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A Collaborative Model Using e-Portfolio in Japanese Language Teacher Education

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Abstract: The purpose of this project is to provide teachers with an online collaborative space in which a Moodle-based website and an e-Portfolio system can be applied toward their teaching and learning improvement. Using both systems, the author investigated how to conduct collaborative teacher research through contents and an e-Portfolio platform, in addition to what specific activities generated critical reflection within teacher inquiry groups, which comprised a community of educators and practitioners. A year-long study of Japanese language teacher inquiry groups revealed the following three points: (1) collaborative sharing between teachers created opportunities for structured dialogues and professional linkages, (2) moderated groups with active facilitators improved group processes and provided greater cohesion and impressive group outcomes, and (3) participant-driven projects were attractive for participants who did not have enough opportunities to consult with other teachers.

Keywords: Teacher learning, pedagogy of investigation, e-portfolio, teacher collaboration, action research

1. Introduction

Issues related to professional development are receiving increased attention, as teachers at all levels are realizing the centrality of their roles to school reform and improvement (Burbank & Kauchak, 2003). However, despite the growing trend of teacher inquiry groups, limited attention has been paid to what activities generate inquiry and the types of learning that such inquiry might support. Thus, the models of cyclical processes for improvement, which have been proposed by many professional development experts and educational researchers, largely encompass desired activities, as opposed to actual activities (Zwart et al., 2008).

The research literature suggests that the professional development of teachers can be improved by fostering scholarly teaching; that is, a systematic and critical examination of how learning in each discipline can be improved (Burbank & Kauchak, 2003; Taylor, 2010). To optimize faculty development practice, engagement in a discipline requires not only shared knowledge of a subject matter, but shared goals, methods of inquiry, and communication styles (Huber & Hutching, 2005; Swales, 1990; Zwart et al., 2008). In this context, the most effective method is based on real-world practice, which can enable faculty to examine their own practice, reflect on their methods, and socialize. In the present study, the focus will be upon actual teacher collaboration and learning activities for improvement.

In response to these challenges, some educational institutions have been expanding considerable resources and developing new curricula, assessments, and technologies to foster integrative learning (Huber & Hutching, 2005; Zwart et al., 2008). According to Burbank and Kauchak (2003), collaborative action research, which combines groups of teachers in the design, implementation, and evaluation of action research projects, provides a mechanism for professional development. With regard to learning for novices and experienced teachers, these trials are characterized by pedagogy of investigation that overcomes the disconnection between acquired knowledge in university coursework and applied knowledge in the classroom. Through generated action research, collaborative knowledge sharing between participants provides opportunities for professional linkage and reflective discussion (Burbank & Kauchak, 2003; Rathgen, 2006).

2. Teacher Learning as Professional Development

In the context of teacher development, teachers are expected to learn about their profession by studying their experiences through systematic inquiry. According to Cochran-Smith and Lytle (1993), action research has become the centerpiece of many professional development programs. Through such research, teachers can come to understand and appreciate research as a personal meaning process. Teacher research, however, has occurred in isolation and has been dependent upon input from outside experts through either district in-service opportunities or from administrative mandates (Burbank & Kauchak, 2003).

One reason for this is that a majority of research has followed a scientific model in which the process of gathering evidence is based upon rigid, formal rules of sciences (Cochran-Smith & Lytle, 1993). Thus, traditional research is not conducive to helping teachers change their approach and improve their teaching skills. Another reason is that teachers tend to take a passive role in classroom research. More specifically, in many collaborative endeavors, the framing of research questions, data collection, and reporting of educational outcomes are dictated by those who are often in positions of power (Burbank & Kauchak, 2003). Consequently, teachers have difficulty implementing ideas that are conceptually and practically far removed from their classrooms. Hence, balancing the input from outside experts and moving teachers from a passive role to an active role can create opportunities in which teachers raise questions about theory and practice, and evaluate their teaching through systematic inquiry. The impact in this approach is a fundamental recognition of teachers as active empowered decision makers who are valid producers of knowledge.

In her previous study, the present author examined experiences that provide teachers with autonomy and active participation in teacher research by designing four different activities to encourage effective teacher partnership: (1) self-study on e-learning contents, (2) e-teaching portfolio development, (3) communication with peers and mentors, and (4) action research projects. These activities were implemented and integrated in the systems to promote reflective feedback and teacher collaboration (Kato, 2014). The purpose of the present study is to examine and analyze the factors that influence the collaborative process using qualitative and quantitative data from the participants. More specifically, the author investigates how to conduct collaborative teacher research through contents and portfolios on the Internet, and what specific activities generate critical reflection within teacher inquiry groups.

3. System Development for Teacher Learning

Through this project, the author provided a learning environment on the Internet in which participants and mentors collaboratively performed tasks and exchanged perspectives and information. Furthermore, to promote professional communication between participants, the author developed two different communication websites—a Moodle-based learning website and an e-Portfolio system. This system integrated four different activities: (1) e-learning contents, (2) e-teaching portfolio, (3) communication with peers and mentors, and (4) project-based teacher learning on the Internet (Kato, 2014).

In the first trial, the author promoted teacher collaboration for new curriculum development and assessment for Japanese language education, based on an exchange of practices and ideas. Like many traditional means of professional development, collaborative methods provide teachers with opportunities to interact professionally with one another. The Moodle website (https://lms.katoyukari.net/) was designed to provide two of the aforementioned activities (i.e., (1) e-learning contents and (3) communication with peers and mentors) through a discussion forum, a course, a voting system, and questionnaires to support and encourage the exchange of ideas. In this space, the participants were gathered for discussion sessions led by professionals (mentors), as shown in Figure 1. After the topic was presented to the participants, they were allowed to inquire or discuss the scope of topics. During the collaborative work, the participants were expected to critique their own practices and comment on those of others. Additionally, the mentors ensured engagement with other participants, teaching experiences, and learning outcomes through the virtual environments. Most

importantly, the author and her colleagues were particularly interested in examining the participants' benefits through this virtual community of practice.

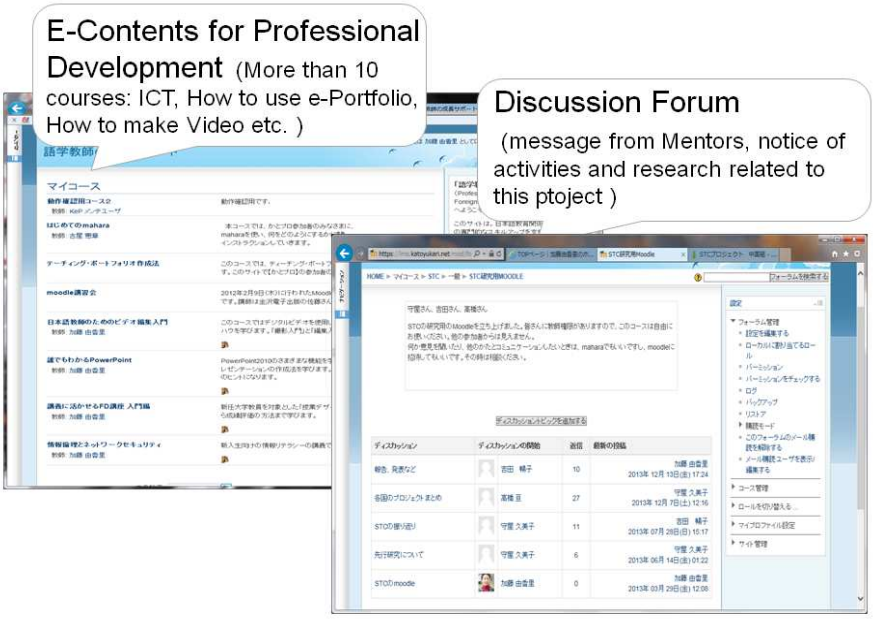

Figure 1. Screenshot of Moodle.

The e-Portfolio (https://sns.katoyukari.net/) served as a repository of reflective activities, as well as a personalized learning space, for the participants and mentors. As shown in Figure 2, the e-teaching portfolio was a collection of electronic evidence assembled and managed by each participant usually on the Internet. Such electronic evidence might include texts, electronic files, images, multimedia, blog entries, and hyperlinks. It also included built-in reflective activities for the participants and mentors, which worked as a personalized learning space.

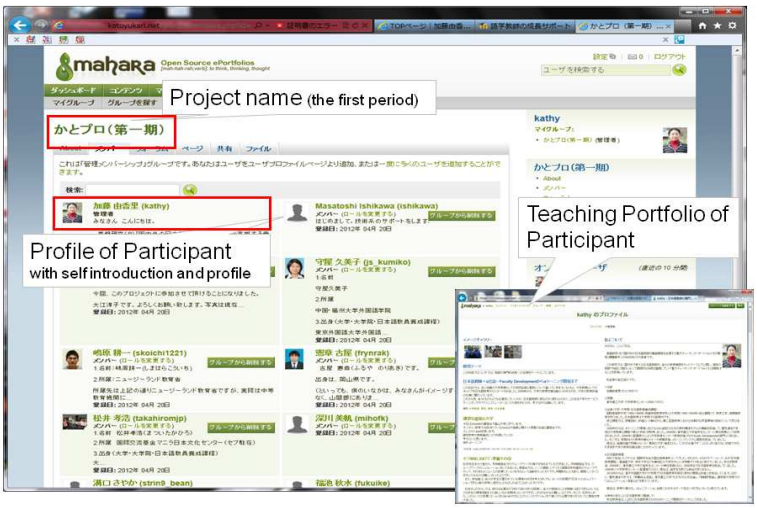

Figure 2. Screenshot of e-Portfolio.

This e-teaching portfolio used the Mahara open source software in which the content and layout could be personalized to create multiple views that meet the specific, differing, and/or changing requirements of the user. This platform also supported a key tenet of reflecting on teaching activities and learning events using blog functions and diaries to share thoughts. Furthermore, this portfolio provided the data as evidence of the topic discussions posted on the Moodle-based website.

Overall, the Mahara-based website was designed to promote two of the aforementioned activities: (2) e-teaching portfolio for reflection, and (4) project-based learning through collaborative

discussions and activities among the participants. Thus, the goal of this website was to introduce participants to an e-teaching portfolio that was not only a technology, but more importantly, a tool to foster integrative pedagogy.

4. The Evaluation Study of the First Trial

In the first trial, the author investigated the effects and operability of the two systems with nine participants, focusing on the following three aspects: (1) motivation to participate in this project, (2) ability to communicate with other participants and mentors, and (3) suggestions for improving the collaborative space for teacher learning (Kato, 2013). A total of five senior teachers working in Japan and four junior teachers working overseas reported and reflected on their own practices over the six-month time period. Four mentors (one instructional designer, two experienced teachers, and one system engineer) were also involved in this project. Given the exploratory nature of this project, the author used multiple methods to collect data to gain a broad understanding of the methods in which Japanese language teachers confront and solve problems.

Additionally, the author facilitated focus group interviews with six participants and four mentors, which covered issues regarding the participants' conception of the project as well as the functionality and utility of the systems. The focus group meeting (held on Aug. 3, 2012) was digitally recorded and the recording was transcribed before data analysis was conducted. In accordance with the nature of the semi-structured focus group interviews, the interviewers requested elaboration on emerging topics to obtain detailed responses (Kato, 2013). Although a majority of the participants agreed that the "systems are convenient tools to promote communication between teachers," some participants stated that they experienced less communication (Kato, 2013, 2014), as shown in the following three comments:

> *"In reality, I have never met any of the participants. So, I am afraid that I cannot communicate with them adequately. I was trying to comment on others' diaries, but I could not. For me, commenting on unknown teachers' work was difficult."* (Female, 40s, teaching in Japan)

> *"I have not commented on others because I am not an experienced teacher. I think that a mentor's role is to provide comments to the participants. I have no chance to see them, so it is difficult for me to talk with them frankly."* (Female, 20s, teaching in an overseas aid program in China)

> *"I have difficulties sharing background knowledge because the participants work with different institutions, curriculums, and learners. I believe that I can easily exchange ideas if I meet participants who work under similar conditions."* (Male, 20s, teaching in an overseas aid program in New Zealand)

In the first trial, the author primarily used Moodle (an open source learning management system) and facilitated collaborative learning among the participants, which was mentor-driven through her ownership. In fact, a majority of the participants stated that communication was inhibited because of hesitation and fear of expressing their opinions and ideas to unfamiliar participants (Kato, 2013). To improve the situation, the participants stressed the importance of both mentors' assistance and support for collaboration.

4.1 Improvements based on the First Trial

On the basis of the observations and data analysis in the first trial, the author enhanced the educational aspects of this system by developing and implementing solutions to support the activities for teacher collaboration (Kato, 2013; 2014). The resulting new trial aimed to enhance the facilities for inquiry, reflection, and integration (as key ingredients) by employing small group activities for their social learning and personal development. Thus, the author offered more intensive and attractive activities than simply creating a teaching portfolio as proof of their professional growth and excellence.

In addition to organizing the small group activities, the second trial included teacher research based on the participants' comments. According to Burbank and Kauchak (2003), collaborative sharing between teachers creates opportunities for structured dialogues and professional linkages. This

approach also enables teachers to move from formerly passive roles to truly collaborative roles. To encourage this type of research, the author allowed the participants to use alternative forms of inquiry, such as peer observations, reporting on their own practices, and making collaborative reflections. In sum, collaborative teacher research attempts to broaden teachers' abilities to take control of their professional lives and create opportunities to publicize their views regarding educational expectations (Burbank & Kauchak, 2003; Rathgen, 2006).

5. The Evaluation Study of the Second Trial

In the second trial (Nov. 2012–May 2013), eighteen participants (consisting of six new teachers, eight participants, and four mentors) were involved in this project, as shown in Table 1.

Table 1: Profiles of the 18 participants (Nov. 2012–May 2013).

Participants	Employment Position (Institution, Region)	Academic Degree	Teaching Experience (region)	Age
A	Lecturer (University in China)	M. A. (Japanese Language Education)	Less than one year (China)	20s
B	Lecturer (University in China)	M. A. (Japanese Language Education)	Less than one year (China)	20s
C	Lecturer (Department of Education in NZ)	M. A. (Japanese Language Education)	Less than one year (NZ)	20s
D	Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	6 years (Thailand, Taiwan, Japan)	30s
F	Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	7 years (Japan)	30s
G	Lecturer (Japan Foundation, Philippine)	M. A. (Japanese Language Education)	8 years (Thailand, Philippines)	30s
H	Associate Professor (University in Japan)	M. A. (Japanese Language Education)	10 years (Dominica)	30s
I	Part-time Lecturer (University in Japan)	M. A. (Asia Studies)	13 years (U.S., Japan)	40s
N	Lecturer (University in Serbia)	M. A. (Japanese Language Education)	4 years (China)	20s
O	Lecturer (University in Thai)	M. A. (Japanese Language Education)	2 years (China)	20s
P	Lecturer (University in Russia)	M. A. (Japanese Language Education)	Less than one year (Russia)	20s
Q	Ph. D. Student, Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	10 years (Thailand, Japan)	30s
R	Lecturer (University in Japan)	M. A. (Japanese Language Education)	7 years (Mongolia, Japan)	30s
S	Associate Professor (University in Japan)	M. A. (Japanese Language Education)	15 years (Philippines, Japan)	50s
J (Mentor)	Part-time Lecturer (High School in Japan)	M. A. (Japanese Language)	13 years (Korea, Japan)	40s
K (Mentor)	Lecturer (University in Japan)	M. A. (Japanese Language Education)	10 years (Japan)	30s
L (Mentor)	Associate Professor (University in Japan)	Ph. D. (Major: Media Studies, Minor: Japanese Language Education)	13 years (Japan)	40s
M (Mentor)	Assistant Professor (University in Japan)	Dr. of Eng. (Information Sciences)	2 years (Japan, No language teaching experience)	30s

Organizing a small inquiry group in the second trial, which was participant-driven, facilitated the active use of e-Portfolio, as shown in Table 2. Each participant selected at least one topic-based project after which the facilitator shared teaching tips and described how to plan a new project as well as investigate and study new assessments for language learning. At the initial meeting (held on Nov. 10, 2012), the participants and mentors set up eight small groups and selected the facilitators for each group. With regard to the latter, each facilitator was selected on the basis of his/her continued involvement in the project and knowledge regarding the use of the systems to conduct teacher research.

Table 2: Activities of the subgroups in the second trial.

Participants	Employment Position (Institution, Region)	Academic Degree	Teaching Experience (region)	Age
A	Lecturer (University in China)	M. A. (Japanese Language Education)	Less than one year (China)	20s
B	Lecturer (University in China)	M. A. (Japanese Language Education)	Less than one year (China)	20s
C	Lecturer (Department of Education in NZ)	M. A. (Japanese Language Education)	Less than one year (NZ)	20s
D	Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	6 years (Thailand, Taiwan, Japan)	30s
F	Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	7 years (Japan)	30s
G	Lecturer (Japan Foundation, Philippine)	M. A. (Japanese Language Education)	8 years (Thailand, Philippines)	30s
H	Associate Professor (University in Japan)	M. A. (Japanese Language Education)	10 years (Dominica)	30s
I	Part-time Lecturer (University in Japan)	M. A. (Asia Studies)	13 years (U.S., Japan)	40s
N	Lecturer (University in Serbia)	M. A. (Japanese Language Education)	4 years (China)	20s
O	Lecturer (University in Thai)	M. A. (Japanese Language Education)	2 years (China)	20s
P	Lecturer (University in Russia)	M. A. (Japanese Language Education)	Less than one year (Russia)	20s
Q	Ph. D. Student, Part-time Lecturer (University in Japan)	M. A. (Japanese Language Education)	10 years (Thailand, Japan)	30s
R	Lecturer (University in Japan)	M. A. (Japanese Language Education)	7 years (Mongolia, Japan)	30s
S	Associate Professor (University in Japan)	M. A. (Japanese Language Education)	15 years (Philippines, Japan)	50s
J (Mentor)	Part-time Lecturer (High School in Japan)	M. A. (Japanese Language)	13 years (Korea, Japan)	40s
K (Mentor)	Lecturer (University in Japan)	M. A. (Japanese Language Education)	10 years (Japan)	30s
L (Mentor)	Associate Professor (University in Japan)	Ph D. (Major: Media Studies, Minor: Japanese Language Education)	13 years (Japan)	40s
M (Mentor)	Assistant Professor (University in Japan)	Dr. of Eng. (Information Sciences)	2 years (Japan, No language teaching experience)	30s

5.1 Participants

Each participant in this project taught some type of Japanese language course during the length of this inquiry. Their teaching experience ranged from six months to 13 years. Six junior teachers (A, B, C, N, O, and P) working overseas and eight senior teachers (D, F, G, H, I, Q, R, and S) working in Japan reported and reflected on their own practices over the six-month period. A total of four mentors (J, K, L,

and M) were also involved in this project, as shown in the Tables 1 and 2. One mentor, an instructional designer (L) from the Educational Development Center (faculty developer), designed and coordinated this project, while two other mentors (J and K) were experienced Japanese language teachers who helped the participants reflect upon what they have learned from their experience and how it impacted their overall development as a Japanese language teacher. The last mentor (M) specialized in computer science and worked as an adviser for system development.

Meanwhile, the six junior teachers just completed their respective master's programs and obtained full-time positions at universities and educational institutions overseas, whereas the senior teachers and mentors have various teaching experiences both domestically and overseas.

5.2 Data Source and Analysis

The practical activities through the e-Portfolio and Moodle systems for the first and second trials are shown in Table 3. On the basis of the observations and data analysis, the author will enhance inquiry, reflection, and integration as key ingredients for using the e-Portfolio system. The findings indicate that communication in the second trial was more efficient and active than in the first trial. In particular, small group activities using e-Portfolio facilitated participants' ongoing access to their social learning and personal development. Active participation and discussion were also observed among the two subgroups of Communication (A) and Challenge (Kato, 2014).

Table 3: activities of the subgroups in the first and second trials.

Group	Purpose of Activities	No. of Participants	Participants (facilitator*)	No. of Forums	No. of Postings on the System
The First Trial	Mentor-driven notice	13	9 participants and 4 mentors, including L* as a facilitator	1	28
The Second Trial		18	14 participants and 4 mentors, including L* as a facilitator	1	4
Writing/Reading (A)	Collaboration and discussion about reading and writing	4	B*, K, Q, and P	1	10
Writing/Reading (B)		3	D*, A, and M	1	7
Material/Content (A)	Collaboration and discussion about educational materials and content development	3	H*, O, and L	1	4
Material/Content (B)		3	F*, I, and N	1	1
Communication (A)	Collaboration and discussion about student exchange activities	4	A*, J, M, and N	2	76
Communication (B)		3	I*, R, and B	1	6
Communication (C)		3	G*, F, and C	1	4
Challenge	New trials	18	14 participants and 4 mentors, including C* as a facilitator	2	45

Overall, the second trial offered more attractive contents than the teaching portfolios and intensive contents that the participants worked on during the first trial. Additionally, moderated groups with active facilitators improved group processes and provided greater cohesion and impressive group outcomes such as video exchange projects among non-native students studying Japanese in different

countries (Communication A) and a local seminar for the professional development of non-native Japanese teachers in Cebu, Philippines (Challenge).

Figure 3. Record of Video Exchange Project on Mahara (Communication A).

Figure 4. Students' Videos on a Blog (Serbia, Communication A).

Figure 5. Log Data of Discussions related to the Seminar on e-Portfolio (Challenge).

Figure 6. Local Seminar for Japanese Language Teachers in Cebu (Challenge).

6. Conclusion

This study investigated how to conduct collaborative teacher research through contents and an e-Portfolio platform, in addition to what specific activities generated critical reflection within teacher inquiry groups, which comprised a community of educators and practitioners. In the first trial, the author primarily used Moodle and facilitated collaborative learning among the participants, which was mentor-driven with her ownership. The practical activities during the first trial revealed the following four points: (1) participants did not have sufficient opportunities to communicate with one another, although they were highly motivated; (2) classroom evidence and reflective documentation were effective tools for focusing on and analyzing their own practices; (3) continuing discussion among the participants was necessary to build and sustain a community of practitioners; and (4) young teachers were hesitant to express their ideas and opinions to their senior counterparts (Kato, 2013).

In the second trial, the participants and mentors were divided into eight subgroups after which they collaboratively conducted project work for their own inquires and interests. Effective implementation was facilitated by maintaining communication with one another, finding the latest resources, and sharing their own experiences through the teacher learning project. This new trial enabled teachers to move from formerly passive roles to truly collaborative roles. It also shifted the emphasis in professional development thinking away from individuals and courses toward systematic, complex understandings in which learning was shared within a community of practice.

Finally, this project offered teachers autonomy, choices, and active participation, which are all critical for effective professional development. Through collaborative teacher research, such as peer observations and reporting on their own practices, this project also provided experienced teachers with the mechanism to systematically mentor their novice counterparts and suggestion on how Japanese language teachers (both domestic and overseas) can broaden their ability to take control of their professional development. One of the long-term goals of this researcher is to construct a common web-based teaching platform that can be utilized by a community of educators and practitioners committed to collaborative pedagogical inquiry and innovation.

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