Digital Literacy, CALL and Flipped Learning:
An overview of technology use surveys and a rationale for the development of Flipped Learning-based CALL courses that enhance learning and digital skills

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"O Education, Education, wherefore art thou Education?"

~ Technology

1. Introduction

What do digital literacy, second language learning, and William Shakespeare have in common? The answer can be found in the balcony scene between *Education* and *Technology*. To equate education and technology with the tragic downfall of *Romeo and Juliet* may be a reach in literary-slash-academic prose. Yet the forbidden and ephemeral nature of their relationship provides a useful irony through which a parallel narrative emerges, serving as both a warning and an opportunity for us to take seriously the coming revolution in learning and the necessary changes needed in education and how we engage students both inside and outside the 21st century classroom. A classroom that is evolving in significant ways due in large part to the social impacts of technology and the changing digital literacy needs of careers in the knowledge-based digital age. Several problems exist, however, within education and our use of technology inside and outside the classroom.

The problems include: (1) traditional educational systems are too slow in integrating the use of technology to enhance learning and teaching in the classroom; (2) a prolonged disconnect between teaching methodologies and students with different learning styles and an increasing set of varied digital skills; and (3), the lack of time and willingness to implement projects that enhance digital literacy and communication skills that provide a basis for strengthening global citizenship. These problems perpetuates a paradox in that while we have grown increasingly close together as a world with the advent of the Internet and social networking media and online services, there is a 'disconnect' between our traditional models of education and what it means to learn (and teach) in the 21st century. We try to overcome these problems by improving education

through things called 'reforms' and attempt to raise standards, which are all well and good. However, we are rarely changing the underlying culture that exists and this ultimately reverts back to perpetuating a status quo mentality because as teachers we can feel limited in what we can do within the constraints of the 'system' and give in to those pressures, simply because there is no time to do otherwise. Based on my experiences and observations of teaching in Japan for nearly a decade, pedagogy can be a very sensitive issue that is rarely discussed or considered as a top priority that needs immediate change. Certainly, the content may be modified and updated, but how we teach is critical if we want to improve the quality of education for our students and in effect foster learner engagement and student satisfaction overall. The benefits of this have a high return on investment as it makes the learning environment more appealing to potential students in the future.

Further complicating this is the other side of the disconnect - a generation of university students whom have entered college in the last two or three years and are, according to Prensky (2001), "students who are no longer the people our education system was designed to teach". Robinson (2008) expands on Prensky's observation with this critical point:

> The problem is that the current system of education, in my view and experience, was designed and conceived and structured for a different age. It was conceived in the intellectual culture of the Enlightenment and in the economic circumstances of the Industrial Revolution…It was modeled on the economic premises of industrialism.

He goes on to say that, "If you are interested in the model of education [today], you don't start from production line mentality." Where do we start then? We start with a question that reminds us of what is important in what we do as educators: What is the purpose of education in the 21st century? Education is a reflection of the era in which we live and is something that tries to predict things that will be necessary in the future. Undeniably, there are economic aims for education. That is, if you go through the education system you will come out 'educated' and get a job that will make you economically stable. In turn, one's economic presence in the world will contribute to sustaining our cultures, economies and world for generations to come. Future generations will repeat a similar process of education that has largely remained unchanged for the last century or more. And while the economic aims of education are also vital to successfully changing education in the 21st century, to do this, the ultimate answer to the question and solution has to be: To teach students *how* to learn. If we do that, then students should be able to find their own path in life. But the question of how do we teach students to learn remains.

As any good teacher will tell you, if you want students to learn you have to engage them. To facilitate spaces for engagement, teachers need to be more efficient with their time making them more effective guides on the side instead of sages on the stage. We can't simply lecture to our students anymore through direct-instruction hoping that the *transmission* of information - our supposed knowledge – will miraculously make learning happen by filling their heads with it, and hope they remember it for the test. This is only the first step in Bloom's Revised Taxonomy of learning updated by Anderson (2001). I'm not saying that all direct-instruction is useless and should be thrown out the window. At the heart of this paper is the emphasis on how important it is to rethink *how* and *when* the instruction occurs and how it affects the time we have in class to really engage our students on a more individualized, personal level that makes the potential for learning to occur more accessible to students, especially students who struggle. Educational approaches to learning today shoot for the middle – a kind of minimum standard that falls under a 'one-size fits all' mentality, even if it is well intentioned to be more accessible to struggling students at the bottom. But one of the problems with this mentality is that it disengages students – students whom find the content not challenging enough and those who find it overwhelming. Both feel a lack of control over the learning process – a process that is largely teacher-centered and lecture-based, especially in the university setting where large classes make it seem impractical to do so otherwise. But if education is to teach students how to learn, why are we still limiting them with educational approaches that no longer seem equitable for their futures? We should be providing a more personalized student-centered learning experience, because after all learning is a very personal endeavor - one that involves people, emotions and their diverse set of backgrounds. However, when external aims and standardized impersonal testing dominates the conversation of education, then learners will become disengaged and teachers will struggle to keep up with both the evolving standards and the seemingly insurmountable amount of technology available to them and their students. Technology can create a necessary process that accelerates the learning revolution of the 21st century. Understanding how and why we should do this with the technology and digital media today in the classroom is critical in ensuring our students are in fact mastering the material and are gaining the necessary sustainable learning skills increasingly required in our connected world. The cultural and social applications for using technology and changing education have become increasingly more dynamic and unpredictable. But how?

Technology is transforming and driving the connected knowledge-based digital age we find ourselves in, but to what extent is it affecting education and our students? With the advent of the Internet and social media networks and online services such as Facebook, Twitter, YouTube, wikis, blogging, video collaboration tools (i.e. Blackboard), and web service portals like Google,

and the emergence of tablet devices such as the iPad, you see more and more students growing up surrounded by and using all kinds of these technologies, increasingly becoming integral parts of their lives (Prensky, 2001). Understanding the relationship our students have with technology in education and in their social lives is critical in creating engaging ways to bring out more creative thinking and collaborative skills. It is then important then to remind ourselves that technology is a process, not a thing, which magnifies human intent and students' capacity to learn, especially *learn how to learn* and be the creative thinkers and doers we hope they become (Honeysett, 2008; Toyama 2010). Chris Lehmann (2010) furthers this view point by arguing that "Technology must be like oxygen: ubiquitous, necessary, and invisible." But in the typical classroom today, especially at the university level where teacher-centered lectures are the norm, technology is largely what the teacher uses (PowerPoint, at most) while the students are told to 'switch off' so that they can sit quietly and listen to the lecture, and *maybe* take notes. It's typically a one-shot deal. If you didn't take notes, didn't listen or didn't come to class, you would have to copy from someone else. But that's cheating! Yet, outside of school we consider that "collaboration" (Robinson, 2008a, 2008b). The irony is deafening. The student could visit the teacher during office hours and ask him or her to re-explain things, but this is an extremely inefficient use of time for both the student and teacher. Handouts of the presentation slides or material covered in the lecture may be convenient, but then the *point of instruction* – the focus of knowledge/information transmission - shifts from the teacher to the handout. The handout becomes the teacher as the notes of the teacher pass on to the notes of the student without entering into their brains for internalization, reflection and application. This results in the 'learning' of that material becoming less interesting and engaging because then the students don't really have to listen to the lecture in the first place, figuring they can just rely on the notes already written out for them. There's no real internalization of the content or challenges to the thinking because the students are not really engaging the material, sharing what they think about it with their peers or even the teacher, or thinking of different ways to look at it within a collaborative framework. Class time is limited and a 60-minute or 90-minute lecture students aren't going to listen to or engage in is not the approach our students need today.

Accordingly, this type of Industrial-era, assembly line lecture-style approach to education and learning is increasingly disengaging our tech-savvy, 'mobile' students from the learning process, ultimately stifling motivation, creativity, divergent thinking and communication between their peers and teachers – teachers who have little in class time to engage students on an individual basis because they're usually busy giving a long lecture, hoping the students are interested. The setting of minimum standards that go hand-in-hand with standardized testing, while effective in some cases, often do not lead to improvements in the quality of education or assessment on

whether or not students are truly learning or simply being shuffled down the assembly line, because times up and they have to move on to the next step regardless if they've really learned or not. To be the knowledgeable, creative thinkers and doers we hope students become, we shouldn't be afraid to look at technology as an invisible tool that appropriately leverages the course content and facilitates a more engaging, active and personalized approach to student learning. This provides a lasting ownership of the learning process itself by making it as relevant as possible to not only their future careers, but also their immediate personal lives. Moreover, it shifts responsibility and ownership of the learning process from the teacher to the student. Technology has a downside if we don't know how to properly manage the time we spend with it.

Our traditional education approaches and use or miss use of technology need to be assessed and changed if we want to teach for tomorrow the skills and knowledge students need, not for just some job (which hasn't been created yet), but for the entirety of their adult lives. Understanding the cogitative dissonance we have of Industrial-era models of teaching and learning in light of the saturation of technology in our lives is essential in closing the divide between it and the educational changes that need to be made. Our attention is increasingly being supplanted by inorganic interactions with technology and digital media in an environment where schools and businesses are well behind both understanding students' use of technology and how their assumed 'native' know-how can be leveraged to make learning and teaching more engaging and meaningful. Why has it come to this? Why is it that our standards for living are much higher than the previous generation, yet the deluge of information and our reliance on technology is trampling on our quality of life? On the amazing miracles of modern technology in life that we all tend to take for granted, the famous American comedian Louis C.K. laments that: "Everything is amazing now and nobody's happy." Why? For one, our priorities are backwards and our expectations about technology and for each other are going in the opposite direction. Technology seems more important when in fact it is the relationships we create that make us who we are. This is affecting how we integrate technology in our lives without understanding its impact on our social wellbeing inside and outside the classroom, as both teachers and students.

The influence and effects of technology on us in the digital age harkens back to B.F. Skinner's rat experiments and his famous *"Skinner Box",* which provided insight into operant conditioning and the effectiveness and detrimental effects of reinforcement and intermittent reward when rats learned they could easily receive food when pressing a bar (Skinner, 1938; 1948). Weil (2013, February 10) notes the striking resemblance of Skinner's bar-pressing experiments to our incessant desire today to *tap* our smartphones and tablets to check and respond to new email, Facebook and Twitter posts, even though we did so three minutes ago. But we do it because, like the rats, we find it easy to do and it is intermittently rewarding.[1] Gives new meaning to the term

"rat race". According to Weil (2013), this kind of technologically motivated reinforcement, taken to the extreme, is hijacking our brain's reward centers and drawing our attention away more and more from things that matter in life. An incessant flow of intermittent rewards, without restraint, like with the rats in Skinner's experiments, brings with it changes in behavior, often to the detriment of our social wellbeing. The rats became so preoccupied with waiting for the reward that the things they naturally did like forage for food, mate, build nests and care for their young, were largely ignored resulting in working themselves into exhaustion (Weil, 2013). People are beginning to do the same thing as technology is changing our most primal of human behaviors – talking directly with other people and doing physical things (Weil, 2013). We need to refocus our attention with regard to technology use in our lives today. But as players in an increasingly digital society we are just beginning to come to terms with technology its effect on education.

What can be done to overcome this disconnect between education and technology and make it more accessible and meaningful to not only students, but also to teachers? Accordingly, what teaching approaches for learning through technology are appropriate to meet the growing digital literacy and communication needs of our students in the 21st century? How can learning a second language enhance digital literacy? The following sections examine these questions in a broad context of changing paradigms, digital literacy, computer-assisted language learning or CALL and an innovative way to teach better learning practices through the adaptation of the Flipped Classroom ideology into university level courses in the Faculty of Tourism.

Section 2 looks at how understanding the changing paradigms in education and its relationship with language, culture and literacy is important in mapping out a discussion that builds a rationale for transforming the ways students learn and teachers teach in the 21st century. What does it means to be *digitally* literate today? And, how digitally literate are our university students?

Section 3 attempts to answer that question by examining the data collected from two surveys conducted in both the 2012 spring and fall semesters in the Faculty of Tourism's Department of Wellness Tourism at Josai International University's Awa Campus. The survey findings provide valuable insight into how students are integrating and using technology in their personal lives and studies in and out of the classroom and how they feel about technology in general. The findings lead to a better assessment of students' technology or digital literacy needs going forward, informing the future design and development of pedagogy-driven, learner-centered courses that leverage technology and are crucial for academic achievement and building sustainable learning skills necessary for living and working in a knowledge-based digital society. To what extent technology use informs digital literacy in a second language classroom context is also examined.

Section 4 examines what computer-assisted language learning (CALL) is and how it is being used to enhance second language learning, communication skills and digital literacy skills in EFL courses in the Faculty of Tourism. CALL provides a unique platform from which digital literacy needs can be met and enhanced through the communicative nature of language learning and practice and the 'anytime', 'anywhere' nature mobile communications technology (i.e. smartphones, tablets, etc.) that nearly all Japanese students possess. Understanding what CALL is and how current digital media and technologies can be better incorporated into language learning (and teaching) space is an important step in understanding the factors required for enhancing learning and digital literacy among university students using Flipped Classroom learning approaches.

Section 5 introduces the concept of the Flipped Classroom and how flipped learning approaches can be adapted to CALL, as well as other subjects in the department, to provide more engaging, sustainable learning practices. The Flipped Classroom model is one transformative way that can bring CALL and digital literacy together to not only enhance learning but also radically change the culture of teaching and collaborating among teachers themselves. This will raise the quality of education from within, not top down, and ultimately better prepare students with the emerging learning skills they will need to acquire for use in careers in business, tourism and tourism-related industries – industries that are making up a growing portion of the knowledge-based society in the 21st century. Flipped learning can open up opportunities to improve the quality of education by allowing us better ways to manage our time with students in class by providing a unique way of flipping the traditional classroom paradigm enabling a more blended and differentiated approach to learning with technology that is meaningful and engaging to the students *and* teachers.

If all the world's a stage and we merely players in it, we see that what binds digital literacy, second language learning and Shakespeare together is our relationships with people within and across our cultures and languages. Technology is just a process through which we can achieve and sustain those relationships and our cultures. Technology is wondering where Education is, and if the unrequited romance continues to confound and or deny each other's roles in how we teach, learn and innovate for sustainable development in the twenty-first century, we may likely meet a tragic end not unlike our star-crossed lovers Romeo and Juliet. Flipped learning approaches, however, within the context of CALL, second language learning and even blended distance or online learning, provides us an much needed way to embrace technology and transform our education systems to enhance communication and digital literacy skills required in the 21st century. How we do this comes from an understanding how technology has influenced education and why it is often seen as both an obstacle to and an opportunity for lifelong learning.

2. Language, Culture, Literacy and Digital Literacy

Is language technology? Education has always been influenced and driven by various forms of technology, the most significant in human evolution being *language* itself and the radical ability to read and write the spoken word, store it, collect it and most importantly, share with others present and future a narrative record of what had been and what was learned. Yes, in a way, language is technology that was born out of the development of our brains, which was part of our biological capacity to interact with others who could do the same. For some animals, but especially humans, the necessity to birth children before their brains grow too big brought with it the responsibility to care for and raise children until they could fend for themselves. This parent-child bond forged at birth created an opportunity for the parent to transfer knowledge (and love) to the child. This evolutionary inevitability provided the first blueprint for the 'proto-teacher' and 'proto-student' construct as parents became a child's first teacher and consequently the first role model. This intimate desire to connect with others began the moment you and I were born and helped human brain development cultivating our capacity for language, higher order thinking and compassion for others. Language became essential in informing our cultures, who we are and what roles we play in our lives and in the lives of others. In turn, culture has reciprocated in providing 'education' that helps us define who we are, and what we do, and in the process, assists us in building on our capacity for and desire to learn more about the world. One of the best ways of course is through a second language, which further cultivates deeper connections between and across cultures around the world. What is culture?

Walker and Noda (2000:23) point to our inescapable reality of being human: "Culture and language are two of the most complex concepts we will ever encounter and life, unfortunately, is short." Walker and Noda's argument of 'culture as performance' is based on situated or contextually based knowledge of our specific culture and what we do or perform on that cultural stage:

> "[C]ulture is behavior by one individual that is understood by that individual and others in specific contexts. It is situated knowledge: the situations are social, conventional and many — but constrained — not everything conceivable is possible in every culture. What we do in our cultures can be understood by our intentions and our understanding of the intentions of others (that is, our interpretations of them). What we do is what we *are* — and what we *are* is what any specific culture allows us to be." (Walker and Noda, 2000:24)

Over time, specific cultures advanced, populations increased and new ways of thinking and technological advances during the Age of Enlightenment and the Industrial Age brought science out of the shadows and mass education to our cities and towns radically changing our social, economic and political landscapes. People began to move from one place to another more quickly through steam engines, trains, planes, and automobiles, bringing with them not only goods and services, but also information and knowledge at speeds unforeseen prior to 19th century. The 20th century saw the materialization of an Information Age, which has changed our way of life through computers, networks and telecommunications, effectively transforming how we buy and sell, communicate and socialize today in the 21st century. With the exponential growth and access of information and the ease at which we can share knowledge through the Internet, the Information Age is being supplanted by a Knowledge Age or 'knowledge-based society' producing a generation of 'connected learners' also referred to as the 'Net Generation'.

In the Knowledge Age, "knowledge has key social and economic value" thus creating "the need for a society able to understand and create knowledge" (Harasim, 2012). Harasim (2012) states that the implications for education and learning in a knowledge-based society are critical yet largely unmapped. This global network of interconnected people increasingly rely today on technology more than ever before in human history, integrating it into almost every aspect of their personal lives influencing how we learn, communicate and live. With the advent of social networking, microblogging and user generated content services in the last ten years with YouTube, Flickr, Facebook, and particularly Twitter and its 140-character limit for posting, the way we use language, deliver information and share knowledge within and across our connected societies is rapidly changing in ways we are just beginning to understand. The rate of adoption is staggering.

As of December 2012, Twitter had a 200-million-person active user base around the world with 60% or more accessing Twitter through their mobile phones (Twitter). Facebook has five times that with over a billion active users and nearly 70% of them access it via their mobile phones (Facebook). Twitter, however, has seen an incredible increase in active users going from 100 million in September 2011 to 200 million by December 2012. This means that Twitter added as many users in those 15 months as it did in its first five years since it began in 2006. This acceleration of growth and integration of social media in our lives, especially in the lives of our students, is greatly impacting one of the most essential skills we have as language and culture-toting humans in the 21st century – *literacy*. But what is literacy?

As language and cultures developed over time and formal education systems emerged, literacy arose as a means for a more effective way to communicate with larger numbers of people separated geographically (and by time) through the dissemination of written information and

knowledge. Literacy is one of the most essential components in the evolution of human development, which has become deeply connected today to sustainable development and consequently our very own survival here on planet Earth. Historically, being literate meant acquiring and possessing the skills to read and write. But it means far more than can/cannot read or write. Literacy includes such things as an awareness of the sounds of language, printed language and the relationship between sounds and letters that make up words and expressions, and comprehension of a text. In *The Handbook for Sustainability Literacy*, Stibbe (2010) explains literacy as "a collection of skills that allow for effective participation and influence in diverse areas of social life." The overall definition of literacy has expanded greatly over the last half century to overcome the social and technological challenges we find ourselves facing in the digital age.

The United Nations Education, Scientific and Cultural Organization (UNESCO) defines literacy broadly within the context of building foundations for lifelong learning, placing it at the forefront of human rights and education for all. UNESCO's web site explains the significance of literacy this way:

> Literacy is a fundamental human right and the foundation for lifelong learning. It is fully essential to social and human development in its ability to transform lives. For individuals, families, and societies alike, it is an instrument of empowerment to improve one's health, one's income, and one's relationship with the world.
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> The uses of literacy for the exchange of knowledge are constantly evolving, along with advances in technology. From the Internet to text messaging, the ever-wider availability of communication makes for greater social and political participation. A literate community is a dynamic community, one that exchanges ideas and engages in debate. Illiteracy, however, is an obstacle to a better quality of life, and can even breed exclusion and violence.

Sheridan and Roswell (2010) take an extensive look at literacy and its evolution over the last half-century and the various social and semiotic turns that make us reconsider how we define literacy today. In the research covered by Sheridan and Roswell, the social turn looks at literacy as a highly situated event, practice, or activity. Here, literacy is "something people do" as an essential part of culture (Sheridan and Roswell, 2010) and harkens back to what Walker and Noda (2000) said about 'culture as performance'. The semiotic turn Sheridan and Roswell (2010) explain, expands on the social turn's recognition of where situated learning occurs with regard to

digitally mediated ranges of modes where audio, visual and gestural are more common. Both the social and semiotic contexts lead Sheridan and Roswell (2010) to conclude that a fuller appreciation of literacy today requires also a recognition and understanding of those involved in making action or people who are engaged in literate activities. They call these people 'producers' or designers of literacy, people who develop new ways of learning. Because it is important to know how to participate in a network that is connected to others, sharing information to make meaning, if we are to counter disengagement in our education system today, Sheridan and Roswell (2010) point to the New Long Group's (2000: 9-10) recommendation that schools should be focusing on "creating the learning conditions for full social participation" and not the filling of empty vessels.

We are in a world where for the first time in human history our advances in technology and a growing interconnectedness brought on by computer-mediated communication through powerful laptop computers, smartphones and tablets, is changing faster than society. Technology is outpacing, outmoding and challenging more than ever our traditional notions of education, literacy, learning and what our roles are within both the growing 'connected' knowledge-based society and our planet. To this end, it is important to understand what digital literacy is and what it means to be a digitally literate person in the 21st century.

The term digital literacy for one is often interchangeable with "21st century skills" because this century is one of rapid technological advancement that has connected us together through a networked society and we will need to know how to use technology if we want to affect change in the world, for others and ourselves. Cornell University's website defines digital literacy succinctly as: "the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet." Why is this important? Because technology is everywhere and changing at rates faster than society can keep up. What we can do with technology today presents us with challenges that affect the social norms, market models and legal frameworks that make up our digital society going forward. If we are interested in ensuring our students' future in the 21st century, we must improve upon and raise the standards of general literacy as well as take more seriously digital literacy education at the university level, beginning with first-year students in the first semester of their academic careers. This means going beyond just learning how to use Microsoft Office and surfing the web, but digital writing skills on a multiple of platforms, including social media like Facebook and Twitter. Teachers need to be engaged in and help students with their writing processes because computers and social networks already mostly mediate a lot of their writing. It also means examining the rules of appropriate behavior in using computers and online media, considering for example copyright law, privacy, academic integrity, research methodologies, citation rules and more. Stibbe (2010) points out that while

media skills can be taught, the communicative component is "best acquired and learnt through doing, participation and engagement" that "learn by doing" through constructivist active-learning approaches are the key to general literacy and digital literacy.

While we find ourselves being the most connected generation in human history, where the convergence of the Internet with information and communication technology has brought us closer together on a more global stage, sharing information and knowledge and communicating with great ease and speed, we also find this very reliance on technology, particularly on social media, is conditioning us to disassociate ourselves from the exhaustive, often stressful nature face-to-face communication has seemingly become. If this face-to-face communication is exhausting in one's *native* language, image how challenging it is for students today to navigate social discourse in a *foreign* language! Who are the students we are teaching today? Are they as tech-savvy as we are lead to believe? Can a better use of technology make communication less stressful for our students? The following section examines a nascent generation of new learners and how they correlate to university students in Japan.

3.   Digital Natives and the Japanese University Student

The pervasiveness of technology and digital media in society today is still very new and transforming not only our notions of what education, learning and knowledge are, but it is also transforming how our children learn, think, communicate and behave in society. With the advent of social media networks and online services such as Facebook, Twitter, YouTube, wikis, blogging, video collaboration tools (i.e. Blackboard), and web service portals like Google, and the emergence of mobile tablet devices such as the iPad, more and more children are growing up surrounded by and using all kinds of these technologies, increasingly becoming integral – sometimes *natural* - parts of their lives (Prensky, 2001). As mentioned in the Introduction, Prensky (2001, 2004) explained the disconnect we have in today's connected world between an educational system that no longer can sustain the emerging generation of tech-savvy students, students he refers to as 'digital natives' and another group born before the Internet called 'digital immigrants'. This is the same disconnect that Nussbaum-Beach and Hall (2012) and others argue is keeping us from making the necessary changes in education required for the learning revolution.

Prensky famously coined the phrase 'digital natives' to refer to a group of students born into a digital age surrounded all their lives by the Internet and digital technology. Because they have grown up in this world, Prensky (2004) likens them to 'native speakers' of the digital media language of our time beginning with the Internet and computers and now increasingly shifting

towards a more mobile space where smartphones and tablet devices encourage an 'anytime', 'anywhere' approach to doing things, especially with regard to learning and forging relationships; often outside of the classroom. Digital immigrants, on the other hand, are the rest of us who were born before the Internet and have 'immigrated' through the Information Age and into the Knowledge Age using technology as a kind of 'second language'; slowly and skeptically integrating it into our lives at a much slower pace than the younger 'native' generation. This dichotomy of tech-savvy 'native' learner and 'immigrant' teacher is in conflict with each other and is one of the major challenges schools and teachers have in raising standards and improving the quality of education. Resistance to incorporating technology into learning that can provide more efficient points of instruction enable more flexible process points of learning both in and outside of the classroom, is one of the main factors for student disengagement in the classroom. Are students, especially university students in Japan really all that digitally native?

Japan is world renown to be a highly technologically advanced society on the cusp of the future. According to Internet World Stats, as of June 2012, Japan had a population estimated at 127.3 million people with nearly 80% of them Internet users. As of December 2012, Japan also had over 17 million Facebook users. It is unclear whether or not these are active users, and where they're accessing the Internet. In my experience, however, having lived and taught in Japan for nearly ten years, observably, a large portion of the 80% is likely accessing it solely through their mobile phones, not traditional desktop or laptop computers. As such, Japan has an enduring image of being a mobile or smartphone-driven society. This is quite apparent when I see a lot of students typing with two fingers on a computer keyboard in Japanese. So accustom to using the keyboards and now touchscreen keyboards on their smartphones, many students don't know how to type well, let alone touch-type, when they get in front of a computer and keyboard. What extent are these and other computer skills taught at the university level? In the Faculty of Tourism?

Students in the Faculty of Tourism have a wide range of courses available to them, including courses that focus on desktop publishing, presentation skills and multimedia creation. The three basic courses students can are: *Business Applications* (ビジネス・アプリケーション), *Business Presentation I* (ビジネス・プレゼンテーションI), and *Tourism Media Creation* (観光メデイア制作). Learning how to use Microsoft's Office Suite with Word, Excel and some PowerPoint is the primary objective of *Business Application*, while more time is spent on using PowerPoint in *Business Presentation I*. *Business Presentation I* examines and cultivates presentation skills in the larger context of communication, verbal and non-verbal, and the how to effectively incorporate images and texts into slides while telling a story. One of the main learning objectives in *Tourism Media Creation* is the choosing of a theme and creating a digital photo story on that

theme. Students learn how to take photos and video, edit them using Photoshop Elements and put them together in Windows Live Movie Maker. In the end, students create a DVD of their work and share it with others. In the past, *Web Design* and another course called *Media Creation* was taught, but are no longer part of the course curriculum. Of all of the courses above, only the first one, *Business Applications* is a required course for graduation and is typically taken in the first semester of a student's first year. The others are elective courses students can choose to take.

The Awa Campus, home to the Faculty of Tourism at Josai International University, offers students two computer labs, one with 44 PCs running on Windows 7, including a teacher's smart desk, and another smaller lab of 16 computers running Windows XP. There are two small limitations regarding each computer lab. The larger lab blocks out the local campus wide Wi-Fi network, forcing you to use the computer in the lab. This may not seem like a major thing, after all the students came to the lab to use the computers that are there. But those who have tablet devices or smaller touchscreen Wi-Fi enabled devices are out of luck in connecting, unless you have your own mobile Wi-Fi devices you can tether them to. Wi-Fi leveraging presentation tools like *Remote* for iPhone or iPad are useless. In the smaller room with Windows XP computers, because of their age, some of the computers have failed and or take minutes to boot up and are slow to use. Windows XP is a fine operating system still used in businesses today and an important platform to learn, but the hardware will need to be updated soon to meet the needs of our students and teachers adapting newer technology and digital media to cultivate learning in the context of building communication and digital literacy skills; as I have done in my English language courses over the past few years.

This takes us to the next question: What does the English language university student in Japan look like today? And what language courses could potentially provide a learning space for enhancing digital literacy skills through CALL and flipped-based learning?

The English Language University Student in Japan

By the time Japanese students enter university they have had about 6 years of formal English language education, largely taught by native Japanese instructors who are not fluent in the language themselves, and who rely heavily on course materials designed to prepare students for university entrance exams, which place greater emphasis on reading and listening comprehension rather than writing and spoken fluency. But even that is not enough and many Japanese high school students find themselves going to cram schools, where again speaking the language is not a priority. Not surprisingly, Japanese students enter university and are shocked to learn that their English teachers are going to focus on literacy as it pertains to *all* of the four

skills (six if you count critical thinking and culture), but with greater emphasis on communicative discourse that promotes both individual thinking and project-based collaboration. Japanese students have been conditioned this way for decades and, despite efforts at 'making English fun' in primary and secondary education, the system remains unchanged and testing for reading and listening continues to be the sole measuring stick for their English language skills. This must change if Japanese students are to be better positioned to compete on a more level playing field or stage as it were, in the 21st century.

In the Faculty of Tourism, students can take a wide range of English courses. Table 1 below shows a short list of core English courses currently taught in the department. Each level builds upon the previous one, preparing students with the necessary English skills required prior to study abroad, international study tours and internships. Advanced mastery in English can aid in working in an increasingly connected world mediated and driven by both technology and English in business. Students typically take about 2 to 3 English courses a semester beginning in their first

Table 1 – English language courses in the Faculty of Tourism

Fundamentals of English I (FOE1)
Fundamentals of English II (FOE2)
Fundamentals of English III (FOE3)
Oral Fluency I (OF1)
Oral Fluency II (OF2)
English for Tourism I (EFT1)
English for Tourism II (EFT2)
English for Tourism III (EFT3)
TOEIC for Careers 400 I/II (TFC400)
TOEIC for Careers 500 (TFC500)
TOEIC for Careers 600 I/II (TFC600)
TOEIC for Careers 800 I (TFC800)

year with Fundamentals of English I and TOEIC for Careers 400 I. In the fall semester they take Oral Fluency I and continue with TOEIC for Careers 400 II. Many students also take English for Tourism I, which I have taught for the last six years. EFT1 has been an experimental test bed for some of the ideas I have had on how to engage students more through the use of technology and enhance their learning of English for travel and work in the tourism and hospitality industries. Because tourism is inherently the movement of people connecting with the world, the best way to engage with world without physically going there, is to leverage the power of Internet and the online media and services that connect us to the world – people – and provide greater opportunities for communication, collaboration and higher order thinking to occur. I have

implemented various blended approaches to my teaching using wikis, YouTube and most recently Google Docs. One of the biggest obstacles in finding a way to integrate technology into the teaching and learning processes of my students was not really knowing how tech-savvy my students were. As I've stated above, Japanese grow up in a technologically advanced society that emphasizes to a large extent the use of mobile phones over computers. Japanese students out of high school do not know how to type well and that is just in their own language. General knowledge of keyboard short-cuts like ctrl+C for "copy", ctrl+V for "paste" or ctrl+Z for "undo" is largely not taught. While students generally know how to use a web browser to do searches, knowledge of strategies of what to search for and what queries were appropriate appear to be lacking. Therefore, I wanted to dig deeper and know what their tech skills were and how it changes as they progress through college life in the Faculty of Tourism. To do this I prepared and conducted two student surveys that focused on their technology use habits in and outside of class. Section 4 examines the findings resulting from those surveys.

4. Technology Use Surveys

Japan is considered one of the most technologically advanced countries in the world and with one of the largest Internet user bases, especially on mobile phones and smartphones, one might be surprised to learn that not all Japanese university students are as savvy or digitally 'native' as Prensky (2001, 2004) would have us believe. This is just one of several significant findings found in the two technology use surveys given to Faculty of Tourism students, one at the beginning of the 2012 academic school year, and a smaller scale online survey in the fall semester language course I teach called *English for Tourism I* (EFT1), which incorporated a blended approach to using technology to provide opportunities for language use, collaboration among students and hopefully in the process enhance their knowledge and skills of the technology we used.

The two surveys were conducted to better understand the basic technology use behaviors of students in the department, especially as it related to their general computer literacy skills and to what extent how they are or have been using technology in their studies in and outside of the classroom. This in turn provides the department critical information in mapping out greater opportunities to enhance the literacy skills (both general and digital) of our students. This means going beyond Microsoft Office and instead putting emphasis on presentation design and delivery skills, Internet search skills, which involve specific reading skills, as well as learning how to write e-mails, use a class wiki, viewing videos and screencasts outside of class, and collaborating on projects online both synchronously and asynchronously. As we will see later in Section 6, the

Flipped Classroom model can provide a means for using technology in an effective way in both language and non-language course subjects that can then enhance the digital literacy skills of our students.

Educational Technology Student Survey 2012

One hundred and sixteen undergraduate (76 males, 40 males) first-year, second-year and third-year students participated in the first survey conducted at the start of the academic year during student orientation week. Due to scheduling constraints, fourth-year students were unavailable to take the survey. The Educational Technology Student Survey 2012 consisted of 20 questions with several sub questions incorporated into the main questions, printed out back-to-back on A4 size paper. An example of the survey can be found in Appendix 1. Because the survey was written in Japanese, I will briefly outline the content of the survey here in English.

Survey Translation

Question 1 asked students about sex, grade level and where they're from. Question 2 asked how long they've been using 'pasokon' or personal computers. Question 3 asked how much on average students used their computer for their classes. Question 4 asked if they used their own computer, a computer in one of the campus computer labs or both. Students could write what percentage they used their computers or campus computers. Question 5 asked how much confidence they had in using computers. Question 6 asked what type of computer they owned: desktop, laptop or nothing. Question 7 asked what maker their computer is. Question 8 and 9 asked what the computer's name is and what operating system (OS) their computer had with choices between three different Windows versions (XP, Vista, 7) and Mac OS X (10.5, 10.6, 10.7); or another OS. Question 10 asked what portable or mobile devices they had, which choices ranging from smartphone, tablet, touchscreen music player, or electronic dictionary. Question 11 asked what the names are of those devices the student owned. Question 12 asked which of the devices they owned where did they use them. Choices included: on campus, in the classroom, at home, at a restaurant or café or other. Question 13 asked whether or not they intended on buying a new computer or mobile device in the future, which choices ranging from wanting to buy within 3 months, 6 months or 12 months, or not all. A space to write a reason for the selected choice was given. Question 14 asks what device they wanted to purchase. Question 15 asked for what purpose they wanted to buy the devices they want to purchase. Question 16 asked about ranking 10 factors or preferences for buying a computer or mobile device. Those 10 included: price, screen size, OS, brand name, functionality (touch, speed, etc.), software, memory, HDD storage space, mobility (is it easy to carry), and data plans offered by the major telecommunication

companies in Japan such as NTT, KDDI/AU and Softbank. Students were asked to rank them from most important to least – 1 being the most important.

On the back of the survey, Question 17 (written as 14; Questions 17-20 were formatted incorrectly at the time of printing) asked which specific computer students used: desktop or laptop. Then asks about to what degree students did 24 specific tasks, from not at all, to one or twice a year, once or twice a month, every week and everyday. The tasks are outlined in Table 2 below.

Table 2 – Question 17 (14) computer tasks

a. Play games.	n. Post photos to the web or blog.
b. Take class notes.	o. Use Wikipedia.
c. Do homework.	p. Download a file from the teacher.
d. Write reports in MS Office Word.	q. Order and purchase textbooks or books.
e. Use Excel for calculating data.	r. Study English or other foreign language.
f. Make presentations using PowerPoint.	s. Chat with a friend using Facebook.
g. Use the Internet.	t. Have a conversation with a friend using Skype.
h. Use the web for searching; what search engine they used.	u. Have a conversation with the teacher using Skype.
i. Use e-mail.	v. Read news.
j. Do web-based e-learning.	w. Read a foreign language website (what language).
k. Watch videos on YouTube.	
l. Edit photographs.	x. Read sports websites.
m. Edit videos.	

Question 18 (15) asked students who have a tablet computer or other internet-connected mobile device (smartphone or Wi-Fi-enabled music player or game player) what top 5 tasks in the tasks Table 1 they did on them. Question 19 (16) asked students to what extent they agreed or disagreed with 19 statements outlined in Table 3 below. Choices included: agree, somewhat agree, somewhat disagree, disagree.

Table 3 – Question 19 (16) Statements

   a.   Computers are necessary to do homework.

   b.   Owning a computer is necessary to do university studies.

   c.   Using a computer makes my studies and self-study more interesting.

   d.   I want to learn more about computers and software.

   e.   Having a computer in class would be very convenient.

   f.   I personally take a lot of notes in class.

   g.   I think PowerPoint presentation-based lectures are easy to understand.

   h.   I think blackboard or whiteboard-based lectures are easy to understand.

   i.   I think it would be convenient to have a copy/handout of the PowerPoint slides.

   j.   If I had a handout of the slides, taking notes will become less necessary.

   k.   I'm interested in a class that uses tablets (iPad, etc.).

   l.   I'm interested in a distance learning (video conferencing-based) or online class.

   m. I'm interested in E-learning.

   n.   I want to use a computer or tablet in my English for other foreign language class.

   o.   My instructor often does PowerPoint presentation-based lectures.

   p.   I want to use a digitalized textbook (e-book) on a tablet rather than a regular paper-based textbook.

   q.   All students should have a laptop computer or tablet.

   r.   My instructor uses various kinds of media (video, audio) in class.

   s.   In class, I want the instructor to use computers and websites more.

The last question, Question 20 (17), asked the students to write any comments or opinions they had about computers and educational technology in a blank space provided.

Data Analysis

Analyzing the three years of students separately and by sex will allow us to compare the differences associated with progress through academic life and see if any patterns exist. For the sake of clarity and time, only a portion of the data collected – the most relevant to the discussion in this paper – was analyzed.

First-Year Students Data

The following data was taken from first-year students who took the Educational Technology Survey 2012, first examining the data on page 1, followed by analysis of the tasks and preferences on the back of the survey.

A total number of 48 first-year students (n=18 female, n=30 male) completed the technology survey. Female students were found to have 2.78 years more computer background experience

prior to entering the university with an average of 4.2 years compared to only 1.4 years for male students (Q2). While first-year students just entered university and technically cannot answer Question 3 because they hadn't started classes at that point, some students misread it assuming it referred to how much they plan to use computers going forward, not prior to entering school. Therefore, 15 out of the 18 females students marked 'every day', while the same number of male students marked the question correctly: 'not at all' (Q3). Regarding confidence in using computers, females skewed slightly more confident than males, percentage wise, among only 16 out of 18 who answered the question (31% to 16.6%). Five female students had some confidence, 9 didn't feel they had much confidence, and 2 said they had no confidence at all. Two students didn't answer the question. There were also 5 male students who felt somewhat confident, while 11 didn't have much confidence and 14 didn't have any confidence at all. Around 47% of first year male students felt very little confidence in using computers (Q5). Twelve female students (67%) owned their own laptop, while the remaining 6 didn't own any computer. Half of the male students (15) owned their own laptop while 1 owned a desktop and 10 didn't own either (Q6). Overwhelmingly, both male and female students owned computers with a Windows-based operating system (OS). Windows 7 accounted for 30% of the male students (n=9), while only 2 were using XP. Three of the male students had marked down owning a computer but didn't check which OS they were using. For females, 5 were using XP, while 2 were using Vista, and only 1 was using Windows 7. There were 7 female students who had marked owning a computer but didn't mark which OS they were using. All students had a mobile phone (Q10). Seventeen female students stated they mainly use their computer at home, while 10 males use their computer at home. For class use, there was 1 male and 1 female (Q12). Mobile phones were predominately used at home, with a few on campus and two male students marking they use their phones at a restaurant or café (Q12).

Questions 13 through 16 are not covered as it pertains to preferences about what kind of device students would like to purchase in the future and is not relevant to the content of this paper.

For Question 17 (Q14), I mostly looked for what students did 'every day' to 'every week' with regard to the computer tasks, and to see what percentage of the whole the students didn't do any of the tasks. Out of 30 first-year male students only 13 students had taken the time to actively read the tasks and mark how often they did them. It was clear in the remaining 17 that they either hadn't read the tasks and or they didn't own a computer marking most if not all the tasks 'don't do'. Of the 13, using the Internet (g.), searching (h.), checking email (i.) and viewing videos on YouTube (k.) were the most common in every day or weekly frequencies. Less than a handful of those 13 students used Wikipedia (o.) or posted photos to a blog or website (n.) about once or

twice a month. For female students, 10 of them gave useable answers', while the remaining either didn't mark the tasks at all or mark them all 'don't do.' About 60% of those 10 used the Internet (g.), did searching (h.) or checked email (i.) almost every day. The remaining female students did those things once or twice a month if at all. Surprisingly, only 3 of the 13 females used Facebook but only once or twice or once a year. One male used Facebook once or twice a year. Five female students showed they had experience using MS Word or Excel, while 7 males did. While the data can be skewed, we can estimate that approximately 58% of the males did not do the tasks, whereas approximately 48% of the female students didn't do the tasks.

For Question 18 (Q15), 3 female students marked mobile phone and the following five tasks they did in 17 (Q14): play games (a.)(n=1), use the Internet (g.)(n=2), check email (i.)(n=3), searching (h.)(n=1) and one student read the news (v.) and watched YouTube videos (k.). For males, they primarily used their mobile phones to play games (a.)(n=3), use the Internet (g.)(n=6), or watch YouTube videos (g.)(5). One person did have a tablet and use it for the Internet (g.), checking email (i.), watching YouTube (g.), upload photos to a blog or website (j.) and chat on Facebook (s).

Question 19 (Q16) examines to what extent students agreed or disagreed with the statements listed in Table 2 (or Appendix 1). For the most part, females (n=13) tended to "agree" or "somewhat agree" with the statements, while 3 were mixed but mostly tended towards "somewhat disagree". Two students didn't mark anything. For females, those that garnered "disagree" the most tended to be any statements below (j.). Around 66% of the males (n=20) leaned towards "agree" or "somewhat agree" on all of the statements. The remaining 10 students were more varied but tended to "somewhat disagree" with a less than half of the students marking "disagree". It is clear that some of the male participants did not read the statements and marked all of them either "agree", "somewhat agree" or "disagree". Only 1 male student out of the 48 students commented in Question 20. That student wrote the following comment: 「無知なのでレベルに見合ったことをしてほしいです。お願いします。」. This translates to "I don't know any of this, so I would like it if you could correspond it to my level, please." This student did not own a computer.

The next section will look at the data taken from the same surveys given to second-year students in the department.

Second-Year Students Data Analysis.

The following data was taken from second-year students who took the Educational Technology Survey 2012, first examining the data on page 1, followed by analysis of the tasks and preferences on the back of the survey.

A total number of 44 second-year students (n=35 male, and n=9 female), completed the technology survey. Both male and females students were found to have almost identical computer background experience prior to entering the university with an average of 4.2 years for males and 4.4 years for females (Q2). Eight males and three females did not answer the question. After entering university, 2 females marked they used their computer for classes "every day", while 5 used them "every week"; the remaining 2, once or twice a month (Q3). For males, 7 used their computer "every day", 10 "every week", 14 "once or twice a month", 2 "once or twice a year", and one didn't use their computer at all. One student didn't answer the question (Q3). For the majority of both female and male students, they said they used both their own computer and the campus computers; 6 males and 1 female primarily using the campus computers (Q4). Regarding confidence, 6 females (66%) showed "somewhat confident", while 2 "somewhat not confident" and 1 "not confident at all" (Q5). Nearly half (n=14) of all male students showed "somewhat confident" or "very confident" (n=2), while 13 showed "somewhat not confident," and 5 "not confident at all." One male student didn't answer the question. Of the female students, 8 (89%) owned their own laptop, with 1 also owning a desktop computer. Twenty-four out of thirty-five males (69%) owned their own laptop as well with 4 having a desktop, and 1 no answer (Q6). All female students owned a Windows computer running XP (n=2), Vista (n=2) and Windows 7 (n=2) (Q9). Of the 9 female students, 3 didn't know or just left blank what an operating system they had. Of the 35 male students, 10 used Windows 7, 9 used Vista, and 5 used XP. Three of the remaining students had marked owning a computer, but did not answer the question on what type of OS they have. All students had a mobile phone (Q10). Three male students had an iPad tablet (n=10, n=11). Twenty-nine out of 35 male students used their computer at home (82%). Eight female students use their computers at home (Q10). Mobile phones were predominately used at home and on campus (Q12).

Questions 13 through 16 are not covered as it pertains to preferences about what kind of device students would like to purchase in the future and is not relevant to the content of this paper.

For Question 17 (14), I mostly looked for what students did 'every day' to 'every week' with regard to the computer tasks, and to see what percentage of the whole the students didn't do any of the tasks. For the 9 females, the tasks they tended to do "every day" to "every week" included, using the Internet (g.) and checking e-mail (i.). Tasks such as doing homework (c.), writing reports in Word (d.), and working in Excel (e.) tended to fall under the "once or twice a month" category. For male students, the frequency of tasks varied greatly, spanning "every day" to "once or twice a month", yet tended towards the same as the female students; using the Internet (g.), checking e-mail (i.), as well as searching (h.), watching YouTube (k.), and doing homework (c.).

Approximately 33% of the male students didn't do the task, whereas approximately 38% female students didn't do of the tasks.

For Question 18 (Q15), no female students answered the question, whereas 6 male students did, all selecting mobile phone. The top 5 tasks done on their mobile phone included a variation of: play games (a.)(n=6), use the Internet (g.)(n=4), searching (h.)(n=2), check email (i.)(n=4), watch YouTube (k.)(n=4), use Wikipedia (o.)(n=1), chat on Facebook (s.)(n=3), hold a Skype conversation with a friend (t.)(n=1), and read news (v.)(n=2).

Question 19 (Q16) examines to what extent students agreed or disagreed with the statements listed in Table 2 (or Japanese in the Appendix 1). For the most part, both female and male students tended to "somewhat agree" or "agree" with the statements. However, those which warranted pause and eventual checking of "somewhat disagree" or "disagree" the most (though only a fifth of the students in total), tended to be statements (g.), (h.), (i.), (j.), (k.), (l.), (m.).

The next section will look at the data taken from the same surveys given to third-year students in the department.

Third-Year Students Data Analysis

The following is the data analysis for the third-year students who took the Educational Technology Survey 2012, first looking at the data on page 1, followed by analysis of the tasks and preferences on the back of the survey.

A total number of 24 third-year students, 13 female and 11 male, completed the technology survey; about 50% of the entire third-year class. Female students were found to have 4.7 years more computer background experience prior to entering the university with an average of 7.8 years compared to only 3.1 years for male students (Q2). After entering university, female students had a mix of computer use for classes marking spread relatively evenly between ' 'every day' and 'every week ' (Q3). For the majority of both female and male students, they said they used both their own computer and the campus computers (Q4). Regarding confidence, females skewed more confident than males, 3 being "very confident" followed by 8 "somewhat confident" and the remaining 2 "somewhat not confident." Almost all male students were "somewhat not confident" (n=7) and 3 were "very confident" (Q5). A majority of females (76.9%) owned their own laptop, with 3 also owning a desktop computer and 2 owning neither. A majority of males (n=8) owned their own laptop as well with having a desktop and 2 with no answers (Q6). Overwhelmingly, both male and female students owned Windows-based computers with Windows 7 (n=5, n=7), and XP next with 7 total (Q9). All students had a mobile phone (Q10). Only one male student used their computer (laptop) on campus, while the remaining students used their computer at home (Q12). Mobile phones were predominately used at home and on

campus (Q12). Questions 13 through 16 are not covered as it pertains to preferences about what kind of device students would like to purchase in the future and is not relevant to the content of this paper.

For Question 17 (Q14), I mostly looked for what students did 'every day' to 'every week' with regard to the computer tasks, checking to see if anything stood out. For the most part, both male and female third- year students spent most time every day to every week on tasks like using the Internet (g.), searching (h.), checking email (i.) and viewing videos on YouTube (k.). Visiting Facebook and chatting with a friend tended to happen "once or twice a month" for male students, while a third of female students used Facebook in that way "every day" or "every week". Surprisingly, few females used Facebook where about half of the male students didn't either. Using MS Word to write reports tended to be more a "once or twice a month" activity, while some did use it "every week." Approximately 35% of male students didn't do the tasks at all, while 13% of females didn't do the tasks.

Question 19 (16) examines to what extent students agreed or disagreed with the statements listed in Table 2 (or Japanese in the Appendix 1). For the most part, both female and male students tended to somewhat agree or agree with the statements. However, the most common statements marked "somewhat disagree" or "disagree" tended to same statements the second-year students marked: (g.), (h.), (i.), (j.), (k.), (l.), (m.). All having to do with the style in which classes were conducted or the kind of technology used in class - by way of a lecture using the blackboard or PowerPoint presentation, or though the use of computers or tablet devices both in class and or through E-learning or online, particularly in English language classes where stated.

Summary

It is interesting to see that female students on average have 2.6 years more experience than male students in using computers prior to entering the university. This experience may be why their confidence in using computers appears to be higher than male students. What is interesting is the constant increase in female confidence through the years while male confidence peaked in the second year falling nearly 20% from 46% to 27%. Female students saw a rate of increase in confidence using computers by almost two-fold each year – 31%, 66%, 85%.

Of the 40 female students who participated in the survey, 30 or 75% owned a computer, with the majority of them laptops. Of the 76 male students, 48 of them or 63% owned their own computer. As of April 2012, approximately 48% of the student body that makes up first, second and third-year students, own a computer. Those who owned a computer were running a Windows operating system with Windows 7 being the most prevalent. Approximately 18% of the students

surveyed were still using Windows XP. None surveyed were using Macs, but some expressed interest in purchase a Mac laptop. Several students owned iPads and other tablet devices.

All students owned mobile phones and used them predominately at home and on campus. No one admitted to using them in class! Computer usage typically occurred at home or in the campus labs. Few students brought their laptops to school.

For the tasks on the back of the survey, most of the same tasks done "every day" to "every week" to "once or twice a month" were common throughout all three years of students. The 8 most common tasks students did on computers "every day" to "once or twice a month" are listed in Table 4 below.

Table 4 – 8 Most Common Computer Tasks done Every Day to Once or Twice a Month

1. using the Internet (g.);
2. check email (i.) ;
3. viewing videos on YouTube (k.);
4. searching (h.);
5. doing homework (c.);
6. writing reports in Word (d.);
7. working in Excel (e.);
8. Facebook chatting (s.).

Compare this with some of the data found in Question 18 (Q15) which asked students what 5 main tasks in Question 17(Q14) did they do most on their mobile devices – smartphone or tablet. A very small sample of first and second year students answered this question. A list of the 5 most common tasks done on a mobile device is shown in Table 5 below.

Table 5 – 5 Most Common Smartphone Tasks done Every Day to Once or Twice a Month

1. using the Internet (g.);
2. play games (a.);
3. check email (i.);
4. viewing videos on YouTube (k.);
5. Facebook chatting (s.);
6. searching (h.).

Even though a high percentage of students own laptops, they are using them primarily at home because they can do most of the tasks they want to do on their smartphone, which is smaller, lighter and provides greater mobility than a laptop. What matters is being connected to the Internet, which most of the tasks, even some games, require.

Question 19 asked students to what extent they agreed or disagreed on a list of statements related to content delivery in class (way of teaching the material) and using technology in various educational settings from in class to more E-learning, distance or online-based learning. For the most part, both female and male students across all years tended to "somewhat agree" or "agree" with the statements. Notable patterns of disagreement (mostly "somewhat disagree") with all years with statements (g.) and below raise questions about the interest of using various forms of technology in the classroom to mediate student learning. All of these involve uses of technology that most of the students have never experienced in their academic lives, such as using an iPad in class or using E-learning software or taking a distance learning (video-conferencing) type online class.

Since first-year students hadn't yet experienced classes at the university level and have no frame of reference to draw on, many of the questions regarding teaching style and use of either the blackboard, PowerPoint or other technology in a university class setting could apply to second and third-year students. In those cases, it was interesting to find that a large number of students agreed or somewhat agreed that many lectures they've had were PowerPoint-based (statement o.) while a disproportionate number of students felt they somewhat easy or somewhat not easy to understand, on statement (g.): I think PowerPoint presentation-based lectures are easy to understand. Most did agree that the PowerPoint lectures were "somewhat easy" to "easy" to understand, however. Interestingly, a majority of second and third year students "agreed" or "somewhat agreed" with statement (j.): *If I had a handout of the slides, taking notes will become less necessary.* To what extent makes them easy to understand? Was it the content and presentation of the PowerPoint presentation? Or the handouts of slides I know most teachers give students prior to or after a PowerPoint-based lecture? Or was it just the style of teaching? Were students just used to the style of lecture in PowerPoint format? In the end, what does the data suggest about the students' level of digital literacy skills?

According to the findings of the survey, a significant portion of students - a third to more than half did not do the tasks in Question 17 (Q14). Whether or not they can or cannot do them is unclear. Lack of opportunity, need or interest, could also contribute to not doing the tasks. There appears to be some anxiety in using newer technologies, like computers and tablet devices on a regular basis in classes, particularly in the case of English language classes. Some earlier answers to questions on the front page of the survey about the kinds of computers and devices

students owned suggest that some did not know what operating system their computer has or the name of their computer.

Clearly the presentation and wording of the survey created some confusion in students. As it was written in Japanese by myself and was not thoroughly checked by a native Japanese person in time, some of the language may be ambiguous enough to skew the answers provided by the students. A re-ordering of the questions and or statements may also provide a better means to collect and analyze the data more efficiently. Also, first-year students were just beginning their university life so many of the questions did not apply to them. In spite of this, many answered anyway. Future surveys could be created and given online through Google's online form creation service within Google Docs, a part of Google Drive. There you can create desktop publishing documents, spreadsheets and various forms, that include quizzes, tests, questionnaires or surveys. The data is automatically configured into both spreadsheet form, which can be exported to Excell if necessary and a summary of the data is charted for you. It is a major time saver for those who are tired of going through dozens if not hundreds of paper-based surveys.

Understanding the limitations and time it has taken to analyze the data from 116 students who participated in this first survey, I created a follow-up survey in Google Docs, which I gave to 15 of my English for Tourism I students at the end of the fall semester upon completing the course. The survey covers some of the same types of questions in the spring survey, but is more concerned about what students did in my class using technology, mostly Google Docs. The next part goes over the course and the survey data collected.

English for Tourism I and Course Surveys (Fall 2012 Semester)

Offered to first-year students in the Faculty of Tourism, *English for Tourism I* (EFT1) is a 2-credit, 15-week English language course that meets twice a week for a total of 3 hours per week (45 in-class hours per semester). Typically, two EFT1 courses are taught during the semester and are split into two class levels – Level 1 (higher level) and Level 2 (lower level) – determined by the placement tests students take at the beginning of the year. Each class has between 20 to 30 students. Since the course is an elective course, not all students initially enroll in the class; though over 90% usually do in the first year. In the Fall 2012 Semester, two native English teachers from the United Kingdom and the United States (me being the latter) taught EFT1 separately for the first time. Usually I have exclusively taught EFT1 in the past. Due to a larger than normal disparity in students' levels this year between level 1 and level 2, each course was taught using different course materials, though the course objectives are essentially the same. One of the major differences between the two courses is that in my class of the higher-level

students, we used Google's free email service Gmail and the online desktop publishing and collaboration services it provides in Google Drive.

In EFT1 students learn practical tourism and travel-related English vocabulary and phrases that are frequently used while studying abroad, traveling overseas, working in tourism and hospitality-related jobs, as well as likely situations when encountering foreign tourists visiting Japan. Students also learn basic geography of popular countries, cities and major tourism and sightseeing destinations around the world and in Japan. Students also have the opportunity to prepare for the National Association of Language, Business and Tourism Education's（全国語学ビジネス観光教育協会）Tourism English Proficiency Test (TEPT)（観光英語検定試験）[2], Grades 2 or 3, as the test is administered within the department at the end of October. Passing the TEPT Grade 3 by the summer of their second-year is one of the main aims of course, as well as in *English for Tourism II*, offered in the spring semester to those who passed EFT1. Grade 3 is approximately equivalent to a TOEIC level score between 220-470.[3]

Table 6 shows an excerpt of the syllabus for English for Tourism I used in the fall of 2012. The second paragraph outlines the course objectives and basic outcomes students can expect from taking the course. Note number 6 and the footnote that accompanies it. Students also learn some basic computer-mediated communication (CMC) skills, primarily in the form of email and online desktop publishing via Gmail and Google Docs, which were used for collaborative and individual project speeches that covered materials found in the course textbook:『単語でカンタン!旅行英会話』(Presswords, 2006). Since it is within the context of a language course, it is explained that what they are doing falls under Computer Assisted Language Learning (CALL).

Table 6 – English for Tourism I Fall 2012 Syllabus (Excerpt)

About the Class
毎年多くの日本人が留学をはじめ、海外旅行に出かけ、また同時に多くの外国人が日本を訪れている。このような国際観光の時代において、世界共通のコミュニケーション手段である英語を習得することは、観光産業を志す人にとって必須である。

このコースでは、旅行・ホテル・航空など、観光産業を希望する人に必要な実践的な英語を習得することを目指す。具体的には下記の視点を目的とする。

（1）観光業務で必要な会話表現の修得
（2）観光業における専門用語や表現の修得
（3）旅行全般知識や海外習慣の理解
（4）海外観光地理英語や国内観光地理英語の理解
（5）観光英語検定試験＜2級／3級＞（全国語学ビジネス学校協議会）の対策
（6）コンピュータ利用に基づくコミュニケーション力の修得 [1]
_____

Data Analysis

Fifteen undergraduate students (n=12 females, n=3 males), mostly consisting of first-year students, and one fourth-year student, participated in the online English for Tourism 1 (2012) – End-of-Term Technology Use and CALL Survey conducted at the end of the academic year in January 2013. An example of the survey can be found in Appendix 2. Due to the length of the survey amounting to about 10 pages if printed out, I will examine specific points of interest in the data results as summarized by Google Docs with in-line translations of the questions that refer to the survey in Appendix 2. Unfortunately, when creating the survey online, the questions were not given a number. Therefore, I will apply a number in my analysis to make it easier to understand. I will go in sequential order, so please refer to the Appendix 2 if necessary.

Question 4 asked: *Do you own a laptop computer?* Of the students who participated in the survey, 13 did and 2 did not (1 female and 1 male). All of those were Windows-based computers (Question 5).

Question 6 asked: *What kind of mobile phone do you own?* Thirteen students owned touch panel smartphones, while two had flip or slide-based phones. Of the smartphone users, 5 were iPhones and 8 were Android-based phones (Question 7).

Question 7 asked: *Do you own a tablet device?* Choices included all of the iPad versions as well as the Kindle Fire and iPod touch. Only 1 person had an iPod touch. No one owned a tablet otherwise.

Question 8 asked: *How good are you at using electronic devices?* Ten students (67%) said they were nominally good with using the devices, while 5 students (33%) said they were not good at using the devices. Only 1 person said they were a little good with using devices.

Question 9 asked: *How has your interest in technology and electronic devices after taking this course?* The class was split with 8 stating they were slightly more interested, while 7 said that their interest hasn't really changed.

Question 10 asked: *How as your use of technology and electronic devices improved after taking this class?* Again the class split with 8 saying nothing has improved, while 7 stated a little improvement.

Question 11 asked: *To what extent were you able to do the tasks below?* Students had choices left to write: Cannot do at all, Cannot do well, Can do somewhat well, Can do well, Can do very well.

Task (a.) states: *Use a computer, connect to the Internet, send email and compose documents.* A majority of the students could do task (a.) somewhat well (n=8), well (n=2) and very well (n=3). One student felt that they could not do it well.

Task (b.) states: *Use a computer and create Word documents.* All students could do this somewhat well (n=9), well (n=3), and very well (n=2).

Task (c.) states: *Use a computer and create Word documents and send them via attachment.* Eleven students could do the task somewhat well (n=7), well (n=3) and very well (n=2). Three students could not do it well, (n=2) or not at all (n=1).

Task (d.) states: *Use a computer and create English language documents in Google Drive.* Ten students could do the task somewhat well (n=7), well (n=3) and very well (n=2). Four students could not do it well, (n=2) or not at all (n=2).

Task (e.) states: *Use a computer and share created Google Drive documents.* All students could do the task somewhat well (n=10), well (n=4) and very well (n=1).

Task (f.) states: *Use a computer and send an e-mail written in English.* Ten students could do the task somewhat well (n=9), well (n=2) and very well (n=2). Three students could not do it well, (n=1) or not at all (n=2).

Task (g.) states: *Use a computer and use a search engine such as Google, Yahoo or Bing and find websites, information or video.* Fourteen students could do the task somewhat well (n=6), well (n=2) and very well (n=6). One student could not do it well, (n=1).

Task (h.) states: *Use a computer and use Wikipedia or similar sites to find original documents or sources.* Thirteen students could do the task somewhat well (n=9), well (n=3) and very well (n=1). Two students could not do it well, (n=1) or not at all (n=1).

Task (i.) states: *Use a <u>smartphone</u> or <u>tablet</u> and create English language documents in Google Drive.* Twelve students could do the task somewhat well (n=10) and well (n=2). Three students could not do it well (n=2) or not at all (n=1).

Task (j.) states: *Use a <u>smartphone</u> or <u>tablet</u> and share created Google Drive documents.* Eleven students could do the task somewhat well (n=8), well (n=2) and very well (n=1). Four students could not do it well (n=2) or not at all (n=2).

Task (k.) states: *Use a <u>smartphone</u> or <u>tablet</u> and send an e-mail written in English.* Ten students could do the task somewhat well (n=8) and well (n=2). Five students could not do it well, (n=2) or not at all (n=3).

Task (l.) states: *Use a <u>smartphone</u> or <u>tablet</u> and use a search engine such as Google, Yahoo or Bing and find websites, information or video.* Twelve students could do the task somewhat well (n=5), well (n=2) and very well (n=5). Three students could not do it well (n=2) or not at all (n=1).

Task (m.) states: *Use a <u>smartphone</u> or <u>tablet</u> and use Wikipedia or similar sites to find*

original documents or sources. Twelve students could do the task somewhat well (n=7), well (n=1) and very well (n=4). Three students could not do it well (n=3).

Task (n.) states: *Cite the sources you found in English.* Nine students could do the task somewhat well (n=8). Six students could not do it well (n=4) or not at all (n=2).

Task (o.) states: *Cite the sources you found in <u>Japanese</u>.* Nine students could do the task somewhat well (n=7) or well (n=1). Six students could not do it well (n=4) or not at all (n=2).

Task (p.) states: *Send an e-mail to a friend when I don't understand something regarding the class assignments.* Eleven students could do the task somewhat well (n=9) or well (n=2). Four students could not do it well (n=3) or not at all (n=1).

Task (q.) states: *Send SMS message to a friend when I don't understand something regarding the class assignments.* Ten students could do the task somewhat well (n=7) or well (n=3). Four students could not do it well (n=3) or not at all (n=2).

Task (r.) states: *Ask a friend on Facebook when I don't understand something regarding the class assignments.* Eight students could do the task somewhat well (n=7) or very well (n=1). Seven students could not do it well (n=2) or not at all (n=5).

Task (s.) states: *Call a friend using my mobile phone when I don't understand something regarding the class assignments.* Fourteen students could do the task somewhat well (n=8), well (n=3) or very well (n=3). One student could not do it well.

Task (t.) states: *Ask a friend in person when I don't understand something regarding the class assignments.* Ten students could do the task somewhat well (n=5), well (n=3), or very well (n=1). Five students could not do it well (n=2) or not at all (n=3).

Task (u.) states: *Send an e-mail to a <u>teacher</u> when I don't understand something regarding the class assignments.* Eight students could do the task somewhat well (n=6) or well (n=2). Four students could not do it well (n=5) or not at all (n=2).

Task (v.) states: *Send SMS message to a <u>teacher</u> when I don't understand something regarding the class assignments.* Seven students could do the task somewhat well (n=7). Eight students could not do it well (n=3) or not at all (n=5).

Task (w.) states: *Ask a <u>teacher</u> on Facebook when I don't understand something regarding the class assignments.* Six students could do the task somewhat well (n=5) or very well (n=1). Nine students could not do it well (n=2) or not at all (n=7).

Task (x.) states: *Call a <u>teacher</u> using my mobile phone when I don't understand something regarding the class assignments.* Seven students could do the task somewhat well (n=7). Eight students could not do it well (n=3) or not at all (n=5).

Task (y.) states: *Ask a <u>teacher</u> in person when I don't understand something regarding the class assignments.* Eight students could do the task somewhat well (n=7) or very well (n=1).

Seven students could not do it well (n=3) or not at all (n=4).

Question 12 asked: *To what extent have you become to want to use computers for homework and assignments?* Students answered this way: Want to use somewhat more than before (n=5), Unchanged from before (n=9) and, want to use much more than before (n=1).

Question 13 asked: *How useful was using computers and mobile phones to learn English in this class?* Students answered this way: Somewhat useful (n=10), Unchanged (n=2), Very useful (n=3).

Question 14 asked: *How useful are electronic [digital] skills to your future career development?* Students answered this way: Somewhat useful (n=10), Unchanged (n=4), Very useful (n=2). One person said not useful at all.

Question 15 asked: *How difficult was computer-based assignments and homework outside of class?* Students answered this way: Somewhat difficult (n=6), Normal (n=5), Very difficult (n=4).

Question 16 asked: *How difficult was textbook-based handout assignments and homework outside of class?* Students answered this way: Somewhat difficult (n=7), Normal (n=8), Very difficult (n=2). One person said it wasn't difficult at all.

Question 17 asked: *To what extent have you achieved your goals for this English class?* Students answered this way: 80%-90% or A (n=6), 70-80% or B (n=5), 60-70% or C (n=3), 60% and under Z or failing grade (n=2).

Question 18 asked: *How much time did you required outside of class to do the homework assignments and study for the test?* Students answered this way: Under 1 hour per day (n=1), More than 1 hour per day (n=3), More than 2 hours per day (n=4), More than 3 hours per day (n=2), More than an hour per week (n=2), More than 2 hours per week (n=2), More than 3 hours per week (n=1).

Question 19 asked: *How was the textbook?* Here students typed in answers. The overwhelming majority of the responses stated that the textbook was easy to use and understand due to a number of factors including, color presentation, use of pictures, and organization of the useful travel English phrases. Two students said that more interesting conversations would be good beyond just the travel phrases and expressions.

Question 20 asked: *Did you use the CD from the textbook?* Eleven students said "No" while 5 did use the CD.

Question 21 asked: For those who said "Yes" in Question 20: *How often did you use the CD?* Three students said one to three times a month, while 1 student said two or three times a week.

Question 22 asked: For those who said "No" in Question 20: *Why didn't you use the CD?* Responses included: "Didn't have a CD player." "It's troublesome to play a CD." "I didn't have a device to play it on." "I didn't know when a good time was to listen to it." "It never occurred to me to use it." "I didn't have time to listen to the CD while studying."

Question 23 asked: *To what extent could you apply the technology skills you learned in this class to other classes?* Ten students answered they could the somewhat apply the skills, while 5 students didn't apply the skills at all.

Question 24 asked: *In what classes could you apply the skills?* Students stated the following classes: Career Development, TOEIC 400, Oral Fluency I, writing reports for the Okinawa Study tour, writing reports for the Nagano study trip, Introduction Wellness class.

Question 25 asked: *How much do you use the following social media and websites?* Students answers can be seen in Table 6.

Table 7 – Social media and website usage

		Not at all	Not very much	Occasionally	Often
1.	Facebook	4	0	7	4
2.	Twitter	3	1	2	9
3.	YouTube	0	1	7	7
4.	Mixi	3	4	5	3
5.	Skype	8	1	4	2
6.	Google+	3	3	6	3
7.	News sites	5	8	1	1
8.	Instagram	10	5	0	0
9.	Wikipedia	0	5	7	3
12.	Google Search	0	5	7	3
13.	Yahoo Search	3	5	1	6
14.	Bing Search	9	5	1	0
15.	Other Search	9	3	3	0
16.	Online dictionaries	2	3	8	2
17.	Google Translate	0	1	8	6
18.	Amazon	4	5	4	2
19.	Rakuten	4	5	5	1

Question 26 asked: *How useful would it be if the teacher put content from the textbooks (like conversations, phrases, pronunciation) as well as other information in the form of a YouTube video that you would see before and after class?* Ten students said it would somewhat useful, while 3 said it would be very useful. Two students said it wouldn't be useful.

Question 27 asked: *Do you think it would be good if the English teacher's lecture was recorded*

and uploaded to YouTube where you could view it and use it to practice speaking before you come to class? This lecture would be homework, while in class time would be focused on project work. Four students said it wouldn't be that good, while 6 students said it wouldn't be any different than class now, and 5 students said it would be good.

Question 28 asked: *Question 27's scenario is for an English class, but what do you think if we did the same thing with other classes? That is, the teacher's lecture would be viewable on YouTube anytime before class, while in class you would focus on project work.* Five students said it wouldn't be that good, while 6 students said it would be OK, and 4 students said it would be good.

Question 29 asked: *How much interest would you have if you did that kind of class, but online with a teacher overseas?* Fourteen students said they would be somewhat interested (n=12) or quite interested (2). Only 1 stated they would not be interested in it at all.

Question 30 asked: *How often do you use the computer large lab on campus?* Eight students answered, "two or three times a week." Six students answered "one to three times a month," and 1 student answered "not at all."

Question 31 asked: *How often do you use the computer small lab on campus?* Eleven students answered, "not at all." Three students answered "one to three times a month," and 1 student answered "two to three times a week."

Question 32 asked: *What do you think about the computer labs on campus?*
Several of the student responses include the following:

1. The connection in the small lab is bad.
2. The computers in the small lab are old and hard to use.
3. It's easy to connect to the Internet, though you can move around. Free printing is a lifesaver.
4. Computers in the small lab boot up extremely slow and are unresponsive. Both labs have computers that don't work, so it would be great if all of them could.
5. The computers are slow and should be replaced by Apple computers.
6. I really want the small computer lab changed because they're old and too slow.

Question 33 asked: *How useful would it be for your learning and job hunting if the small computer lab was changed to have a place where you could use iPads or a cart of iPads that could be used in other classrooms?* Eight students answered that it would be somewhat useful, while 7 said it would be quite useful.

Question 34 asked: *For those who do not have a tablet or an iPad, how much would you like to purchase one within the next 6 months?* Seven students answered they would like to purchase one a little, while 1 student said they really want to purchase one. The remaining 7 students said they have no intention to purchase a tablet or iPad.

Question 35 asked: *By the way, how are you answering this survey?* Thirteen students answered, "Campus computer lab", 1 student on their own laptop, and 1 student did the survey on their smartphone.

Question 36 asked: *Which do you think is easier to do, a paper-based survey or a web-based on?* Six students thought paper-based surveys were easier, while 8 thought the web-based survey was easier. One student said both are difficult to use.

Question 35 asked: *What did you want to study more or do more of in this class?* Students responded in the following way:

1. English idioms.
2. I wanted to know more specialized English words.
3. I wanted to do more activities not so many tests.
4. Grammar.
5. I want the speaking tests separated from normal lecture class.
6. I wanted to study the textbook more deeply.
7. I wanted to study more phrases.
8. I wanted to study a little more conversations used at hotels and restaurants.
9. I wanted to study how to explain in English Japanese culture and sightseeing spots.

Question 36 asked: *What did you think of class?* Here is a sample of the student responses.

1. It helped me learn a lot, about computers and tourism English.
2. I learned a lot about tourism.
3. I'm glad I was able to actually practice conversational English.
4. We had a lot of presentations so I felt I was able to do the assignments well.
5. It was a class where I could learn tourism English by moving by body and that was fun.
6. It was fun because it wasn't just a class where you sat at your desk facing front all the time, but actually used the English we learned from the textbook and practiced.

Summary Discussion

Taking what was learned from the survey conducted at the beginning of the 2012 spring semester, a follow-up survey was created and given at the end of the fall semester to a small group of fifteen students who took the *English for Tourism I* course I teach. The survey this time was created and conducted electronically online through Google Docs form generation service. Reasons for this ranged from students having been using Gmail and Google Docs throughout the semester in EFT1 and thus knew how to get online and take the survey; it was far easier to create, collect, and conduct the survey; and the data was automatically converted into and saved as spreadsheet data (Appendix 3) as well as a Summary of the spreadsheet data (Appendix 4). This saved hours if not days that would have spent inputting the data into a spreadsheet

manually and calculating the information. In creating the survey, questions can be designated "required" in order to submit the survey. This can ensure that students are taking the time to answer the questions more thoroughly. Because of the ease by which students can just click their mouse to answer, more than half of the students (8) felt an online survey was easier than paper-based ones (Question 36). On the other hand, the online survey was much longer in length, and that may have been the reason 6 students preferred paper-based surveys. That said, the online survey, which was five to six times longer than the spring survey, only took a few more minutes longer than the 2-page, front and back, paper-based survey taken in the spring semester. The ease by which technology enables the answering of the survey is probably a major factor into this.

The survey focused on specific tasks involving the use of technology by students within and outside of class, as well as hypothetical questions posed to students with regards to integrating computers, tablets and social media such as YouTube (part of Google) into the classroom in the future at the Faculty of Tourism.

Overall, the data suggests that tasks involving Gmail and Google Docs to mediate the learning of tourism and travel-related English did improve a majority of the students' digital literacy skills, especially with regards to tasks such as writing emails in English, creating documents in Google Docs and sharing them with both the students and teacher. Tasks (d.) through (h.) which involved using a computer were compared to and corresponded to tasks (i.) through (m.) which were done on a smartphone or tablet. Interestingly, task for task, students did marginally better on the same tasks using a computer than on their smartphone or tablet. Table 8 below highlights the differences.

Table 8 – Tasks on Computers vs. Smartphones or Tablets

Tasks	Tasks on Computer Number of students					Tasks on Smartphone Number of students				
	very well	well	somewhat well	somewhat not well	not at all well	very well	well	somewhat well	somewhat not well	not at all well
d / i	2	3	7	2	2	-	2	10	3	1
e / j	1	4	10	-	-	1	2	8	2	2
f / k	1	2	9	1	2	-	2	8	2	3
g / l	6	2	6	1	-	5	2	5	2	1
h / m	1	3	9	1	1	4	1	7	3	-
Totals	11	14	41	5	5	10	7	38	12	7

What is indicative of the times we live in is the observation that the tasks students did the best (well to very well) in were *search* related (g. / l.)(h. / m). Students were better at searching on their phones than on the computer in this case.

To understand the use of technology in the context of social interactions, tasks (p.) through (t.) involving contacting a friend when not sure about the class content corresponds to the same situation but with a teacher instead of a friend in tasks (u.) though (y.). Table 9 below highlights the differences.

Table 9 – Interaction with Friend or Teacher when not sure about the class materials

Tasks	Interaction with Friend Number of students					Interaction with Teacher Number of students				
	very well	well	somewhat well	somewhat not well	not at all well	very well	well	somewhat well	somewhat not well	not at all well
p / u	-	2	9	3	1	-	2	6	5	2
q / v	-	3	7	3	2	-	-	7	3	5
r / w	-	1	7	2	5	1	-	5	2	7
s / x	3	3	8	1	-	-	-	7	3	5
t / y	1	3	5	2	3	1	-	7	3	4
Totals	4	12	35	11	11	2	2	32	16	23

While overall ability to do the tasks "somewhat well" were similar regardless if it was asking a friend or teacher, students were less likely to seek out and or contact the teacher if a problem arose about the materials. Students were more likely to call a friend or send an SMS message if they had questions about the materials. In person, face-to-face interaction (t. / y.) was less likely to happen with the teacher. However, around 40% of the students appear hesitant about face-to-face communication with their friend, while they were better talking with them over their smartphones. Here it seems that students prefer technology to mediate oral communication over in person, face-to-face communication.

Question 20 asked students if they used the CD that came with their textbook. Most of them did not use the CD, even though I encouraged its use for practice. Reasons for not using the CD suggest that either (A) students really didn't have a CD player or device from which they could play the CD, or (B) had a computer with a DVD/CD-ROM, but didn't know they could play the CD through it. Question 4 addresses this answer, as all 13 of the 15 students did in fact have a laptop. Most Windows-based laptops still have DVD/CD-ROMs in them unlike the newer retina

display MacBook Pros from Apple, so here I'm going to assume they didn't realize that they could use their computers to not only play the audio, but also import it into a music application where they could then upload it to a music player like an iPod and listen to the material that way. Students may have thought that because it was part DVD player they couldn't play CDs. Because they were not using the CD, I tended to be the only resource for proper pronunciation practice. This meant spending more time in class involved in direct-instruction and model practice of the vocabulary and phrases and less time for more interactive activities.

Overall, the data collected from the survey shows that integrating specific technology and media, such as Gmail and Google Docs and using the Internet, can reduce anxiety related to using a computer as well as enhancing digital literacy skills in the guise of learning English through the medium. Students use social media and I was surprised to learn that many of them preferred Twitter to all others, including Facebook.

Lastly, at the end of the survey Questions 26, 27 and 28 posed hypothetical situations asking students to gauge the usefulness of video content created by the teacher and uploaded to YouTube for students to view anytime before and after the class. Question 27 expanded on this scenario by saying the teacher's in class lecture be recorded and uploaded to YouTube and be given as homework to view, take notes and practice before the next class. In class time would then be focused on project work. More students thought the original scenario would be more useful / better than second scenario, even though technically they are the same with Question 26 having less emphasis on in class time. It could be that the video recordings were not the problem but the project work that would be done in class that harbored reservations about the situation. Question 27 responses were split between the students evenly, 4 saying it wouldn't be good, 6 saying it would be OK and wouldn't be any different than class now, and 5 said it would be good. Question 28 poses the question of doing the same scenarios in 27, but in other non-language classes. That is, taking the teacher's lecture out of the classroom and putting it on YouTube. Students again were split evenly with 5 saying it wouldn't be good, 6 saying it would OK, while 4 said it would be good. While the data sample is very small with 15 students, the findings do suggest that there is some interest in using YouTube to deliver classroom content and or teacher's lectures to students in both language classes and non-English classes. The questions did not mention that this model of instruction and learning is part of the Flipped Classroom ideology and that typically videos are shorter – only 5 to 15 minutes long depending on the content - than in class lectures, which can take more than 30 to 60 minutes depending on the day, teacher, and how well the students are prepared.

Because there is interest in this approach among students in the Faculty of Tourism, the next section introduces CALL and the Flipped Classroom as a means to enhance learning and

classroom management. This in turn strengthens relationships that occur when implementing this model of learning to classes, especially second language classes that use technology such as computers, mobile devices and the Internet to assist in the learning process. This process would be referred to as CALL. What does adapting the Flipped Classroom model to CALL make it then?

5.　Flipped CALL – Flipped learning and Computer-assisted language learning

What is CALL?

Computer-assisted language learning (CALL) is broadly defined by Mike Levy (1997) as "the search for and study of applications of the computer in language teaching and learning". This approach to language instruction, learning and research has evolved dramatically in the last three decades with its practice and philosophies closely tied to those of educational technology (Chappelle, 2001). The advent of the personal computer in the 1980's, the Internet and Web in the early 1990's, and today's powerful laptop computers, touchscreen smartphones and tablet devices, provide CALL teachers transformative ways to enhance pedagogy that supports and sustains constructivist methodologies geared towards promoting learner-centered, differentiated learning, thinking and application of a second language both in and outside of the classroom.

The traditional impersonal PC-only 'e-learning' environment is giving way to a more blended, social learning space that includes learning in the 'cloud' through various online social media, courses and apps on mobile phones and tablets. Both online and in the classroom, smartphones, tablets and lighter and more powerful laptop computers are being used in a variety of ways that enhance pedagogical practices that make better use of classroom time, which in turn promotes more opportunity for language reflection, practice, production and assessment. This is a process students need in order to strengthen their skills, deepen their understanding of the content and show them how it connects with their lives, helping them build meaningful relationships that require a willingness to cooperate with others to convey and share ideas, concepts and strategies. Learning a language, I believe, is more personal to the individual than any other field of study because of its inherent nature of being most essential for humanity's social wellbeing – affecting everything we do, how and why we think the way we do, person to person, culture to culture. But time is against us. Time is perhaps the most essential requirement for success and achievement in language classes, and CALL classes, are no exception. This is time essential for students to internalize and apply the language and knowledge they've acquired with activities that strengthen communicative competencies that are in turn closely tied to digital literacy and sustainable lifelong learning skills. Humans are social beings. However, in classrooms today,

even in language classrooms, a lot of time is spent on doing non-social things, like lecturing to the "middle of the class." Lectures that waste valuable in-class time for application and performance assessment are bad lectures. Long, boring lectures effectively stifle student motivation thus causing them to disengage from the process, lag behind or even drop the class. Advanced students, aren't being challenged enough either, so they're bored too. And as classes limit the amount of time teachers can spend providing individual one-to-one feedback, they often shoot for the middle of the class hope 'learning' will rub off the capable students and onto the ones falling behind because teachers don't have the time to they wish they had to meet the individual needs of their students. What do you do then when you have a wide range of learners with different learning styles, want to provide more application and performance time in class, and want to give students proper feedback if they need it? One promising option is to 'flip' your classroom.

Changing Paradigms: What is the Flipped Classroom?

The growing adoption in the United States of the Flipped Classroom ideology and its practical approaches to teaching and learning in the 21st century is changing the fundamental classroom paradigm and contributing to greater adoption of effective blended learning approaches world-wide. The term "flipped classroom" is most attributed to Jonathan Bergmann and Aaron Sams, chemistry teachers at the Woodland Park High in Colorado. Bergman and Sams pioneered the use of screencasting and video podcasting in 2006 to deliver content for their high school science classes. In addition to Bergman and Sams, other key players in introducing and advancing the flipped classroom such as Dr. Lodge McCammon of the Friday Institute and Katie Gimbar, provide great insight into how the flip classroom has developed over the years and what it means for today's classroom and how it can play a critical role in sustainable CALL and building digital literacy skills. While qualitative research on flipped learning or reverse instruction is scarce, there is a wide range of resources found on the Internet that can go into far more depth than I can here. Please see the *Getting Started – 5 Essential Flipped Learning Resources* at the end of this section.

So, what is the flipped classroom?

The flipped classroom is about *time* and *attention*. At its most basic level, the flipped classroom takes the traditional lecture and time-shifts it out of the classroom. The typical in-class lecture is pre-recorded by the teacher and uploaded to YouTube or other content managements systems (CMS) such as Moodle or Edmodo for students to view at home or at other times outside of class. If students do not have access to the videos online, copies can be given to the students in a variety of creative ways, such as on a USB flash drive or DVD, or be viewed in

class. The videos are not exact copies of the lectures given in class and are often shortened versions of about 5 to 20 minutes long that hit on key concepts the students need to know prior to the next class so they can then participate in more learner-centered activities that reflect the kind of problem solving and thinking required when doing homework outside of class. In the flipped learning approach, students can learn at their own pace and with the video lecture - an extension of their teacher – students can paused, rewind, or fast-forward the teacher as they feel necessary in understanding the content. They control that process. This could never happen in a traditional lecture-centered classroom. The video can have an interactive component as well, such as questions posed to the student for them to think about and or answer back in class or during collaborative online chats with fellow students or with the teacher. The CMS applications mentioned above provide ways of synchronous or 'real time' chats, in addition to social media in Twitter, Facebook and Google Plus' Hangouts feature or within Google Docs themselves shared with the class. The delivery of the content is no longer a one-shot deal aimed at the middle of the class. Students can go back to the videos anytime and anywhere to review concepts. The video becomes the homework and the students in away get to take their teacher home with them. The homework or application of the content is now shifted to the classroom. Here is where *attention* is shifted.

In one part it resembles spiral learning in that after students are introduced to the content on the video and as they begin the next class they've already begun to construct a frame of reference in relationship to the knowledge and information presented based on associations and connections in their own lives. It becomes more personalized and meaningful at an individual level, not aimed at the middle of the class. As students work through the content in class, however, with assistance from the teacher who now has more time to assist struggling students, mentoring one-on-one if necessary, or with their peers, the student begins to master the content. At some point in the process, and it could be different for each student, the student must demonstrate their knowledge or ability to 'perform' the concepts. One of the first pioneers of flipped learning, Aaron Sams, is interviewed in the *GOODMagainze* YouTube video "*Teaching for Tomorrow: Flipped Learning*," where he explains his approach to assessment in his high school science class this way:

> I also give them the option if they don't want to take my test, to demonstrate their understanding some other way. So I have students making video games, writing comic books, and creating art projects. So, yeah, the sky's the limit. Whatever they want to do. As long as they can prove to me that they get it, that they're learning, that they understand these things, and it's good enough for me.

In the case of a CALL language class assessment, students could demonstrate their understanding of expressions, conversations, grammar, or even body language through other creative projects like making a video, podcast, poster or presentation. Moving the lectures out of the classroom effectively shifts the focus away from a teacher-centered lecture-based classroom to a more learner-centered classroom where students take ownership of their learning by being actively involved in activities that support reflection, practice and production or application of the content. These could also occur outside of class on collaborative projects. What about the teacher?

Dr. Lodge McCammon (2013) explains how flipped learning can build better teachers and students in one of his many *flippedtraining* channel videos on YouTube. In his video "Flipped Classroom Training Program – Efficient, Reflective and Mastering Relationships," and illustrated in Table 10 below, McCammon presents how research has shown that better teachers equal better student success and that the "Flipped Classroom is the most powerful way of strengthening all of these attributes in any teacher."

Table 10 – Better Teachers = Better Student Success

Adapted from Dr. Lodge McCammon's YouTube video

Flipped classroom teachers are…   Flipped classroom students have…

Better Teachers…   **=**   **Better Student Success…**

because they are..   because…

Efficient Lectures are condensed to 5-15 minute videos or screencasts	→ which	- increases class time providing more time for collaboration, projects
Reflective Ongoing reflection of and improvement of pedagogy…	→ which	- increases teacher confidence, content knowledge and skill increases.
Masters at relationships Building and strengthening connections with parents and students…	→ which	- increases teacher, student and parent accountability for learning.

The teacher and her roles in the classroom aren't diminished because the direct-instruction of the content is taken out of the classroom and replaced by a video. With the use of videos, in a way, the students get more of the teacher through the flipped classroom approach because the

delivery, learning and application of the content is happening both inside and outside the classroom – in actuality, a blended learning approach where online and offline interaction directly supports learning goals (Makice, 2012). Teachers can use the extra time in-class for more efficient activities that promote higher order thinking that informs more creative application and production of the content.

Bergmann and Sams (2012) warn that you can still have a flipped classroom *without* videos and that the great benefit is the in-class time that every teacher must evaluate and redesign. Advances in computer technology and software has made the creation of screencasts or video tutorials easier to do and self-publish to websites like YouTube or to CMS like Moodle and Edmodo. However, there are many teachers who do not want to record videos. They may not have the skills, equipment, or support staff to assist in the process. They maybe camera shy or simply their in-class lecture is difficult to reproduce in a video format. That is OK, according to Ramsey Musallam, who defines "flip teaching" as "leveraging technology to appropriately pair the learning activity with the learning environment." This flexibility is why technology has the potential to be so transformative in education. Musallam (2012) says this about the transcendent nature of technology and its ultimately place in education:

> No technology can make the honor of being a teacher an easier thing. Techniques, pedagogies, etc., can make what we do more efficient, but only if we first, through hours and hours of sweat, empathy and failure, work towards a system that transcends technology.

In a flipped classroom the teacher's role becomes even more critical now because she has more time to create spaces for meaning-making in class, facilitating, mentoring, assisting and challenging students as they apply the knowledge and skills they learn from the videos and in previous classes. Typically, a student would go home and do homework. If they struggled with a concept or didn't feel motivated to do it, no one could really help them. They come back to class not having learned and feel embarrassed or hesitant to participate actively in class. It becomes a vicious cycle for many students. With the flipped classroom both the teacher and student can become more efficient, reflective and creative in applying their knowledge and skill. In the end, it provides a means to for students and teachers to connect at a deeper level that promotes higher order thinking, creativity and tangible achievement that can be assessed in alternative ways other than the one-size-fits-all mentality of standardized testing. Makice (2012) warns though that the "success with a flipped class is a combination of understanding the pedagogical goals and using the technology and method to support them." What does this mean in terms of a Flip-

based CALL class or Flipped CALL?

Very little research is out there specifically covering flipped learning and CALL together, though the teaching and learning approaches found in flipped learning are not new and that reverse instruction has been around a long time. Bergmann and Sams (2012) have spent the last 6 years modifying their initial approaches to flipped learning they discuss in their 2012 book *"Flip your Classroom: Reach Every Student in Every Class Every Day."* In their book they do mention briefly about a Spanish teacher whose class they visited and whose students were actively engaged in speaking activities in class. He had told Bergmann and Sams (2012) that "the videos freed him up to do more of these engaging activities in his classroom." Activities were the key to enhance student engagement and application and use of the content to create something meaningful. Flipping in such a way moved the classroom model away from *consumption* to *production*, which in the terms of a second language class, is one of the most critical factors for acquiring the knowledge and *communicative* skills to perform in the target culture. Flipped learning approaches can enhance CALL approaches to learning and teaching through applications of the technology that are appropriate for the target learners, enabling a more sustainable path towards mastery in a given area. In the process it builds on the varied computer skills the students already posses, but challenges them to be more collaborative through technology and accountable for their own learning. A flipped classroom is just part of one stage towards mastery of the content. Bergmann and Sams (2012) point to how connected the flipped-mastery class model is in how we deal with digital literacy:

> A flipped-mastery classroom takes the principles of mastery learning and marries them with modern technology to make a sustainable, reproducible, and manageable environment for learning.

Flipping the Language Classroom for Sustainability of CALL

The flipped classroom is a paradigm shift in our traditional thinking of what the classroom is, what the roles of the teachers and students are, and how learning is mediated through the process of technology applications that the pedagogy makes invisible. The flipped classroom is, however, just a beginning of part of a larger process of reflective improvement on pedagogical frameworks that inform sustainable delivery and long term application of content that promotes long term learning skills – both general literacy as well as digital literacy. As McCammon stated, better teachers are ones who are reflective in how they teach and doing so can help improve their teaching and make them more efficient and a master of building relationships with their students. Kennedy and Levy's (2008) factors for long term sustainability of CALL should be

considered when implementing new styles of teaching and classroom management. Their research into the factors for success in a technology world predicated on change, leads to three key principles that assist in sustainable outcomes for CALL: tailoring, integration and iterative development process (Kennedy and Levy, 2008).

The first entails understanding how the application of approaches is tailored for the specific context or environment. What may be OK for one group of students may not be appropriate for others. The second is integration, what Kennedy and Levy state is "ensuring the CALL component becomes an essential part of the course it is designed for and is beneficial to all the students for a sustained period of time, not just an extra option that appeals until the novelty wears off, and is useful to only some of them." This also involves developing approaches to training students (and teachers) how to convey the pedagogical aims with a technological framework that informs the use or application of the content that can also be linked to its assessment (Kennedy and Levy, 2008). According to Kennedy and Levy, this linking of use or production of the language to assessment is essential in forcing students to take the process more seriously. This would be critical in a flipped classroom that requires students to view videos outside of class, where control over how and when to view the videos is left to the students. How do you ensure they are viewing them? One approach is to having them notes while viewing and submitting them at the next class. Other ways is to make it as interactive as possible. Online, students could write in the comments section on the page where the video is embedded questions or comments during or after viewing the video lecture that other students could answer or respond to in both synchronous (real-time) and asynchronous situations. What is important here, however, is teaching students how to view and use the videos in an efficient and effective way that will help understand both the content and why it's important for them to learn. Lastly, the iterative development process involves viewing the entire process as an on-going project "experimentation, evaluation and enhancement" (Kennedy and Levy, 2008). This highlights the importance of course evaluation surveys that allow us to get valuable feedback into how useful the applications were in class and if the approaches used were interesting and fun. One way to do this is in an ongoing way throughout the course is to have students create a weekly reflective journal that makes them think and internalize what they've learned during that week and what they could expect in the following week. The key for lower level students who may be hesitant to using technology (as well as teachers) is starting small – maybe one or two videos a month instead of every class period. The benefits of leveraging flipped classroom approaches, driven by pedagogy, is that it can be enormously more engaging for students who have been surrounded by technology all their lives and will use it more in their lives after graduation. To me, Flipped-based CALL is about three things:

1. Enabling students to be agents in their learning; taking responsibility for their own learning by understanding their responsibilities, their skills, abilities and needs better;

2. Leveraging technology to build a student-centered, blended learning environment that meaningfully engages the cultural and social context of our students;

3. Directs students on a more sustainable path towards mastery in a second language and building and applying both digital and lifelong learning skills that can be transferrable.

The flipped learning approach can accomplish both the communicative outcomes we desire in our students as well as prepare them better for professions that increasingly require the willingness to cooperate through technology-mediated social networks. More implementation and research needs to be done however on the effectiveness of the flipped classroom approach, especially in a CALL classroom setting. Previously, I have used blended approaches and partial flipping of content in my English courses, but never a full flipped experience. In the spring of 2013, I plan to completely flip one or more of my English courses at the Faculty of Tourism to track the effectiveness of the approach, students perceptions with using technology and whether or not the approach is appropriate for other courses within the department. To help you get started, please check out the resources below as well as in the References section at the end.

5 Essential Flipped Learning Resources for Getting Started

1. **The Flipped Classroom Infographic,** *Knewton*
   http://www.knewton.com/flipped-classroom/

2. *Flip your classroom: Reach every student in every class everyday.*
   Johnathan Bergmann and Aaron Sams (2012).

3. *The Flipped Class: What it is and What it is Not*
   Johnathan Bergmann, Jerry Overmyer and Brett Willie (2012).
   http://www.thedailyriff.com/articles/the-flipped-class-conversation-689.php

4. *Intro to The Flipped Classroom For Students*
   Crystal Kirch (20, July, 2012). YouTube: http://youtu.be/ZzJbA2Y2S5A.

5. **Flipped Learning.** *Scoop.it!*
   http://www.scoop.it/t/flipped-learning

6. CONCLUSION

Digital media and technology are increasingly mediating language and communication within and across cultures in society. We need to understand the disconnect that exists between the traditional classroom methodologies and how technology is transforming education and society in the 21st Century. Firstly, sustainable literacy and digital literacy skills are more integral to the success and development of knowledge-based societies, emerging new economies and the growing number of service-based professions that they support. Moreover, lifelong learning skills are critical not just for the future 21st century workforce but also for global citizenship. Sustainable digital literacy skills gained within flipped learning-based CALL classrooms can provide students with a more consistent ownership of learning that then can be applied to a wider range of uses and professions where a willingness to cooperate with others, and to convey and share ideas, concepts and strategies exists. All of this can lead to sustainable innovation and development by promoting global citizenship within education.

Flipped classrooms and flipped learning-based CALL classrooms consist of learner-centered, pedagogy-first approaches that shift the traditional direct-instructed lecture to outside the classroom; typically viewed and studied by students through instructional videos, screencasts or podcasts. This frees up more time in class for teachers to act as a more efficient guide and to challenge students more on an individualized basis through communicative, learner-centered activities in which differentiated learning can lead to higher order thinking, collaboration, risk-taking, self-directed enquiry and self-reflection. All of these define active learning - an essential part of sustainable literacy that involves a wide range of practices people are empowered to participate in, through having lifelong learning skills in using language in specific ways (Stibbe, 2010). Making this even more complex is the ubiquity of technology, which is blurring the lines between the 'real world' and the 'classroom.' Warschauer (2011) claims,

> Educational reform must address the kinds of skills and practices needed in
> the world our children will grow up in, and better use of technology in schools
> is essential for achieving this goal.

Everything in education today points to student engagement and its relationship with motivation and learning in, and out of, the classroom and the way the methodologies ultimately need to change to meet the individual needs of our students. As the results here showed, students are unique and each has a different learning style and learning speed. Moreover, the surveys highlight three main points regarding enhancing education, pedagogy, language and

digital literacy skills through technology: (1) the more exposure students had to computers and knowledge application strategies, the more students digital literacy and communication skills improved; (2) ongoing use of digital media (computers and Google-based services) improved overall confidence in their use; and (3), interest in using technology more as tool or process for learning and studying exists within the Faculty of Tourism. Students may not be completely 'digitally native' in the sense they are "tech-savvy," as the surveys showed, but flipping aspects of the content forced students to take greater responsibility for their work and production of the language. Additionally, with regard to the Flipped Classroom, the flipping of content "speaks the language of today's students" (Bergmann and Sams, 2012) and if we just ignore the use of technology in our classes we risk further disengagement from them and lower satisfaction and achievement overall.

The Flipped learning ideology may not be the answer to every situation, but it shows great promise. The recommendation here is that teachers, especially language teachers, should examine the flipped classroom ideology to check its suitability to their own pedagogical philosophies and classroom circumstances. By sharing experiences of this approach through online communities and in departments university-wide, researchers and educators will gain further insights into its application and success, especially regard to university level courses in Japan. Accordingly, more discussion and research is necessary to further the pedagogical changes necessary to meet the needs of our students. Flipping the language classroom is one way we can do this while creating complementary ways in which we can add to and enhance CALL teaching and learning in the 21st century.

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[Educational Technology Student Survey 2012 (Spring Semester, April)]

パソコンや携帯端末をどう使いますか?

2012年度 教育テクノロジーアンケート調査 Educational Technology Student Survey 2012

観光学部では、パソコンや携帯端末をツールとして、Eラーニングソフトウェアを使った教育を実施しています。現在の各学生の現状を把握し、今後より良い学習環境を整備するために、このアンケート調査を実施します。ご自分のテクノロジーの使用と勉強法を客観的に考え、以下の質問にお答えください。 ご協力をお願い致します。

1. 個人情報　性別: ○ 男性　○ 女性　　学年: ○ 1年生　○ 2年生　○ 3年生　○ 4年生　　出身地: _____

2. 大学に入学する前に何年間パソコンを使ってきましたか。 _____ 年間

3. 大学に入学してから、平均的に授業のためにどのくらいパソコンを使っていますか。

　　　　　○ 全く使わない　　　○ 年1〜2回くらい　　　○ 月1回〜2回　　　○ 毎週　　　○ 毎日

4. そのパソコンは、自分のパソコンですか、キャンパスのパソコン室のパソコンですか。

　　　　　○ 自分のPC　　　○ キャンパスPC　　　○ 両方　　利用割合　自分のPC_____%　　キャンパスのPC_____%

5. パソコンを使う自信はどのくらいありますか。

　　　　　○ とても自信がある　　　○ 少し自信がある　　　○ あまり自信がない　　　○ 全く自信がない

6. 持っているパソコンのタイプ:　○ デスクトップ　　　○ ノートブック　　　○ 持っていない

7. メーカ名:　○ ACER　　○ APPLE　　○ ASUS　　○ DELL　　○ HP　　○ LENOVO　　○ SAMSUNG　　○ SONY

　　　　　○ TOSHIBA　　○ その他: _____

8. パソコンの名称: _____

9. パソコンOS:　**Windows** ○ XP　○ Vista　○ 7　**Mac** ○ 10.5　○ 10.6　○ 10.7　その他 _____

10. 持っている携帯機のタイプは何ですか。

○ 携帯電話　　　　○ タブレットPC　　　○ 他のタッチスクリーン機　　　○ 電子辞書　　○ その他 _____
(スマートフォンも)　(アップルのiPadなど)　タッチパネル (mp3プレーヤなど)

11. 各機の名称:　携帯電話: _____　　タブレットPC: _____　　他のタッチスクリーン機 _____

　　　　電子辞書 _____　　　その他 _____

12. どこでパソコンや携帯機を主に使いますか。**各機○の2カ所だけを記号してください。**

ノートブックPC	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____
タブレットPC	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____
タッチスクリーン機	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____
電子辞書	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____
携帯電話	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____
その他	○ キャンパス内	○ 授業内	○ 家	○ レストランやカフェ	○ その他 _____

13. 今後、パソコンや携帯機を購入する予定について:

○ 3ヶ月以内に購入したい　○ 6ヶ月以内に購入したい　○ 12ヶ月以内購入したい　○ 今年は買わない　理由_____

14. これから購入したいパソコンや携帯機種は何ですか。 _____

15. 購入の目的は何ですか。 _____

16. パソコンや携帯機を購入する前に、重視する点は何ですか。順序ランキング(1〜10)を□に記入して下さい。

　　□ 価格　　□ スクリーンサイズ　　□ OS　　□ メーカ名　　□ 機能性　　□ ソフトウェア
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　タッチ、スピード　ゲームなど
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　ネット接続など

　　□ メモリー　　□ HDDスペース　　□ 持ちやすさ（モビリティー）　　□ 通話データなどのプラン
　　　RAMメモリー　　内蔵ストレージメモリー　　　　　　　　移動性　　　　　　電話会社によるプラン (3G、LTE、無線LANなど)

　　※ 1 = 一番大切　　　　その他 _____

14. 次のコンピュータータスクをどのくらいしますか。　→　メインPCはどれですか。○ デスクトップ　○ ノートブックPC

a. ゲームをする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
b. 授業ノートを取る	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
c. 宿題をする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
d. MSワードを使ってレポートなどを書く	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
e. MSエクセルで計算したりする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
f. MSパワーポイントを使いプレゼンを作成する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
g. インターネットを使う	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
h. ウェブ検索する (サーチエンジンは＿＿＿＿)	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
i. Eメールを使う	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
j. ウェブ上のEラーニング学習をする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
k. YouTubeビデオを見る	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
l. 写真を編集する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
m.ビデオを編集する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
n. 写真をウェブやブログに載せる	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
o. ウィキペディアを使う	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
p. 教師によるファイル（メディア）をダウンロードする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
q. 教科書や本を注文する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
r. 英語などの語学を学ぶ (＿＿＿＿語)	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
s. Facebookで友人とチャットする	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
t. Skypeで友人と会話する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
u. Skypeで教師と会話する	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
v. ニュースを読む	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
w.外国語のウェブサイトを読む (＿＿＿＿語)	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日
x. スポーツウェブサイトを読む	○ しない	○ 年1~2回	○月1回~2回	○ 毎週 ○ 毎日

15.タブレット（iPadなど）か、インターネットに接続できる携帯端末を持っている学生は、上のタスクの中に主なよくする５つのはどれですか。(a~x) を＿に記号してください。 ○ タブレット　○ 携帯電話　　＿＿ ＿＿ ＿＿ ＿＿ ＿＿

16.次の質問に、賛成するか賛成しないかをマークしてください。

a. パソコンは、宿題などを行うのに必要だ。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
b. 大学の勉強の目的でパソコンを持つことは必要だ。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
c. パソコンを使うと、勉強と自習が、より面白くなると思う。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
d. パソコンとソフトなどについてもっと知りたいと思う。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
e. 授業内でパソコンがあったら大変便利だ。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
f. 自分は、授業中、よくノートを取る方だ。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
g. パワーポイントの講義は、分かりやすい。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
h. 黒板やホワイトボードの講義は、分かりやすい。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
i. パワポのスライドのプリントがあったら便利だ。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
j. パワポのプリントがあれば、ノートを取る必要が少なくなる。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
k. タブレット（iPadなど）を使用する授業に興味がある。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
l. PCを使った遠隔授業やオンライン授業に興味がある。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
m. Eラーニング(PCを使った学習) に興味がある。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
n. 英語などの語学授業で、PCやタブレットを使いたい。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
o. 教師のパワーポイントの講義形式が多い。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
p. 普通の教科書よりもタブレットでの電子教科書を使いたい。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
q. 学生全員は自分のノートブック（PCやタブレット）を持つべき。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
r. 教師が様々なメディア(ビデオや音声）を使う。	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない
s. 授業内でパソコンやウェブサイトを多く使用してほしい	○ 賛成	○ やや賛成	○あまり賛成しない	○ 賛成しない

17. パソコンや教育用テクノロジーに関する意見がありましたら、書いてください。

_____

Appendix 1 Image - 2 (Survey Page 2)

APPENDIX 2 – English for Tourism I (2012) テクノロジー使用・コンピュータ支援語学学習(CALL) 後期末授業アンケート[English for Tourism 1 (2012) – End-of-Term Technology Use and CALL Survey]

Note: This survey was created in Google Drive's Google Docs and can be accessed here:
https://docs.google.com/spreadsheet/viewform?fromEmail=true&formkey=dHo5bmV2d1dMci00bzNyeEtJams1RGc6MQ.

English for Tourism I (2012) - テクノロジー使用・コンピュータ支援語学学習(CALL) 後期末授業アンケート

English for Tourism Iの学生へ
現在の各学生の現状を把握し、今後より良い学習環境を整備するために、この授業の後期末アンケート調査を実施させて頂きます。
ご自分のテクノロジーの使用と勉強法を客観的に考え、アンケートの質問にお答えますようご協力をお願い致します。
(10分程度)
* Required

性別 *
☐ 女性
☐ 男性

学年 *
Year
☐ 1年
☐ 2年
☐ 3年
☐ 4年

留学生ですか。
☐ Yes
☐ No

ノートパソコンをお持ちですか。 *
☐ Yes
☐ No

Yesの方：どのようなノートPCをお持ちですか。 *
☐ Windows ウィンドウズ
☐ Mac マック
☐ その他
☐ ノートパソコンは持っていないが、デスクトップがある

どのような携帯電話をお持ちですか。 *
☐ フリップ/スライドフォン式の携帯電話（ノンタッチパネル）
☐ スマートフォン（タッチパネル式）

フリップ/スライドフォン式の携帯電話（ノンタッチパネル）の方:ブランドメーカーは何ですか。
メーカー名が分からない場合は、機種番号を書いてください
☐ [_____]

Appendix 2 Image – 1 (Online End-of-Term Survey Screenshot 1)

スマートフォンタッチパネル式の方、ブランドメーカーは何ですか。 *
- ☐ iPhone (iOS)
- ☐ アンドロイド (Samsung Galaxy Noteなど)
- ☐ ウィンドウズ　フォン
- ☐ Other: [_____]

どのようなタブレットをお持ちですか。※電話機能のない機器 *
すべてお持ちのタブレットをチェックしてください。
- ☐ iPad Wi-Fi
- ☐ iPad mini Wi-Fi
- ☐ iPod touch Wi-Fi
- ☐ Kindle Fire Wi-Fi
- ☐ iPad Wi-Fi + Cellularモデル
- ☐ iPad mini Wi-Fi + Cellularモデル
- ☐ 持っていない
- ☐ Other: [_____]

あなたは、電気機器をどのくらい上手に使いますか *
- ☐ 全く上手ではない
- ☐ 上手ではない
- ☐ 普通だ
- ☐ 少し上手だ
- ☐ かなり上手だ

この授業を受けた後、技術や電気機器に対するあなたの興味はどのように変わりましたか。 *
- ☐ 前より全く興味を持たないようになった。
- ☐ 前より少し興味を持つようになった。
- ☐ あまり変わらない
- ☐ 前よりとても興味を持つようになった。

この授業を受けた後、技術や電気機器の使用回数の改善はありましたか。 *
- ☐ 全く改善しなかった。
- ☐ 改善しなかった。
- ☐ 変わらない
- ☐ 少し改善した
- ☐ かなり改善した。

Appendix 2 Image - 2 (End-of-Term Online Survey - Screenshot 2)

この授業を受けた後、以下の技術に関わるタスクがどのくらいできるようになりましたか。 *

	全くできない	あまりできない	少しできる	かなりできる	とてもできる
a. コンピュータを使用して、基本的なことを行うために インターネットを繋げ 、メールを送信し、文書を作る。	○	○	○	○	○
b. コンピュータを使用して、 ワード(MS Word)ドキュメントを作る。	○	○	○	○	○
c. コンピュータを使用して、作ったWordドキュメントを Eメールに添付し、送信する。	○	○	○	○	○
d. コンピュータを使用して、 Googleドライブで英語のドキュメントを作る。	○	○	○	○	○
e. コンピュータを使用して、 Googleドライブで作ったドキュメントを共有する。	○	○	○	○	○
f. コンピュータを使用して、 英語でEメールを書き、送信する。	○	○	○	○	○
g. コンピュータを使用して、ウェブサイト、情報、またビデオなどを見つけるために、GoogleやYahoo、Bingのような検索エンジンを使用する。	○	○	○	○	○
h. コンピュータを使用して、元のドキュメントとソースを見つけるためにウィキペディアのようなウェブサイトを使用する。	○	○	○	○	○
i. 携帯電話やタブレットを使用して、Googleドライブで英語のドキュメントを作る。	○	○	○	○	○

Appendix 2 Image - 3 (End-of-Term Online Survey - Screenshot 3)

j. 携帯電話やタブレットを使用して、Googleドライブで作ったドキュメントを共有する。	○	○	○	○	○
k. 携帯電話やタブレットを使用して、英語でEメールを書き、送信する。	○	○	○	○	○
l. 携帯電話やタブレットを使用して、ウェブサイト、情報、またビデオなどを見つけるために、GoogleやYahoo、Bingのような検索エンジンを使用	○	○	○	○	○
m. 携帯電話やタブレットを使用して、元のドキュメントとソースを見つけるためにウィキペディアのようなウェブサイトを使用する。	○	○	○	○	○
n. 見つけた情報（ドキュメント・ソースなど）を英語で参考文献に引用する。	○	○	○	○	○
o. 見つけた情報（ドキュメント・ソースなど）を日本語で参考文献に引用する。	○	○	○	○	○
p. 授業課題に関しては不明点がある時には、Emailで友達に尋ねる。	○	○	○	○	○
q. 授業課題に関しては不明点がある時には、SMSで友達に尋ねる。	○	○	○	○	○
r. 授業課題に関しては不明点がある時には、Facebookで友達に尋ねる。	○	○	○	○	○
s. 授業課題に関しては不明点がある時には、携帯電話で友達に尋ねる。	○	○	○	○	○
t. 授業課題に関しては不明点がある時には、フェイストゥフェイスで友達に尋ねる。	○	○	○	○	○

Appendix 2 Image - 4 (End-of-Term Online Survey - Screenshot 4)

質問					
u. 授業課題に関しては不明点がある時には、Emailで先生に尋ねる。	○	○	○	○	○
v. 授業課題に関しては不明点がある時には、SMSで先生に尋ねる。	○	○	○	○	○
w. 授業課題に関しては不明点がある時には、Facebookで先生に尋ねる。	○	○	○	○	○
x. 授業課題に関しては不明点がある時には、携帯電話で先生に尋ねる。	○	○	○	○	○
y. 授業課題に関しては不明点がある時には、フェイストゥフェイスで先生に尋ねる。	○	○	○	○	○
z. 授業課題に関しては不明点がある時には、自分でインターネットなどを使用して、解決する。	○	○	○	○	○
aa. 授業課題やプロジェクトワークをするのには、クラスメイト（チームメンバー）と一緒によく協力し、完成する。	○	○	○	○	○

この授業を受けた後、前より課題や宿題のためにコンピュータをどのくらい使いたくなりましたか。 *

☐ 以前より全く使う気はない。
☐ 以前より少し使いたくなってきた。
☐ 以前と変わらない
☐ 以前よりとても使いたくなってきた。

この授業を受けた後、英語を学習する上で、コンピュータや携帯機器などの使用でどのくらい役に立ちましたか。 *

☐ 全く役に立たなかった。
☐ 少し役に立った。
☐ 変わらない
☐ とても役に立った。

Appendix 2 Image – 5 (End-of-Term Online Survey – Screenshot 5)

この授業を受けた後、将来のキャリア形成のために電気機器の使用スキルはどのくらい役に立ちますか。 *

☐ 全く役に立たない。
☐ 少し役に立つ。
☐ 変わらない。
☐ とても役に立つ。

この授業を受けた後、授業外のコンピュータ使用に関わる課題や宿題はどのくらい難しかったですか。 *

☐ 全く難しくなかった。
☐ 少し難しかった。
☐ 普通だった
☐ とても難しかった。

この授業を受けた後、授業外、教科書を使用して、プリント式の課題や宿題はどのくらい難しかったですか。 *

☐ 全く難しくなかった。
☐ 少し難しかった。
☐ 普通だった。
☐ とても難しかった。

この観光英語の授業の狙い・目的をどれくらい達成できましたか。 *

☐ 90%〜100%
☐ 80%〜90%
☐ 70%〜80%
☐ 60%〜70%
☐ 60%以下

授業課題やテストのために、授業外時間はどれくらい必要でしたか。 *

☐ 1日で1時間以下
☐ 1日で1時間以上
☐ 1日で2時間以上
☐ 1日で3時間以上
☐ 1週間で1時間以上
☐ 1週間で2時間以上
☐ 1週間で3時間以上
☐ 1週間で4時間以上

Appendix 2 Image - 6 (End-of-Term Online Survey - Screenshot 6)

この授業の教科書はいかがでしたか。 *

良い点・改善点について具体的に説明してください。

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教科書のCDを使用しましたか。 *

- ☐ Yes
- ☐ No

Yesの方は、どれくらい使いましたか。

- ☐ 月１〜３回
- ☐ 週２〜３回
- ☐ 毎日
- ☐ Other: [＿＿＿＿＿＿＿]

NOの方は、使用しなかった理由は何ですか。

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この授業で習ったテクノロジー技・スキルを、他の授業でどのくらい適用しましたか。 *

- ☐ 全く適用しなかった。
- ☐ 少し適用した。
- ☐ よく適用した。

他の授業で、あなたがこの授業で習得した技・スキル、または英語を適用しましたか。

例（授業名）：TOEIC 400, キャリア形成、海外研修など

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Appendix 2 Image - 7 (End-of-Term Online Survey - Screenshot 7)

以下のソシャルメディアやウェブサイトをどのくらい使っていますか。 *

	全く使用しない	あまり使用しない	たまに使用する	かなり使用する
Facebook	○	○	○	○
Twitter	○	○	○	○
YouTube	○	○	○	○
Mixi	○	○	○	○
Skype	○	○	○	○
Google+	○	○	○	○
ニュースサイト	○	○	○	○
インスターグラム Instagram	○	○	○	○
Wikipedia	○	○	○	○
Googleサーチー	○	○	○	○
Yahooサーチー	○	○	○	○
Bing サーチー	○	○	○	○
他のサーチー	○	○	○	○
オンライン辞書 (Gooなど)	○	○	○	○
Google 通訳 (Google Translate)	○	○	○	○
Amazon	○	○	○	○
Rakuten	○	○	○	○

もし教師は、教科書の内容（会話やフレーズや単語の発音など）また他の教えることをYouTubeで見られるビデオ形式でレクシャーチュートリアル（学習用）を授業前と授業後に提供したら、どのぐらい役に立ちますか。 *
○ 全く役に立たない。
○ 少し役に立つ。
○ とても役に立つ。

YouTubeビデオ教材などを、普段の授業内のレクシャーの代わりに"宿題"として予習をし、次回の授業までに、英会話のスピーキングの練習し、実際に授業に来る時には、以前宿題の課題を授業内で行います。Youtube教材で自宅などで練習してきた会話などを実際に教師に発表し、プロジェクトワークに授業内に取り組むという新しい授業形態について、良いと思いますか。 *
○ あまり良いと思わない。
○ 普通だと思う。今までの授業形式と変わらない
○ 良いと思う。
○ とても良いと思う。

Appendix 2 Image - 8 (End-of-Term Online Survey - Screenshot 8)

17番のシナリオを、英語の授業だけではなく、他の授業科目でも実施することについてどう考えますか。 要するに、現在のクラスレクシャーをすべてビデオ形式で、YouTubeや交換できるビデオファイルとして自宅やキャンパスで見られ、 授業内では、学生自身が中心となり、プロジェクト課題に取り組むという授業形式です。 *

○ あまり良いと思わない。
○ 普通だと思う。
○ 良いと思う。
○ とても良いと思う。

17番のシナリオで、オンライン(海外遠隔教師と)の英語の授業を受けることに、どのくらい興味をお持ちですか。 *

○ 全く興味がない。
○ 少し興味がある。
○ かなり興味がある。

一般的にはキャンパス内のコンピュータ室をどれくらい使用しますか。 *
★大きいパソコン室

○ 全く使用しない。
○ 月1～3回。
○ 週2～3回。
○ 毎日。

一般的にはキャンパス内のコンピュータ室をどれくらい使用しますか。 *
★小さいパソコン室

○ 全く使用しない。
○ 月1～3回。
○ 週2～3回。
○ 毎日。

キャンパス内のコンピュータ室・設備・コンピュータやソフトはいかがですか。 *
良い点・改善点 (あったら良いことなど) について

小さいコンピュータ室の古いパソコンを入れ替えて、iPadのタブレットのある、あるいは授業中に借り出しiPadのある設備があったら、学習や就職活動などにどれくらい役に立ちますか。 *

☐ 全く役に立たない。
☐ 少し役に立つ。
☐ かなり役に立つ。

Appendix 2 Image - 9 (End-of-Term Online Survey - Screenshot 9)

iPadや他のタブレットを持っていない方、半年以内どれくらい購入する気がありますか。 *

☐ 全く購入しない。

☐ 少し購入したい

☐ かなり購入したい

☐ Other: _____

ところで、どのようにこのアンケートを答えていますか。 *

☐ キャンパス内のパソコン

☐ 自分のノートパソコン

☐ 自分のスマートフォン

☐ 自分のタブレット（タッチパネル機器）

☐ 友達のノートパソコン

☐ 友達のスマートフォン

☐ 友達のタブレット（タッチパネル機器）

☐ Other: _____

ウェブ上のアンケートか、紙ベースのアンケートか、どちらの方がやりやすいですか。 *

☐ ウェブ上のアンケート

☐ 紙ベースのアンケート

☐ どちらもやりづらい

この授業では、もっと勉強したかったこと、したかったことはありますか。

最後ですが、この授業についての感想は何ですか。 *

Submit

Appendix 2 Image — 10 (End-of-Term Online Survey — Screenshot 10)

APPENDIX 3

Screenshot 1 of EFT1 Survey data automatically collected in spreadsheet form.

Google Docs (Google Drive)

APPENDIX 3

## Screenshot 2 of EFT1 Survey data automatically summarized
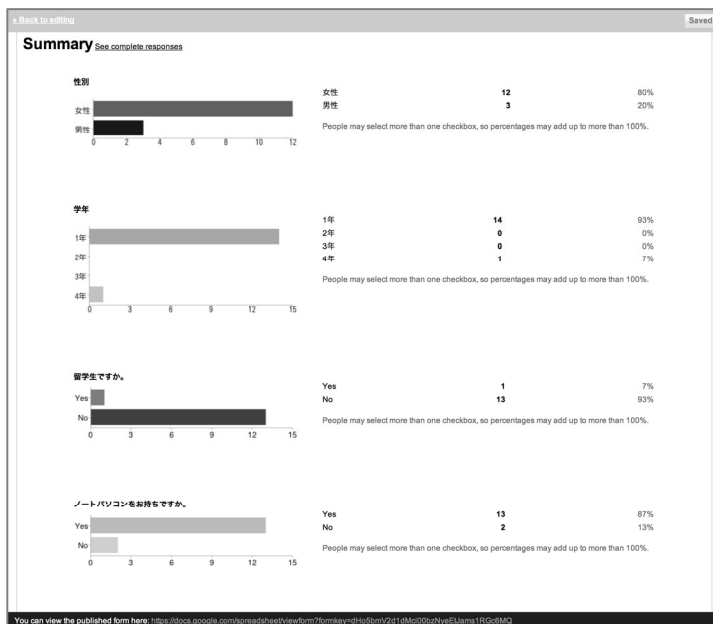
Google Docs (Google Drive)

[1] This amusing Christmas card that hit the Internet back in 2008 or 2009, illustrates the untenable relationship we have with technology and its impact on our relationships. Notice that the message is in abbreviated text-chat language. *Source: Huffington Post. Retrieved from http://www.huffingtonpost.com/2011/09/15/clever-family-christmas-card-photo_n_964568.html.*
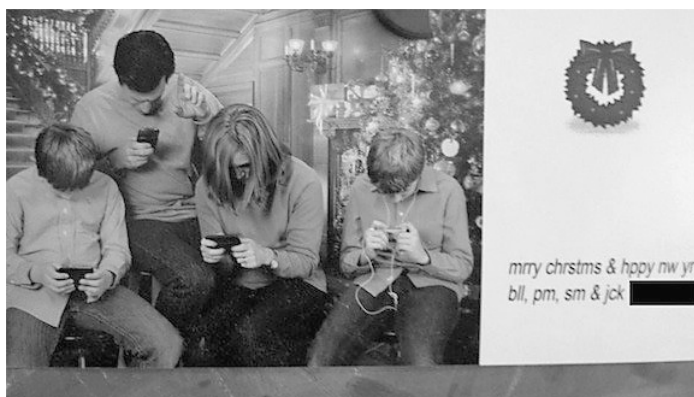
[2] More about the *Tourism English Proficiency Test* or *kankou eigo kentei shiken* 観光英語検定試験 can be found on the website here: http://kanko.zgb.gr.jp/index.html.

[3] Comparisons of levels between the *Tourism English Proficiency Test* and the *TOEIC® Test* are explained at the National website found here: http://kanko.zgb.gr.jp/schedule/index.html.

Digital Literacy, CALL and Flipped Learning:
An overview of technology use surveys and a rationale for the development of Flipped Learning-based CALL courses that enhance learning and digital skills

Daniel F. Stuntz

Abstract

Digital media and technology are increasingly mediating language and communication within and across cultures in our digital societies. This includes education. We need to understand the disconnect that exists between the traditional classroom methodologies and how technology is transforming education and society in the 21st Century. Sustainable literacy and digital literacy skills are more integral to the success and development of knowledge-based societies, emerging new economies and a growing number of service-based professions.

To address this issue, in the 2012 spring and fall semesters, two technology surveys were given to first, second and third-year students in the Faculty of Tourism to better understand how students use and perceive the role of technology and their teachers in the classroom, and to explore the extent to which students are "digitally" prepared for their academic studies and future careers. The findings of the two surveys answer questions about how digitally 'native' university students truly are in the department, and what factors are required for the future development and implementation of sustainable digital literacy education at the university level, particularly in the context of CALL-based second language courses that utilize Flipped Classroom learning and teaching approaches.

Moreover, sustainable digital literacy skills gained within flipped learning-based CALL classrooms can provide students with a more consistent ownership of their learning that then can be applied to a wider range of uses and professions. All of this can lead to sustainable innovation and development by promoting global citizenship within education.

Keywords – digital literacy, CALL, Flipped Classroom, Flipped Learning, sustainable literacy, second language acquisition, educational technology, knowledge society