

Action Research: Student Voices on the Modification and Improvement of English Study Site “Akakemushi.com”

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1. Introduction

In 2016, an online study-aid for students studying English at Health Science University (HSU) was created called “Akakemushi.com”. At the time of its creation, it was noted that students spent large amounts of time using their smart phones in their daily lives, and so it was believed that if some form of English study material was also accessible through their mobile devices it would be more likely to be utilized than a textbook or paper-format version.

The site has been in use for 6 years now, and although those students who use it consistently do well on tests, a lack of any critical evaluation or feedback from students means that it has not been proven that usage of the site results in higher test scores. Another issue is that the site is not utilized by the majority of students at all, despite having been introduced at the beginning of each semester for the past 6 years. It is clear that not every student finds the site useful and that some of its features and/or functions must be changed, but before any critical update is performed upon the site, student opinions and feedback must be carefully collected and considered in order to assure that the changes will be beneficial. It is also prudent to have a cycle in place to make improvements or changes in the future, and so the cyclical design of action research is well-suited to this task. Nunan and Bailey (2009) describe the cycle of action research as having 6 steps: (1) identifying a problem we want to

investigate in our own teaching practice, (2) thinking and planning an appropriate action to address that concern, (3) carrying out the action, (4) observing the apparent outcomes of the action, (5) reflecting on the outcomes and other possibilities, and (6) repeating these steps again.

This study constitutes both the first and second step of the action research cycle, and aims to determine the following:

1. How often do students at HSU actually make use of Akakemushi.com (confirmation of the suspected problem)?
2. What features and functions do students find useful or not useful for studying English?
3. What features and function would encourage students to use the site more?

The third stage of action research (implementation and action) will be conducted based on the results of this study.

1.1 About the Website

The site was created using a combination of HTML, CSS, MySQL, and Javascript, and consisted primarily of a large databank of multiple-choice questions, created by the English teachers at HSU. Every question created was tagged with keywords which allowed the site’s search engine to find and retrieve questions related to whatever a student wished to study or practice. These keywords included words related

to the name of the class the question appeared in, the quiz that the question could appear in, the linguistic focus of the question (such as spelling, plurality, passive voice, etc.), the format of the question (such as a translation question, a conjugation question, medical knowledge question, etc.), and the topic of the question (such as job duties, assistive devices, physical conditions, anatomy, etc.).

Using navigation panels within the site, students would be able to create quizzes for themselves which contained only the types of questions that they wanted to work on. Once a student selected the content for a quiz, the site would search the databank for all the questions related to those tags, randomly select 10 of those questions, and display them to the student. The student would then use the site's interface to answer the questions and then submit them. The site then scored the quiz and showed the student which questions they got correct, and which ones were wrong, along with what the correct answer was.

Finally, the site kept a running total of points accumulated over time, with each correct answer being worth 100 points on the site. One page on the site contained a leaderboard with an up-to-date listing of each student's points from highest to lowest. Even though points gained on Akakemushi.com had no bearing on a student's actual scores in class, it was believed that a slightly competitive atmosphere might make the site more interesting.

2. Subjects and Methods

The sample for this study consisted of 66 Japanese first-year students (male and female) majoring in either occupational or physical therapy at HSU who took a compulsory English class in their first semester. The students' ages ranged from 18 to 19 years old, and their English proficiency background was mixed.

An online survey consisting of 11 questions about the student's use of Akakemushi.com was created using Microsoft Forms, and distributed via Microsoft

TEAMS. The entire survey was written in the students' native language. The first page of the survey contained an explanation of the survey and its purpose, along with statements which assured the reader that their personal information would not be collected and that the survey was optional and had no bearing on their grades. Below the explanation were two buttons that a student could click on to signify that they either agreed or disagreed to participate in the study. Clicking "disagree" simply exited the questionnaire with a "thank you" message, while clicking "agree" took the student to the survey.

Question 1 in the survey was "How often do you use the site, "Akakemushi.com?", to which students could choose from the following:

1. "I have never used it"
2. "I tried to use it once, but it didn't work"
3. "I used it once, but not after that"
4. "I used it a few times"
5. "I usually use it before a quiz"
6. "I use it a lot, even when there isn't a quiz".

Those who answered with option 1 or 2 would not be able to answer most of the questions in the survey since they have never seen it, so instead they were taken to a separate page from the main survey with just one final open-response question, "what features would you like to see if you became a future user of this site?" in the hopes that some further insight might be gained into answering the question of what features would encourage the site to be used.

Those who answered question 1 with option 3 or higher were taken to the main part of the survey. Questions 2 through 8 consisted of statements arranged on a Likert scale. Students were asked whether they agreed or disagreed with each of the statements, choosing from the options of "disagree", "somewhat disagree", "unsure", "somewhat agree", and "agree. The prompts were as follows:

2. The site is useful for quiz preparation.

3. The site is useful for studying English in general.
4. If the site were improved, I would use it more often.
5. I would recommend this site to my classmates.
6. The types of questions on the site were relevant to my English classes.
7. The site was easy to use.
8. The site worked as expected.

Question 9 asked "which of the following features did you find most useful?", and allowed the student to check all that applied. The following options were given:

- Cumulative score and student leaderboard ranking
- Grammar related questions
- Spelling related questions
- Medical knowledge related questions
- Questions related to class quizzes
- Conversation related questions
- Other (open response)

Questions 10 and 11 were both open response questions with the following two question prompts, "what features or function would you like to see added or changed to the site?" and "are there any features that you think are unnecessary or should be removed?"

3. Results

Of the 66 students who were invited to participate in the study, 31 agreed to participate. Due to the anonymity of the survey, details regarding the ratio of males to females and mean student age are unknown.

Of the 31 participants, 14 had never used the site before, and 6 tried to use it once but could not understand how to use it. Of these 20 students, 6 students provided an answer to the open-ended question on the separate page regarding site features they would like to see if they were to use the site in the future. Two students noted "testing" or the ability to get a higher test score. One student suggested that the site should provide not only test training, but also practice for medical treatment vocabulary, though they did not specify if this should be in English or Japanese.

Another student suggested that the login process be simplified, and yet another student expected to see the "explanation of answers" (presumably to the quiz questions on the site). The final response stated that if the site was entirely in English, they might be able to get used to English a little bit.

The remaining 11 students had at least some experience with the site and completed the main questionnaire. For question 1 regarding frequency of use, 3 students responded, "I used it once, but not after that", 6 students responded, "I used it a few times", and the remaining responses "I usually use it before a quiz", and "I use it a lot, even when there isn't a quiz", each had one response.

Responses to the Likert-scale questions are shown in figure 1. As Figure 1 shows, students were mostly in agreement with the statements, however statements 4, 6, and 7 produced some disagreement, and statement 3 produced a large amount of uncertainty. Question 9 regarding features of the site that students thought were useful found that questions which helped students prepare for an upcoming quiz were the best feature of the site, with 7 of the 11 students responding as such. Five students found spelling questions useful, and 3 found grammar questions useful. The remaining features only received one response each, and there were no responses to the "other" category. Figure 2 summarizes the data from question 9.

Question 10 regarding desired additional features and functions received 3 responses. One student cited difficulty in searching for the site online, and thinks that the site needs more publicity in order to be located more easily through search engines. Another student wrote that s/he wanted explanations to quiz answers to be provided. The final response merely stated that the site was easy to use and understand. Question 11 regarding unnecessary features did not receive any responses.

4. Discussion

The data from question 1 provides a definitive

answer of “very infrequently” to the first research question, “how often to students at HSU make use of Akakemushi.com”? Of the 31 students who agreed to participate in the study, 20 had never used the site at all, and 3 used it only once and stopped. These figures alone provide more than enough evidence to support this claim, however even further evidence is shown in the fact that only 2 of the students used the site on a regular basis (i.e, before each test or more), making these two students outliers in the data.

For the second research questions, evidence from the high degree of agreement on Likert-scale prompts 1 and 5, and the clear preference for questions that cover upcoming quizzes, points to “class quiz preparation” being the most desired and useful function of the website. Secondary to that, questions specifically associated with English spelling and grammar also seem to be a desirable feature. On the other hand, the score-keeping and ranking system was not mentioned in any comments, and was only found useful by 1 student, suggesting that it may not be necessary to include in future versions of the site. Conversation-based and medical knowledge-based questions also seem to be regarded as unimportant, although 1 student did comment that they would like to learn vocabulary pertaining to medical treatment from the site.

Two problems with the site were also identified. From the Likert-scale responses to prompts 6 and 7, as well as the student comments citing difficulty with finding and logging in, it seems that the site is not as accessible or “user-friendly” as it should be, which may be deterring students from using the site. Site accessibility can be improved by registering it with a variety of commonly used search engines beyond just Google, and by reassessing the searchable “keywords” associated with the site. The login issue might be corrected by simply removing it altogether in favor of an anonymous access system, or by simplifying the registration process.

The second problem is that while the quizzes created by the site provide an answer key for each quiz, there is no explanation given for why an answer is correct or incorrect. It is likely that, by providing such explanations after each quiz, the effectiveness of the site would be greatly improved, and consequently may encourage students to visit more frequently.

Finally, the results of Likert-scale prompts 3 and 4 are somewhat puzzling, if not troubling. Four students responded that they were unsure if they would use the site any more than they already do, even if the two problems discussed above were improved. This makes it difficult to answer the third research question with certainty since there is no evidence that suggests why those students feel that way. To speculate, it may be an issue of time; students may have already decided how much time they will devote to studying each of their respective subjects, and that improvements to the site will not influence their usual study routine. It may also be that some students have already established a method of study (e.g. study sheets and textbook review) that works for them and see no need to change it. It could be that the uncertainty stems from a lack of confidence that the site could be improved to the degree that they are hoping. Regardless of cause, the only reasonable course of action that can be recommended from the limited data is to improve the two problems discussed above and reassess the situation.

5. Conclusion

From the data collected by the survey, it is clear that 3 features of the site (quiz preparation questions, spelling questions, and grammar questions) are favored by its users and thus should be kept in future updates. It is also clear that there are two issues with the site which need to be addressed in those updates: the lack of answer explanations and the difficulty with accessing the site. Current use of the site is very infrequent, with only 8 students who have used the site more than once and among them only 2 who use it regularly. It is

thought that improving or correcting the problems may improve student engagement, however, it has been noted that some students may not engage further with the site no matter what updates are made.

Language Classroom Research: A Comprehensive Guide. Boston, MA: Heinle, Cengage Learning.

The next step in this action research is to plan an update for the site based on the results of this study, implement it, and reintroduce the site to students.

Ethical considerations for this research were assessed and approved by the Health Science University Research Ethics Committee on October, 5th 2022.

References

Nunan, D. and Bailey, K. (2009). *Exploring Second*

