# How the image drawing method can act as an alternative barometer of librarian instruction

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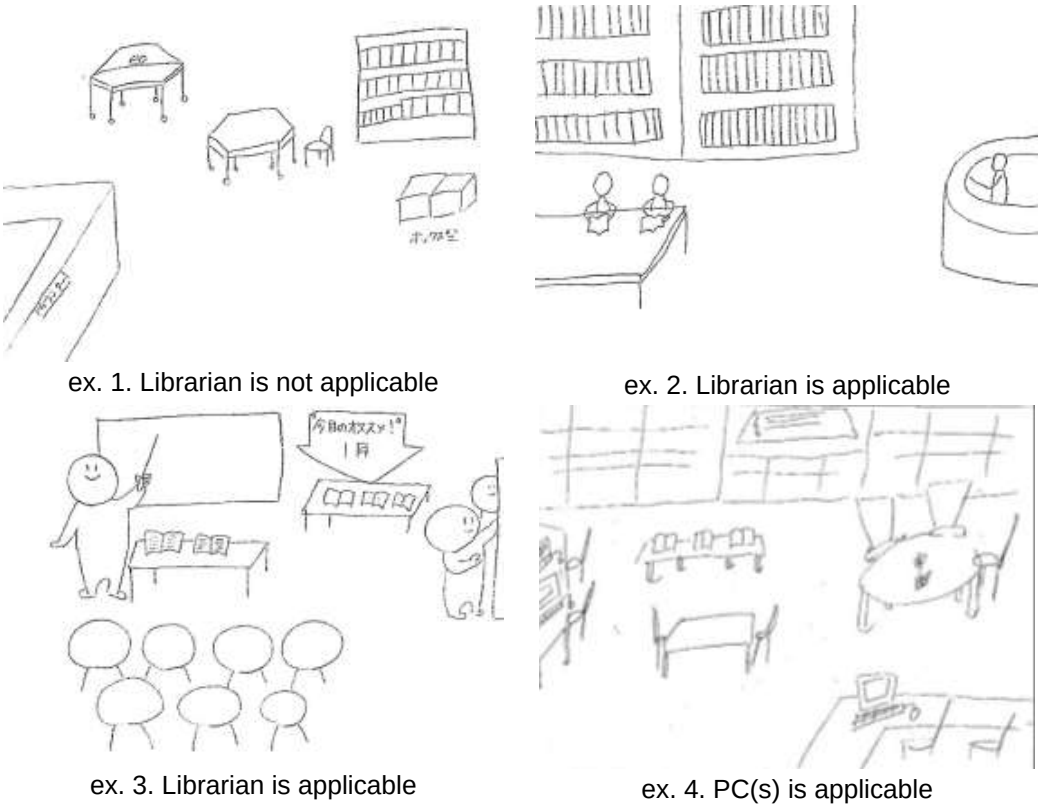
**Abstract**
*Previously, I examined changes in pictures of school libraries drawn over time by university students in a teacher training program taking a course on the importance of school libraries. The results revealed an increased tendency to depict librarians; even so, librarians featured in only 12 of 32 pictures. This study compares my results with those for similar teacher and teacher librarian courses by other teachers and (in most cases) at other universities. Besides my course, only 1 of 15 other courses revealed an increased tendency to draw a librarian, with no significant differences in proportion of students who depicted librarians among the courses, revealing that my lectures successfully communicated the importance of school librarians. Also, 4 of 11 courses that focused on information media revealed an increased to draw PC(s). These results show that the image drawing method may suffice as an alternative barometer for librarian instruction.*

**Keywords:** perception of school libraries, image drawing method (IDM), teacher training, librarian training

## Aim

Okada (2014) examines changes in the pictures that university students in a teacher training program drew of their school library over time (Figure 1) (an approach called the image drawing method [IDM]) while taking a course I taught on “The Planning of a School Library” in the 2013 autumn term. The course explained the importance of school libraries and in particular school librarians to future teachers (excluding school librarians). It was expected that if the lecture objectives had been achieved, while even students who understood the importance of a school librarian would not necessarily in all cases draw a librarian, but that the number of students who drew a librarian would increase compared with drawings done by the same students prior to taking part in the course.



ex. 1. Librarian is not applicable

ex. 2. Librarian is applicable

ex. 3. Librarian is applicable

ex. 4. PC(s) is applicable

Figure 1: Example pictures

While the results revealed an increased tendency to depict librarians after the related lectures, librarians featured in only 12 of the total of 32 pictures drawn by students (Okada 2014).

As such, this study has two purposes: (1) to determine whether 12 out of 32 can be considered “high” or “low,” and, relatedly, whether or not improvements to the curriculum are needed, and (2) to consider whether IDM can act as an alternative barometer for librarian instruction.

The present study is an extension of Okada (2015) that in contrast to that study, which analyzed only 2014 spring term data, also considers a wider range, including 2014 autumn term data as well.

## Method

### *Target*

There are not many lectures with similar objectives to those found in my class—geared toward future classroom teachers—in other universities in Japan. Thus, in this study, my course is compared to the same course taught the next year by another teacher (since I transferred to a different institution) and to teacher librarian courses at other universities. In Japan, the teacher librarian program is composed of the following five courses, credit in which, along with a teacher's license, is required for a "teacher librarian license."

- School Library and School Management
- Building and Organization of School Library Media
- Teaching and School Library
- Character Development Through Reading
- Information Media and Their Use

In general, teacher librarian course students are of course expected to understand the importance of librarians.

The data collection for these course was held in 2014 (either the spring or the autumn term).

### *IDM in this study*

In the present study, the Okada (2014) method is used, with a few modifications. The pretest was held at the time of the initial lectures in the course, and the posttest at the time of the final lecture. The questionnaire has two questions: "1. Please draw a picture of your image of the school library. (3 minutes)" and "2. Please explain in writing why you drew the picture above. (2 minutes)."

The pictures produced by the students reflected various elements of the school library: "Librarian," "Bookshelves," "Desks for users," "PC(s)," "Student(s)," "Sofas," and "Class in session." It was not easy to determine whether a given human figure in a picture was a librarian or student by Okada (2014, section 2.2.3) criteria; question 2 answers were used only when this was difficult to determine.

In Okada (2014), the pictures were evaluated by me and three graduate students in psychology; as the concordance rate was 94%, in the present study, pictures were evaluated by me only.

## Results

The materials for analysis were 604 drawings produced by 302 students attending 15 teacher and teacher librarian training courses at 12 universities. This study focused on increases in representations of "Librarian" and "PC(s)."

### *Fluctuation of appearance of the depicted "librarian"*

From the 15 lectures, 1 revealed an increasing tendency to draw a librarian, 1 had a decreasing tendency, and the others (including the next year's course by another teacher) had no significant differences (Table 1).

| Univ./ campus | Course | Year and term | Stu-dents | Applicable →not | Not applicable → applicable | McNemar's test |
|---|---|---|---|---|---|---|
| | The Planning of a School Library (my class) | 2013 Autumn | 32 | 2 | 8 | +($p$ = 0.0578) |
| | The Planning of a School Library (another teacher) | 2014 Autumn | 14 | 3 | 5 | n.s |
| A / i | Building and Organization of School Library Media | 2014 Spring | 12 | 3 | 1 | n.s |
| A / ii | | | 1 | 0 | 1 | n.s |
| B | | | 83 | 11 | 10 | n.s |
| G | Information Media and Their Use | | 14 | 1 | 2 | n.s |
| H | | | 5 | 3 | 0 | +($p$ = 0.0833) |
| I | | | 7 | 1 | 1 | n.s |
| J | | | 12 | 1 | 2 | n.s |
| L | Character Development Through Reading | | 5 | 1 | 1 | n.s |
| E | Teaching and School Library | 2014 Spring (Intensive) | 6 | 0 | 3 | +($p$ = 0.0833) |
| C | Building and Organization of School Library Media | 2014 Autumn | 16 | 2 | 3 | n.s |
| D / i | | | 26 | 3 | 3 | n.s |
| D / ii | | | 12 | 1 | 3 | n.s |
| F | Teaching and School Library | | 60 | 9 | 13 | n.s |
| K | Information Media and Its Use | | 29 | 3 | 5 | n.s |

Table 1: Appearance of Librarian in Pictures by Course

(*"applicable□not": on the pretest, the librarian is applicable and on the posttest, not; "not applicable□applicable": on the pretest, the librarian is not applicable and on the posttest, applicable;* +p<*.1,* *p<*.05,* **p<*.01)*

***Ratio of depiction of librarian***

The ratio of students who depicted librarians in the results for my original class was compared with the same ratio for the new students in the teacher librarian course (Table 2).

| | | Pre-test | | Post-test | |
|---|---|---|---|---|---|
| | | Applicable : not applicable (depicted ratio) | Significance of difference compared to my class | Applicable : not applicable (depicted ratio) | Significance of difference compared to my class |
| "The Planning of a School Library" | 2013 (my class) | 6 : 26 (18.8%) | | 12 : 20 (37.5%) | |
| | 2014 (another teacher) | 4 : 10 (28.6%) | n.s. | 6 : 8 (42.9%) | n.s. |
| Teacher librarian course students | 2014 Total | 83 : 205 (28.8%) | n.s. | 92 : 196 (31.9%) | n.s. |
| | 2014 Spring | 33 : 112 (22.8%) | n.s. | 33 : 112 (22.8%) | +($p$ = 0.0830) |
| | 2014 Autumn | 50 : 93 (35.0%) | +($p$ = 0.0755) | 59 : 84 (41.3%) | n.s. |

Table 2: Ratio of Depicted Librarians by Term

There were no significant differences between my class (2013) and the same class taught by another teacher (2014) or between my class and the overall teacher librarian course results (2014).

For the spring 2014 teacher librarian courses, in the pre-test, there were no significant differences between the two groups, but in the post-test, the ratio for my class was higher than that for the teacher librarian courses ($p$ = 0.0830). For the autumn 2014 teacher librarian courses, in the pre-test, the ratio of my class was lower than that for the teacher librarian courses ($p$ = 0.0755), but in the post-test, there were no significant differences. From this viewpoint, it seems that my students were able to catch up with the teacher librarian students' level of awareness of the importance of a librarian in the school library.

***Fluctuation of appearance of depicted "PC(s)"***

Generally, PCs may be required by school libraries for online catalog search or for inquiry-based learning, but they were not considered in my course due to insufficient time. Therefore, it was expected that changes in representations of them would be smaller than those in representations of the librarian in my course. In fact, there was no significant change in representations of PC(s).

In contrast, in the lectures on the importance of IT media, such as "Building and Organization of School Library Media" and "Information Media and Their Use," an increase was expected.

In fact, of the 15 lectures, 5 revealed an increased to draw PC(s) and 1 revealed an increasing tendency to draw PC(s) (Table 3).

| Univ./ campus | Course | Year and term | Stu-dents | Applicable →not | Not applicable → applicable | McNemar's test |
|---|---|---|---|---|---|---|
| | The Planning of a School Library (my class) | 2013 Autumn | 32 | 3 | 2 | n.s |
| | The Planning of a School Library (another teacher) | 2014 Autumn | 14 | 0 | 3 | +($p$ = 0.0833) |
| A / i | Building and Organization of School Library Media | 2014 Spring | 12 | 1 | 1 | n.s |
| A / ii | | | 1 | 0 | 1 | n.s |
| B | | | 83 | 8 | 5 | n.s |
| G | Information Media and Their Use | | 14 | 0 | 2 | n.s |
| H | | | 5 | 1 | 0 | n.s |
| I | | | 7 | 0 | 2 | n.s |
| J | | | 12 | 0 | 7 | **($p$ = 0.0082) |
| L | Character Development Through Reading | | 5 | 0 | 2 | n.s |
| E | Teaching and School Library | 2014 Spring (Intensive) | 6 | 1 | 0 | n.s |
| C | Building and Organization of School Library Media | 2014 Autumn | 16 | 0 | 7 | **($p$ = 0.0082) |
| D / i | | | 26 | 4 | 3 | n.s |
| D / ii | | | 12 | 0 | 5 | *($p$ = 0.0254) |
| F | Teaching and School Library | | 60 | 3 | 12 | *($p$ = 0.0201) |
| K | Information Media and Their Use | | 29 | 1 | 10 | **($p$ = 0.0067) |

Table 3: Appearance of PC(s) by Course

## Conclusion

My original students showed an increased tendency to draw a librarian, but with the exception of one other course only, students in the other 14 courses had no significant differences or showed a decreased tendency (3.1); the ratio of my students who depicted librarians was at the same level as that of the students in the teacher librarian courses (3.2), revealing that my original lectures were successful in communicating the importance of school librarians.

In addition, 4 of 11 courses that focused on information media revealed an increased to draw PC(s). Thus, the study findings suggest that IDM can be used not only as a barometer for measuring perceptions of the importance of librarians, but also for investigations into the effectiveness of other aspects of librarian and teacher instruction.

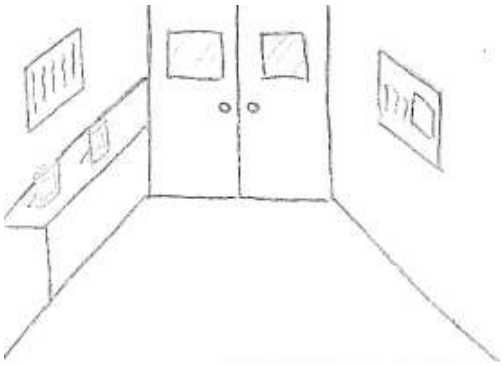
## Future directions

To investigate the following issues, we need collaborators; please get in touch if you are interested in participating in a trial. A larger sample is still needed for better statistical validity and to identify regional differences.

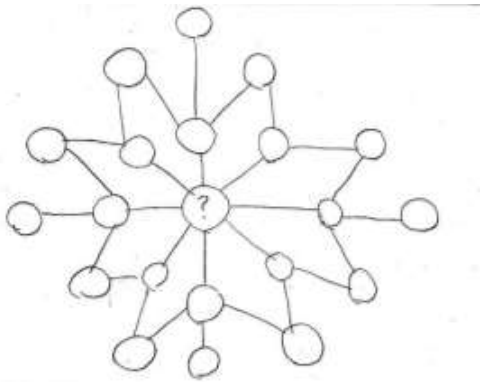
***Is it optimal for all students to draw a librarian? Probably not.***

Many students drew general library maps or scenes, while some drew a picture like the following (Figure 2).

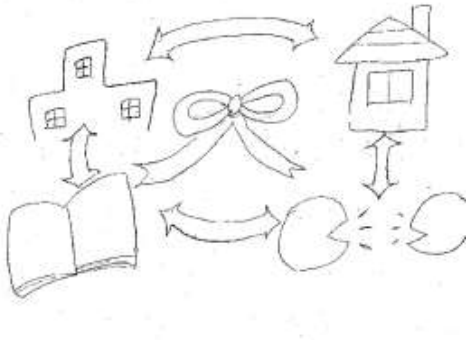
- Point out the present condition of the library (e.g., ex. 5)
- Abstract drawing (e.g., ex. 6, flowers and mountains, the sun, a cube)
- Explanatory diagram (e.g., ex. 7, the relationship between the library and children)



ex. 5. Point out the present condition of the library



ex. 6. Abstract drawing



ex. 7. Explanatory diagram

Figure 2: Librarian is not applicable

It cannot be said with certainty that these students did not understand the importance of the school librarian, but since they did not depict a librarian, I placed them in the “not applicable” group automatically. However, I did not formulate criteria to distinguish between the implications of pictures using a map or scene style versus the above-described style. Future research could take up this goal.

***Can IDM serve as a barometer of understanding the importance of the librarian?***
Teacher librarian students are expected to understand the importance of librarians, and the ratio of these students who drew a librarian showed about 20% to 40%. But this study was answered by students. It is still necessary to investigate the rate of librarians in pictures drawn by in-service teachers, who sometimes teach with school librarians in the field (and teachers, who rarely teach alongside school librarians).

## Acknowledgment
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## References
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## Biographical note
Mr. Daisuke Okada has worked as an Assistant Professor at Akashi National College of Technology in Hyogo Prefecture, Japan, since December 2014. From 2007 to 2010, he served as a teacher librarian at a private junior high school. He currently offers faculty development activities for the teachers and staff at the college and lectures in information literacy classes in the liberal arts. Since April 2015, he has been a part-time lecturer in a librarian program at Bukkyo university.

His research interests include the educational effects of the (school or university) library, lesson planning in the library, and training in inquiry-based learning for schoolteachers. He is the author of *Ask essential questions: Handbook for inquiry-based learning beginners* (in Japanese).