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# Practice and Assessment of Reading Classes Using Moodle

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## Abstract

This research paper details the extensive use of Computer Assisted Language Learning (CALL) for a content-based reading syllabus at Gunma University, through the software program Moodle (*Modular Object-Oriented Dynamic Learning Environment*), a free and open-source software learning management system used at Gunma University.

The research basis of this paper is within the sphere of *Action Research*, as a valuable professional development tool (Nunan, 2001) based on this researcher's perceived valuation of the system and how it could better aid students to perform better in and be more motivated towards their English language and reading studies, introduce new technological skills and abilities, and aid teachers in better preparation, teaching and assessment of reading classes. Moodle enthuses that the Lesson Module 'enables a teacher to deliver content and/or practice activities in interesting and flexible ways…teachers can choose to increase engagement and ensure understanding by including a variety of questions, such as multiple choice, matching and short answer.' (Moodle, 2016). Therefore, this paper will ascertain whether the syllabus achieved a greater engagement and enjoyment by the students, and ensured better comprehension and understanding of key tasks and instructions. In addition, it will detail how teachers can benefit course management by employing such technology within the classroom.

Keywords: *Moodle, CALL, Action Research, Reading, Innovation*

## 1．Introduction

Due to the proliferation of the computer as a study tool and the availability of more and more computer based study aids, English language teaching has seen dramatic changes in the development from traditional-style learning classes to more active or interactive classes. Technology is becoming embedded in many

educational spheres and settings. The World Economic Forum (WEF), a self-proclaimed *International Organization for Public-Private Cooperation*, states that 'The gap between the skills people learn and the skills people need is becoming more obvious, as traditional learning falls short of equipping students with the knowledge they need to thrive' (WEF, 2016), in which traditional education could be exemplified by a teacher's primary activity set as lecturing, with students listening and memorizing information. Freire (1970) would label traditional learning as that which '… leads the students to memorize mechanically the narrated content. Education becomes an act of depositing, in which the students are the depositories and the teacher is the depositor'.

In this paper, the use of CALL in the form of a Moodle administered content-based reading course will be evaluated. This evaluation will take the form of Action Research, to offer some insights into a small-scale study which seeks to address four research aims. Firstly, this study will show how Moodle can aid students to comprehend and be motivated towards their reading studies. Secondly, this research exemplifies how Moodle has the potential to reduce lesson preparation, ensure better collection, delivery and grading of assignments, administer quizzes, and collate results faster. Thirdly, it will ascertain how Moodle as a technological innovation aids teachers and students to acquire new educational related technology skills. Fourthly, this research paper seeks to promote, what Nunan (2001) calls, an 'inside out' approach to professional development, in which the concerns and interests of the practitioners are placed at the center of the learning process, rather than from an 'outside in' approach whereby an outline 'expert' brings the good news to the practitioners.

## 2．Literature Review

It is important to conduct a literature review of both Action Research and CALL as both disciplines and pedagogies. Burns (2005) addresses the research approach of Action Research in her article 'Action Research：an evolving paradigm'. Burns details the antecedents, definitions, processes and purposes of Action Research in the field of English Language teaching. Burns (2005) defines Action Research as '… a means towards creating meaning and understanding in problematic social situations and improving the quality of human interactions and practices within those situations'. Burns 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. Burns (2005) quotes Wallace, who suggests that focus for action in language teaching should include *classroom management*, *appropriate materials*, *particular teaching areas* (e.g. reading, oral skills), *student behavior, achievement or motivation,* and *personal management issues* (e.g. time management, relationships with colleagues/higher management)

In addition, thinking about myself as practitioner-researcher, Burns (2005) refers to Bell who points out that less common in the literature are individual accounts by teacher practitioners working in classrooms. These may be a result of the reasons for the minimal literature in the ELT field to 'a clash of methodologies', and the difficulty for language teachers of setting up experimental conditions in the 'natural confusion and complexity' of the classroom. As such, I aim to address this issue of being a teacher practitioner in a classroom. The educational benefits of this though, as listed by Kemmis and McTaggart (Burns, 2005) are that teachers develop skills in thinking systematically about what happens in the school or classroom, implementing action where improvements are thought to be possible, and monitoring and evaluating the effects of the action with a view to continuing the improvement.

Brydon-Miller et al (2003) stress that 'action research is not merely about 'doing good', it is also about doing things well.' They state that one of the tenets of action research is that research that is conducted without a collaborative relationship with the relevant stakeholders is likely to be incompetent. Huang (2010) states that Action research is an orientation to knowledge creation that arises in a context of practice and requires researchers to work *with* practitioners. Unlike conventional social science, its purpose is not primarily or solely to understand social arrangements, but also to effect desired change as a path to generating knowledge and empowering stakeholders. Within a Japanese tertiary context, *thejaltcalljournal* has a plethora of research articles about Action Research、Moodle and specific learning objectives within the Computer Aided Language Learning (CALL) field. Bateson (2008) details ideas for language teachers to incorporate Moodle into their lessons. Robertson (2008) considers how Course Management Systems technologies can have a beneficial impact on course organization, lesson implementation, coursework, and a more student-centered learning experience. Broadway (2011) details how Moodle was used to create an online version of a print textbook for a content-based course. Mynard (2011) describes a university course designed to facilitate awareness of the language learning process through the examination and adoption of various technology-based language learning tools (TLLTs), including Moodle. Daniels (2012) investigates the use of Moodle through mobile devices rather than traditional notebook or desktop computers. In addition, Hirschel (2102) examines student perceptions of the Moodle applications.

In a previous study, it was shown that student tasks displayed a general progression in complexity through the first semester and a general transfer of activity from the teacher to the students. This emancipatory transfer facilitated a positive view of Moodle and allowed the students to gain more than just using computers, smartphones or tablet devices for information gathering or dispersal (Deadman, 2014). This study represents a continuation in part to this previous study, through the research questions posed below.

As Moodle is a technological tool for learning and teaching it is important to consider the nature of innovation that Moodle represents. The notion of diffusion of innovation was developed by Rogers (2003),

in his book *Diffusion of Innovation*, originally published in 1962. Originating in his research as a rural sociologist in 1950s U.S.A., Rogers proposed five steps in the decision-making process of an individual or institution in the adoption or implementation of an innovation, that include awareness, interest, evaluation, trial, and adoption stages. Later editions of Rogers', *Diffusion of Innovations*, carry a total of 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 and innovation is rejected or accepted over time. This figure also illustrates that the adoption of an innovation follows an S curve, a mathematical function that plots real input values and has a positive derivative at each point.

Figure 1 below, based on the original found in Rogers 1962 book *Diffusion of Innovation*, shows the diffusion of innovations typically associated with the introduction of an innovation. With successive groups of consumers adopting the new technology (shown in the blue line) its market share (shown in the yellow line) will eventually reach the saturation level, in theory (Rogers, 2003).
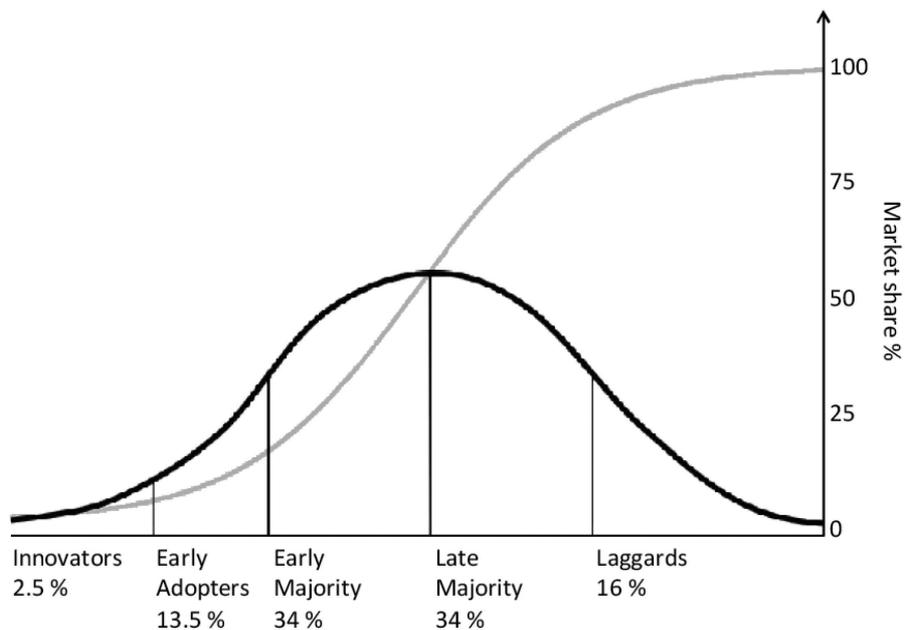


Figure 1-'Diffusion of innovations' graph
*Source（http：//www.uxbooth.com, 2016）*

## ３．Research Questions

The aim of this paper is to evaluate how Moodle, as an online learning platform, could better aid both students and teachers in learning and teaching. I looked for more answers to the following points：

１．How Moodle can aid students to comprehend and be motivated towards their reading studies.

２．How Moodle has the potential to reduce lesson preparation, ensure better collection, delivery and grading of assignments, administer quizzes, and collate results faster.

３．If Moodle as a technological innovation aids teachers and students to acquire new educational related technology skills.

４．In addition, this research paper seeks to promote, what Nunan (2001) calls, an 'inside out' approach to professional development, in which the concerns and interests of the practitioners are placed at the center of the learning process, rather than from an 'outside in' approach whereby an outline 'expert' brings the good news to the practitioners.

## ４．Background Information to the Reading Course

### ４．１　The Moodle Learning Management System

Moodle as a learning and teaching tool is already in use at the University in the form of The Gunma University Learning Management System (GULMS), which hosts Moodle for computer assisted administration and learning. Moodle is largely used in English language learning purposes for Extensive Reading programmes, which is heavily utilized by teachers and students alike.

Gunma University's Aramaki Campus library currently has more than 12,000 graded readers, which provide a vast range and depth to reading for students taking English language reading classes. As of November 2016, 78％ of the School of Science and Technology (SST) students at the University, studying English, had taken at least one Moodle Reader Quiz, and the actual average number of quizzes taken was six with an average word count of 28,403 words across the eleven reading classes in the General English Education program (Gunma University, 2016b).

### ４．２　The General English Program

The goal of the General English Education program is to combine a strong liberal arts background with the fostering of students' overall language abilities, known as "English as a Foreign Language (EFL) Literacy" (Gunma University, 2016a). Within the concept of 'English Literacy', the Teachers Handbook (Gunma University, 2016a) states it would be expected that students would develop an ability to use

English, would be taught learning strategies and academic skills in instruction, and acquire a thirst for learning, by motivation and autonomy in learning. It is impossible to achieve full foreign language literacy by simply transmitting language knowledge to students and training their language skills. Therefore, in addition to teaching skills and strategies, the University strongly urges teachers to include a variety of individual and group work, allowing students to discover, think, and negotiate meaning. Such activities may include a small project, some fieldwork, a written report, or an oral presentation. Allowing the opportunity for self-reflection may also help students attain these goals.

The primary goal of this course is to develop English reading skills. Reading accuracy (comprehension) and reading fluency (automaticity, comfort, speed, etc.) are covered. Through use of various materials and activities, students develop numerous reading strategies and skills necessary to satisfy the many purposes they will have for reading in their futures as students, engineering professionals, and global citizens. These strategies and skills are embodied within course objectives such as developing micro-skills, improved reading fluency and speed, understand and use an expanded vocabulary, advance closer to thinking directly in English, and most importantly to learn to enjoy reading. It is essential that every teacher meet these objectives, irrespective of being taught by an either a paper or digital based system.

### ４．３　The Extensive Reading Program

A significant aspect of this reading course is the Extensive Reading Program, through which students receive large amounts of comprehensible input, fostering fluency with language forms already learned and increasing exposure to vocabulary items, from the habit of reading in English, increased motivation by learning to read English in a more meaningful way, and an expanded knowledge of the world (Gunma University, 2016a). Each student is required to read a minimum number of words during the semester. As of 2016, it is recommended that a goal of 100,000+ words during Semester 1 be set for each student. A student can attain this goal by reading 14 books of 6666 words, the average for Stage 1 books in the *Oxford Bookworms* series. A Stage 1 graded reader book is written with an elementary level of grammatical complexity in mind and with vocabulary that is limited by frequency headword counts, in this case 400 (Oxford University Press, 2017). Provision is made in the syllabus and class time to ensure that Extensive Reading is done both inside and outside of the classroom. Inside class, students are advised to bring one book on each lesson day in order develop students' regular reading habits, for which 10-20 minutes at the beginning of each lesson is for extensive "pleasure" reading, referred to as a *sustained silent reading* (SSR) period, which serves to anchor all students into reading at the same time and place each week and keep accurate record reading habits.

In addition, oral activities, for pairs or groups (e.g., reading group, performance), or some simple writing activities (e.g., a reading journal, a book report, book review, class publication of these works) can

be included in this course. Suggested activities by the department include a *Book Club, Shared Reading, Reading-aloud/Performance*, Book *Journal*, and *Book Report/Book Review*.

### ４．４　Computer Provision

Most classrooms are equipped with projectors, screens or flat-screen TVs as well as audio equipment. A few classrooms are equipped with computers, but with Wi-Fi areas available throughout the university campus, including the library, cafeteria, and most classrooms, teachers who want to use such technology can do so if they bring their own devices. For teachers without such computer provision, it is possible to use a computer classroom for a given lesson, which requires a reservation. At the Aramaki campus of the University, there are six 'computer rooms', with the largest room having 65 computers, and the smallest having 24 computers. The actual classroom setting for Semester 1 of the class in this research paper was the dedicated computer room, which consists of fifteen banks of tables with four computers per bank, equating to sixty computers. Each student has a monitor, keyboard, USB docks, and sight of a supplementary computer screen which is typically placed between 2 students. The teacher has access to three computer screens, a classroom projector, and a multi-media control system.

## ５．Methodology

### ５．１　Constructing a Moodle 'Lesson'

In order to carry out Action Research in a reading class, an actual 'reading' infused Moodle account was needed, to both teach and collect data from. Adopting a student-centered learning lesson using Moodle *Lesson* required a great deal of pre-class preparation time and effort. Every lesson of the fifteen-week semester needed to be completed before each lesson, which meant designing an online lesson plan based on the standardized plans for the reading curriculum. In addition, the Moodle *Lesson* would need to be tested, proof-read, and checked for any potential problems that may interrupt the lesson flow, such as typographic mistakes, confusing instructions, and incorrect answers.

Figure 2 below shows the plan for a lesson, Week 14 in Semester 1, a guideline from the SST's English Department handbook (Gunma University, 2016a). The Week 14 lesson plan was chosen to confirm the successful consistency employed throughout the semester from the original lesson plan made for Week 1. The 'Lesson' activity on Moodle allows for duplication, which was employed from Week 1 of the reading course in this study. This duplication of data, in this case a 'Lesson', ensures that a consistent and basic standardized lesson plan can be used in every week of the course, but with the ability to tailor each week's lesson plan according to the guidelines contents.

| The 14th time | Sustained Silent Reading (USSR)<br>Part III, Unit 3：Focus on Vocabulary – Exercises 9 & 10 (pp.145～147)<br>Part IV, Unit 1：Reading Faster – Ex. 10 (pp.251～252；Progress Chart, pp.229～230) |
|---|---|

Figure 2～Lesson 14 plan for the Reading course H27 (2015) BI/II Reading (Gunma University, 2016a)

The prescribed plan lists three activities for the ninety-minute class time, with additional tasks to be conducted by the teacher if necessary or appropriate. The introductory content page for this lesson included a weekly updated of the student's current progress and expected target for the Sustained Silent Reading target, as mentioned above. In this case, students were notified that their class average of words read was 84,787 words, below the target for Week 14 of 93,324 words, but that the class had achieved a 100％ active student reading rate.

After the initial page was created, a variety of pages were created, including content, essay and question pages. An essay page was created for students to write about their current book readings in the silent reading project. Students could write a longer answer than in a regular question, with information such as the book title, author, keywords, genre, and their basic thoughts about the book. Once students had finished their book reports, they quickly shared their ideas verbally in pairs or small groups using the summarized information they used to complete the book report.

Following this initial task, a content page was added explaining the next task, an exercise from the textbook with appropriate instructions. Once the students had read the instructions, which were directly taken from the textbook, they could 'jump' to the exercise questions themselves. Ten multiple choice questions were made from the textbook original exercise, instantly recording the student's responses for grading purposes. The pre-determined answers were immediately relayed to the students in automatic feedback for each question, with each answer referred to in the textbook, to allow students to see where errors were made. After this exercise, students were directed to the next activity via another introductory content page of instructions. In addition to the *Essay* and *Multiple Choice* tasks, the Lesson activity allows for additional tasks, such as *Matching*, *Numerical*, *Short answer*, and *True/false*, which were used in previous weeks.

The last activity specifically conducted on Moodle was the 'Reading Faster' activity, which forms a significant portion of the course textbook. The Teacher's Guide (Gunma University, 2016a) states that this activity is important in that it encourages students to read more in less time, which helps students to understand better and will help students to improve their general knowledge of English. The students are directed to read the textbook guidelines for reading faster in the book on a regular basis within the content pages. The 'Reading Faster' content page instructs students to complete the relevant Exercise from the Unit. Students are instructed to read the exercise text and answer the questions in the textbook itself first,

without using the PC. The aim was to keep students focused on the task at hand, the reading exercise and read the questions and possible answers carefully. Once they had completed the exercise they were prompted by the content page to move or 'jump' to the text-associated comprehension questions, which would record their answers and give immediate feedback. The content page also carried a gentle reminder that they should complete the *Lesson* activity in class time as I, the teacher, would be able to check activity logs and when they had finished the lesson. Apart from absent students who would be able to finish the lesson in their free time, no students attempted to continue the class after actual class time. Students were finally asked to record their reading rates, the words per minute score, and their text comprehension score in their course textbooks in a 'Reading Rate Table'. In addition to recording their scores in their textbooks for their own reference and I asked them to record their scores on a *Chat* task that allowed me to gather their scores quickly. The dual function of this was also to instigate some positive peer pressure of students who were falling behind in reading, in that they would hopefully feel some motivation to improve their reading scores.

A final content page was added to bring the lesson to a close. The student would then see a generic message as in the next screenshot, with a direction back to the main course page or to view their grades. At this point the student's ongoing score is only displayed for each student, not the class scores. This allows the student to check that they have completed all parts of the lesson, and have the chance to re-enter details if there are any inconsistences.

## ５．２　Participants

Data for this study was collected from one class at the University. The students represent a homogeneous group in that most students are aged 18, made up exclusively of first-year course students from the *School of Science and Technology* (SST), predominately ethnically Japanese, of the same educational level, and of similar localized backgrounds in the Gunma prefecture or Kanto regional area. The respondents represent a 24/3 male/female gender split.

## ５．３　Data Collection

A student questionnaire (see Appendix 2) was carried out for this study at the University to ascertain student opinions about the use of CALL in the classroom. The questionnaire was constructed and developed on Moodle and was conducted in class towards the end of the first semester in July 2016. The questionnaires were incorporated into the final Moodle *Lesson* of the course, to maximize the student participation rate, and to get their immediate response to the questionnaires, after just finishing that lesson using Moodle, and that of the Spring Semester syllabus.

## 6．Results

Figure 3 illustrates the comparison of Question 1 and 2, how students view the class theme of reading and the online delivery system of the lesson. A strong positivity is given to both reading and the use of computers. On a scale of 1 to 5, with 5 being 'strongly agree', 17 students rated reading as a score of 4 or 5, and 18 students rated the use of computers 4 or 5. This shows a strong affinity to both ideas, which is positive for both the course and how to teach and learn. Related to this, Question 3 asked students if they preferred computer or non-computer lessons, with 24 students preferring the former.
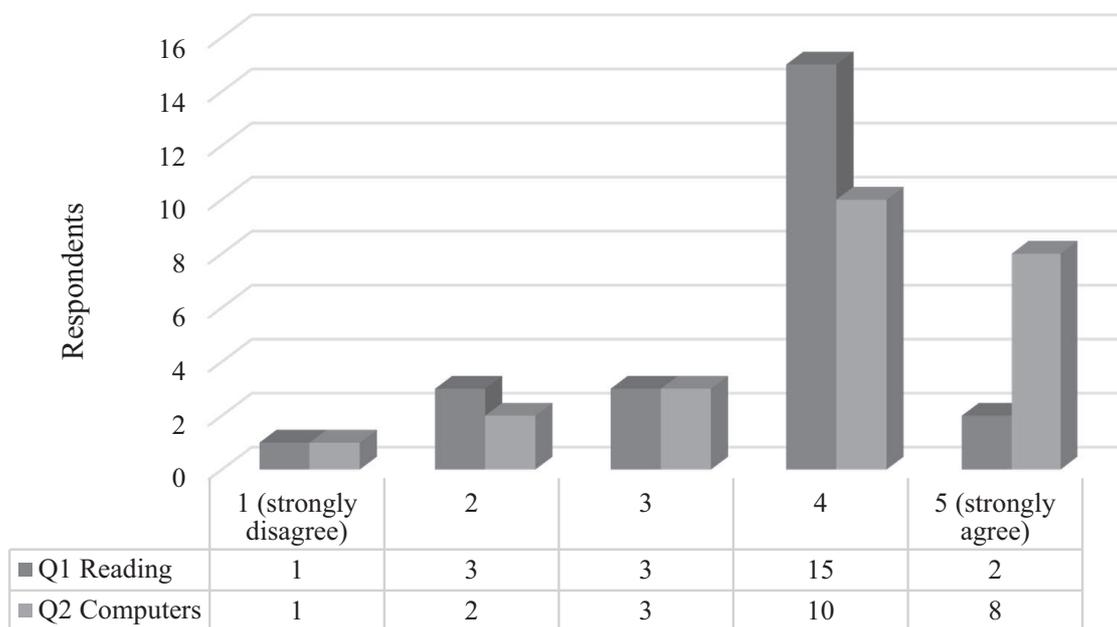


|  | 1 (strongly disagree) | 2 | 3 | 4 | 5 (strongly agree) |
|---|---|---|---|---|---|
| ■ Q1 Reading | 1 | 3 | 3 | 15 | 2 |
| ■ Q2 Computers | 1 | 2 | 3 | 10 | 8 |

Fig 3 ～ Comparison of Questions 1（Do you like reading?）and Question 2（Do you like using computers?）

Question 4 asked student to record which technological devices they use.　Students only used personal computers, tablets and iPhones, but recorded 42 instances of these, showing some of the students use a variety of devices to access information. In question 5, students detailed in how many classes they need to use computers. Positively, only seven students use computers in one class only, whereas fifteen students use computers in two classes, and five use in three or more classes. Question 6 saw students responding that it is easy using computer in class, against seven who thought it is difficult or were unsure.

Figure 4 details Question 8, asking the students what they liked about using PC's in class, with students able to select up to three answers. When asked about why they like using computers in class, with multiple answers allowed, 23 responses recorded that the use of PCs is more interesting than normal textbook classes. Eleven students liked the fact that MOODLE showed answers immediately. Eight responses recorded that they could use other applications (Word, Excel, Internet, and YouTube) in class.

Other responses included the fact that they didn't need to write many notes, that it improved their word processing skills, that they could get information more quickly. Only one student responded that they didn't like using computers in class for any reason.
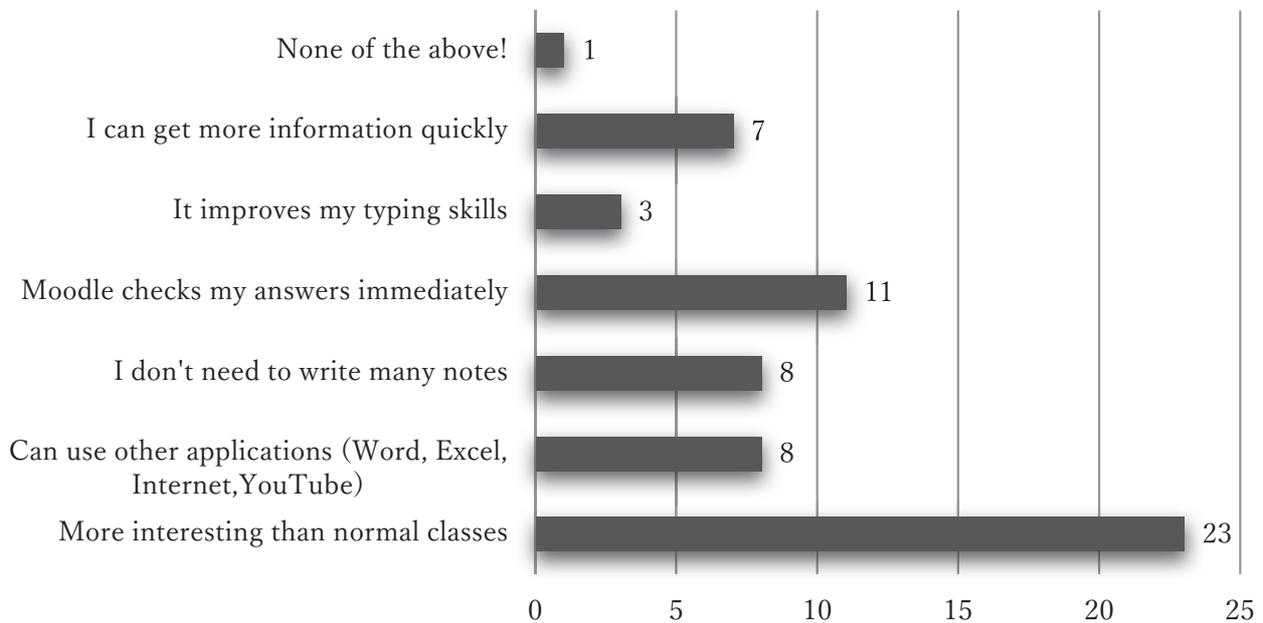


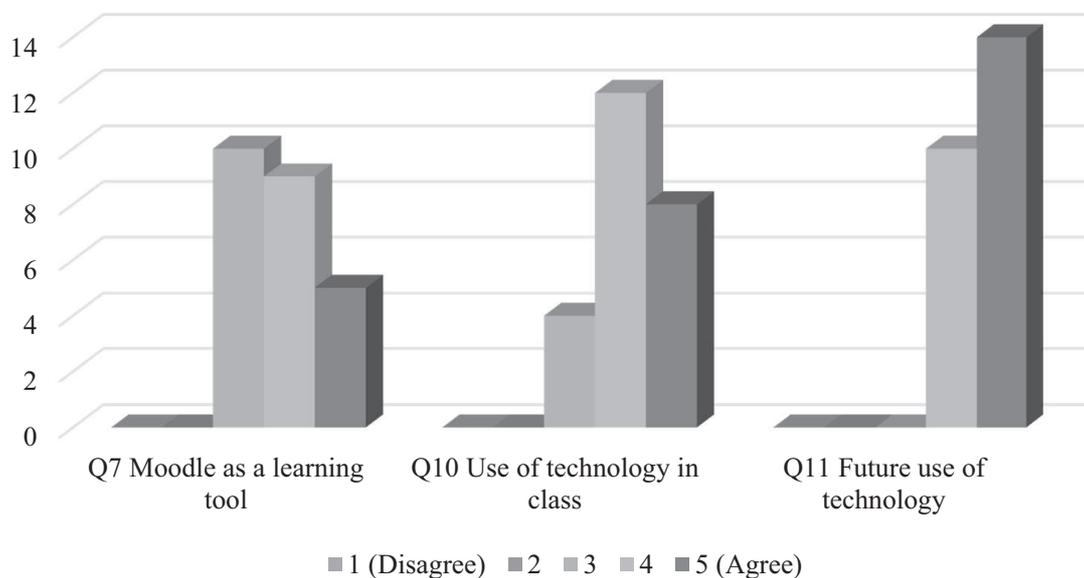Fig 4 ～ Q8. What do you like about using PC's in class?（Please select 1-3 answers）



Fig 5 ～ Comparison of Questions 7, 10 and 11 ；

Figure 5 compares three question to illustrate a pattern of acceptance by the students. Question 7 asks if the students think MOODLE is a good learning tool, Question 10 asks if the students think more classes (reading, listening, and other courses) should use more technology, and Question 11 asks if the students

think technology will be an important part of their future work. All answers were on a scale of 1 to 5, with 1 being disagree and 5 being agree. All three questions recorded no negative response, indicating the important of all three areas to the students. Fourteen out of the twenty-seven students though Moodle was a good or very good learning tool, represented by a score of 4 or 5 respectively. In addition, twenty studnets out of the total thought MOODLE should be used for other classes. However, all students recorded a score of 4 or 5 that technology would be important for their future.

Question 12 provided 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 Moodle as an innovation, which is probably the first database system that they have encountered in their education. It is inevitable with the rise of technology, as described above, that these students will encounter more technology in the future, which they seem to acknowledge. The overwhelmingly view of the students in their open-ended responses was a positive one, with positive opinions about the ease of the software；*'I like this class because it is interesting for me to use MOODLE.'* and *'I am satisfied with this reading class. Using a computer is easy to do and it helped me to understand contents of the class.'* In addition, students responded that classes had become more interesting, *'This PC reading class is very interesting and more easier ［sic］ than normal lesson for me.'*, and *'There is nothing to change because this reading class is interesting! I love this class!'* Also, students reacted positively to this class in that it generated positivity for the course, that of reading skills in that *'I had never get the class which I use these type of PC reading class. I enjoy using PC on this class. This is enable to us improve our English skill immediately. I think it is good method!!'*

Some technical issues were raised, '...*some computers wasn't ［sic］ smooth actions.'*, and fears of losing data *'It is possible that the data will be lost.'*, and perhaps the overuse of computers *'It must be tired my eyes'.* If it is possible to teach this course through online activities within the classroom, it would be important to ensure that there are more designated breaks away from the screen, utilizing that time on non-computer tasks such as pair work, group work, presentations, and other reading activities.

## 7. Discussion

This pedagogical change to my reading class enabled me as a teacher to think about how students may be able to learn in a better way for some parts of the lesson, with a greater focus on intrinsic motivation to learning, signaling to the students that they were the subjects of the learning process and that they would be given more self-directed learning opportunities, with peer teaching and learning, and a more supportive role from me as the teacher instead of an instructional or lecturing role. Additionally, a high degree of peer teaching took place due to the use of technology in the classroom. I had envisaged that students would

need to help each other but the level of cooperation learning, teaching and support was very positive. An educator has a responsibility to always put the student first, and in adhering to the notion of 'Banking of Education', developed by Freire (1970), led me to believe that students can be given more agency within the classroom. In this research, it has been shown that students have begun to understand to self-teach themselves and teach each other, rather than rely on the teacher. In addition, they are undoubtedly the Subject, rather than the teacher, of the learning process.

As detailed above, 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. In this sense, this research represents a small area of planned intervention in one class. In addition, the research element has collected a small-scale questionnaire. Although the results were clearly positive towards the use of CALL and Moodle, the sampling, data collection tools and 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 reading issues at the University, comparing reading comprehension by traditional and online methods of teaching and learning.

In addition, it is very important to address the teacher's opinions about the use of technology in the classroom, rather than limiting this to the thoughts of myself only. This point needs to be expanded to present a more valid promotion of Action Research, Moodle usage for lesson preparation and administration, and the use of technology within lessons.

## 8．Conclusion

This paper details the introduction and use of CALL, through the online learning system MOODLE, for a content-based reading syllabus. As a teacher-practitioner I 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. The *Lesson* activity was time-consuming to initially set-up, proof-read the text and administer. However, if the teacher can teach the same course in the following academic year or semester, the online activity will have already been tried and tested in class and could aid teachers in faster lesson preparation. In addition, the *Lesson* activity showed good collaboration amongst students, enhanced the delivery and collection of gradable assignments

and tasks, and administered quizzes in a more consistent and fairer way. Ultimately it created a more accessible, portable and revisable lesson. Referring to Moodle as an innovation, Moodle has already allowed me to quickly confirm step 1 of the Rogers decision-making process, *gaining knowledge about an innovation.* My initial investigation and construction of a 'lesson' for the first week of the reading course in Semester 1 of 2016, represented step 2, *being persuaded of its value*, and the successful use of it in the first lesson with the students allowed me to achieve steps three to five in *decision, implementation,* and *confirmation.* This latter point needs to be reiterated in that I *confirmed* my decision to continue using the innovation, deeming Moodle Lesson appropriate suitable as a teaching tool.

In addition, the adoption of the *Lesson* activity allowed for a good level of student comprehension and understanding of tasks and instructions, both from myself as the teacher, and the textbook.   It has been shown that the students reacted overwhelmingly positively to this format or medium of learning. The student questionnaire revealed a high level of enjoyment, satisfaction and learning taking place in the lesson and over the course of the semester. Students reported that they could get more information quickly, get answers immediately, research topics and understand instructions much better. The use of Moodle also helped to develop student's basic computer literacy skills. At the same time, some comments revealed that students were concerned about data security and lost data, such as their grades or work, which would need to be addressed in a subsequent repeat or follow-up of the course.

The research questions posed at the beginning of this paper have been met. In the first instance, Moodle can aid students to comprehend and be motivated towards their reading studies. In addition, Moodle has the potential to reduce lesson preparation, ensure better collection, delivery and grading of assignments, administer quizzes, and collate results faster. Lastly, this research paper promoted what Nunan (2001) calls an 'inside out' approach to professional development, in which the concerns and interests of the practitioners are placed at the center of the learning process.

**Appendix 2 (Student Questionnaire)**

**Q1. Do you like reading?** (Please select one answer on a scale of 1 to 5, with 1 being disagree and 5 being agree)

| 1. | 2. | 3. | 4. | 5. |
|----|----|----|----|----|
|    |    |    |    |    |

**Q2. Do you like computers?** (Please select one answer on a scale of 1 to 5, with 1 being disagree and 5 being agree)

| 1. | 2. | 3. | 4. | 5. |
|----|----|----|----|----|
|    |    |    |    |    |

**Q3. Do you prefer computer or non-computer lessons?**

| Computer | Non-Computer |
|----------|--------------|
|          |              |

**Q4. What kind of devices do you use for study/learning?**

| Personal Computer (PC) | Tablet | Smartphone | Other |
|------------------------|--------|------------|-------|
|                        |        |            |       |

**Q5. In how many classes do you need to use computers?**

| Only this class | 2 classes | 3 classes | 4 classes | 5 or more classes |
|-----------------|-----------|-----------|-----------|-------------------|
|                 |           |           |           |                   |

**Q6. Do you think it is easy to use a PC for learning?**

| Yes | No | Don't know |
|-----|----|-----------|
|     |    |           |

**Q7. Do you think MOODLE is a good learning tool?** (Please select one answer on a scale of 1 to 5, with 1 being disagree and 5 being agree)

| 1. | 2. | 3. | 4. | 5. |
|----|----|----|----|----|
|    |    |    |    |    |

**Q8. What do you like about using PC's in class?** (Please select 1-3 answers)

| More interesting than normal classes |
|--------------------------------------|

| |
|---|
| Can use other applications (Word, Excel, Internet, YouTube) |
| I don't need to write many notes |
| Moodle checks my answers immediately |
| It improves my typing skills |
| I can get more information quickly |
| None of the above |

**Q9. Is it easier to learn to read using the Moodle system?**

| Yes | No | Don't know |
|---|---|---|

**Q10. Do you think more classes (reading, listening, and other courses) should use more technology?** (Please select one answer on a scale of 1 to 5, with 1 being disagree and 5 being agree)

| 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|

**Q11. Will technology be an important part of your future work?** (Please select one answer on a scale of 1 to 5, with 1 being disagree and 5 being agree)

| 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|

**Q12. What would you like to change about this type of PC reading class?**

(Open answer)

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# Moodle を用いた読解授業の実践と評価

デッドマン　マーク

## 要　　旨

　本稿は、群馬大学での内容中心教授法によるリーディングシラバスにおいて、無料オープンソースのソフトウェアである Moodle を使用した CALL コンピューター支援学習について詳述している。

　本稿は Action Research の一環として、professional development tool（Nunan, 2001）である Moodle システムの評価に対する認知、英語リーディング学習の支援と学習者への動機付け、新しいテクノロジー技術・技能の導入、教師がより良い授業や課題評価を準備することを研究している。Moodle のレッスンモジュールは教員が授業内容やアクティビティーを学習者が興味を持てるように様々な方法で作成することができる。教員は詳細な授業内容や授業内アクティビティーを作成し、学習者に様々な授業方針や選択を提供することができる。教員は、学習者が授業やアクティビティーに積極的に取り組むようにし、選択問題、組合せ問題、記述問題等で授業内容の理解を確実にする（Moodle, 2016）。本稿は、このシラバスは学習者が授業参加を享受しているか、重要な課題に対してより高い理解度を得たかを調査するものである。