3.4.7 Using Reading and Lecture Notes Logs to Improve Learning
by Ronald Miller (Computer Science, Western Michigan University)

Students who regularly use reading logs and lecture/lab notes logs increase their understanding and retention of course concepts and, at the same time, build their skills in self management, information processing, critical thinking, and assessment. Log forms provide room for taking notes, and they supply probing questions that direct students to reflect on the learning process. Although instructors may need to use a variety of motivating techniques to encourage students to use the logs, the students who use them will develop increased responsibility for their own learning, along with increased accuracy and efficiency in processing new information.

Key Features of Reading Logs

Reading logs may take many forms. They may be found in books like the Learning Assessment Journal (Apple, 2000). They may also be developed by individual instructors for a custom fit in a particular course, such as the Information Technology Self-Assessment Learning Journal (Krumsieg & Miller, 2004). Spiral notebooks in which students respond to prompts given by the instructor are yet another example of reading logs. Figures 1 and 2 show the layout of a general reading log. Figures 3 and 4 show the layout of a course-specific reading log. Whatever the form, however, all effective reading logs address two areas: what the student has learned and how the student has learned it. Reading logs challenge students to analyze their reading strategies, to demonstrate what they have learned from a reading assignment, to assess the quality of what they have read, and to develop an action plan for improving their reading skills.

A reading log should begin with pre-reading questions and activities that prepare students for the reading assignment. These typically include previewing the reading selection to determine topic, length, and general difficulty, compiling a list of questions that the reading is expected to answer, and activating prior knowledge. Logs often ask students to estimate how long it will take to read the assignment so that they can better manage study time, and logs usually provide space for students to identify objectives and performance criteria to help them select the reading strategies most appropriate to their objectives. Only after documenting that they have completed these activities are students ready to read the assignment for the first time.

After the pre-reading section, reading logs provide space for students to take notes as they read for the first time. Usually there is space to record unfamiliar terms and definitions, key ideas or reactions to the reading, and questions arising from the reading. After students complete a second reading, they use the logs to write down the author’s main ideas and an explanation of how this new material integrates with their previous knowledge and experience. Reading logs should include assessment questions related both to the reading selection and to the student as the reader. How accurately did the student estimate reading time? How much of the material can the student understand and remember? How effective were the reading strategies used? How can performance be improved in the future? As students learn more about how they manage the reading challenges that they face in a particular course, they can incorporate into their logs an action plan for targeting their specific reading and study issues.

A reading log addressing all of the above activities and questions for every reading would be too long and cumbersome for students. Instructors, therefore, need to carefully select what they require in a reading log, making sure that they include something to address pre-reading, something that requires student engagement while reading, and something that requires students to assess the results of reading. In each area, the reading log should have at least one question that addresses the content of the reading and one that addresses the student’s reading process. Even when reading logs are relatively short, students will complain that the logs are time consuming, and they are. But using reading logs based on sound reading strategies provides benefits in the long run as students understand better, remember more easily, and require less time for review.

Key Features of Lecture/Lab Notes Logs

Lecture/lab notes logs, like reading logs, help students know what they have learned and how they have managed the learning process. A sample course-specific lecture/lab note log can be found in Figures 5 and 6. Lecture/lab logs typically begin with a preview section that helps students build the habit of identifying lectures and labs by day and time as well as topic. Logs also provide space to note any reading assignments the students are expected to have completed. Too often students do not understand that their own preparation for a lecture or lab is as important as the preparation of the instructor or lab manager in terms of quality of learning. To emphasize the importance of preparation, note forms should provide space for students to report how well they have prepared for the lecture or lab.
Once the lecture or lab has begun, students jot down main points and copy figures, tables, or drawings either in note logs or in some other place. After the lecture or lab is complete, students should review what they have experienced by summarizing the main points in the note logs and writing down any questions they still have about the day’s material. While rewriting their notes in summary form, students learn the material as they conduct a thorough review of their lecture or lab. They also identify new insights or understandings gained from the work of the day and connect that new learning to their prior knowledge and experience, thus increasing the relevance of the new material.

Note forms, like reading logs, include an assessment section that poses questions about how students learn. How can the student change his or her in-class note taking habits to improve learning? How much time did the student need to review his or her notes? How could the student capture this material more efficiently?

The final section in both reading and lecture-note logs should be a challenge to students to improve performance. One effective practice is to have students identify two major factors that influenced their reading or in-class learning effectiveness (positively or negatively) and then use those factors to create action plans for increased effectiveness. Creating action plans will give students practice in personal development skills like preparing and planning individual action, in management skills like evaluating performance and facilitating change, and in assessment skills like assuring completeness and presenting feedback. For help in identifying strategies to improve reading, note-taking, and thinking skills students and instructors can consult a wide selection of materials designed to improve study skills in higher education. Students in the sciences are especially directed to Essential Study Skills for Science Students (2000) by Daniel D. Chiras.

Motivating Students to Use Note Logs

Motivating students to use reading logs and lecture/lab notes logs without creating the image of busy work is the key to student acceptance. Students must be convinced they can improve comprehension significantly by analyzing their reading, listening, and note-taking habits and by applying new or expanded strategies to their readings, lectures, and labs. The list that follows offers suggestions for getting students to appreciate the value of reading and note logs.

- Allow students to use one of each type of log while taking quizzes
- Begin class sessions with discussion of reading logs
- Use class sessions for additional information, rather than repeating the information in the assigned readings
- Use material from the readings and note logs for exam questions
- Make lecture material available only during class sessions
- Use the logs to prepare study guides for exams
- Review logs in office with students who come for help
- Integrate logs into learning projects (3.4.5 Effective Design of Problem-Based Projects)
- Modify the questions on the logs to fit specific course contexts
- Connect the use of logs to course objectives and learning outcomes
- Show students how to use the logs to take responsibility for their own learning

Assessing the Benefits of Using Note Logs

Assessing the students’ skill in reading or taking lecture notes and providing feedback to them is ideally done on an individual basis. In small classes, instructors can assess logs early in a term to emphasize learning skills development. Reviewing the logs can also help an instructor assess his or her teaching practices. Using reading and lecture/lab notes logs in large classes, however, is more difficult. The incorporation of reflection and assessment succeeds best in large classes when students are familiar with self-assessment journals (3.4.8 Practical Implementation of Self-Assessment Journals). Students can use the same self-assessment techniques that they use in problem-based, self-assessment projects to improve their reading, listening, and note-taking skills.

Students Become Responsible for Their Own Study Guide

While some students may think the reading and lecture-note logs only provide a way of improving their grades on quizzes, their use of the logs causes many students to rethink how they can actually improve their information processing skills (2.2.5 Overview of Critical Thinking). But perhaps a greater benefit of using the logs, from the instructor’s point of view, is that they permit the instructor to lay the burden and responsibility of learning directly on each student. For example, instead of the instructor providing study guides for large exams, students develop their own study guides using the logs. Requiring students to prepare their own study guides for quizzes and the
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**Figure 2**

**Second Reading**

Two additional inquiry questions that I have are:

1. ____________________________________________________________
2. ____________________________________________________________

**Summarize**

The most important points of the reading were:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

**Integrate**

The relationship between the new information and my previous knowledge and experience is:

1. ____________________________________________________________
2. ____________________________________________________________

**Assessment of material and effort**

I suggest the author make the following change(s) to the material or style of writing (explaining why):

1. ____________________________________________________________
2. ____________________________________________________________

Actual time (minutes) spent reading: _____ . This compares to my estimated time: ________________________

The following affected (positively or negatively) the quality of my reading performance:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

The relationship between this new information and my previous computer knowledge and experience is:

1. ____________________________________________________________
2. ____________________________________________________________

**Second Reading Notes**

Inquiry questions to clarify my understanding of the material:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

**Summarize Reading**

The most important points of the reading were:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

Actual time spent reading: _____ . This compares to my estimated time: ________________________

The following affected (positively or negatively) the quality of my reading performance:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

**Integrate Knowledge**

The relationship between this new information and my previous computer knowledge and experience is:

1. ____________________________________________________________
2. ____________________________________________________________

**Assessment of Learning Performance**

I suggest the following change(s) to improve my learning performance:

1. ____________________________________________________________
2. ____________________________________________________________

My reason for making this suggestion(s) is:

1. ____________________________________________________________
2. ____________________________________________________________

The following two factors most affected (positively or negatively) the quality of my reading performance:

1. ____________________________________________________________
2. ____________________________________________________________

**Rereading Notes**

Significant new understanding of major computer technology concepts:

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________

**Instructor Feedback**

Insights:

Areas for Improvement:

Strengths:

Figure 3
comprehensive exams helps them realize the importance of creating complete and accurate notes on their reading and lecture/lab notes logs.

**Concluding Thoughts**

There are many ways to incorporate the reading and lecture/lab notes logs into a learning environment. Providing proper motivation and reward to students, however, is essential to obtain positive acceptance of a new tool like reading and lecture/lab notes logs. The benefits of getting student acceptance are significant because the logs can, in part, help students take ownership of their learning and successfully accomplish the course outcomes. Other advantages of the logs include growth in language development, critical thinking, and assessment skills, as well as further opportunity for students to apply the Learning Process and Information Processing Methodologies.

**References**

