commented: "*Finishing the project on time and making a video that they* [classmates] *liked was satisfying*." Keito stated: "*The task was very enjoyable. I worked with my partners really well. I have never made a video before, but after this*

assignment I became interested in making videos." Akari remarked: "*Making the video took a lot of time so I'm happy that we could decide our own partners. I worked with my friends, so things went smoothly, and we were free to give our opinions. The project was fun!*" Likewise, Haruna wrote this on her evaluation form: "*I enjoyed this video project. Getting to know everyone in my class was a good point. We got along better after making our DS*." Yui noted: "*Everyone gave out good ideas and cooperated to make our video. We were very happy with our video. I had a nice time watching my friends' videos at the film party.*"

The DST project also generated extrinsic rewards (Keller, 2000) which was evident in Chie's words:

> *I think everything went pretty well. For me, the most satisfying part was showing everybody our video and getting feedback from my classmates. There were a lot of steps, and we had a few problems … but it was definitely worth it in the end.*

During the video-viewing 'after party' (i.e., informal mingling session), several students were overheard praising their classmates in both English and Japanese. The recipients of these positive compliments appeared to be quite proud of their collaborative digital creations.

At the other end of the satisfaction spectrum, there were a small number of participants who were quite vocal about their discontentment with the DST project. The students who felt that they had been treated unfairly by either their social loafing teammates or laissez-faire instructor voiced their displeasure in the open-ended questionnaire section and self- and peer-evaluation forms. For example, Miki wrote:

> *My partners didn't do much work and my burden was very heavy and difficult. I did all the scripting and editing, and they only did the final music and some of the narration. It was very difficult to make a video alone. I would like you to decide on the groups so that this does not happen to me again*.

Likewise, Mahiro noted the following:

> *I made almost the entire video. Shunsuke only sent me his audio file and a tiny part of the script. I had never used iMovie so it took me almost forever to make the video by myself. I was editing our video until the morning of the due*

date. We made a promise to meet at the school on Sunday to work on the video together. I arrived at 9:00 am and he arrived 5 hours later! He said: 'I slept until noon because I went to karaoke last night'. I could not believe it! It was terrible working with Shunsuke.

Asuka wrote: "*We couldn't meet and work together that much, so it was difficult to get everyone to do the same amount of work. I liked watching the videos, but I didn't like working with my partners*." Concern about free riding was also evident in the post-project open-ended responses and evaluation forms. For example, Shudo wrote: "*It's difficult for the teacher to know everyone's effort from the finished product. Some students can get a high score because of their teammates*."

The students' frustrations with time-related matters reverberated throughout the post-project questionnaire open-ended comments and focus group interviews. Sayaka wrote: "*We did not have enough time! There were to many things to do for each person*." Miku noted: "*The video took a lot of time to make, and it wasn't easy meeting up with my teammates outside of class*." Yui stated: "*Freshmen are very busy and need to get accustomed to a new life. I think there were too many things to worry about … English skills, reading, researching, and learning how to edit a video."* Aika expressed her displeasure in these words: "*Nana did not do the part we decided. I sometimes could not contact my partners and they changed our meeting time. I wasted a lot of my time. I would like to work on the next project by myself*."

4.6 Discussion

4.6.1 Research Question One: Discussion

The findings for the first research question are organized into these five themes: (a) awareness of sociocultural issues, (b) critical thinking skills, (c) opinions of my classmates' videos, (d) learning from my peers, and (e) intercultural tolerance. In this section, I discuss the data in each of these areas in relation to the academic literature. In addition, I answer the first research question which examines the impact that socially conscious digital narratives have on Japanese university EAP students' CT.

The majority of the participants in this study believed that it is important for Japanese ELLs to think critically about local and global sociocultural issues in an AE course. Chie stated: "*We need to focus on things we humans can do which is critical*

thinking. Otherwise, we won't be able to keep up the advances in most workplaces." Likewise, Yui commented: "*If it's just conversations about family, boyfriends, shopping, movie starts, it's not enough … we need to have our own opinions about social problems so it's important*." Chie's thinking appears to have been influenced by the twenty-first century movement which continues to tout CT as an essential skill in the globalized marketplace (van Laar et al., 2017, 2020). Whereas, Yui's words highlight the problem with most commercially produced ELT materials that Japanese ELLs use, namely the focus on 'aspirational content' (Gray, 2012) and the omission of any topics with a critical or 'controversial' (e.g., LGBT issues) edge (Appleby, 2018).

While most of the participants felt that sociocultural issues should be included in an AE course, there was also evidence of cumulative fatigue and frustration. In the pre-project questionnaire, 70.4% of the participants agreed or strongly agreed that it is important for Japanese students to think critically about local and global social issues; whereas, this number decreased to 60.3% at the conclusion of the DST project (see Table 4.3). The other sources of student-generated data shed more light on this 10.1% drop. For example, Jun expressed his irritation in these words: "*But I was tired making our video and talking about social problems … one member in my group did not do much work*." These comments were not surprising as CT tasks can be linguistically challenging for ELLs (Lin, 2018) and DST is a 'pedagogy of discomfort' that requires students to step outside of their comfort zones (Sunderland et al., 2021). As we shall see later in this chapter, social loafing is also a problematic reality in many collaborative group assignments (Lin et al., 2021).

There were also students who felt that topics with a critical edge should not be part of an AE course curriculum. Hiro stated: "… *I'm not interested in thinking critically about social issues. I'd rather study English linguistics or business English topics in this class*." He also claimed that his DST experiences "*didn't change how I use PET bottles, straws, and other plastics*" and thus, "*I don't think the project has had a strong influence on my real life*." There are a few things to unpack here. First, this student's 'plastics in our oceans' DS was quite well done as it contained effective critical visuals and made the audience think about their own plastic consumption. Next, Hiro was studying for the Test of English for International Communication (TOEIC) when the focus group interview took place. This test, which is extremely

popular in Japan and Korea, was created to examine the English skills of individuals who work in an international context (Im & Cheng, 2019). It is possible that Hiro's desire to achieve a high TOEIC score may have factored into his preference to study business English in the AEA course over topics with a more critical orientation. Finally, the DST project did not transform Hiro into an 'eco-warrior', but nevertheless it appears to have added to his knowledge domain, which is an interconnected part along with skills and dispositions in Thomas and Lok's (2015) CT attribute framework.

The data for the first two themes suggests that many of the participants did not have a lot of experience discussing sociocultural issues in high school. This is perhaps best captured in Akari's statement: "*We had to study for our entrance exams, so we didn't talk about social problems*." This was not surprising as previous studies (e.g., Asaoka, 2019; Thompson & Yanagita, 2017; Underwood, 2017) have reported that contextual factors such as a lack of time, large class sizes and a focus on preparing students for passing their university entrance exams prevent many Japanese high school teachers from utilizing a more active CLT approach. In addition, most secondary school educators have never received any training on how they can foster students' CT abilities (Mineshima & Imai, 2021).

The data for the third theme, opinions of my classmates' DST videos, highlighted a wide range of emotions. At one end of the emotional continuum, there was genuine frustration which can be found in Taiki's comments: "*Some of the video scripts were too difficult or they were all over the place*." Likewise, Chie stated: "… *some of the voice recordings didn't work out very well*." My analysis of the DST projects support these criticisms. For example, the whaling video script was not coherent and included difficult words such as "*exceptions*," "*barbaric*," and "*commission*." This finding echoes Lee's (2014) study which reported that the use of unfamiliar lexical items was a source of irritation for students as they could not fully comprehend their classmates' digital narratives. The digital artefact analysis process also revealed that some teams had inappropriate images which is best exemplified in the 'smoking and vaping' DS. More specifically, five images of attractive young female models who were either glamourizing or sexualizing vaping appeared on the screen when the narrator was discussing the health hazards of e-cigarettes. Other groups had eye-catching visuals and great transitions but failed to provide the

audience with much information. Taiki noted this reality in his focus group interview: "*One of the videos I watched – I can't remember which one – had lots of pictures and words but not a lot of words*." My video analysis finding echoed Barber's (2016) belief that students can spend too much time on the 'digital' and overlook important elements from the 'story'. I also concurred with Kim and Lee's (2017) contention that some students focus on the multimedia features of their DSs as a way to avoid writing a more detailed script.

At the other end of the emotional continuum, many of the participants were moved by their classmates' DSs. For example, Yui commented: "*I thought the pictures of the animals were pitiful. The* [animal testing] *video made me think about the cosmetics that I buy and my dog*." Likewise, Mari stated: "*I think the impact of the social issues became stronger for me because of the images and videos*." These comments in conjunction with an analysis of the video projects support previous studies (e.g., Chen, 2018; Huang, 2019; Kusumaningputri & Widodo, 2018) which claimed that a multimodal approach can enhance ELLs' awareness of sociocultural issues. In Yui's case, the video viewing process appears to have fostered her 'digital empathy' (Friesem, 2016).

There were a diversity of data generated by the fourth theme, learning from my peers. Overall, the majority (90.4%) of the participants felt that the small group discussions in the AEA course helped them to better understand social issues (see Table 4.5). This notion can be found in Yako's words: "*I could clarify my own thoughts, present an agenda for a problem, and exchange my opinions with other students*." Likewise, Mari stated: "*It was enjoyable to be exposed to other fields that I didn't know much about because I did it with other people*." However, several of the participants did not enjoy learning alongside their peers in a small group. For example, Ryosuke noted that "*one of my teammates was really bossy*." On her self- and peer-evaluation form, Saho claimed that one member in her group was "*a little dictatorial*." These statements were not surprising as several researchers (e.g., Jetten & Hornsey, 2014; van den Herik & Benning, 2021; Samarakoon et al., 2021) have reported that deviants and dissenters can have a negative impact on intragroup dynamics during collaborative learning activities.

My own classroom observations also mirrored another comment that

Ryosuke made: "*It was hard to discuss social issues*." Before the AEA course started, I erroneously assumed that it would be relatively easy for the ELLs in my class to talk about sociocultural issues and generate critical ideas in a small group context. At the beginning of the year, the small group discussions were frequently stilted, and most students were hesitant to voice their opinions. I initially thought this problematic issue stemmed from the fact that the students did not know one another that well in conjunction with their lack of familiarity with the PBLL approach (Petersen & Nassaji, 2016) that I was using. After critically reflecting on the situation, I concurred with previous studies (e.g., Luk & Lin, 2015; Willingham, 2008) that CT is challenging to teach and my students needed more scaffolding and guidance to foster their autonomous learning skills (García Botero et al., 2021; Lai et al, 2016). Thus, I incorporated more scaffolding strategies (e.g., graphic organizers, modelling) and FL activities into my lessons. Once this pedagogical intervention was made, the overall quality of the group discussions dramatically improved.

My classroom experiences in the AEA course supported Chen and Hwang's (2020) claim that a concept mapping-based FL approach can enhance ELLs' CT awareness and speaking performances. I was also cognizant of the negative impact that foreign language anxiety (Horwitz et al., 1986) and class-fronted public speaking activities can have on Japanese ELLs (Wroblewski et al., 2014). Hence, I decided to use the 'small-group carousel technique' whereby students would have several short interactive discussions for a set amount of time with different classmates instead of a longer one with a post-task oral report to the rest of the class. Like the carousel amusement park ride, students are in motion and rotate around the classroom to talk with different groups. This method not only reduced anxiety levels and increased the students' cumulative speaking time, but it also exposed them to more critical ideas. By the time the DST project commenced, most of the participants seemed to be fairly comfortable voicing their critical thoughts, especially during the in-class debates and critical role-playing activities. At the other end of the collaborative learning spectrum, there were also a small number of social loafers and 'human statutes' (i.e., reticent students) who did not contribute very much to the small group discussions that focused on sociocultural issues.

The fifth thematic category, intercultural tolerance, did not have a diverse

array of opinions like some of the other data sets featured in this section. The majority (92%) of the participants indicated that they are tolerant of other cultures on their post-project questionnaire; which was a 4.4% increase from the first survey (see Table 4.7). The other sources of student-generated data (e.g., focus group interviews, evaluation forms) not only support the survey data, but also indicate that some of the participants' CT dispositions, especially their 'attitudes' and 'habits of mind' (Thomas & Lok, 2015) may have been sharpened during the DST project. These ideas can be found in Yui's comments: "*When I looked at the world's child-rearing policies, I realize that Japan's child-rearing polices are not good. I became more critical making our video* [social pressure on Japanese working mothers]." In Yuki's case, the project enhanced his knowledge domain (Thomas & Lok, 2015): "*I could gain knowledge of social problems and cultural differences all over the world through DST projects*." The findings in this section support previous research (e.g., Fushino, 2011; Kiss & Weninger, 2017) which claimed that a PBL approach and visual texts can broaden ELLs' cultural horizons.

4.6.2 Research Question One: Summary

The first research question asked: 'What impact, if any, will digital narratives have on Japanese university EAP students' CT about local and global sociocultural issues?' After examining the data related to this research question, I concur with the findings of earlier studies (e.g., Chen & Chaung, 2021; Huang, 2019; Wu & Chen, 2020; Yang & Wu, 2012) that a DST approach can foster students' CT abilities and awareness of sociocultural issues. In addition, several of the participants in my study appeared to have greater 'digital empathy' after watching their classmates' socially conscious multimodal videos which supports the scholarly work of Jiang and Gao (2020) and Chen (2018). Although many of the participants found CT activities to be challenging, they also felt that they were a valuable and interesting way to study English. This discovery was not surprising as it mirrored Lin's (2018) research with Chinese high school students. Several researchers (e.g., Lai, 2015; Luk & Lin, 2015; Park, 2013) have challenged the deeply entrenched essentialist assumptions that pigeonholes Asian ELLs as passive learners who are either unable or uninterested in thinking critically. At one of my first university teaching jobs in Japan, I was reprimanded by my supervisor for integrating the notion of homelessness into a

discussion activity. He provided me with the following words to reflect upon: "*What the hell are you doing? Japanese students don't want to talk about that kind of stuff. Your job is to teach English, not incite a bloody riot! Follow the textbook and don't think so much*!" This individual adhered to the banking concept of education whereby teachers deposit knowledge and learners are expected to "receive, memorize, and repeat" (Freire, 1996, p. 53). My research challenges essentialist assumptions about Asian ELLs and the banking model of education which is still prevalent in many Japanese university EIL programs. Previous investigations (e.g., Akatsuka, 2019; Kusumoto, 2018) conducted in Japan have demonstrated that an active learning approach and HOTS initiatives can enhance ELLs' CT attitudes. My findings support these earlier studies and demonstrate that a socially conscious DST project can have a positive impact on each of the three spheres (i.e., skills, knowledge, disposition) in Thomas and Lok's (2015) CT attributes model. Furthermore, it shows how a PBLL DST approach fosters Japanese university EAP students' CT abilities.

4.6.3 Research Question Two: Discussion

The findings for the second research question are organized into the following thematic categories: (a) familiarity with ICT tools, (b) the benefits of ICTs in an EAP course, (c) the challenges of ICTs in an EAP course, (d) DST and peer support, and (e) DST and self-directed learning. In this section, I discuss the data in each of these areas in relation to previous academic studies. The second research question, which focuses on the impact that a PBLL DST approach has on Japanese university students' digital competencies, is also addressed.

The numeric data from the pre-project questionnaire suggests that the participants did not have a high degree of familiarity with different types of ICT tools. For example, 45% of the students reported that they were not comfortable using a PC and almost half (48.5%) found word processing software to be troublesome (see Table 4.8). The pre-project data supports anecdotal evidence (e.g., Marceau, 2019) and earlier studies (e.g., Cote & Milliner, 2017; Mehran et al., 2017; Paterson, 2017) conducted in Japan which reported that HE ELLs had limited DL abilities. Furthermore, it gives credence to Mizukoshi's (2017) belief that there is an "invisible illiteracy" in Japan due to the omnipresence of smartphones and sharp decline in PC

usage. Overall, the DST project appears to have had a positive impact on the participants' DL skills in three out of the four items in Table 4.8 which mirrors the findings of other studies conducted within Japan (e.g., Cowie & Sakui, 2018; Thomas, 2017). However, it was not anticipated that the students would feel less comfortable using their digital devices at the end of the DST project. At the beginning of the DST project, 43.7% of the participants felt very comfortable using their digital device; whereas this number dropped to 36.5% in the post-project questionnaire (see item 17). The open-ended survey responses and peer- and self-evaluation forms also revealed that several of the participants were not enthusiastic about using video editing software on a mobile device. For example, Rina stated: "*It was hard to make a smartphone video and edit it*." Likewise, Yuto noted: "*We couldn't agree on a good software to make a video for Windows, so we ended up doing it with an iPhone app. Editing was hard because the screen was small*." After reflecting upon the student-generated data as well as my own classroom observations, it is likely that using a previously unknown smartphone feature (e.g., iMovie) and collaboratively editing a video while huddled around a tiny screen generated a certain amount of discomforting friction. Thus, I concur with Stockwell's (2022) contention that smaller screen sizes and limited input methods can diminish the effectiveness of mobile devices in EIL classrooms.

The second theme explored the benefits of ICTs in an EAP course. The majority (90.5%) of the participants felt that DL is an essential skill for Japanese university students, especially when they enter the workforce (see Table 4.9). This notion can also be found in Aya's comment: "*I will need to use lots of ICTs when I start working. I will be able to use the things that I learned in academic English*." This finding was not surprising as Japanese policymakers and advocates of the twenty-first century movement frequently emphasize the importance of strong ICT skills (MEXT, 2014; OECD, 2018; P21, 2019; van Laar et al., 2017, 2020). The next three items on Table 4.9 examined if ICTs contributed to the language learning process as well as the participants' comfort level using digital devices and PCs to complete AE homework assignments. Even when the somewhat agreed data were factored into items 21-23 in Table 4.9, the post-questionnaire numbers were only between 61.9% and 68.3%. This finding shows that the participants in my study were not as

passionate about TEL as many other teacher-researchers (e.g., Caldwell, 2018) have previously claimed. Thus, I concur with previous studies (e.g., Marceau, 2019; Mehran et al., 2017) which reported that Japanese university students are not always enthusiastic users of ICTs in their scholastic endeavors. The BYOD policy that was implemented in the AEA course was like the proverbial double-edged sword. On one hand, the students were engaged (Al-Okaily, 2013), could learn in a flexible manner (Sundgren, 2017), and used their personal mobile devices for a wide range of tasks (e.g., video editing, researching, writing scripts) which mirrored Thomas's (2020) findings. The flipside to the BYOD model will be discussed in the next section.

The third theme focused on the challenges of using ICTs in an EAP course. Several participants were disgruntled that they had to use ICTs in an AE course. For example, Misaki commented: "*My teammates did not know how to use technology. I had to waste lots of time teaching them how to make a video. I often wondered if I was in a computer class or English class*." Likewise, Nanako noted: "*Students who do not know how to use technology get left behind in this class and rely on other people to do the work*." These comments were not surprising as other researchers (e.g., Beckett & Slater, 2018; Beckett et al., 2020) have reported that some students find a technology-mediated PBLL approach to be a frustrating and ineffective way to improve their L2 abilities. The second significant element that emerged from the data for the third theme falls under the digital divide umbrella. Although I was aware that BYOD initiatives can require students to incur additional costs (Sundgren, 2017), I did not think it would be a problem in my study, especially since the students were attending a private university. In retrospect, this was a misguided assumption because there was a noteworthy digital rift between the 'haves' and 'have nots'. This is perhaps best captured in Chie's words: "*It was hard to work on group projects at my house … the Wi-Fi is super old so it's not always connecting. We can't afford an upgrade, so I had to be at the university* …" Akari shared a similar comment: "*One member of my group did not have Wi-Fi in her apartment. I had to travel to school for group meetings, so it cost me extra money*." Emi noted her teammate's antiquated digital device: "*Mizuho could not install the app because her smartphone is old so we could not edit the video together*." My research supports previous studies (e.g., Nuhoğlu Kibar et al., 2020) which reported that BYOD collaborative activities can

create a rift between the 'haves' and 'have nots'. Contrary to popular belief, the digital divide does exist in a variety of different Japanese educational environments (MEXT, 2020; Suzuki, 2020) and not all private university students come from wealthy families.

The fourth theme, DST and peer support, was considered by many participants to be an essential part of the DST project. For example, Chie commented: "*We had to communicate a lot with our teammates and help each other out*." Miki noted: "*My partners were cooperative. We helped each other a lot and had fun making our video*." Taiki stated: "*Some of the other teams asked me 'how do I do this', 'how do I do that' so I also helped them out*." My classroom observations support these comments. Several students assisted their classmates by spearheading impromptu mini-workshops which focused on specific ICT skills (e.g., video editing, transferring a smartphone audio file to a PC). During these informal tutorial sessions, the following engagement dimensions were noticeable: (a) behavioral, (b) cognitive, (c) social, and (d) affective (Reinders & Nakamura, 2021). More specifically, I noticed that students actively participated in the learning process and interacted with one another. Furthermore, they appeared to be genuinely curious and enthusiastic about learning a new ICT technique so the peer leaders had no problem sustaining their classmates' attention. Several students recognized the positive impact that group work can have on the creative process. This notion can be found in Akari's words: "*I think our video is pretty creative. The video has everyone's ideas. If I made it alone, it would be so-so*." The PBLL DST approach that was featured in this study generated collaborative synergy which led to high quality contributions in many of the groups. My findings support previous studies (e.g., Beckett et al., 2020; Belda-Medina, 2021) which claimed that a PBLL initiative can foster students' creativity, decision-making, and collaborative work skills. I also concur with Hafner and Miller's (2011) contention that peer teaching in a DST project is an important element in the autonomous learning process.

The fifth theme, DST and self-directed learning, generated a wide range of responses. The DST project required the participants to learn independently and in cooperation with their classmates. Throughout the AEA course, the ELLs were required to complete FL tasks outside of class and collaborate on various PBLL

activities each lesson. Therefore, it was not surprising that most (93.6%) of the students felt that they had a responsibility to improve their English skills outside of the classroom (see Table 4.11). This notion can be found in Yui's words: "*The textbook QR codes are helpful. I usually watch the videos more than once. It helps me prepare for the group talks*." Likewise, Ayana noted: "*I was able to take the initiative and make a video by myself. I'm happy that I learned how to do this*." The student-generated data also revealed a number of negative comments, especially in regard to increased workloads and the video-sharing site YouTube. For example, Emi stated: "*Our team was not familiar with computers, so we had a hard time producing a good video. We had too much homework and the deadline was too fast.*" Likewise, Moka noted: "*I wanted to learn how to actually use a computer in class, not for homework*." These critiques were expected as other researchers (e.g., Kasami, 2018; Mehring, 2015; Oskoz & Elola, 2016) have reported that FL and DST initiatives can add to ELLs' workloads and generate some 'time-crunch' anxiety.

Although YouTube is full of countless mind-numbingly nonsensical videos, many EIL educators (e.g., Alobaid, 2020) consider the platform to be a genuine goldmine as students can access a wide range of instructional ICT content. Taiki's comments during his focus group interview support this notion: "*I learned some video editing shortcuts on YouTube. It's pretty easy to find videos that will show you exactly what you need to do on YouTube."* I anticipated that the rest of the student-generated data would validate Taiki's belief that YouTube is an effective self-directed learning tool. Therefore, I did not expect that over a quarter (28.6%) of the participants would find YouTube to be ineffective in helping them to overcome problematic video editing issues (see Table 4.11). It should also be noted that the AEA textbook included QR codes for six English language video editing resources, and the students were encouraged to watch instructional videos in their L1. The other sources of student-generated data support the post-project numeric data. For example, Aya claimed that she "*didn't understand much*" when she watched the 'how to' videos on YouTube. Likewise, Kaori commented: "*I watched YouTube videos, but I couldn't understand them, so I stopped. It was easier for me to just use the app."*

4.6.4 Research Question Two: Summary

The second research question focused on the impact that a PBLL DST initiative can have on Japanese university EAP students' digital competencies. After examining the pertinent data related to this area, I discovered that a PBLL DST project had a positive impact on the participants' DL abilities. My findings support earlier studies (e.g., Cowie & Sakui, 2018; Gerdera & Zalipour, 2021; Quah & Ng, 2021; Rahimi & Yadollahi, 2017; Thomas, 2017; Yamada, 2021) which claimed that PBLL is an effective way for ELLs to cultivate their communicative competencies, DL, research skills, and collaborative work abilities. However, I also identified several elements that generated discomforting friction such as the incompatibility of group members' digital devices, problematic connectivity issues, a lack of tech support from the teacher, and an increased workload. Overall, the PBLL DST project fostered the participants' independent learning; albeit with less striking results than previous investigations (e.g., Hafner & Miller, 2011; Morgana, 2021) have reported. While I consider myself to be a confident (and critical) user of classroom ICTs, the BYOD model that my university adopted meant that it was impossible for me to provide individualized tech support (Hockly, 2012) for each group as the participants were using a variety of different devices and video editing software. Thus, I encouraged students to watch instructional videos on YouTube in their L1 to overcome this digital gap. In essence, I erroneously assumed that the integration of the YouTube video-sharing platform into the DST project would be problem-free and lead to greater self-directed learning. In retrospect, I should have paid closer attention to the scholarly work of Selwyn (2016) and Stockwell and Reinders (2019). More specifically, I needed to be more realistic and flexible because digital technologies are not a panacea for learner autonomy (Stockwell & Reinders, 2019) and can often be 'complicated' and 'messy' in HE contexts (Selwyn, 2016).

4.6.5 Research Question Three: Discussion

The findings for the third research question are organized into the following themes: (a) attention, (b) relevance, (c) confidence, and (d) satisfaction. These four categories are derived from Keller's (1987, 2010) ARCS model of motivational design. In this section, I discuss the data in each of these areas in relation to the relevant academic literature. In addition, the third research question, which focuses on how a PBLL DST approach in an EAP course impacts the participants' attention, relevance,

confidence, and satisfaction conditions, is addressed.

The first theme, which is the attention condition, generated a great deal of data. The attention condition in the ARCS model includes the following subcategories: (a) capture interest, (b) stimulate inquiry, and (c) maintain interest (Keller, 2000, 2010). Previous studies (Caldwell, 2018; Son et al., 2017) have reported that Japanese university ELLs are not only interested in technology but are also enthusiastic ICT users in their English classes. Anecdotal evidence, namely, many ELLs' fierce attachment to their smartphones and passion for social media sites, in conjunction with the fact that young people in Japan spend over five hours a day online (Cabinet Office, 2022) could lead many to believe that these findings are quite persuasive and predictable. In fact, item 29 in Table 4.12 also seems to support this research. More specifically, the majority (82.5%) of the respondents in the post-project questionnaire felt that ICTs make English language learning more interesting. However, when this figure is critically examined vis-à-vis Keller's (2010) ARCS model, only the first two subcategories in the attention condition have been met. The participants in my study experienced perception and inquiry arousal (Keller, 2000, 2010) but their initial enthusiasm for ICTs waned significantly towards the end of the DST project when their motivational outcomes were examined under the spotlight of the satisfaction condition. There was also a noticeable gap in the participants' comfort levels using PCs (61.9%) and digital devices (68.3%) in the post-project questionnaire when the somewhat agreed, agreed, and strongly agreed categories were combined (see Table 4.9). Although the students I researched were certainly curious about using technology in the AEA course, it did not mean that they were competent and willing users of ICTs which echoes Stockwell's (2016) earlier work and challenges the findings of the aforementioned studies (Caldwell, 2018; Son et al., 2017).

My classroom observations in various EAP classes that I have taught and student comments on the end-of-the-year course evaluations led me to believe that most Japanese ELLs find academic writing to be a tedious and challenging undertaking. Thus, I was initially surprised to discover that less than half (42.8%) of the respondents in the post-project questionnaire felt that they could express themselves easier in a DS than a writing assignment (see Table 4.10). Several of the

open-ended statements and focus group comments indicated that the participants would be able to better maintain attention (Keller, 2010) in a DST project. For example, Yusei wrote: "*I got motivated because making a video looked interesting and it's better than writing a paper*." Likewise, Keitaro noted: "*Writing assignments are a little boring. Making a video is hard but fun*." Even though students with different learning styles find the process of creating a video to be interesting (Gedera & Zalipur, 2021) and motivating (Kasami, 2021), it does not mean that every type of DST project is ideally suited to capture ELLs' attention. Keller (2010) reminded us that the attention condition can be a tricky construct because teachers need to "find the right balance of consistency, novelty, and variation" for their students because individuals "differ in their tolerance of stimulation" (p. 96). The participants in my study were required to create a DS with a sociocultural focus which can be somewhat challenging for ELLs (Huang, 2019) and follow a prescribed checklist. Undoubtedly, these two realities curtailed the 'novelty' and 'variation' factors which resulted in a lower state of perceptual arousal (Keller, 2010). This notion can be found in Sakura's pre-project questionnaire comment: "*I don't think making a social problem video will motivate me. It might be ok, but there are better ways to study English*." Had the participants made a more personalized DS and been provided with more creative control, it is likely that their attention condition would have been much more pronounced.

The student-generated data also revealed that several of the participants appeared to be intrinsically motivated (Deci & Ryan, 1985) to make a DS because it was enjoyable. For example, Akari noted: "*I worked with my friends, so things went smoothly and we were free to give our opinions. The project was fun!"* Whereas, other participants were more extrinsically motivated (Deci & Ryan, 1985). Yui remarked: "*I'm conscious of what other people think so I want to make a good video.*" Taiki stated: "*I want to show them* [classmates] *that I'm capable of making a good video so that motivated me. I guess it's a competitive thing, but I did not want to lose to them*." Chie discussed her motivation: "*I was quite shy in the past, so I was a bit scared of disappointing everyone. I knew my classmates were going to watch it so that's why I wanted to make sure I did not mess anything up*." Clearly, the knowledge that the DST projects would be shared publicly played into some of the

participants' "sensation seeking needs" by providing them with a new learning approach (i.e., technology-enhanced PBLL) which maintained their attention (Keller, 2010, p. 95). This discovery was not surprising as other researchers (e.g., K-P Liu et al., 2018) reported that a DST initiative resulted in high levels of extrinsic motivation because ELLs wanted to perform and look better in front of their peers. The majority (87.3%) of the participants in my study were also motivated to a certain degree by an external force or reward (Ryan & Deci, 2000), namely the instructor's evaluation (see Table 4.12). This notion can be found in Hiro's comments: "*I was not embarrassed when the class watched our video … I wanted to get a high score so that motivated me*." For some students such as Hiro and Taiki, the DST project stoked their competitive fires which bled into the attention condition and thus, maintained their interest (Keller, 2010). Whereas, Chie's past learning experiences and concern about "*disappointing*" others filtered into her motivation and helped to sustain her interest throughout the DST project. Taken together, the findings in this section support previous studies (e.g., Dörnyei & Ushioda, 2011; Paiva, 2011; Ushioda, 2009) which claimed that motivation is a multifaceted construct that includes social, affective, and cognitive elements in conjunction with the ELLs own unique personalities and prior learning experiences.

The relevance condition, which is the second thematic category, generated several interesting findings. An examination of the numeric data in Table 4.13 in conjunction with the other sources of student-generated data revealed that group work, researching, presenting, and ICT skills were considered to be highly relevant elements in the DST project. The majority (88.9%) of the participants felt that making a collaborative DS is more beneficial for their learning than doing it independently (see Table 4.13). For example, Jun noted: "*most companies make people work in a team … we can actively participate and produce better things working in a group than alone*." The PBLL approach that was used in this study generated feelings of relevance as it was related to the participants' future goals and matched their interests (Keller, 2010). However, several students were not entirely satisfied with their DST teams even though they found collaborative learning to be a worthwhile endeavor. This finding, which falls under the umbrella of the satisfaction condition, will be explored in more detail later in the chapter. The majority (92.1%) of the

participants felt that making a DS with a sociocultural focus enhanced their research skills (see Table 4.13). Similarly, 79.4% reported that the process of introducing their videos and leading a class-fronted post-viewing discussion improved their public speaking abilities. Kaori's comments support the numeric data: "*In my high school English class, we only read sentences and answered questions. We did not make any group presentations or speeches … I feel like my presentation skills and listening skills improved through this video project*." Kaori sees relevance in the project when she ties it to her past English learning experiences (Keller, 2010) and compares it to the present. Whereas, Yui's comments are more goal oriented (Keller, 2010) and connected to the future: "*When I graduate, I will need to give presentations so it was good practice to make a video and presentation in English*." Several participants were also cognizant of the need for strong ICT skills in the globalized workforce. For example, Rena noted the following on her pre-project questionnaire: "*This project can help improve our technology skills and English proficiency at the same time. We will need these things when we graduate from university*." Clearly, ICT skills were considered by the majority (80.9%) of the students to be relevant as they factored into their goal orientation, motive matching, and familiarity (Keller, 2000, 2010). As we shall see later in this chapter, some students who considered ICTs to be highly relevant in an EAP course, were also dissatisfied users of technology. The findings in this section were anticipated as other researchers (e.g., Fu et al., 2021; Gedera & Zalipur, 2021; Stanley, 2018; Thomas, 2017; Quah & Ng, 2021) have reported that a DST initiative can foster ELLs' research skills, DL, speech delivery abilities, and collaboration within peer groups.

There were also a couple of unexpected discoveries. At the beginning of the project, three quarters (75%) of the participants thought that a DST project would improve their listening skills (see Table 4.13). Taken alone, this figure supports previous studies (e.g., Cavus & Ibrahim, 2017; Chen, 2018) which reported that DST and MALL initiatives can enhance ELLs' listening skills. However, there was a significant drop (63.5%) in the post-project questionnaire that was initially a little surprising. However, once the video analysis and transcripts of the focus interviews were completed, it was obvious that ineffective paraphrasing and problematic sound quality issues diminished the relevancy of the listening part of the DST project. The

most unexpected finding in this study was that only 41.2% of the students felt that making a DS would help develop their speaking abilities. After examining item 36 in Table 4.13, I assumed that the negatively worded item may have created 'respondent carelessness' (Roszkowski & Soven, 2010) and skewed my results. Several of the post-project questionnaire comments supported this notion. For example, Wakana wrote: "*I practiced my pronunciation, and it sounded more clear because I could redo the audio recording*." However, the focus group interview data made me reconsider the 'respondent carelessness' explanation and believe that the post-project numeric data were in fact correct. The majority (87.5%) of the focus group interviewees spoke "*mainly in Japanese*" whenever they communicated with their teammates. Yui stated: "*I didn't think that the video project helped my English communication skills … we didn't need to speak much English. When my team talked, we spoke Japanese and on LINE we communicated in Japanese.*"

These comments were not expected as the participants predominantly communicated with one another in English whenever they were in class. While I assumed that many students might revert to their L1 in certain situations such as problematic ICT issues, I did not expect that the only time they would use English was during their recorded narrations and presentations. However, after examining the focus group Interview data vis-à-vis Keller's (2010) attention condition, it makes sense why communicating with one another in English was not considered to be particularly relevant. In essence, the students were focused on a specific objective, namely creating a collaborative DS within a limited time frame. Had the participants been more familiar with video editing software and provided with a more flexible deadline, it is quite likely that their goal orientation (Keller, 2010) would have included L2 communication skills. Thus, my findings challenge earlier studies (e.g., Hwang et al., 2016; K-P Liu et al., 2018) which reported that DST can have a positive impact on ELLs' oral communicative competence.

The third thematic category focuses on the confidence condition. Keller (2010) believed that students' anxiety levels can be alleviated if they "develop realistic expectations for success" and understand the parameters of an assignment and evaluation criteria (p. 159). Keeping these words in mind and the lessons learned during the pilot study, I provided the participants with sufficient information (e.g.,

detailed checklist, grading rubric) at the beginning of the project. In addition, the class examined several exemplary DSs and scripts from previous cohorts. I naively assumed that this pedagogical intervention would pave the way for my students' success expectations (Keller, 2010) as they would be less apprehensive about using ICTs in a collaborative assignment. Many of the comments in the first questionnaire revealed that the participants were still anxious despite having ample information about the DST project. For example, Keiya noted: "*This assignment will be stressful and take too much time*." My classroom observations and informal conversations led me to believe that many participants became more confident making a DS as the project progressed. The fact that 61.9% of the students still felt that DST was a stressful undertaking in the post-project questionnaire (see Table 4.14) indicates that I overestimated the collective confidence levels. Ultimately, this finding was not surprising as other researchers have reported that ELLs find DST to be a time-consuming process (Oskoz & Elola, 2016) which can generate 'fear and apprehension' (Sunderland et al., 2021).

Even though the AEA DST project generated a certain amount of anxiety, it also provided the participants with success opportunities (Keller, 2010). The notion of enhanced confidence can be found in the open-ended survey comments and focus group interviews. For example, Mio stated: "*… I thought that I couldn't do it because it was difficult to make a video … I tried my best and improved my technology skills. This gave me confidence …*" Likewise, Yui remarked: "*The experience of being able to try something I've never done before as a team gave me a lot of confidence. I think that was a good thing about the project.*" Clearly, these participants had a higher level of confidence at the conclusion of the project because they understood the learning requirements, completed relevant learning activities, and had the necessary success attributes (Keller, 2000, 2010). At the other end of the confidence continuum, a significant number of students felt that their 'success opportunities' were impeded by group members who lacked 'personal responsibility' (Keller, 2010). This sentiment can be found in Taiki's words: "*One member in my team was lazy so the other two people had more stress and burden ...* [future video projects] *can be split into three different parts. Each person will be graded on his own part.*" Clearly, Taiki's concerns about the negative impact of social loafing (Lin et al., 2021) and free

riding (Forehand et al., 2016) diminished his confidence in future collaborative PBLL activities. In a similar vein, Ayana noted: "*It was difficult to work with my team. I regretted that I wasn't confident and couldn't say my real opinion to the other members. I just nodded my head and rarely expressed my opinion*." This student did not experience success opportunities with her classmates because her 'locus of control' (Keller, 2010) or ability to control the pace of learning was compromised by problematic intragroup dynamics.

The questionnaire data revealed that other students were also disgruntled and lost confidence in collaborative learning activities. In the first questionnaire, 39.2% of the participants expressed a preference to work independently rather than in a small group; whereas, this number jumped to 60.3% at the end of the project (see Table 4.14). On one hand, I anticipated a certain amount of friction within the DST teams as earlier studies (Greenier, 2020; Hwang et al., 2016; Petersen & Nassaji, 2016) reported that ELLs can struggle and experience discomfort or even conflict in PBLL environments. On the other hand, I was nevertheless a little bit surprised at how pronounced the erosion of confidence was during the DST project, especially since there seemed to be a high degree of camaraderie and "co-creative flow" (Schmoelz, 2018) amongst students during the various in-class activities.

The final thematic category, the satisfaction condition, generated a diverse array of data. In the post-project questionnaire, the majority (82.8%) of the participants claimed that they enjoyed creating a DS with their classmates (see Table 4.15). This was also evident in the other sources of student-generated data. For example, Taiki stated: "*Finishing the project on time and making a video that they* [classmates] *liked was satisfying*." Likewise, Haruna noted: "*I enjoyed this video project. Getting to know everyone in my class was a good point. We got along better after making our DS*." Yui commented: "*Everyone gave out good ideas and cooperated to make our video … I had a nice time watching my friends' videos at the film party*." These comments indicate that the participants experienced social engagement (Reinders & Nakamura, 2021) and derived intrinsic satisfaction (Keller, 2010) after successfully completing their DSs. The DST project also generated extrinsic rewards (Keller, 2000; Ryan & Deci, 2000) for some students. For example, Chie commented: "*For me, the most satisfying part was showing everyone our video*

and getting feedback from our classmates." My classroom observations during the video-viewing 'after party' (i.e., informal discussions over snacks and non-alcoholic beverages) support Chie's statement. In addition to overhearing a lot of positive compliments in both English and Japanese, I noticed that the recipients of these comments seemed to be quite proud of their digital creations. Clearly, the DST project generated extrinsic rewards (Ryan & Deci, 2000) and intrinsic satisfaction (Keller, 2000, 2010) for many of the participants. In addition, the collaborative process enabled some of the students to forge stronger bonds with their classmates. Thus, I concur with earlier studies (e.g., Kasami, 2021; M-C Liu et al., 2018; Ono, 2014) which reported that a PBLL DST initiative can have a positive impact on ELLs' engagement and motivational levels.

At the other end of the satisfaction continuum, there were also a small number of students who had a high level of discontentment with the DST project. Keller (2010) believed that learners will be dissatisfied if their "expectations are not met" or they "perceive them to be unfair compared to what other people receive" (p. 167). There were participants who did not appreciate their social loafing teammates or instructor's laissez-faire attitude. During the early stages of the project, I was contacted by Miki and Yuma, both of whom wanted to change teams because of their 'super lazy' partners. I politely declined these requests for logistical considerations and my belief that young adults should be able to negotiate with one another and resolve any simmering problems themselves without the intervention of an authority figure. However, I made a point at the beginning of the next class to reemphasize the importance of positive group work dynamics and the peer-evaluation component of the DST assignment in the hope that it would curtail the more blatant incidents of social loafing. The post-project student-generated data revealed this intervention did not have much of an impact. For example, Miki wrote this on her evaluation form: "*My partners didn't do much work and my burden was very heavy and difficult … I would like you to decide on the groups so that this does not happen to me again*." Mahiro noted: "*I made almost the entire video … It was terrible working with Shunsuke*." Shudo was concerned with the free riding phenomenon: "*It's difficult for the teacher to know everyone's effort from the finished product. Some students can get a high score because of their teammates*."

The participants' frustrations with time-related matters was another element that reverberated throughout the different sources of student-generated data. Sayaka wrote: "*We did not have enough time! There were too many things for each person*." Miku stated: "*The video took a lot of time to make, and it wasn't easy meeting up with teammates outside of class*." Likewise, Yui commented: "… *there were too many things to worry about … English skills, reading, researching, and learning how to edit a video*." Aika noted: "*I sometimes could not contact my partners and they changed our meeting time. I wasted a lot of my time. I would like to work on the next project by myself*." During the pilot study, I heard a few similar complaints so I anticipated that the deadline might be a little too tight and social loafing could cast a dark shadow over my research undertaking. Thus, I extended the initial deadline and incorporated a self- and peer-evaluation grade into the DST project. In addition, my classroom observations in the AEA course mirrored earlier studies (e.g., Gibbes & Carson, 2014; Laverick, 2019) which reported that resentment and stress can percolate in collaborative PBLL teams with the presence of unmotivated students and if there is an unequal distribution of work amongst group members. Therefore, I followed the suggestion of other researchers (e.g., van den Herik & Benning, 2021; Samarakoon et al., 2021) who have urged educators to integrate an effective peer evaluation component into collaborative projects.
I naively thought that my self- and peer-evaluation form would virtually eliminate the adverse impact of the free riders (Forehand et al., 2016) and social loafers (Ferrari & Pychyl, 2012). As the aforementioned comments have clearly shown, this pedagogical intervention had a minimal impact at best. The phenomenon of social loafing and time-crunch anxiety acted as a double-headed monster that disrupted several of the participants' satisfaction condition (Keller, 2010). Thus, my findings mirror other researchers' (e.g., Kayaoğlu & Çetinkaya, 2018; Lin et al., 2021) contention that social loafing, irresponsible peers, and unfair grades are noteworthy challenges in collaborative assignments.

4.6.6 Research Question Three: Summary

The third research question utilized Keller's (1987, 2010) ARCS model to examine the participants' perceptions of a PBLL DST project in an EAP course. An analysis of the pertinent data related to this research question revealed that DST

captured the students' attention and was considered to be a relevant learning activity. On one hand, my research supports previous studies (e.g., Kasami, 2021; Ono, 2014) which reported that DST had a positive effect on Japanese ELLs' engagement and motivational levels. More specifically, I discovered that the four interconnected dimensions (i.e., behavioral, cognitive, social, affective) of Reinders and Nakamura's (2021) engagement model were present at different points in the DST project. There were also students who were intrinsically motivated (Deci & Ryan, 1985) which was evident in the post-project student-generated data (e.g., focus group interviews, evaluation forms). Similarly, there were extrinsically motivated participants who wanted an external reward (Ryan & Deci, 2000) such as praise from their classmates or a high grade from the instructor.

On the other hand, my findings become murkier and even a tad contradictory at times when I examined the data vis-à-vis Keller's (2010) confidence and satisfaction conditions. A case in point concerns ICT skills and collaborative group work. Both of these topics were thought to be interesting and highly relevant, especially when viewed under the twenty-first century skills spotlight. However, they also generated a certain amount of uneasiness and dissatisfaction amongst a significant number of the participants. More specifically, I identified several elements such as social loafing, free riding, intragroup conflicts, problematic ICT issues, and time-crunch anxiety that had an adverse impact on the participants' confidence and satisfaction conditions.

4.7 Conclusion

This chapter first opened with an overview of the six research instruments that were utilized in this study. Next, readers were provided with a brief summary of the key findings that emerged from the different sources of data. Chapter four is divided into two overarching sections – the research findings and discussion. Within each of these foundational parts, there are several subsections which are guided by the thematic categories that were developed during the coding process and the theoretical framework, namely Thomas and Lok's (2015) CT attributes framework and Keller's (1987, 2010) ARCS model. The purpose of this chapter was to view the DST project "through the eyes and hearts" (Krueger & Casey, 2009) of the participants to get a more holistic understanding of their experiences. The students'

perceptions and portrayals of the collaborative DST assignment were also compared to existing studies in the TEL and TESOL fields. The discussion is organized into three parts which corresponded to each of the research questions.

There were several interesting findings that emerged from the data. First, the process of crafting a socially conscious DS cultivated the participants' awareness of sociocultural issues and had a positive impact on the three domains (i.e., skills, knowledge, disposition) in Thomas and Lok's (2015) CT attributes model. Next, there was a notable digital gulf between the 'haves' and 'have nots' in my study. This finding supports earlier studies (e.g., MEXT, 2020; Suzuki, 2020) as well as anecdotal evidence from frontline HE educators who claim that a digital divide does exist in a wide variety of Japanese educational environments, including private universities. My research also puts the deeply entrenched 'digital native' (Prensky, 2001) narrative under the critical spotlight. While the students I researched were certainly curious about using ICTs in the AEA course, they were not competent and willing users of technology. Lastly, my findings challenge previous investigations (e.g., Hwang et al., 2016; K-P Liu et al., 2018) which reported that DST enhances ELLs' oral communication skills. The students in my study did not improve their English language speaking skills as they predominately communicated with one another in their L1 for much of the DST project.

Chapter 5: Conclusion and Further Work

5.1 Introduction

This case study explored the value of integrating a socially conscious PBLL DST project into a first-year Japanese university AE course. In this chapter, I first review the findings and implications of this research. I then highlight how an amalgamation of Keller's (1987, 2010) ARCS model of motivational design and Thomas and Lok's (2015) CT attributes framework provided me with a versatile theoretical instrument which I utilized to answer each of the research questions. Attention then turns to a discussion of the study's strengths and limitations as well as its contributions to the TEL and TESOL fields. The knowledge generated from this investigation helps to fill a noticeable void in the academic literature and provides educators with some practical insights on weaving a PBLL DST initiative into an EAP course. In the final section, I reflect on my long and bumpy research journey along the graduate studies road.

5.2 Summary of Findings

The following research questions guided this thesis:

1. What impact, if any, will digital narratives have on Japanese university EAP students' critical thinking about local and global sociocultural issues?
2. Does a project-based language learning digital storytelling initiative enhance Japanese EAP students' digital competencies? If so, how?
3. With regard to Keller's ARCS model of motivational design, what effect does a project-based language learning digital storytelling approach in an EAP course have on the participants' attention, relevance, confidence, and satisfaction conditions?

A qualitative case study methodological approach is utilized because it allowed me to examine data from a variety of different sources and gain a more comprehensive understanding of my own research context. A review of the relevant academic literature to this investigation revealed that many studies examined personal DSs and were situated in a Western research context; whereas, my case study is unique because it takes places in a Japanese university EAP course and focuses on socially conscious DSs. The single-case descriptive case study (Yin, 2014) that I adopted was the best fit for this research undertaking as it aligned well with my critical realist

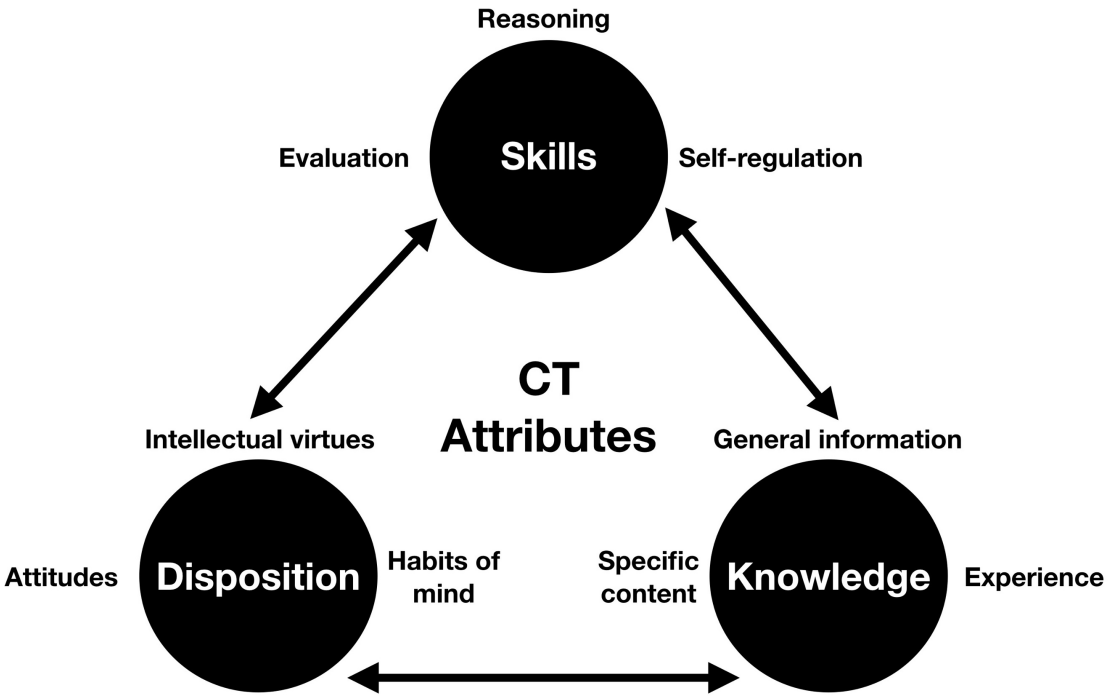
ontological and epistemological assumptions.

5.2.1 Research Question One: CT about Sociocultural Issues

In Thomas and Lok's (2015) CT attributes model, there are three interconnected spheres (i.e., skills, knowledge, disposition) that both teachers and researchers can use to ascertain the level of HOTS that are present in a learning activity (see Figure 5.1).

Figure 5.1

An operational framework (Thomas & Lok, 2015, p. 98)



After examining the relevant data related to the first research question, I discovered that the DST project had a positive impact on each of the three domains in Thomas and Lok's (2015) CT attributes framework. The DST approach that I adopted for this study fostered the participants' awareness of local and global sociocultural issues. In addition, the DST-viewing process and post-video discussion sessions cultivated some of the students' 'digital empathy' and generated a certain amount of critical reflection on their own lives (e.g., consumption of plastics, the use of animal testing products). The DST project also had a positive impact on many of the participants' CT dispositions, more specifically, their attitudes, intellectual virtues, and habits of mind (Thomas & Lok, 2015). For example, Kaori stated the following during her focus group interview: "*If we think about social problems in English class, we look at other*

countries and think differently about our own country." Likewise, Yui commented: "*When I looked at the world's child-rearing policies, I realized that Japan's child-rearing policies were not good. I become more critical making our video*." While CT tasks were considered to be quite challenging, many participants still felt that they were a valuable and interesting way to study English.

5.2.2 Research Question Two: Digital Competencies

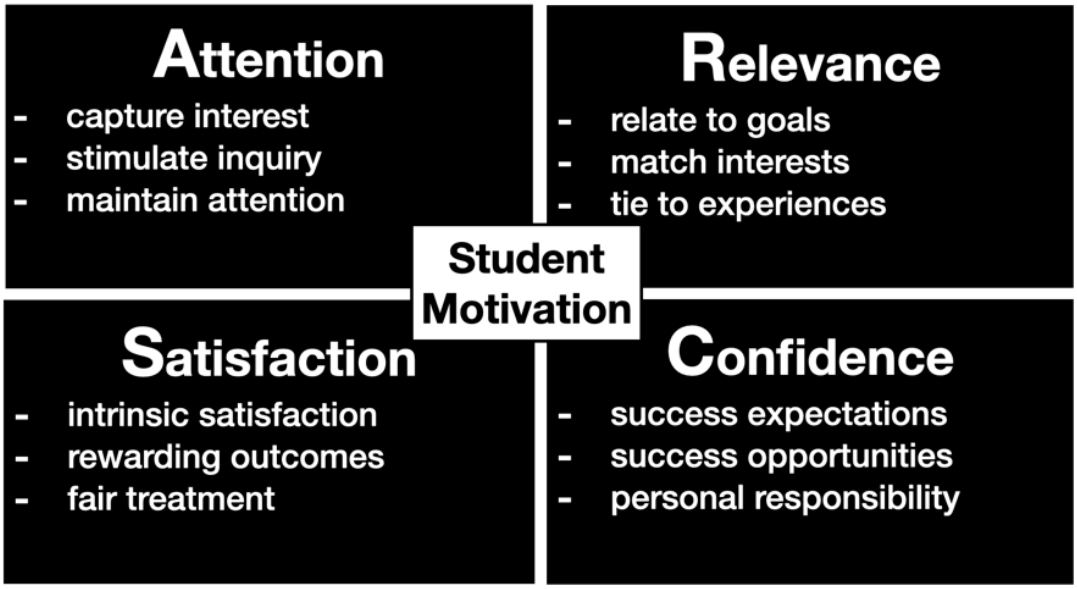
The second research question focused on the impact that a PBLL DST initiative had on the participants' DL. Several scholarly studies (e.g., Caldwell, 2018) conducted in Japan continue to propagate the myth of the digital natives' (i.e., students) technological acumen versus that of their 'digital immigrant' counterparts (i.e., teachers). Prior to the COVID pandemic, the 'e-readiness' of Japanese university ELLs was of low priority to the Japanese MEXT (Colpitts et al., 2021) and many administrators overlooked the negative impact that the digital divide had on the public school system (Suzuki, 2020). I discovered that the digital divide is not just a 'third world problem', but also something that can adversely affect ELLs studying in a modernized private university. Most of the students that I researched did become tangled up in problematic ICT issues and were not overly enthusiastic about using technology in an EAP course. There was also a noticeable digital gap between the 'haves' and 'have nots'. Several of the participants were frustrated by the incompatibility of their group members' digital devices, problematic connectivity issues, a lack of tech support from the instructor, and an increased workload. In spite of these noteworthy obstacles, the PBLL DST project still had a positive impact on the students' DL and comfort levels using different types of ICT tools (e.g., video editing software). Likewise, the process of crafting DSs enhanced many of the participants' self-directed learning skills. At the beginning of the project, I assumed that the integration of instructional 'how to' videos from the video-sharing platform YouTube would help students learn how to use video editing software. In retrospect, this was an erroneous assumption as not many participants benefited from watching instructional YouTube videos in either English or Japanese. However, peer teaching and intragroup support were considered to be essential elements that helped many students cultivate their independent learning competencies.

5.2.3 Research Question Three: ARCS Model Analysis of a PBLL DST Project

Keller's (2000, 2010) ARCS model includes the following four conditions: (a) attention, (b) relevance, (c) confidence, and (d) satisfaction. Each of the conditions and 12 subcategories were utilized in this thesis to gauge the participants' perceptions and motivational effectiveness of a PBLL DST project in an EAP course (see Figure 5.2).

Figure 5.2

Subcategories of the ARCS model (Keller, 2000, 2010)



An analysis of the relevant data related to the third research question revealed that the PBLL DST initiative had a positive impact on the participants' engagement and motivational levels. At one end of the learning continuum, DST captured the students' attention and was considered to be a highly relevant activity vis-à-vis Keller's (2010) ARCS model, especially when viewed under the twenty-first century skills spotlight. More specifically, the majority of the participants perceived collaborative group work, researching, public speaking, and familiarity with various ICT tools to be transferable skills that could be used in other courses or after graduation when they enter into the globalized workforce. At the other end of the learning continuum, the water became a great deal muddier when the data were filtered through the ARCS model confidence and satisfaction conditions (Keller, 1987, 2010). A case in point concerns group work. While the majority (88.9%) of the students acknowledged that creating a collaborative DS was more beneficial for their learning than making an individual project, a significant number (60.3%) preferred to

work independently at the conclusion of the study. Many of these individuals were frustrated and lost confidence in fellow group members who lacked 'personal responsibility' (Keller, 2010) and failed to do an equal amount of work. More specifically, I identified several elements such as 'social loafing' (Ferrari & Pychyl, 2012), 'free riding' (Forehand et al., 2016), intragroup conflicts, problematic ICT issues, and time-crunch anxiety that had an adverse impact on the participants' confidence and satisfaction conditions.

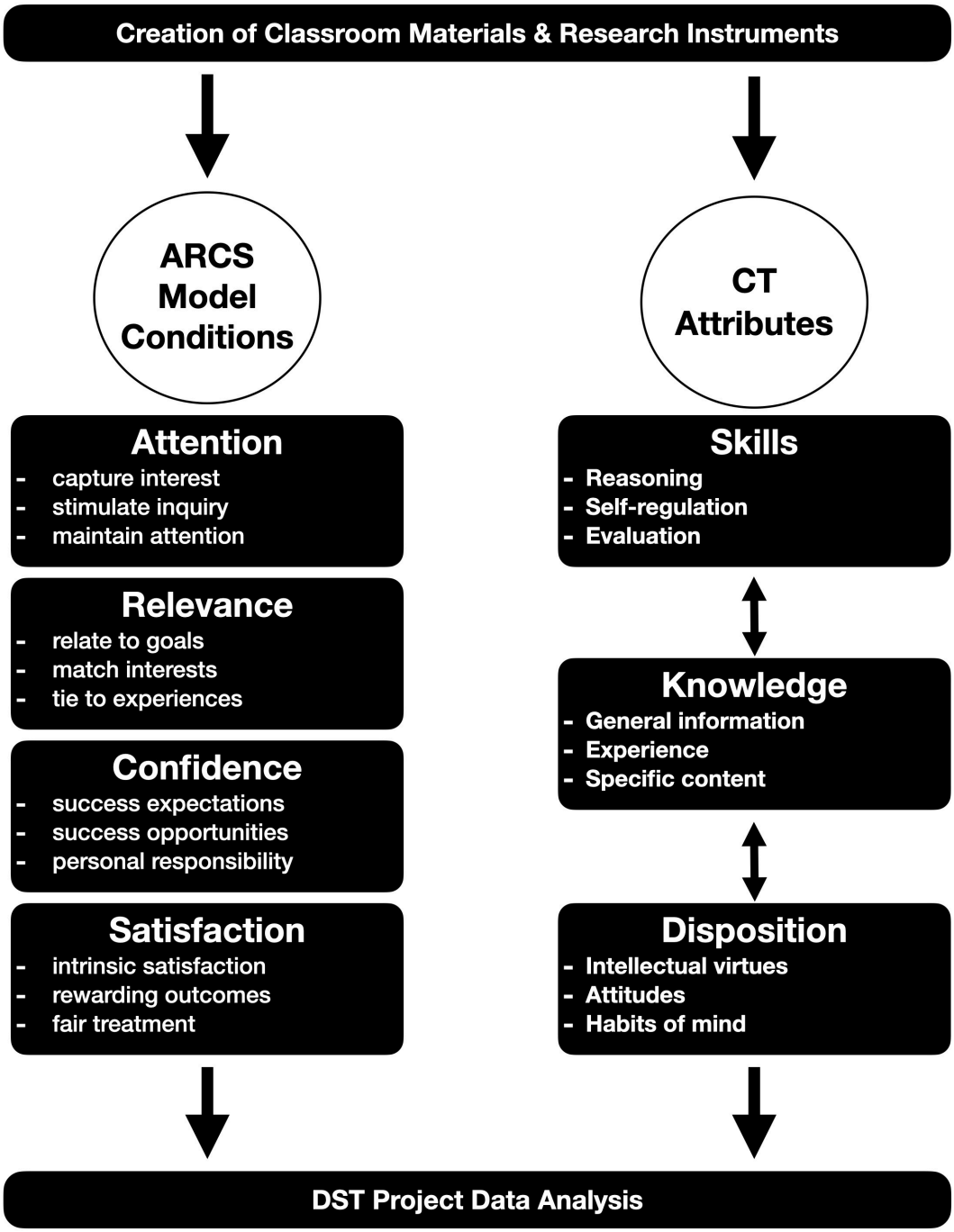
Several researchers (e.g., Hwang et al., 2016; K-P Liu et al., 2018) have reported that a DST initiative fostered ELLs' oral communicative competencies. However, my findings challenge these earlier studies as the majority of students I researched communicated primarily in their L1 throughout the duration of the DST project. This notion can be found in Mio's words: "*We spoke mainly in Japanese … I don't think this project was that useful for studying English if you have low skill, but it makes a lot of sense for students who can speak English really well*." When Mio and her classmates' comments are examined vis-à-vis Keller's (2010) attention condition, it makes sense why communicating with one another in English was not considered to be particularly relevant. The participants were focused on completing a demanding collaborative task within a limited time frame. Had the students been more familiar with video editing software and given a more flexible deadline, their goal orientation would have most likely included a more pronounced emphasis on L2 communicative skills at all stages of the DST project.

5.3 Review of the Theoretical Framework

After much deliberation, I realized that merging Thomas and Lok's (2015) CT attributes framework with Keller's (1987, 2010) ARCS model of motivational design provided me with a highly versatile theoretical instrument that I used to formulate my thesis and analyze the data (see Figure 5.3) with a more discerning eye. The two-pronged approach allowed me to address each of my research questions more effectively than if I only utilized one of the frameworks. In the two sections that follow, I highlight why these theoretical models worked well together and were appropriate for my research context.

Figure 5.3

A hybrid theoretical framework (Adapted from Thomas & Lok, 2015; Keller, 1987, 2010)



5.3.1 Theoretical Framework: CT Attributes Model

Several scholars (e.g., Sahin et al., 2014; Tan, 2017) have reported that CT can be a challenging area to study due to problematic cultural compatibility issues with various research tools and approaches. Thomas and Lok's (2015) CT attributes framework has been successfully adapted to other Asian contexts (e.g., Muiroh,

2021) and was culturally appropriate for my thesis. This model helped me create the classroom materials (e.g., DST checklist, grading sheet) and research instruments (e.g., pre- and post-project questionnaires, video analysis rubric) that were used in this study. While Thomas and Lok's (2015) theoretical framework has yet to be widely adopted, it was nevertheless an essential resource which provided me with some much needed 'conceptual clarity', especially in regard to the CT elements that were part of the first research question. More specifically, I utilized the CT attributes model to analyze the data that emerged from the two questionnaires and focus group interviews. The skills and dispositions spheres (see Figure 5.1) were especially relevant to the DST project as the participants were required to identify a sociocultural issue, research their topics, evaluate evidence, self-reflect, and be mindful of their own personal and cultural biases. However, I also realize that Thomas and Lok's (2015) model is not a panacea as it is extremely difficult to capture the inner essence of a complex construct like CT. In fact, Terblanche and De Clercq (2021) argued that CT frameworks "only offer insights into broad concepts or certain dimensions of critical thinking" (p. 326). While Thomas and Lok's (2015) CT attributes model was pertinent to this thesis, it did not specifically examine CT competencies from the perspective of ELLs. Despite this limitation, the work of this research duo nevertheless dovetailed nicely with Keller's (1987, 2010) ARCS model.

5.3.2 Theoretical Framework: ARCS Model

The work of educational psychologist John Keller was essential to this study. First, Keller's (2000) motivational design ten step model (see Appendix B) enabled me to assess the motivational value of the instructional materials that I used in the DST project. Next, Keller's (1987, 2010) ARCS model of motivational design acted as the second support beam in this study's theoretical foundation. Keller's (2010) cross-disciplinary framework has been validated for over three decades and deployed in a wide range of TEL and TESOL environments (e.g., Kasami, 2021; Min & Chon, 2021). This model is quite versatile so researcher-practitioners can make adaptations to better suit their own research and instructional contexts. The four conditions in the ARCS model, namely, attention, relevance, confidence, and satisfaction, and 12 subcategories (see Figure 5.2) were a beacon of guidance when I first conceptualized the questionnaires and focus group interview questions. In addition, Keller's (1987,

2010) ARCS model helped me to answer two of my research questions. More specifically, I utilized this theoretical framework to assess the participants' perceptions and motivational effectiveness of a PBLL DST project in an EAP course. There are two important lessons that I learned from adopting a hybrid theoretical model. First, it is much more complicated than it might initially appear, especially in regard to creating research instruments and instructional materials grounded in a two-pronged theoretical approach. Next, it is important that each of the models are culturally appropriate and complement one another. When I first formulated my thesis, I quickly discovered that theoretical frameworks are not a 'one-size-fits-all' phenomenon and certain models were a poor fit for the cultural context of my study. Future researchers would be wise to carefully consider cultural compatibility elements as well as the suitability of integrating a hybrid theoretical framework into their own research environments.

5.4 Contribution of this Research

For almost forty years, people have used different types of video-mediated platforms to impart knowledge and share their DSs (Lambert & Hessler, 2018). In recent years, DST has become an increasingly popular research area, especially with the ubiquitous nature of digital devices (Kukulska-Hulme & Viberg, 2018) and ongoing advances in video editing technologies. This thesis explored the value of integrating a socially conscious PBLL DST project into a first-year EAP course. Even though DST has a well-established history, and it is used in a variety of different scholarly disciplines (Quah & Ng, 2021), my DST study nevertheless adds several original insights to the pool of knowledge and pedagogical practice.

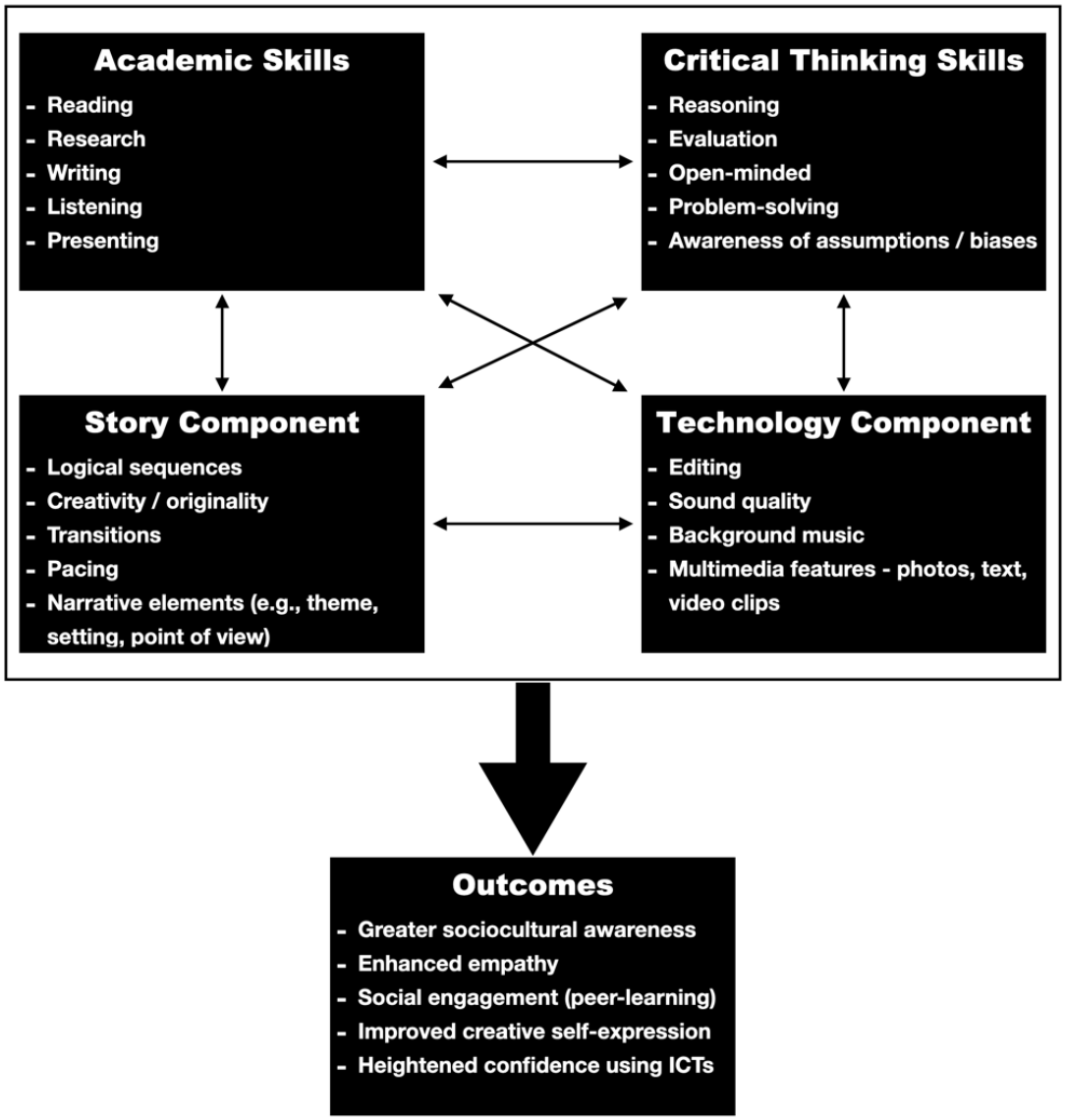
5.4.1 Contribution to Theory

This thesis makes three notable theoretical contributions to the TEL and TESOL fields. My research helps to fill an existing an existing gap in the academic literature by providing a rich case study that combines Thomas and Lok's (2015) CT attributes framework with Keller's (2010) ARCS model. This hybrid theoretical instrument helped me to investigate the value of integrating socially conscious DSs into an EAP course. The 'Academic English: Socially Conscious Digital Storytelling model' (see Figure 5.4) that I created represents my first distinct contribution to the academic literary landscape. Figure 5.4 highlights the four interconnected strands

(i.e., academic skills, CT skills, story component, technology component) that are in play whenever students create a collaborative multimodal project with a sociocultural focus. If educators are cognizant of the various elements in each of the strands and utilize appropriate pedagogical strategies it can lead to the following learner outcomes: (a) greater sociocultural awareness, (b) enhanced empathy, (c) social engagement [peer-learning], (d) improved creative self-expression, and (e) heightened confidence using ICTs.

Figure 5.4

Academic English: Socially conscious digital storytelling model



A typical EAP course is content-driven so students are required to learn a variety of different things such as CT strategies, note-taking, research skills,

referencing systems, and presentation skills (Ruegg & Williams, 2018). Integrating a DST initiative into an already busy EAP class can be a time-consuming and challenging undertaking for many instructors (Koelzer & Christiansen, 2016; Ohler, 2013), especially when one considers that ELLs who are not proficient with ICTs will require even more guidance as they must combine traditional language skills with technological knowledge (Oskoz & Elola, 2016). Not surprisingly, DST in an AE context is an under-researched area, especially in Japan where many universities do not even offer EAP instruction (Ruegg & Williams, 2018). Socially conscious digital narratives should be a foundational part of AE courses as they can help students develop key academic skills in conjunction with other important twenty-first century competencies such as communication, collaboration, CT, creativity, and DL. My original DST model (Figure 5.4), which is customized for an AE context, provides frontline EAP teachers with some much needed clarity and encourages them to integrate a PBLL DST initiative in their classes. Anecdotally speaking, many educators are apprehensive about incorporating a PBLL DST project into an AE course because they do not fully understand what it entails and the positive learning outcomes that can be generated.

My study is original as I utilized a PBLL DST approach in an EAP context to explore the role that digital narratives can play in fostering Japanese university students' CT about local and global sociocultural issues, DL, and engagement. A careful review of the academic literature revealed that only one other researcher has used DSs in a similar manner. Kohnke (2019) adopted a critical pedagogical approach to examine 10 Hong Kong university ELLs' perceptions of Western-based EAP instructional materials compared to that of localized materials which were created by the students themselves. Part of the EAP course featured in this study required the ELLs to create an individual DS that highlighted a local social issue (e.g., housing shortage) in Hong Kong. In the Japanese HE context, most of the DST investigations (e.g., Gobel & Kano, 2016; Kasami, 2018, 2021; Knight, 2018) have been situated in communicative English courses and primarily explored the impact that DSs had on ELLs' linguistic proficiency, foreign language anxiety, and motivational levels. My research demonstrates that a PBLL DST initiative can be successfully integrated into a content-driven EAP course. More importantly, it shows that socially conscious

multimodal projects can foster EAP students' DL, self-directed learning, and critical awareness of local and global sociocultural issues.

It would be naïve and disingenuous for me to say that a four-week sociocultural-themed DST project had a dramatic or lasting effect on the lives of the participants in my study. In fact, this area was touched upon during one of the focus group interview sessions. Hiro, who created an impressive DS on the ocean plastics pollution problem, shared his thoughts: "*But it didn't change how I use PET bottles, straws, and other plastics. So, I don't think the project has had a strong influence on my real life*." There were two elements that were hidden beneath the surface of the project which Hiro failed to acknowledge. First, the DST initiative featured in this thesis had "transformative potential," a concept that Jemal (2017) defined as "levels of consciousness and action that produce potential for change at one or more socio-ecosystemic (e.g., individual, institutional) levels" (p. 603). In other words, the DST project planted a seed of sociocultural awareness in many students' minds. This notion can be found in Yui's words: '*The* [animal testing] *video made me think about the cosmetics that I buy* …'. Lastly, the process of crafting socially conscious DSs in an EAP course enhanced the participants' CT attributes, namely their skills, knowledge, and disposition domains (Thomas & Lok, 2015).

The second theoretical contribution that this thesis makes is the merger of Thomas and Lok's (2015) CT attributes model with Keller's (1987, 2010) ARCS model of motivational design which resulted in a hybrid theoretical framework that I used to formulate my study and analyze the data. This dual approach provided me with some much needed conceptual clarity as both CT and motivation are notoriously complex notions to pin down (Dörnyei, 2020; Kuhn & Dean, 2004). To the best of my knowledge, this combination has never been used before. The success that I had with my two-pronged model might encourage other TEL and language learning researcher-practitioners to expand their theoretical horizons. While frameworks such as the Technology Acceptance Model, Theory of Planned Behavior, and Activity Theory are widely used in the TEL field (Chung et al., 2019; Koul & Eydgahi, 2017), my study demonstrated that alternative approaches can also be applicable and yield worthwhile benefits.

The third contribution to methodology revolves around the 10-item video

analysis rubric (see Appendix D) that I created for this study. This research instrument, which is underpinned by Thomas and Lok's (2015) CT attributes framework, can help researchers scrutinize the level of criticality in their participants' digital artifacts. In recent years, a growing number of researchers (e.g., Huang, 2019; Lim & Toh, 2020) have utilized a multimodal discourse analysis approach to study students' digital multimodal composing practices. Future researchers who examine DSs with a CT or sociocultural orientation may find the video analysis rubric to be a worthwhile addition to their methodological toolbox.

5.4.2 Contribution to Practice

The academic literary landscape is awash with technological deterministic studies (e.g., Laina & Marlina, 2018) that promote the seemingly never-ending benefits of DST. This thesis provided a more balanced analysis of the PBLL DST approach and generated several practice-oriented contributions that will be of interest to TESOL educators and TEL research practitioners. Several researchers (e.g., Fu et al., 2021; Hwang et al., 2016; K-P Liu et al., 2018) have claimed that a DST initiative had a positive impact on ELLs' oral communicative competencies. My research repudiated this oft-cited benefit. One of the most unexpected findings in my study was that only 41.2% of the participants in the post-project questionnaire felt that making a DS developed their speaking abilities. Moreover, the focus group interviewees indicated that they mostly communicated in Japanese during their various online interactions and out-of-class meetings with fellow group members. The overreliance on the participants' L1 can be traced to a tight deadline in conjunction with their lack of familiarity with video editing software. To avoid this pitfall, EIL educators should devote more in-class time to DST initiatives and emphasize the importance of using the target language during the entire video-making process. In addition, ELLs will benefit from crafting a simpler (i.e., non-research) DSs (e.g., 'Where I want to go on holiday') at the beginning of a semester as it will help them become more comfortable with various ICT tools and the idea of self-directed learning. This mini-project will not only scaffold learning and enhance students' confidence conditions (Keller, 2010), but it will also reduce the anxiety levels and amount of L1 chatter than can be present during the creation of a collaborative sociocultural-themed DS. Another benefit of this pedagogical

intervention is that it would provide ELLs with practice audio recording themselves and refining the sound quality of their videos.

The second contribution that this thesis makes to practice falls under the umbrella of ELT materials development. Tomlinson and Masuhara (2018) defined materials development as a "field of academic study that investigates the principles and procedures of the design, writing, implementation, and evaluation of materials" (p. 1). As noted in chapter one, the vast majority of commercially produced ELT resources contain Eurocentric biases (Kumaravadivelu, 2016), stereotypical racial images (Bori, 2018), gender disparities (Lee, 2014), and 'aspirational content' (Gray, 2012). Furthermore, global publishers strategically omit 'sensitive' topics such as LGBT issues and economic disparities (Appleby, 2018) because they are fully aware that 'controversy' is not good for business. Not surprisingly, a small but growing number EIL educators (e.g., Cripps et al., 2018; Ruegg et al., 2018) in Japan have shifted away from Western-oriented ELT materials and replaced them with culturally appropriate in-house textbooks which develop students' CT, DL, and academic English abilities. Other instructors (e.g., Eisenlauer, 2020) have opted to 'remix' different types of paper-based and digital resources to better suit their own instructional contexts. Knobel and Lankshear (2008) defined remix as the process of combining and reformulating cultural artifacts "into new kinds of creative blends" (p. 22). On a similar note, a number of research practitioners in the TESOL field create or customize their own ELT materials for participants to use in different types of MALL and CALL studies. The hybrid theoretical framework that I adopted for my study can be utilized by ELT materials makers to measure the motivational effectiveness and level of criticality in both original in-house textbooks and 'remixed' resources. A case in point concerns the 'AE DST Project: Grading Sheet' (see Appendix F) that teachers can use to assess five different elements (i.e., concept, story component, content/organization, technology component, presentation performance) in a multimodal assignment. This evaluative tool was developed from my 'AE: Socially Conscious DST Model' (see Figure 5.4). Many EIL research practitioners and teachers rely on the 'trial and error' or 'instinctive feel' strategies to field test the materials that they have developed. The theoretical approach that I used in my study eliminates much of this uncertainty as it provides materials developers with a

practical and useful tool to assess the instructional value of ELT resources.

While several studies (e.g., Cavus & Ibrahim, 2017; Juviranto et al., 2018) have reported that MALL and DST initiatives had a positive effect on ELLs' listening comprehension, my findings were somewhat mixed. Only 63.5% of the participants in the post-project questionnaire believed that DST helped their listening skills. The data that emerged from the focus group interviews and video analysis charts indicated that problematic audio production issues and ineffective paraphrasing diminished the relevancy of the listening part of the DST project. Future researchers may want to implement a more robust peer-evaluation checklist so that students can provide one another with focused feedback during the 'rough cut' video-viewing sessions.

In a typical PBLL DST initiative, there are a plethora of moving parts such as problematic ICT issues, digital divide concerns, intragroup dynamics, irresponsible students (e.g., social loafers, free riders), and curricular objectives that EIL educators must take into consideration. These elements can often generate a great deal of friction and disrupt the learning outcomes of a collaborative multimodal project. The third contribution that this thesis makes to practice is that it provides teachers and research practitioners with a realistic portrayal of the unforeseen challenges that often emerge in technology-mediated EIL learning environments. Anecdotally speaking, there is a tendency for many presenters at CALL/MALL conferences to rave about the numerous 'affordances' of an emerging ICT tool (e.g., language learning software) and the 'transformative' impact that it had on their classroom practices; while at the same time minimizing any difficulties that they encountered. On one hand, my findings support Selwyn's (2016) contention that technology is "inevitably complicated, 'messy', ambiguous and not wholly satisfactory" (p. 1019). Likewise, I concur with the notions that 'digital natives' are mythical creatures who do not exist (Kirschner & De Bruyckere, 2017) and ELLs are not always competent and willing users of ICTs (Stockwell, 2016). The participants in my study were not overly enthusiastic about using technology in an EAP course and were quite frustrated when they became tangled up in problematic ICT issues and worked with irresponsible peers. On the other hand, I also discovered that the process of creating a socially conscious DS had a positive impact on the students' self-directed learning,

DL, and CT abilities.

There were several strategies that I utilized in my study which can help future EIL instructors and research practitioners reduce the amount of discomforting friction that can be generated during a DST project. First, the intragroup support and organic peer teaching sessions that I observed fostered the participants' self-directed learning competencies and helped them to learn different ICT skills (e.g., video editing). Teachers should create time and space for this type of informal learning to take place at the beginning of the multimodal composition process. Next, I carefully adhered to the following mantra: "Don't put the technology before the pedagogy." Student-generated instructional materials and the DST project checklist, which was created with Keller's (2000) ten step motivational design model (see Appendix B) and Thomas and Lok's (2015) CT attributes framework in mind, were especially beneficial at the beginning of this study. More specifically, the class was shown two exemplary DSs which were created by students from a previous cohort and provided with both video scripts. In addition, each of the items on the DST project checklist and instructor's grading rubric were examined and discussed during the first lesson. Clearly, EIL teachers and researcher-practitioners will find the work of Thomas and Lok (2015) and Keller (2000, 2010) to have both practical and theoretical applications.

5.5 Limitations and Further Research

There are several noteworthy limitations to this thesis. The first one revolves around the compressed time frame in which the study took place. From start to finish, the participants only had four weeks to complete their DSs. Not surprisingly, this reality generated a fair amount of time-crunch anxiety which had an adverse impact on many of the participants' satisfaction conditions (Keller, 2010) as well as a barrage of negative comments in the post-project questionnaire and focus group interviews. Unfortunately, it was impossible for the DST project to be extended as it was situated in a coordinated content-based EAP course. As a limited-term contract instructor, I was also aware that one of the previous teachers was dismissed for not following the set AEA curriculum. After discussing the time-crunch anxiety issue with my supervisor, I received permission to rearrange the AEA schedule so that the next cohort of students would be given 12 weeks instead of a month to complete the DST

project. I planned on replicating my study during the last year of my contract. Unfortunately, the 2020 COVID pandemic disrupted this plan, and the DST project was scrapped entirely from the virtual AEA course. I recommend that future researchers provide ELLs with more time to complete DST projects as the participants in my study identified time-crunch anxiety as a major source of frustration which detracted from their satisfaction condition (Keller, 2010). Curricular coordinators must give EIL teachers more time to organize and incorporate DST initiatives into their classes as ELLs often find merging traditional language skills with ICT knowledge to be a time-consuming process (Oskoz & Elola, 2016). Instead of viewing DST as a short-term 'one-off' part of an EAP class, future researchers should investigate the impact of a socially conscious DST project over an entire 15-week semester.

The second limitation falls under the demographics umbrella. My single-case descriptive case study involved 75% female participants and took place at a private institution whereby the socioeconomic status of students can be quite different to that of their public university counterparts. Future DST research in Japan could include a more even gender balance and students from a wider range of socioeconomic backgrounds.

The ripples generated by this thesis will reverberate with both EIL teachers and researcher-practitioners who would like to integrate a PBLL DST initiative into their professional practice. I also hope that my research spurs Japanese university administrators and curricular coordinators to be more proactive in developing ELLs' CT and DL skills. As noted earlier in this chapter, social loafing was a disruptive force that had an adverse effect on many of the participants' satisfaction condition (Keller, 2010). Future research should explore different strategies to minimize the negative repercussions of this phenomenon in collaborative multimodal assignments. For example, researchers could investigate if the 'flocking method' (Harding, 2018), which means grouping students together based on their schedule availability and work ethic or organizing ELLs via their proficiency levels (Nishioka, 2016) will help to reduce the amount of social loafing in a PBLL DST project. In the first chapter, the problematic issues associated with most commercially produced ELT textbooks and digital resources were identified. Instead of relying on these items, teachers should

be encouraged to use customized instructional materials that are inclusive, culturally appropriate, and develop the three domains in Thomas and Lok's (2015) CT attributes model.

Many participants in my study became ensnared in problematic ICT issues or were frustrated with their fellow group members' lack of basic technology skills. Japanese university administrators need to be cognizant of the actual reality on the teaching frontlines and stop believing in the digital native myth. Furthermore, they must provide ELLs with space for self-access learning and more DST training opportunities. While multimedia self-access centers have been shown to have a positive impact on ELLs' autonomous learning, Mynard (2019) noted that many Japanese universities have been slow to adopt this type of learning approach. Shortly before my study started, the administrators removed the video editing software from all of the university's computers and promoted a BYOD policy to reduce institutional costs. A multimedia self-access center with trained staff and student volunteers would have filled this void and alleviated some of the anxiety that my students experienced during the DST process. Peer teaching and support were considered to be essential elements that helped many participants in my study cultivate their independent learning competencies. Future researchers can explore this area in more depth by comparing ELLs' perceptions of peer teaching to that of the instructional videos on YouTube. For example, students who partake in a FL approach and watch YouTube videos could be the comparison group. Whereas, the participants who learn from their peers by either face-to-face mini-workshops or pre-recorded videos uploaded to the university's LMS could be the experimental group. Administrators should also provide tech savvy students with a stipend to spearhead the mini-workshops and make their 'how to' videos. In addition to providing an enriching learning opportunity for the peer tutors, this type of proactive approach would help to address the 'invisible illiteracy' (Mizukoshi, 2017) and digital divide issues that exist in many Japanese university EIL classrooms.

5.6 Final Reflections

The quest to complete this thesis has been long and arduous. While the old adage 'a picture is worth a thousand words' is definitely overused, there is also a certain amount of truth to it. Thus, I will use an image to highlight my journey along

the graduate studies road and experiences in the TEL programme. Figure 5.5 is a drawing of a frog and heron which exemplifies the perseverance that I needed to be able to type the words that you are now reading. For several years, I felt like a floundering frog who was either on the verge of getting devoured by hungry heron or one that was stuck in a swamp aimlessly flopping around and going absolutely nowhere. Fortunately, a much needed change in direction enabled me to escape the muddy morass and get back on track. Without question, I feel extremely blessed to even be in a graduate studies programme, especially when I reflect upon the significant obstacles that I needed to overcome.

Figure 5.5

Don't ever give up (Nash, n.d.). Reprinted with permission.

The final point that I will make in this section is that this thesis is not the end, but rather the beginning of my research journey. The fields of TEL and TESOL are constantly changing so it is essential that we keep abreast of the latest developments and continue to improve both our researching and teaching competencies.

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Appendix A

The Japanese Education System

Type of school	**Length of Time**	**Students' ages**
Yōchien (nursery school)	3 years	3 to 6 years old
Shōgakkō (elementary school)	6 years	6 to 12 years old
Chūgakkō (middle school)	3 years	12 to 15 years old
Kōkō (high school)	3 years	15 to 18 years old
Senmongakkō (vocational school)	2 – 3 years	18 to 21 years old
Daigaku (university)	4 years	18 to 22 years old

Appendix B

Keller's Motivational Design: Ten Step Model (Keller, 2000, p. 6)

Steps	**Description**
1. Obtain course information	Course description and rationale; setting and delivery system; instructor information
2. Obtain audience information	Entry skill levels; attitudes toward school or work; attitude toward course
3. Analyze audience	Motivational profile; root causes; modifiable influences
4. Analyze existing materials	Positive features; deficiencies or problems; related issues
5. List objectives & assessments	Motivational design goals; learner behaviors; confirmation methods
6. List potential tactics	Brainstorm list of tactics; beginning, during, and end; throughout
7. Select & design tactics	Integrated tactics; enhancement tactics; sustaining tactics
8. Integrate with instruction	Combine designs; points of inclusion; revisions to be made
9. Select & develop materials	Select available materials; modify to the situation; develop new materials
10. Evaluate & revise	Obtain student reactions; determine satisfaction level; revise if necessary

Appendix C

Focus Group Questions: Digital storytelling in a Japanese University Academic English Course

フォーカスグループの質問:日本の大学アカデミック英語コースにおけるデジタルストーリーテリング

1. What is your age? What is your academic standing? (1st-year student, etc.)
あなたの年齢は? また、あなたの学年は? (1 年生、等)

2. Do you think it's necessary for Japanese university students to think critically about local and global sociocultural issues in their English language classes? Why or why not?
日本の大学生が英語の授業で地域や世界の社会文化的な問題について批判的に考えることは必要だと思いますか？その理由、または、そう考えない理由は何ですか？

3. Did the digital storytelling project (DST) you completed in your Academic English (AE) course improve your critical thinking? Explain your answer.
アカデミック英語（AE）コースで行ったデジタル・ストーリーテリング・プロジェクト（DST）は、あなたのクリティカルシンキングを向上させるものでしたか？あなたの答えを教えてください。

4. Did you think critically about social issues after watching your classmates' digital videos and participating in the post-viewing discussion sessions? Can you provide me with any examples of DST projects that made you think critically?
クラスメートのデジタルビデオを視聴し、視聴後のディスカッションセッションに参加した後、社会問題について批評的に考えることができましたか？批評的に考えるようになった DST プロジェクトの例があれば教えてください。

5. Did the DST project help you to improve your critical reading and research skills? Did it help your problem-solving abilities? Explain your answers.
DST プロジェクトは、批判的な読解力や調査力を高めるのに役立ちましたか？また、問題解決能力の向上に役立ちましたか？
あなたの答えを説明してください。

6. How would you describe your video editing skills now that you have created a DST project? Does this type of project help Japanese university students improve their information and communications technology (ICT) skills? Why or why not?
DST プロジェクトを作成した今、あなたのビデオエンディングスキルを自己評価してください。このようなプロジェクトは、日本の大学生の情報通信技術（ICT）スキルの向上に役立ちますか？
その理由、または、そうでない理由は何ですか？

7. Did the DST project help you to improve your English language communicative abilities (e.g., speaking, listening, writing, presentation skills)? Please provide some specific examples or reasons.
DST プロジェクトは、あなたの英語コミュニケーション能力（スピーキング、リスニング、プレゼンテーション能力など）の向上に役立ちましたか？
具体的な事例や理由を聞かせてください。

8. What were the main **benefits** and **challenges** of the DST project?
DST プロジェクトの主な効果と課題は何でしたか。

9. There were a lot of steps in the DST project. Do you feel satisfied that you completed the DST project? What part of the project gave you the most satisfaction? Why?
DST プロジェクトでは、多くのステップがありました。
DST プロジェクトを完了したことに満足していますか？
このプロジェクトで最も満足したのはどの部分ですか？
それはどうしてですか？

10. Would you be confident making another DST video in the future? Why or why not? Would you do anything different?
今後、別の新たな DST ビデオを作れる自信はありますか？
そう思う理由、またはそう思わない理由は何ですか？
（作るとすれば）今回の DST とは違うように作りますか？（制作過程や時間配分など）

11. Did you watch any YouTube 'how to' videos (e.g., 'How to film & edit on your smartphone', 'iMovie tutorial') before you created your DST project? Did these videos help you learn outside of class? Was this a good learning and teaching strategy? Explain your answers.
DST プロジェクトを作成する前に、YouTube の「ハウツー」ビデオ（「スマートフォンでの撮影＆編集方法」、「iMovie のチュートリアル」など）を見ましたか？
これらのビデオは授業以外の学習にも役立ちましたか？
これは良い学習・教育戦略でしたか？
あなたの意見を教えてください。

12. How would you describe your experience working with your classmates on a DST project? What difficulties did you encounter? How did you overcome these challenges?
クラスメートと一緒に DST プロジェクトに取り組んだ経験について聞かせてください。どのような困難に遭遇しましたか？どのようにその困難を克服しましたか？

13. Did the members of your team help each other learn? How?
あなたのチームのメンバーは、互いに学び合うことを助け合いましたか？どのように、でしたか？

14. Were you motivated to create a higher quality digital video because you knew your classmates would watch it? Did you enjoy sharing your digital video with your classmates? Explain your answers.
より質の高いデジタルビデオを作ろうと思ったのは、クラスメートが見てくれると思ったからですか？
デジタルビデオをクラスメートと共有することは楽しかったですか？
あなたの答えを説明してください。

15. Did you find a DST project in your AE class to be a useful and practical way to study English? Did you enjoy the project? Do you think most Japanese university students would be motivated to study English if they created digital videos in their AE classes?
AE クラスでの DST プロジェクトは、英語の勉強に役立ち、実用的な方法だと思いましたか？また、そのプロジェクトは楽しかったですか？日本の大学生の多くは、AE の授業でデジタルビデオを制作課題にすると、英語を勉強する意欲が上がると思いますか?

16. Is there anything else you would like to say about the DST project?
DST プロジェクトについて他にご意見はありますか?

***** Thank you for your assistance and time *****

お時間とご協力をいただきありがとうございました。

Appendix D

Video Analysis Rubric: Digital Storytelling in a Japanese University AE Course

Video Analysis Rubric: Digital storytelling in a Japanese University Academic English Course

Students' names: _____, _____, _____, & _____

DST Project Title: _____

Sociocultural issue(s): _____ ( ) - Local ( ) - Global ( ) - Both

Length of video: _____ **Script: Number of words** _____

Total number of 'critical' visuals (i.e., images, video clips, graphics, infographics): _____

Item	#1 - Incomplete	#2 - Partially Proficient	#3 - Proficient	#4 - Exemplary
1. Critical analysis and evaluation / Skills-based performance (examines sociocultural issue with a clear awareness; considers multiple elements & diverse perspectives; incorporates personal/relevant examples to draw conclusions; self-questions; manages biases)				
2. Information / Knowledge-based performance (gathers sufficient, relevant, & credible information from reputable sources; includes oppositional information & inferences; avoids assumptions; systematic thinking; ensures validity of conclusion)				
3. Problem Identification / Disposition (clearly identifies and summarizes problem; discusses possible solutions — practical/innovative ways to deal with problem; open-minded; seeks truth; inquisitive)				
4. Implications & Consequences (identifies the most significant implications & consequences; differentiates between probable and improbable outcomes)				
5. Post-viewing discussion questions (critical ideas generated; formulates appropriate questions; level of audience participation & engagement)				

6. Script / Storyboard - (storyboard highlights each scene; transitions, special effects, images, video clips; narration; thumbnail sketches used to organize DTS project)				
7. Images / Video clips / Graphs / Infographics (visual stimuli - audience engagement; supports position; originality; generates critical ideas)				
8. Digital Video Quality - (DST video had required elements; video was well edited; moves smoothly from scene to scene; appropriate visuals, video clips, & special effects; narration - easy to understand; appropriate volume)				
9. Collaborative Learning - (evidence of teamwork during presentation; all students contributed to the post-video discussion; group members showed respect to one another; evidence that everyone contributed to digital video)				
10. Relevance / Student Learning - (students use critical thinking skills to curate content, meaningful content, demonstrate ability to select, organize, and present content)				
Total Score:				

Comments:

Appendix E

Digital Storytelling Video Topics

1. Starvation in the developing world
2. Fast food & obesity
3. Smoking & vaping
4. Online bullying
5. Eating disorders
6. Japanese educational problems
7. Endangered species
8. Energy & the environment
9. Animal testing
10. Immigrants and refugees in Europe
11. Over-fishing
12. Water shortage
13. Drug addiction & substance abuse
14. Poverty
15. Racial discrimination in America
16. LGBT issues
17. Social pressure on Japanese working mothers
18. Caffeine addiction
19. Whaling
20. Plastics in our oceans
21. Air pollution
22. Plastic overuse & pollution
23. Albinos in Africa

Appendix F

Academic English Digital Storytelling Project: Grading Sheet

Academic English Digital Storytelling Project: Grading Sheet

Category	Grade
Concept Central theme Purpose - explain why you choose this sociocultural issue Awareness of assumptions & biases	/ 5
Story Component (Script and Storyboard) Logical sequences Creativity & originality Pacing Narrative elements (theme, setting, point of view, emotional content) Transitions between scenes Opening scene - appropriate beginning, title, subtitles Body scenes - appropriate message, subtitles Ending scene - appropriate ending, credits	/ 15
Content / Organization Logical sequences Clearly written - easy to understand Audience appropriate language - (Are there any unfamiliar lexical items?) Repetitive / not enough variation Adequate background research Reputable sources of information	/ 10
Technology Component Editing - images and narration match Multimedia features - photos (high resolution), text (appropriate size, colour contrast), video clips (appropriate length) Sound quality - (too loud / not enough volume) Smartphone video - (horizontal camera filming)	/ 10
Presentation Performance Eye contact - looks directly at the audience/camera; (over-reliance on notes) Posture - feet shoulder-width apart Gestures - support words with physical message Voice volume - loud and clear Voice inflection - key words are emphasized Time - (over 4 minutes / under 10 minutes)	/ 10
Comments and Final Score:	/ 50