Adopting Moodle:

Case Studies in the Diffusion of Innovation

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Abstract

This joint research paper among five part-time English teachers at Maebashi Kyoai Gakuen University, hereafter called Kyoai University, represents a focused practical application of Action Research based on CALL (Computer Assisted Language Learning) in the classroom and syllabus. This research builds upon the history and development of CALL at the University, including previous research based on student perceptions of CALL (Deadman, 2014) and teacher's perceptions and evaluations of multimedia technologies (Mason, 2014). The paper details and investigates how CALL is adopted amongst the teachers in this study, through the existent software Moodle (Modular Object-Oriented Dynamic Learning Environment). Two of the members of this group have used Moodle, whereas the three other part-time teachers have had limited exposure and experience using it. The aim of this research group is to peer-teach each other in a community of practice, in order that our own technology skills increase, ultimately transferring this to better learning experiences for the students.

The paper will use teachers experience, observations and planning to detail the purposefulness of technology in the curriculum; the teacher's own perceptions of the technology; the subsequent selection, planning and design of appropriate class-specific Moodle applications; and each teacher's initial evaluations of Moodle as they begin to construct their own Moodle accounts for various classes. A general e-mail was sent to all Japanese part-time teachers who would be interested in jointly partaking in a

research paper, based on the above considerations. As such, the members of this research paper are equal in membership and responsibility for the research, as per the ethical considerations of practitioner research (Hammersley, M., Gomm, R., and Woods, P., 2003).

1.   Literature Review

It is essential that this research paper be correctly placed within the existing notion and pedagogical theme of the application of CALL within the University. The history of CALL research at Kyoai University can be taken from the Maebashi Kyoai Journal entries over the first sixteen years of its publication, written in research articles by the teachers who have taught at the University.

The Kyoai Journal was formerly known as the *Bulletin of Kyoai Women's Junior College* (Kyoai Gakuen Joshi Tankidaigaku). Over the period 1998 to present, a total of sixteen research papers and notes have been written on technology issues, four of which were co-authored by two authors. These papers can be broken down into those that focused on or connected to technology through the following themes: *computer processing* (Hirata, 1998; and 1999); *the design of computer classrooms themselves* (Matsuda and Yonezawa, 2001a; and 2001b); *self-study and autonomous programs* (Akutsu and Pennington, 2000; Pennington, 2010); *online projects* (Harashima, 2004; Okuda and Ogashiwa 2011), *programming* (Matsuda, 2002), *online concordances* (Jennings, 2008); *curriculum design* (Jennings, 2007), *the use and application of multimedia technologies* (Mason, 2014), and the *evaluation of SNS* (Muruyama, 2015). Those that are specific to Moodle and its applications are those by Pennington (2011) and Deadman (2014). This collection represents a wealth of localized, institutional specific qualitative and quantitative data directly from the University, indicating a high degree of technological awareness and usage amongst teachers and ultimately the students.

In previous research specific to this University, Deadman (2014) focused on Moodle usage amongst a set of students. It was found that Moodle offers a new perspective and valuable opportunity for both teachers and students in language learning. Principally the aim of the study was to aid teacher development, passing new skills and the ability to participate in "international communication" and communicate in everyday situations. Five themes were central to the study: all of us are potential teachers as well as learners - in a true collaborative environment we are both; we learn particularly well from the act of creating or expressing something for others to see; we learn a lot by just observing the activity of our peers; by understanding the contexts of

others, we can teach in a more transformational way; and lastly a learning environment needs to be flexible and adaptable, so that it can quickly respond to the needs of the participants within it.

However, none of the papers are practical self-help case studies between teachers at a peer level, which this research paper hopes to achieve. In a sense, this paper is a response to Mason's (2014) paper that calls for several initiatives including a commitment to training staff in the use of new technologies, further academic study into the effects of multimedia in the classroom, and supporting teachers with increased preparation workloads.

The basis for the use of Moodle at Kyoai University is due to the introduction of the 'Kyoai Autonomous Language Learning Program: Stage Two', outlined by Pennington (2010). Whereas the earlier 'Kyoai Autonomous Language Learning Program' outlined by Akutsu and Pennington (2000) targeted a graduation goal for students, including communication ability and a TOEIC (The Test of English for International Communication) score more than 500, Stage Two of the plan sought to implement many changes in the English Program to achieve the goals set in the original plan. Pennington (2010) further outlines the development from semi-autonomous self-access style learning classes to more active or interactive, due to the proliferation of the computer as a study tool and the availability of more and more computer based study aids. Since Pennington's paper on the Second Action Plan was published in 2010, there has been a big increase in the use of technology in the University. As such, technology is becoming more and more ubiquitous within teaching and student learning.

The central tenet of this research paper is the adoption of such technology within the University by teaching staff. Mason (2014) notes a move to globally focused university courses into 'skilling-up' students with second language-based applied English courses investing in new language learning software and some tentative uses with web based wireless technologies. Mason (2014) points out that old methods of classroom instruction seem to be waning, replaced instead by '...a need for excitement, life relevance, and a certain 'wow-factor', exemplified by the need for a more mediated playful 'edutainment' approach to the English language teaching classes that would help to combat demotivation, anxiety and break orthodox study patterns. However, Mason points out that there exists a multitude of problems and a reluctance to change amongst teachers themselves. In his survey taken within three Japanese universities, Mason notes that 50% of respondents think using new technology will help students with attention in class. However, over 60% of respondents have never received any training on how to use new technology, but 70% of respondents some training or more training would help

with their use of new technology in the classroom. Apparent in Mason's research, teachers feel positive about the uptake of technology, but feel overwhelmed and need help to set up and administer it in class.

Therefore, this research paper presents a natural progression from Mason's findings, detailing case studies of part-time teaching staff as they either begin to use Moodle for the first time in classes or more extensively than previously. Five-part time teachers present their own unique and individual observations upon their use of Moodle before and during the Autumn Semester of the 2016 academic year.

In addition, the uptake of Moodle as a technological innovation for these teachers represents a diffusion of innovation, first outlined by Rogers (2003) in his book *Diffusion of Innovation*, originally published in 1962. Originating in his research as a rural sociologist in the 1950s U.S.A., Rogers proposed five steps in the decision-making process of an individual or institution in an adoption or implementation of an innovation. Rogers argues that diffusion is the process by which an innovation is communicated over time among the participants in a social system. Rogers (2003) detailed how diffusion occurs through a five–step decision-making process that includes awareness, interest, evaluation, trial, and adoption stages. A definition and graph of Roger's Diffusion of Innovation S-curve graph, a mathematical function that plots real input values and has a positive derivative at each point, was given to each teacher to illustrate how innovations are adopted by people, seen in Figure 1 below.
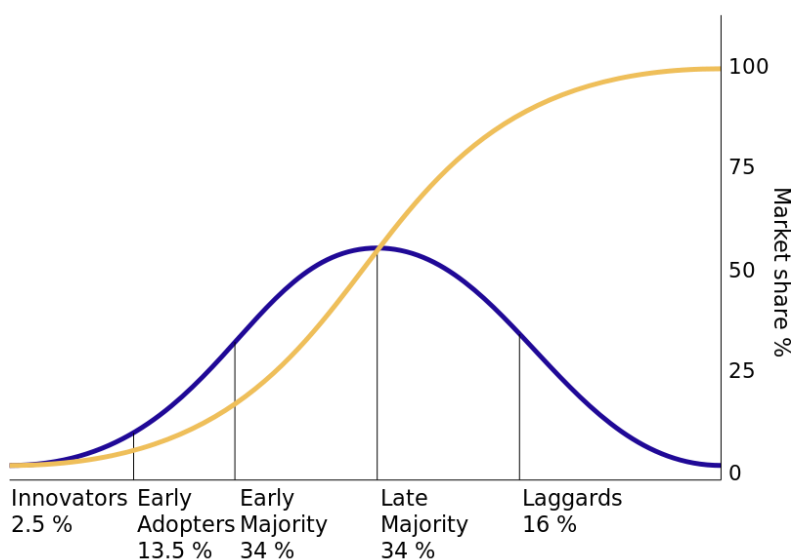
Figure 1 - 'Diffusion of innovations' graph
Source En.wikipedia.org. (2016)

Figure 1, based on the original found in Rogers 1962 book 'Diffusion of innovations', shows the diffusion of innovations typically associated with the introduction of an innovation. According to Rogers (2003) theory, as successive groups of consumers adopt a new technology (shown in the darker line), its market share (shown in the lighter line) will eventually reach the saturation level. In later editions of *Diffusion of Innovation*, Rogers changes his terminology of the five stages to: knowledge, persuasion, decision, implementation, and confirmation. In addition, in later editions of his book, Rogers added five categories of adopters to standardize the usage of adopter categories in diffusion research, namely innovators, early adopters, early majority, late majority and laggards. Rogers's notion of diffusion offers a simple and easy measurement to assess how well an innovation is rejected or accepted over time. In the case of this study, it was pertinent to use this as a model for this research paper.

2. Methodology

This study is presented as an evaluation of technology and Moodle by Kyoai students in their ongoing study, taken from the annual student surveys and a small-scale questionnaire. In addition, this paper presents case studies of how successful a software tool is adopted by the teaching staff in their planning and implementation of lessons. The paper will detail the student survey analysis of technology and Moodle, and teachers' use of Moodle. Therefore, the two parts to this study, student evaluation of the technology and teachers training and development, will be presented separately. Each section will be presented with a methodology and results section. Following this, the discussion section will draw together the two parts.

3 Student Survey and Class Questionnaire

3.1 Student Survey

In order to assess the potential use of Moodle as a learning tool, it is important to ascertain student reactions to the current use of technology at the University, and the actual use of Moodle in taught courses. In a wider perspective of the University's student's attitudes, the University annually gathers data in the form of a Student Survey about classes, resources, lesson content and teaching staff. Entitled 'Kouki Jugyou Anketto Kekka', or literally 'Tuition Survey Results', this survey asks students to rate their experiences within the college based on twenty-three gradable statements based on teaching practices at Kyoai University.

3.1.1 Methodology

3.1.2 Data Collection and Sampling

The 2009 and 2015 Tuition Survey Results were collected from the Kyoai University office staff. The results represent all student answers from the entire student body.

3.1.3 Data Analysis

In the 2015 survey, several of the statements reveal a positive attitude towards the use of technology in the classroom. These include; *Student Motivation* (Statement 1), *Ingenuity of the class* (statement 7), *Preparation and Review* (Statement 15), *Using iPod* (Statement 18), and *Comprehensive Education* (Statement 23).

	2009	2015	Change
Student Motivation	75.3%	86.7	+11.4%
Ingenuity of the class	69.3%	82.3%	+13.0%
Preparation and Review	18.8%	29.5%	+10.7%
Using iPod	n/a	21.1%	n/a
Comprehensive Education	66.6%	85.9%	+19.3%

Table 1 – Student evaluations

Table 1 reflects the evaluations of all Kyoai University teachers and lessons graded by the students as 1 or 2 out of 5, with a score of 1 being the highest. By showing these top two grades only, it is easier to ascertain the level of satisfaction regarding *student motivation*, *ingenuity in class* and *comprehensive education* over the period 2009-2015. The positive change in four of the categories reflects an improvement in class quality, teacher skills ability and student expectations. An improvement was also seen in the student response to *preparation and review*, with a score of 1 or 2 given to 29.5% of classes. In addition, applicable to 2015 only as such technology wasn't used in 2009, students were asked to evaluate *Using iPod* in class, or smartphone technology. A figure of 21% in 2015 indicates that teachers were either using it sparingly in class, such as for attendance purposes only, or not at all. These two latter facts, *preparation and review* and *Using iPod* illustrate the fact that there is much potential for greater use of technology to help both teachers and students. Teachers may

be able to prepare much more for class beforehand with such technology, and set up follow up activities and tasks, and homework through Moodle, and foster greater use of devices to access Moodle, the Internet and other software and Web links.

   Connected to the student survey, an analysis of Moodle uptake in lessons taught at the University is useful to understand the present level of Moodle usage.

2015		2016	
Semester 1	Semester 2	Semester 1	Semester 2
105	110	101	108

Table 2 - Moodle course accounts (Source Kyoai, 2016)

   Table 2 above shows the depth of Moodle usage at Kyoai University. The number of Moodle course accounts has fluctuated at the 100 level over the last two years until the present. The high number of courses that offer Moodle provision confirms that Moodle has reached a level of implementation and confirmation among many teachers, who can be considered an early majority of users. However, not within the scope of this paper, it would be pertinent to investigate how many of these courses are actively used by both teachers and students.

3.2 Student Questionnaire

   In addition to the general 'Tuition Survey Results', a small-scale questionnaire was carried out to ascertain further details of students reaction to the use of technology in their classes.

3.2.1 Methodology
3.2.1 Participants

   Data for this study was collected from four classes at the University. This represents a homogenous group in that most students are aged 18-22, predominately ethnically Japanese, and of similar linguistic and educational levels. The sample group represents 27 students, with a 20/7 male/female split in respondents.

3.2.2 Data Collection

   A questionnaire was conducted by Mark Deadman of this research group, addressing student opinions about the use of CALL and Moodle in the classroom. The questionnaire was constructed and developed on Moodle and conducted in class in July

2016. Questionnaires were collected from four different classes, for low intermediate to Advanced English classes, based on TOEIC score.

3.2.3 Data Analysis

In the first instance, 66% students responded very positively to using computers, whereas seven didn't. In addition, 42 responses were recorded showing the various devices that students use to access Moodle and CALL, including smartphones, personal computers, and tablets, showing that some of the students use a variety of devices to access information. Regarding the use of computers in the future, 22 (81%) students thought that they would be essential, with five reporting 'no' or 'not sure'. This is connected to the following multiple-answers question, which asks students which software or databases they use with 65% stating exposure to common software programs such as Microsoft Word, Excel and PowerPoint and a further 33% having used Moodle or Google classroom.

In addition, 81% of the students responded that computers should be used at least 75% of the lesson time, with only 19% stating computers should only be used at least 50% of lesson time. The next question referred to the use of E-books, a simple twist of using Microsoft PowerPoint as a template for creating a book design rather than a slideshow, in all four classes at Kyoai University. Students were expected to complete an E-book over the course of the first semester of the academic year 2016. Of 19 responses, 84% thought that E-books were useful for class.

In an open-ended response evaluation of the course, there was an overwhelming positive reaction to the use of computers and Moodle in class, for tasks and as a learning tool. Students saw the importance of this innovation which is probably the first database system that they have encountered in their education. The overwhelming view of the students in their open-ended responses was a positive one, with positive opinions about the ease of the software; *'I can collect the information quickly.',* and *'We can research about the topics in the classroom.'* Many YouTube, TED.com talks, and TEDed animated presentations were uploaded onto the various courses for students to watch for lesson theme purposes, which garnered the following comments; *'Because I can know many facts and opinions through the Internet.', 'We could collect information in the internet and compare it whether correct or not. It is useful to know the real history and so on.'*

Some technical issues were raised, related more to technological issues such as internet access *'Some people use not relative lesson by smartphone and PC. Also, some computers weren't smooth actions.'* [sic], and fears of losing data *'I deleted my data*

once, I had to start again. It was troublesome.' and perhaps the overuse of computers *'I got tired form sitting at the computer.'* [sic].

4.   Peer Teaching Development and Workshops

The positive results of the student tuition questionnaire and the student questionnaire about Moodle usage was used as a basis for teacher awareness of using more technology for teaching and learning. As outlined above, the principal aim of this research paper was to aid the self-development of a peer group of teachers in the uptake or diffusion of an existent technology that wasn't being fully utilized. As such, two workshops were conducted between the group to address the issues and concerns some of the teachers may have with CALL in the classroom, and for peer teaching and support to take place to address some of those issues. The first workshop was held in early September 2016, three weeks before the start of the autumn semester, with the follow up workshop held mid-September 2016, two weeks before the Autumn Semester. The first workshop focused on the teachers own computer experiences, issues, concerns and actual plans. In addition, it was planned for how they could personally benefit from employing CALL in their lessons and more importantly how this would benefit their classes and students. This would entail teachers selecting Moodle applications of functions that they could tailor to their own specific classes depending on a basic needs assessment drawn out in this workshop. At this point it was suggested to members of this group to add tasks and activities such as *labels, assignments, adding URL links* and *quizzes*.

The second workshop focused on the teacher's actual needs assessment and previously chosen workshop applications and functions, based on what they thought would be both easy to set up and practical to use. Subsequently, chosen Moodle applications would need to be appropriate and deemed useful by the students to encourage them to use and manipulate these tasks and activities in their study in the autumn semester.

The following observations are direct comments from each teacher and reflect their own individual thoughts. The observations were written individually and collated for this paper. As per Hammersley et al. (2003), this approach adheres to sound ethics of practitioner research taking into consideration the fact that as a peer group, we are carrying out research into our own institutional context, and the case studies that follow allow each teacher to be fully involved in this paper as they have a stake in the improvement of their own work.

4.1 Workshop 1 Teacher Observations

In this first workshop, the principal aim was to ascertain each teacher's views towards technology in general, technology in the field of education, and more specifically the potential use of Moodle. A short informal questionnaire was given out to each teacher to generate some ideas for a short discussion and to start thinking about how and why technology impacts their teaching and life. A definition and graph of Roger's Diffusion of Innovation S-curve graph was given to each teacher to illustrate how innovations are adopted by people, as detailed in Figure 1 above. In addition, copies of the student tuition questionnaire results and Moodle survey results were shown amongst the group members. The following five case studies, written individually by each member of this research paper, reflect the above details. These case studies are presented to provide other Japanese and non-Japanese English teachers with the experiences faced by the teachers in deciding whether to utilize Moodle as a classroom and homework tool, how to use it effectively to support class and lesson aims, and how the teacher evaluated it in terms of setting up, manipulation and ongoing use.

Case Study 1:   Mark Deadman

I first started using Moodle in 2011 when I started working as a part-time teacher at Kyoai University. I had previously used work-related intranet databases, common office software programs, and software related to my online distance Master's degree course. However, I had never used a learning platform such as Moodle and found it initially time-consuming and difficult to manipulate for my own teaching purposes. I learnt how to use it through trial and error, as at the time, very few teachers seemed to be using it and I was a part-time teacher with very limited time to interact with other Moodle users. However, technology is progressing at such an accelerated and exponential rate that it is inevitable that the future classroom will be imbedded with technology and that students, teachers and institutions will need to adopt new ways of learning, using and manipulating technology, with both students and teachers being agents of change, not only directed by an institution. After more than five years using Moodle I feel that I can manipulate most of its functions for my own lessons and teaching. As a part-time teacher with limited amounts of time to plan, prepare, conduct and review lessons, Moodle is a useful application in my teaching practice to streamline my time and enable a more efficient, positive, and accessible teaching pedagogy. I set up this research group with the expressive aim to help other teachers who I felt may benefit from using Moodle in their teaching. An important element of Action Research is that the practitioner, who positively evaluates some tool, theory or program to help

others, namely students and teachers in an educational setting, has a professional responsibility to pass on this knowledge to other stakeholders.

Case Study 2:   Chieko Onozawa

Before Workshop 1, I had used Moodle only as a tool for managing the results of my students' quizzes. Moodle was useful for me and other teachers for checking how our students were performing, since it made supervising so many students much easier. At the time of the workshop, this was my only experience of using Moodle in an educational function. However, I had not used Moodle at Kyoai College because there seemed to be some disadvantages, which made me think that it would be difficult for me to handle. Therefore, I did not intend to use Moodle. When I participated in the discussion in Workshop 1, I realized that I should have known more about such technologies so that I could use them for my work. In particular, I learnt that Moodle has so much potential and usefulness like other technologies. I must admit that I am a bit of a technophobe, so I had tried to minimize the use of technology except the occasional use of the Internet, PowerPoint and some other tools in class. This is because I thought that it would take too much time for me to prepare teaching materials using these tools. In addition, I believe that technology-oriented teaching is just as good as traditional ways of teaching are, but excessive use of technology may interfere with or deprive the language learning class of person-to-person interchange.

After attending Workshop 1, I have learned a lot of things such as the functions that Moodle provides and some new ideas of what I can do using Moodle as a beginner.

Case Study 3:   Kumiko Shoda

My experience with e-learning began in the early 2000's when I studied at a university and graduate school in the United States. I used WebCT, a student course software tool, to take homework quizzes, post opinions, chat, and submit assignments. I found this useful and convenient as a student, and can appreciate the similarities it had with Moodle now that I administer such activities. It was also a very convenient system as I could take a quiz anywhere with my laptop.

I opened my first Moodle account during the second semester in 2010. I had noticed a full-time teacher using it to give his students a quiz. The students used their iPod Touch devices to take the quiz. There were no workshops, manuals, or explanations from the school on how to use Moodle, so I was in the dark. In 2011, a professor knowledgeable in Moodle showed me the preliminaries of setting up a quiz. It was a brief explanation, but he encouraged me to 'Moodle' activities such as quizzes,

labels and pages which display information about courses, assignments, or emails. I usually use the *Label* and *Page* tasks to give notifications and the *Quiz* or *Assignment* activities for comprehension checks and writing tasks. In addition, I use the email function with Moodle itself to remind students of homework tasks. I use the *Label* resource or *Assignment* activity to show a check list. I also use the Moodle *Quiz* module as the online nature of Moodle allows quizzes to be taken anywhere. *Pages* written by me are also shown on the main screen. As an example, I use the page to notify the students of a certain classroom change.

Case Study 4: Machiko Endo

　　　　Thinking about Roger's 'Diffusion of Innovation' graph, I am a technology laggard. I don't use Facebook, Instagram or Twitter. I don't even have a smart phone. I used a computer for planning lessons, making tests and exams. I had heard of the name 'Moodle,' but I didn't know what we could do with it. I was not sure if I would be able to use Moodle but a colleague in the group told me that they would teach me how to use it, so I decided to try.

Case Study 5:　　Yoko Kamo

　　　　I believe that I have some basic computer skills but wish I had more knowledge and skills. I am a typical user of technology, in that I use a computer at home and at university, and use software such as Microsoft Office. I think computers are useful in the classroom as I have had students learn vocabulary using Quizlet and show students open content such as movies and music videos from YouTube on classroom projectors.

　　　　Regrading Moodle, I am interested in Moodle, because it has a lot of functions to make my life easier. For example, it enables us to give a quiz and assignments through Moodle. I think that I need to learn how we can adopt it to our teaching. Such technology will be much more important in the future, for both education and in society.

4.2 Workshop 2 Lesson Planning with Moodle

　　　　All five researcher-teachers in this case study are at different stages in their uptake and use of Moodle. As detailed above, two of our group has used Moodle in lessons previously. The other three members of the group have used Moodle at Kyoai University sparingly. Therefore, the more experienced teacher, Mark Deadman, would help the four less experienced Moodle users construct some basic resources or activities, that would be easy to set up, display and use in class time or as homework tasks. This reflects a peer community of practice, whereby a more knowledgeable member of the

group instructs less knowledgeable members at a level or pitch just above what they are presently capable of doing independently, as per the definition of a community of practice outlined by Vygotsky and detailed in Deadman (2013). As such, it was decided to instruct three of the teachers, with possible choices of resources and activates found on Moodle, specifically *Labels, Adding URL, Assignments* and *Quizzes.* One teacher also requested help in constructing a *Lesson* activity.

Case Study 1:   Mark Deadman

My focus for Workshop 2 was to facilitate the learning process for the other four part-time teachers in this group, helping them to decide which activities and resources from those available on the Kyoai University Moodle system would be most appropriate and useful to the courses each teacher wanted to attempt to use them in. Several actual workshop sessions were conducted on an individual or pair basis with the other teachers and myself in mid-September, before the start of the autumn syllabus.

Throughout the research period, I managed my own 'Moodled' classes, but asked each part-time teacher to add me as a 'guest' in order to check their Moodle tasks and assignment that they may set up throughout the semester. This allowed us to check that the teachers had set up their tasks correctly and testing of the activities and tasks could be carried out before given to students as required or graded tasks. This is in a sense a developing community of practice, whereby one teacher scaffolds the learning process of the others, their peers, until they are able to manipulate the software for themselves, or have sufficient working knowledge of it, to use it effectively for what they want it to do.

Another purpose of my help and support to the other teachers was, through the tenets of Action Research, to instigate a manageable diffusion of the innovation in the form of Moodle, with a manageable learning curve easily adopted by teachers. Due to time considerations, we didn't have much time to go through all the activities and resources available on Moodle and at that point I hadn't used most of them in class. Setting up a manageable and self-directed learning curve for each teacher, allows them to take control of their own Moodle endeavors, although I can scaffold their development whenever needed.

Case Study 2:   Chieko Onozawa

After Workshop 2 Moodle still seems complicated to me and a little difficult to deal with, but I am starting to think that Moodle is manageable if I use it appropriate to my skills and knowledge within reason, as a beginner. Workshop 2, along with several

books I have on Moodle, has certainly enriched my knowledge. For example, there are numerous functions in Moodle that teachers can use in a language classroom including implementing quizzes, exhibiting teaching materials, having communication between teacher and students, and making evaluations. Also, I am aware of the strong relation between e-learning and Moodle, and the purposes of Moodle. These things can be necessary for a beginner even after I have started using Moodle.

Even though I feel a little easier to use Moodle, I am still not confident about using it. Additionally, it is in the middle of the semester now, so I have decided to start with basic and easy functions, such as sending messages within class. I chose to use Moodle for my *Reading* and *TOEIC Training class*. I wanted to develop a class system for my *Reading* class that would allow me to keep progress of student's individual reading over the first semester, via the computer. I used Moodle to keep a better record of reading progress with a 'forum' activity for each week of the semester. Each student had to enter a new 'discussion topic' box each week that asked them to record the name of a book or books read that week as the 'subject' and in the 'message' field they could enter a short book report with the word count they had achieved that week. For my TOEIC class, which is composed of students who are less motivated to study English or do not know how to study because their TOEIC scores are lower Therefore, I set up the *Labels* task to notify the students of any important notices, assignments or homework that they need to do to keep up with the deadlines I set.

I am interested in using Moodle in class, so when I have enough time to prepare, I would like to make better use of it for setting, collecting and grading assignments, receiving book reports and reading word counts, conducting quizzes to aid TOEIC comprehension skills, and help students to become more self-motivated English learners.

Case Study 3:   Kumiko Shoda

In workshop 2, I learned there are various *Lesson* tasks in Moodle. One example is called a *drill*. Some students still have problems with basic vocabulary and grammar. They need to work through exercises to memorize or comprehend the lesson points by self-study. Also, completing drills helps gain an understanding of vocabulary and grammar.

In my present classes I use a peer evaluation form for grading. In class, students give group presentations and evaluate each other on a peer evaluation paper. They give points on item such as pronunciation or contents, and then calculate the total points. Each student needs to fill out an anonymous evaluation. In the future, the

students will use Moodle to complete the peer evaluation form. Moodle can calculate the score and allow students to check the score of their classmates.

Although I was trying to set up the drills and a peer evaluation form on Moodle, I could not complete it this semester. In my opinion, setting up Moodle activities and resources is time-consuming for the teacher but simultaneously time-effective for students. Again, to create both a lesson and activity takes a lot of time. It is sometimes complicated to make a new task. Also, it is possible that some of my classes may change over the years. Then, I will need to set up a whole new lesson or activity. Once I set up a lesson or activity, I can use it again in subsequent years. Just like a typical textbook, the lessons and activities can be set up in unit/chapter order. However, Moodle allows me to review and arrange lesson plans throughout the syllabus. Today, students have a smartphone or another portable device. They can use Moodle anywhere. With more and more devices and software being developed, teachers are more and more being required to improve their technological skills.

Case Study 4:   Machiko Endo

To my surprise, it was not that difficult to make a Moodle page. I even enjoyed choosing an image and uploading it on the page. In one of the first classes of the autumn semester of 2016, I explained to the students how to register themselves to Moodle. Most of the students had some experience of registering to Moodle, so there was not much of a problem.

The next Moodle function I used was the *Assignment* activity. The first assignment set asked students to interpret some Japanese sentences into English and attach their answers on a Microsoft Word file. I set a due date for October 10 so that I would be able to print out their assignments writing in advance and talk about it in the class on October 14. I set Moodle not to accept assignments in the editing page after the due date because I wanted to be strict about the deadline.

Before the class on October 14, I found out that some of the students had successfully submitted the assignment before the due date but some of them hadn't. Those who failed to submit their assignments had mistakenly thought that the assignment was due on October 14, the day of the next class, or they stated that they were going to do the assignment the night before the class.   Of course, they couldn't submit the assignment because Moodle blocked them. I extended the deadline to October 18 so that all the students could submit their assignments. In addition, there were some students who didn't press the 'submit' button after writing their English sentences so the 'Assignment' module showed that their assignments were being written

but had not been finished.   But it was not a big problem because I could read their sentences though it was unfinished.   After I extended the deadline, it was very easy for the students to 'submit' their assignments.   They only needed to press the *submit* button.

Through the activity, the students had typed their ideas and submitted them to Moodle, typically in Microsoft Word files. This allowed me to run a more effective homework system. Before the class on October 20, I printed out the students answer sheets, including the students' names and their sentences. Then I cut their examples into individual pieces.   Then I manually underlined the word(s) which were incorrectly spelt.   In class, I gave each student back their examples and talked with them about the mistakes they made.   Then they corrected their mistakes on the piece of paper and gave them back to me, and I checked if the sentences were corrected well.

My next target in using Moodle is to learn how to correct the students' sentences online. I want students to submit their assignments and actitives online through Moodle rather than using paper or by submitting Microsoft Word files that are more troublesome to check online.   I also want to learn the way the students can look at the other students' sentences and make comments.   By doing this, students will see a lot of types of mistakes and be careful when writing.   This peer editing role will help them to realize that there is often more than one correct answer in writing and they will be able to use various English expressions that they may pick up from each other.

Case Study 5:   Yoko Kamo

I learned how to use Moodle at Kyoai University for the first time during the two workshops. It was a great opportunity for me to attend this workshop because I didn't have a chance to learn Moodle in such a personalized way. Accessing Moodle wasn't as complicated as I had expected. However, I found that I needed more support to use it by myself, including finding the right toolbars, menus, and save and display buttons.

I used the assignment task for my Debate class. In this class, I assign writing an assignment once every two weeks. I have always collected the student's papers in class in previous semesters. However, from the second semester, I asked students to submit their assignments through Moodle. I wanted to use Moodle for this class because it allows both students and myself as the teacher to check work in terms of deadlines, submissions, and evaluations.

I am very satisfied using and setting up Moodle before the start of each class, as it takes some time-consuming activities out of the class time, and allows me to give

more focus to the students within class. Without my colleague's supports during the summer vacation, I could not start using Moodle from the second semester.

5. Conclusion

As a group, we represent a similar level in English teaching standards, based on sharing the same kinds of classes and the levels we teach. However, we also exhibit varying degrees of expertise in using Moodle, and different levels of acceptance and uptake of technology such as Moodle.

Workshop 1 addressed the group's viewpoints, reservations and expectations of using Moodle as a teaching and learning resource within existing classes. All members of our group had either started using or had expressed an interest in using Moodle for various activities and tasks both within class and outside of class. In attending Workshop 1, members had initially been persuaded of its potential *value*, confirming Stage 2, even if not using or experiencing it. Stage 3, *decision*, was confirmed by the teachers in their choice to adopt some Moodle functions within their existing syllabi, even if only limited to several more manageable tasks and activities at the onset of their Moodle uptake. Stage 4 and 5, *implementation* and *confirmation*, would be confirmed in Stage 2 and throughout Semester 2 of the 2016/17 Academic Year as we develop and try out their Moodle infused syllabi for in class and homework tasks. Some members of the group explained their uncertainty about Moodle in terms of complexity, ease of use, actual relevance and appropriateness towards learning.

Workshop 2 reflected a community of practice amongst our group as we helped each other design some basic Moodle tasks and activities appropriate to each member's chosen course(s). Invoking Action Research, tasks and activities were added to enable teachers to realistically meet their expectations for what Moodle as an educational tool could offer that teacher and their students. Typically, amongst the group, this meant using tasks and activities such as *Labels, Adding URL, Assignment* and *Quizzes.* These functions were relatively easy to explain, easy to set up and administer and easy for the students to freely use. The teachers have exhibited Rogers' Stages 4 and 5, *implementation* and *confirmation* respectively. This can be assigned to be true in that we have adopted the various tasks and activities within the syllabus as online learning tools, to supplement traditional learning tools such as textbooks, worksheets, and written reports.

The tenet of this paper was to detail and present case studies of adoting Moodle into teacher's lessons, through the online learning platform, Moodle, within a teacher peer group. This research group and paper exemplified Action Research in a practical

environment that enabled teachers to develop new technological systems to enhance their own expertise levels and simultaneously enable student learning through different lesson tasks and activities. As teacher-practitioners we saw a need to conduct action research into the use of CALL, through data collection, practical application, and subsequent reporting of it, to other English language teachers. This study represents an 'inside-out' approach as outlined by Nunan (2001), whereby the teacher and ultimately the students are placed at the center of the learning process.

Burns (2005) notes that a central aspect of Action Research is the simultaneous focus on action and research, with the *action* component being a process of planned intervention, and the *research* element involving systematic collection of data as planned interventions are enacted. The planning and implementation of Moodle activities and resources by the teachers in this study promotes planned intervention, in order to improve the teaching experience for ourselves and the learning experience for their students. However, the research element the research element has only collected one small-scale questionnaire. Although the results were clearly positive towards the use of CALL and Moodle, the sampling, data collection tools and the number of participants in the study were too small. Developing this point, it would be pertinent to enact a large scale planned intervention into reading at the University, with a greater range and depth to the research in the form of data collection, possibly a much larger questionnaire sample, alternative qualitative collection such as one-to-one interviews, and direct observations.

In addition, quantitative data collection could include statistical analysis of student Moodle usage at the University. In order to fully validate the usage of Moodle, it is necessary to conduct a large scale statistical analysis of how Moodle can potentially save teachers time and effort in their lesson preparation, explanations of tasks and instructions, administration of gradable tasks. This will necessitate a more in-depth analysis of teachers' actual time taken using Moodle.

6. Further Study

We hope that this paper provides an opportunity for other teachers at the University to analyze their own teaching practices and seek out peer cooperation, improved awareness and usage of technology appropriate to their own classes. The ultimate benefactors of the application of this Action Research approach will be the students. As a group, we are interested in developing our Moodle and other technology skills further, and invite other teachers who are interested in such pedagogy to participate with us.

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要旨

技術革新の普及に伴うオンライン学習管理システム
Moodle を使用した英語授業におけるケーススタディ

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加茂 葉子、小野澤 千恵子、正田 久実子

本稿は共愛学園前橋国際大学の５人の非常勤講師による、CALL システムを利用した英語クラスのアクションリサーチの実践的応用についての研究である。本稿は、CALL における学生の認知・理解(Deadman, 2014)、教員のマルチメディア技術に対する認知と評価(Mason, 2014)を含む、本大学での CALL システムの変遷と発展を構築している。本稿では、Moodle を通してどのように教員が CALL システムを取り入れていくのかを調査している。教員の内２名が Moodle 経験者であり、３名はほぼ未経験者であった。本研究の目的は、テクノロジースキルを向上する為に実際に練習しながらお互いに教え合うことを実施し、最終的にこの学習経験が授業内で生かせることである。

本稿では、教員の経験、観察、カリキュラムでの目的に合うテクノロジー使用の計画、教員自身のテクノロジーに対する認知、授業の目的に沿った適切な Moodle アプリケーションの選択、様々なクラスでの Moodle 使用に対する初期段階評価を述べている。

本稿は、通常の授業において上記のソフトウェア技術を採用している本大学に対する報告を目的としており、実践者による確固たるアクションリサーチである。