An Investigation into the Use of Action Logging in a General English Course

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Introduction

The purpose of this study was to assess the contribution of action logs-writing forms used to record student feedback-toward first-year students' learning at a Japanese university. Despite the widespread use of action logs by language teachers, a degree of ambiguity still surrounds the effectiveness of this technique in relation to student learning and the student perceptions of the activity. Furthermore, while promising views in support of the technique as a teaching and learning tool have steadily emerged, there still remains an ongoing need for an evidence-based appraisal of the activity in the Japanese university context. Methodologically, the paper represents a conceptual replication of Matsumoto (1996), who utilized retrospective diaries, questionnaires and interviews to investigate university students' perceptions of self-reporting tasks. The paper is divided into five sections. In section one, relevant literature related to written reflection and action logging is reviewed with a specific focus on the pedagogical benefits of the tool for teachers and students. Section two outlines the participants and data collection methods used in the study, followed by the presentation and a discussion of the results. The paper concludes with limitations of the study and pedagogical implications for the future implementation of action logs in this context.

Literature Review

The benefits of written reflection have been well established in the field of teacher education. Reaching a position of near ubiquity in the teacher education programmes around the world, reflective practice in the form of written self-reflection has been thoroughly integrated into training disciplines and has become a core cross-disciplinary method of instruction and assessment (Man & Walsh, 2017). As a result, the contribution of written reflection to teacher training development has also been well supported by a significant body of research (Farrell, 2013; Hatton & Smith, 1995; Moon, 2006).

In comparison, studies which have investigated the contribution of written reflection to student learning, and the student perception of these activities, are considerably fewer in number. This is particularly surprising given the potential of written reflection to greatly improve learning outcomes for students, and the possible flow on effects to professional teacher practice. In the following section, an overview of the principle benefits of written reflection for student learning is presented under four categories: academic outcomes, meta-cognitive self-regulation, affective regulation, and motivation.

Despite an absence of studies, there is modest evidence to suggest a positive correlation between student written reflection and academic performance. In a study of 40 undergraduate biology students McCrindle and Christensen (1995) found that students who kept learning journals significantly outperformed those in the control group. However, other studies have been less conclusive in their findings. Lew & Schmidt (2011) reported only a limited relationship between journaling and academic achievement for the students in the study. The authors concluded that self-reflection was effective only to a small extent in improving student academic performance.

A more conclusive benefit of the technique relates to the role of written self-reflection in the development of meta-cognitive self-awareness. Referring to the ability to essentially think about one's thinking, self-reflection has been positively correlated with students' ability to manage and plan their learning, as well as tactfully apply learning strategies to improve their learning outcomes (Chick, 2013; Oxford, 2011). In particular, the process of written reflection provides an opportunity for students to set goals and monitor their learning in reference to

evidence of what they've learned (Elias, 2010).

Reflective writing can also contribute to an independent engagement of the learner in the learning process. In this regard, it has been argued that for learning to occur, motivation needs to shift from external motivators to internal ones through the ascription of meaning in the learning process (Yancey, 98). Written reflection is effective in this capacity, as it provides a tool for learners to ascribe personally relevant meanings to learning events and the content they receive in class. Doing so allows the learner to exercise more independence over the learning and develop a greater awareness of their agency in the process (Cavilla, 2017).

Written reflection can also help students to emotionally regulate stressful aspects of the learning process. For some students, learning a second language in the classroom can be a stressful experience. As Arnold (2011) suggests, the students' self-concept is particularly vulnerable in language learning classes, where students may feel they lack the means of expression afforded to them by their L1. To this end, reflective writing offers a mechanism whereby these tensions can be registered and addressed, and adjustments made to the curriculum accordingly.

The above section has supplied evidence in support of the use written reflection for teachers and students. In the latter half of this review, discussion will shift to the specific mode of written reflection used in this study; action logs.

Action Logs

In this paper, action logs shall be used to refer to writing forms "in which students record mainly for themselves the activities of a class and their evaluations, which are later read by the teacher in order to adjust the activities to student needs" (Warkentin, Hooper & Murphey, 2019, p. 341). An important distinction between other forms of diary keeping and action logging is that action logs are specifically focused on the sharing of student perceptions of their learning and the events that occur in a particular class (Murphey, 1993).

The activity typically takes place at the end of a classroom session or at home via the student completion of brief written comments about classroom activities, points of enjoyment and difficulty, student use of English during the session, and other aspects of the class that were useful for their learning (Hooper, 2020). These accounts are then collected by the teacher at frequent intervals during the course, and are returned to the students with feedback comments from the teacher. Upon collection, the comments of students may then be used by the teachers to inform their lesson planning and better tailor the lessons to meet the needs of their students.

Previous studies which have documented the use of action logs have varied in time and nature of the prompts given to the students. Tim Murphey, a key central proponent of the technique, suggests that the procedure can be given as homework task, where prompts ask the students to write what they did in the previous class and how they liked it (Murphey, 1993). Other teachers have used class time for writing of action logs and the collection of these documents.

In terms of their form, previous literature provides little information about the most pedagogically effective ways to structure action logs, nor the types of prompts to be used for reflection. Hooper (2020), supplied action logs to first year Japanese university students, and provided spaces for students to write their target and actual use of English in the class, key learning tasks from each class, and a four-point response system to evaluate the tasks with categories including interest, difficulty and usefulness. Additional spaces were also provided for students to write open ended comments and ways to improve their performance for next time. These logs were completed in class time and collected on a weekly basis. While not used in this study, the utilization of a task scale provides an efficient method for teachers to gauge the effectiveness of activities in the classroom

Action logging benefits language teachers in various ways. Firstly, the activity removes a degree of guess work from the lesson planning and review process, and replaces it with experientially derived evidence from classroom activity. In this regard, the student logs represent a valuable source of information from which teachers can begin to evaluate the merits and student comprehension of specific learning activities (Hooper, 2020; Murphey, 1993). Additionally, action logging can contribute toward a greater personalization of the learning process between teachers and students (Murphey, 1993). Via the collection of action logs, communication between teachers and learners can occur and a positive sense of rapport can be fostered.

There are also benefits of keeping action logs for students. According to Warkentin, Hooper & Murphey

(2019), the activity contributes to a productive cycle of reviewing and recycling information which can contribute to the retention of learnt content. Furthermore, action logging can also help to foster a sense of student agency in relation to the curriculum (Warkentin, Hooper & Murphey, 2019). Specifically, through a dialogue with the teacher, students can begin exert a greater influence on the classroom planning and activity design.

Despite the reported benefits of action logging referred to above, there remains an absence of literature on the student perspective with respect to the activity. In one notable study of 106 Japanese college students, Matsumoto (1996) assigned diaries, questionnaires and interviews to students in an investigation of university students' perceptions of these self-reporting tasks.[1] Utilising Likert scale questions and unstructured prompts, the findings of the paper indicated the value of dairies in raising student awareness of their learning. Building on these findings, this paper focuses specifically on action logs in the classroom and seeks to address the following research questions (adapted from Matsumoto, 1996):

1. Do the students in the study perceive the inclusion of action logs as beneficial to their language learning?
2. If so, how did the inclusion of these activities assist them in their learning?

Methods

Participants

The 136 participants in the study (94 males and 42 females) were first year students at a Japanese University, aged 18-20. Students from five classes and three faculties took part in the study with three classes from Engineering and one each from Medicine and the Department of Law and Letters, respectively. The students in the study were enrolled in a mandatory general English course covering the four skills of speaking, listening, writing, and reading. At the time of data collection, the students were completing the 15 week speaking component of the course. This group of learners received instruction once a week, and were taught by the researcher.

Procedure and Instrumentation

The first stage of the data collection process involved the completion and submission of daily action logs by students via the online learning platform Moodle. At the end of each class, students were required to write a comment in English in response to prompts on a PowerPoint screen, and submit this response to Moodle via a Microsoft Word file before the next class. In addition to providing included spaces for the students to write their comments, the Microsoft Word file allowed the students to sequentially review their submissions during the course. The average completion rate for this activity was 87.85%.

In line with the prompts used by Murphey (1993), the questions were deliberately open-ended to allow for a variety of student responses. The prompts asked the students to comment on something they enjoyed about the lesson, a challenge they faced, and a space to write any additional comments about the class[2]. Upon the collection of these responses, the teacher provided the students with written feedback and encouragement in relation to the content of their comments.

Reflecting the approach of Matsumoto (1996), the second stage involved the student completion of an end of course online questionnaire, including a space for the provision of demographic data and Likert scale questions related to the influence of action logs on their learning. In an attempt to provide a fuller description of the numerical data received from these responses, a short answer section was also included which asked the students to comment on how action logs had contributed to their learning. All responses were then translated from Japanese to English.

The qualitative data from the student action logs, and short answer responses were then coded according to the approach outlined by Corbin & Strauss (1998). The three stage process involves the initial open coding and ascription of category labels to responses, second, the theoretical coding of items to identify relationships between these categories, and then selected generation of core categories from the data.

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[1] While not specifically referred to as action logs, the reflective diaries in Matsumoto's study shared similarities to this technique in this study by encouraging the students to systematically write comments related to classroom activities and their learning.
[2] The inclusion of this prompt reflects the action log design of Miyake-Warkentin & Hooper (2019)

Results

Action log responses

The qualitative analysis of student action log responses revealed the following dominant categories related to the student learning: content specific information, meta-cognitive monitoring and the organization of learning, affective regulation, teacher interaction, and class-based student interaction.

The majority of student comments were related to classroom content. Thematically, comments in this category were linked to the processing of information learnt in class, and the ascription of personal value to specific content. As the following student comment illustrates:

"I worried about continuing conversation, but I found "And" "So" "Also", connection words, are very useful. So, I want to master them!"

In this case, the student appears to be integrating the learnt content in the class, conjunctions, with the ability to maintain and structure a conversation.

Other content focused comments related to the identification of perceived shortcomings in knowledge, or the absence of specific skills, as one student related:

"I found I should practice the English reaction more! I have very small vocabulary, so I was not able to use a lot of kinds of reaction! I will do my best to improve my reaction skill from now!"

The final sentence here also overlaps with the second category of student comments, meta-cognitive monitoring and the organization of learning. In this category, student comments were focused on planning and the organization of their studies. Many of these comments in this category reflected the formulation of informal goals, as illustrated by the following student comment:

"I feel that I have acquired talking skill gradually. I want to use new words actively in the next class and I want to expand my vocabulary."

A further example exemplifies the reflexive relationship between events in the class and the process of informal goal setting evident in a number of comments with:

"I could listen to your English and speak fluently. So, in next class, I want to answer and ask faster than today class."

The third dominant category related to the affective regulation of aspects of the learning process. A number of these students used the comments to reflect on their emotional state during the classroom sessions, or detail their emotional response to specific classroom events. In the following example, the student provides an appraisal of a particular event in class when the students were asked to describe specific items using descriptive language:

"When I spoke to everyone about my word, I was a little nervous. However, I was pleased to be praised. I enjoyed describing and guessing words."

In the following end-of-course comment, another student detailed their initial concerns about participating in a predominantly L2 learning context, and their reconciliation of these concerns with the reality of their classroom experience:

"English 1 was my first class as a college student, so I was nervous. I was worried about whether I could continue the class because the teacher spoke only basic English. However, the teacher supported me in various fields, such as replying to me at any time what I did not understand in my homework, and speaking in Japanese when I spoke English and the students could not understand it. The class was really easy to understand."

A smaller but recurrent category of responses related to interactions with the teacher. In particular, following action log prompts given by the teacher to assess the speed of teacher talk, several students commented on the comprehensibility of the teacher's use of English in the class. As an example, on the first day, one student suggested that they could understand 60% of the teacher's English, however, the following session, the same student commented again with the following:

"I understand 85% of your speaking English. No problem."

A smaller number of teacher directed comments referred to technical issues related to the use of Zoom synchronous conferencing software, and other aspects of course organization such as homework and assessment.

The final main category of comments reflected the interactional aspects of the lesson with other learners. In addition to the documentation of memorable interactions, a number of the students used the comments to document the process of building friendships and individual interactions with other students in the class.

Likert scale survey responses

In response to the question regarding the contribution of action logs to their learning on the course, 44 students (32.4%) indicated strong agreement with the statement that action logs had been helpful to their learning, with a further 55 students (40.4%) also proffering agreement. From the remaining responses, 19 students (14%)

remained undecided, with a further 12 students (8.8%) disagreeing and 6 students (4.4%) registering strong disagreement.

Short answer survey responses

Five main categories were generated through the analysis of student short answer survey responses. In this question, students were asked to write answers in Japanese in relation to the question of how action logs influenced their learning. The following section presents these five main thematic categories of responses generated through the coding process with examples from each.

Overall, the main category of responses was related to the role of action logs in facilitating review of lesson content. In total, 36 responses were recognized in this category. Comments tended to focus on the role of action logs in the recall of lesson content. Some examples included:

1. "自分自身がなにを学んだのかを確認することで意識することができていたと思う" –I think I was able to become aware of what I had learned by checking back on what I had learned.
2. "毎回授業の内容を振り返ることができた" –I was able to look back on the content of each lesson.
3. "コメントを書くことでその日に行ったことを振り返り，身につけることができると思うから" –By writing a comment, I think I can look back on what I did that day and learn more.

The second main category of responses highlighted the benefit of action logging for the students' thinking, writing, and lexical development. Sixteen of the student responses specifically referred to the relationship between the act of written reflection and their ability to think and write in English. The following examples typify some of the themes of these comments:

1. "頭の中で英語を使って考える能力が向上した" –My ability to think in English has improved.
2. "Writing 能力も身につけられたと思う。コメントを書くのにわからない文法や単語を調べたことも語学学習に役立った" –I think I have also acquired writing skills. Searching for grammar and words that I didn't understand when writing comments also helped me in learning the language.

Other student comments (n=7) relayed the contribution of action logging to the acquisition and review of new vocabulary items. The following examples provide a good illustration of this theme:

3. "授業の振り返りをかくことでわからない単語を調べる機会が増えた" –By looking back on and writing about the lesson, I gained opportunities to look up words I don't understand.
4. 様々な表現をコメントの中で用いていくことで，それを実際に使うことができるようになりました –By using various expressions in comments, I have become able to actually use them.

A third category corresponded to the meta-cognitive organizing of learning in the form of planning and self-management. The 19 student entries in this category often referred to the benefit of action logging for the clarification of study goals:

1. "毎授業の自分の英語の話し方や，使ったフレーズを振り返ることで，次回までに改善したいところを認識できた点" –By looking back on my own English speaking style and phrases used in each class, I was able to recognize what I wanted to improve by the next time.
2. "自分を振り返る機会となり，次の授業に向けて新たな目標を立てることに役立った" –It was an opportunity to look back on myself and help me set new goals for the next lesson.

Still other comments related to the student ability to organize aspects of the learning process. The following student comment provides an illustration:

3. "今回の授業で学んだことを整理することができた。後日見直した際にその日に何を学んだのかが分かった" –I was able to organize what I learned in this class. When I reviewed it at a later date, I knew what I had learned that day.

A smaller number of responses (n=8) suggested a linkage between action logging and motivation. The following two examples have been included to exemplify comments from this category:

1. "自分の苦手な部分が浮き彫りになっているため，学習意欲が向上した" –My motivation for learning has improved because my weaknesses are highlighted.
2. "少しずつ上達していることがわかってやる気が出た" –I was motivated to find that I was improving little by little.

The final category identified from responses was related to expression. In this category, the comments of

six students related to the ability to express thoughts and emotions in English through the comments. One comment included:

1. "自分の考えを英語で表現する力が身についた" −I have acquired the ability to express my thoughts in English.

Discussion

In response to the first research question, the majority of numerical responses received by students suggest that the inclusion of action logs was perceived as beneficial to the students' learning in this context. Of the 136 students who took part in the study, 99 (73%) responses indicated either strong agreement or agreement that action logs had contributed to their language learning on the course. This finding closely resembles that of Matsumoto (1996), who similarly found the majority of students rated the activity highly in their questionnaire responses.

Furthermore, the qualitative data from student short answer responses also confirmed that action logging was valued by many of the students in this study as method of content review, a tool for writing and vocabulary development, and a facilitating component in the organization and planning of their learning. For other students, supporting the opinion of Murphey (1993), action logging was serving to motivate certain students and offer others a tool for self-expression in English. Overall, this data provides evidence to support the view that action logging was valued by the majority of the students in this study, and has an ongoing legitimate role to play in this learning context.

Concerning the second question, the analyzed student comments indicate that action logging was facilitating many of these students to process aspects of lesson content. In particular, there was notable overlap in the categories between the action log reflections and the post course short answer questionnaire answers in this study. Clearly, for a number of these students, action logging was providing a vehicle to process the information they had learnt in classes, assess any problems, and integrate these understandings into new knowledge. To this extent, this finding supports the view of Perkins & Salomon (1989), that self-reflection aids in the integration of recently acquired knowledge with prior understanding in the learning process.

Short answer questionnaire responses also suggest that action logging was benefiting the writing and vocabulary development of many students in this study.

This somewhat unexpected finding accords with the established view that reflection is closely linked to the development of critical thinking and other forms of skill development (Dewey, 1933). While outside the scope of this study, the relationship between written reflection and skill acquisition would appear to be a very promising area of future inquiry in this learning context.

Action logging appeared to benefit the students' learning by providing opportunities for them to organize and plan their studies. Here, a number student comments and questionnaire responses indicate that action logs were facilitating the development of meta-cognitive awareness of different aspects of the learning process. This aspect of the study aligns with the established view that reflection is an integral aid to the development of meta-cognitive awareness (Colley, Bilics & Lerch, 2012). It also correlates with the findings of Matsumoto (1996), where it was found that diary keeping was assisting certain students in the development of an objective perspective on the learning process.

Reflecting the findings of Rusche and Jason (2011), action logging seemed to afford the students in this study an affective outlet in relation to the content and events of the classes. This can be most clearly observed from the collected action logs, where students made sense of potentially stressful situations and integrated these events into their broader understanding. Despite this finding, very few questionnaire responses referred to the benefits of action logging in relation to emotional awareness or regulation. It is therefore the author's view that while action logs appear to be providing an emotional outlet for students, more research needs to be conducted through follow up interviews with students to ascertain the extent to which this is consciously valuable to them.

To a reasonable degree, this study confirms the view that written reflection is positively correlated to sustaining learning motivation (Kritt, 1993). From the questionnaire responses of a smaller group of students, the activity of writing reflections at the end of each class appeared to be acting as a motivating force for these students by focusing their attention on areas of weakness and strength.

The findings of this study show that not all students in this study perceived action logging as useful to their learning. This was reflected in the responses of 37 students who remained undecided (19), disagreed (12), or strongly disagreed (6) with the learning benefits of the

activity. To an extent, these results are comparable to those of Chan & Wong (2021), who found that a number of students in their study preferred face-to-face methods of reflection over written forms.

Other issues remain regarding the pedagogical use of this technique in the future. Firstly, as the students in this study were asked to complete their logs in English, it is conceivable that this requirement restricted their ability to fully express their thoughts on their learning. A future study in this context may seek to draw comparisons between the length and content of reflections when completed in the students' L1 or L2. Secondly, the onset of the Covid 19 virus in Japan necessitated the online collection of action logs on this course. In comparison to traditional paper-based collection methods, the collection of student reflections online added to the complexity of the submission and comment return process. While this did not appear to detrimentally affect the length of student reflections, it is possible that the burden of completing the tasks online contributed to a degree of student dissatisfaction with the task indicated in the paragraph above.

Limitations

This study is limited in certain aspects. Firstly, time restrictions prevented the inclusion of interviews with participants. While it is the author's view that the analysis of student logs and questionnaire data provided a reasonably firm basis from which to draw conclusions in this study, the addition of follow up interviews with students would allow for a more nuanced perspective on the contribution of this activity to student learning and a greater triangulation of the data.

Furthermore, while the findings of this study support the benefits of reflection for the students in this context, a longitudinal approach taken over a longer time period and involving a greater number of participants would enhance the ability of the researcher to draw more substantive inferences about the applicability of action logging to other educational environments.

Conclusion and Pedagogical Implications

The addition of action logging was clearly serving to enhance the students' learning in this context in a number of ways. Briefly stated, the activity appeared to be providing these students with a valuable method of content review, a source of problem identification

and learning organization, a forum to express emotional aspects of the learning, and valuable source of motivation.

While beyond the scope of the research questions in this paper, the student action logs also represented a rich source of pedagogical feedback for the researcher in this study. Particularly, the activity afforded the teacher with a reflexive way to modify instruction to facilitate the needs of these students. As case in point, the student comments regarding the speed of teacher talk generated an invaluable source of feedback to gauge the comprehensibility of the teacher talk in the classroom. Following the receipt of these comments, the speed of teacher talk was able to be reduced to ensure student understanding.

Student action logs also generated a valuable source of feedback to the teacher in regard to student learning and classroom organization. Specifically, student comments on the course were invaluable in making informed pedagogical decisions in relation to the online management of speaking classes and planning decisions around conversational activities. These examples represent just a small portion of the pedagogically valuable information provided to the teacher through the collection of action logs. It is the author's opinion that a useful follow up study may seek to investigate the pedagogical feedback offered to teachers through the use action logs. While this topic has begun to be canvassed in field, further research would provide a rich source of information for action research and teacher development in this learning context.

Finally, it is hoped that this paper has contributed to the ongoing pedagogical validation of action logging and a source of encouragement from which other teachers may wish to incorporate the activity into their own classrooms.

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