

Just One More Thing

Getting the Most Out of One-Minute Papers

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The one-minute paper (OMP) is an easy-to-implement classroom assessment tool that is particularly well-suited to the familiar one-shot library instruction session. This article explores the ways that the one-minute paper can benefit academic librarians. Examples from the literature on teaching & learning and the author's own experience are used to illustrate potential benefits, including individualized outreach to students and program planning.

Introduction

In my office, I have saved bundles of notecards from 68 different classes over the past three years. Like many instruction librarians, I teach a lot of course-integrated one-shots. At the end of some of these sessions, I have passed out notecards and asked students to write their name and answer a few questions. What was the most helpful thing that they learned in that session? What was something that they still need to know to be successful in their assignment? This simple practice has helped me connect with students, improve my teaching, and better communicate with course instructors about the value of information literacy.

The one-minute paper (also called the minute paper, half sheet response, or OMP) is familiar to teachers across disciplines. It is a low-cost way to engage students and better understand how they process core concepts introduced in class.

Instructors most frequently use the OMP in courses where they are presenting students with a significant amount of new information (Angelo & Cross, 1993). Many one-shots, which tend to be demonstration and practice-based, can be classified as this type of class.

Librarians can use the one-minute paper when a formal assessment is not possible or as part of their broader assessment plan (Cunningham, 2006). The one-minute paper is not an assessment panacea, but it has a unique value.

Student responses can tell you what those students identify as important to them, which is information you can leverage across your practice.

Literature Review

The one-minute paper has a long history and is well-established across college campuses. Angelo and Cross's *Classroom Assessment Techniques* (1993) popularized the one-minute paper in its current form. Use of this tool has spread as the culture of assessment has grown. The shift away from teaching (“What did I tell them?”) to learning (“What do they now know?”) has also helped to usher in greater use. Use and research on the OMP transcends disciplinary boundaries. Teachers and scholars have written about the minute paper in economics (Chizmar & Ostrosky, 1998; Whittard 2015), computer science (Lightbody & Nicholl, 2013), chemistry (Harwood, 1996), medicine (Ashakiran & Deepthi, 2013), psychology (Lucas, 2010) and English literature (Orr, 2005). Even though it has been more than 25 years since *Classroom Assessment Techniques* was first published, the OMP is still seen as an essential tool for learner-centered assessment (Brookfield, 2017, p. 101-103).

In the literature, librarians have used the OMP in a variety of ways. Some have used feedback from one-minute papers to assess student learning outcomes. A group of librarians at Columbia read 246 OMPs from students in University Writing to look for evidence of previously defined learning outcomes (Mills, Crocarno, & Levin, 2015). One-minute papers from a senior speech-language pathology course helped a librarian revise the session and articulate the need for information literacy instruction earlier in the curriculum (Cobus-Kuo & Waller, 2016). The one-minute paper has been included in guides like *Information Literacy Instruction: Theory and Practice*. Grassian and Kaplowitz (2001) mention the ‘minute paper,’ several times in the book, listing it as a learner-centered assessment and a potential tool to encourage learners to reflect on their learning. Inclusion in guides like these means that the minute paper is likely used across library information literacy (IL) programs in one form or another.

Most librarians who write about the OMP use an adapted version of the tool to measure specific outcomes. Choinski and Emanuel (2005) wrote about the assessment potential of the one-minute paper within a one-shot. Students answered four questions outside of class time, with each question being tied to a learning outcome. Choinski and Emanuel designed a valuable assessment assignment but what they created does not resemble the open-ended OMP (2005).

Meehlhause (2016) created what she described as a “one-minute paper alternative” assignment that was very different from the typical OMP. First-year students were asked to locate a print book relevant to their major and take a selfie with it. Meehlhause designed an engaging assignment that made it easy to assess if students could identify and locate a relevant title. One of the significant benefits of the minute paper is its flexibility, and librarians have adapted the one-minute paper to meet their needs. The literature is rich with ways to use short assignments as evidence of student learning after a one-shot, but little has been written about the standard OMP (Meehlhause, 2016).

This paper will take a broad view of potential benefits librarians might experience by using one-minute papers in the one-shots that they teach. Direct benefits to students have been documented in the literature of teaching and learning. Students who are asked to complete OMPs benefit from the opportunity to reflect upon their understanding of new material and clear up misconceptions before formal assessment (Angelo & Cross, 1993; Chizmar & Ostrosky, 1998; Drummond, 2007). Regular use of the minute paper may help foster greater in-class engagement (Stead, 2005; Whittard, 2015). These benefits do not appear to depend on student ability. The one-minute paper allows shy students to have the opportunity to connect with their instructor directly and there is some evidence that ‘high risk’ students might benefit most from this personal approach, especially in large classes (Drummond, 2007).

Implementing the One-Minute Paper

In the last few minutes of a class, the instructor asks students to think about and write answers to two questions: What is the most important thing you learned during this class, and what question do you have that remains unanswered (Angelo & Cross, 1993). There are many variations on these questions in the literature and many more possible variations (Tables 1 and 2). While questions asking students to reflect and seek clarification are most frequently used, some instructors adapt the one-minute paper to assess recall and retention of important course material. Each question asks students to consider something slightly different. Each variation on the one-minute paper has its own benefits, challenges, and potential role in assessment.

Table 1

Variations of the OMP Questions Found in the Literature

<p>Chizmar and Ostrosky, 1998:</p> <ul style="list-style-type: none"> • What is the muddiest point still remaining at the conclusion of today's lecture? 	<p>Lightbody and Nicholl, 2013:</p> <ul style="list-style-type: none"> • What are the key things you need to go over again?
<p>Ashakiran and Deepthi, 2013:</p> <ul style="list-style-type: none"> • What important question remains unanswered? 	<p>Mills et al., 2015:</p> <ul style="list-style-type: none"> • Do you have any other questions about the library?
<p>Whittard, 2015:</p> <ul style="list-style-type: none"> • What could the lecturer do to improve his effectiveness and therefore my learning? • What concepts were less clear in the lecture today? 	<p>Cobus-Kuo and Waller 2016:</p> <ul style="list-style-type: none"> • What question(s) do you still have?

Table 2

Other Potential Variations Generated by the Author

<p>Question 1</p>	<ul style="list-style-type: none"> • What is one thing you learned today? • What is the most important thing you learned today? • What is the most interesting thing you learned today? • What was the most helpful thing you learned today?
<p>Question 2</p>	<ul style="list-style-type: none"> • What was the most confusing part of today's lecture? • Which part of today's class would you like to go over again? • What do you wish you learned today? • What do you still need to know to be successful in this assignment? • What question do you still have about this material? • What question do you still have about this assignment?

The one-minute paper is particularly well suited to one-shots, which are often a mixture of demonstration and active learning. In the last five minutes of class, librarians can hand out blank notecards or paper. Online surveys can also be used in place of paper if appropriate. The librarian can ask (and display) some combination of the two questions, allow students to answer, and collect the responses after class.

Some instructors have noted the potential problem of having to make time to implement the minute paper, which can be particularly challenging in content-heavy lectures. Thankfully, librarians have long recognized the importance of active learning, and the structure of many one-shots reflects this. An hour-long class might start off with 20-30 minutes of lecture before students work and practice applying these skills for the final 30-40 minutes. Although timing and session structure varies by course, many students naturally find themselves winding down by the last five minutes of class and don't mind a 'before you go' request. Overall, the one-minute paper is easy to implement and should not be overly disruptive to the flow of the class session.

Using the One-Minute Paper: Review and Revision

Most feedback gained from the traditional OMP will be session-specific and will inform the content and structure of a specific class rather than your overall teaching style. If you are particularly interested in feedback about your teaching style rather than content and learning objectives, you can revise the questions for targeted input (Whittard, 2015). However, you may find larger patterns that will help inspire you to make changes across programs or to your teaching as a whole. If I see a particular 'need to know' area across disciplines and courses, I may consider more significant changes to meet this stated need. If first-year students, sophomores, and juniors across disciplines say that they want to know how to focus a topic, covering the basics in the first-year program or across appropriate introductory courses for majors could be a good idea.

The role that one-minute papers can play in developing a scaffolded information literacy program throughout the curriculum is still being explored but shows potential. It may also be unique to librarian usage of OMPs as course-related OMPs typically focus on specific content within a single course. As librarians, our position allows us a unique vantage point; we can see courses across the curriculum, and how the pieces come together. We may find that faculty members assume that students in their courses will have similar knowledge and comfort level with specific research skills and that these instructors may be overestimating or underestimating student exposure and experience. We can use different types of data and assessment to inform our conversations with faculty, but minute papers, a narrative coming directly from students, can become a powerful tool to help you build a case for programmatic IL.

Cobus-Kuo & Waller (2016) used the one-minute paper to assess student learning in their IL session in a speech pathology capstone course. Using open coding, they analyzed 51 student responses over two years. In response to the first question, "What information did you learn today that you think will be most useful to you in your SLPA course," they found six themes, the first four revolving around search strategies, resources, time/efficiency in research, and ILL. Eighteen percent of responses noted that many things were new because this was their first time in the library with this type of session. Twelve percent of student responses mentioned something about wishing that this information had been taught earlier in their college careers. They were able to use this information to refine what they focused on in the session and work with the speech pathology faculty to integrate IL instruction in earlier courses in the curriculum (Cobus-Kuo & Waller, 2016).

Using the OMP across the curriculum means that the librarian can observe identified needs and learning across different course levels. In advanced courses, you see students who identify as being in entirely different places in regard to their comfort with the skills and tools covered in class. In one English capstone class with 18 students, I had two responses that said that the material covered was too repetitive, while other students expressed enthusiasm over being able to flesh out their topic, explore new resources for literary criticism, and start using Endnote for their multi-semester project. Among students who thought that the sessions were valuable, each identified different skills

and tools that they thought were especially useful or were being introduced to for the first time. Based on their responses, there is a case to be made for progressive IL intentionally embedded across the curriculum, so students come to their largest research projects on similar footing.

Feedback from students, especially at the capstone level, along with other forms of assessment can help the librarian develop a compelling narrative to share with faculty. What are students learning as they are working on their capstone? What are they struggling with? What information and research needs do they anticipate? Sharing this information with faculty will also help them get a clearer sense of what their students are learning in library sessions, and if student skills and experiences match up with their assumptions. One-minute papers are, for any instructor who uses them, an opportunity to get feedback on student learning during the course, which means that it can benefit that cohort of students in a way that end-of-semester surveys will not (Lightbody & Nicholl, 2013).

The feedback received from three classes of English capstone students helped spur conversations with English faculty about what skills were being covered in those sessions, what skills students needed, and what skills faculty expected students to be developing at the capstone level. These were three different skill sets. This new data inspired a partnership between an individual faculty member and the library to develop and begin to implement a rough plan for intentionally embedding information literacy skill development across a three-year curriculum, working backward from what faculty expected students to be able to do in the capstone level. Implementing information literacy across the curriculum is slow work in the absence of a top-down mandate. So far, these conversations have produced a new research assignment and IL session in the first course of the English major. First-year English majors now gain early exposure to searching for, evaluating, and comparing works of literary criticism. It has also helped our faculty librarians gain a seat at the table during the process of assessing and revising the English curriculum, which will hopefully lead to greater opportunities for students to develop their information literacy skills before starting their capstone.

Student feedback through OMPs can help faculty adjust their expectations of student capabilities. Sometimes, this means adding additional assignments and support; sometimes it means raising faculty expectations of what students are capable of and revising pre-existing assignments. A sophomore-level early childhood education class asked students to find and cite academic articles on a particular topic. None of this was new to the students, who had already practiced finding, citing, reading, and summarizing academic articles in their freshman coursework. Students wrote that they were appreciative of the time to work but were confused about the aims of the class and the assignment. Using that feedback, I worked with the professor to revise the assignment. The new assignment built upon skills that students had developed in the previous course. Now, these sophomores were expected to evaluate academic and professional journal articles, and think critically about perspective, research methods, and possible limitations. Student feedback was more positive, citing the helpfulness of exercises that helped them think about different types of credibility. Based on the assessment of student work, they were able to rise to this challenge. One student did mention the desire for “more time to go deeper into things, so we are not rushed learning.” The professor and I agreed with his feedback and have started making plans to streamline the class to our outcomes and shift things that students can do outside of class time (like pick a topic from a list prepared by the teacher, something they were doing in-class). Even better, the professor was now invigorated to continue to build upon student IL experiences saying, “This means we will have to change what we do with my juniors! We can ask them to do even more advanced types of critical thinking!”

This feedback from students may also help dispel the assumption that students will retain/apply everything that they learned in their first year. Our library has a week-long first-year IL program embedded in the first-year seminar. Some faculty members assume that students will not need further instruction in search strategies or topic development because they already got that as first-years. However, deliberate practice is necessary to retain and develop skills, including information literacy (Campitelli & Gobet, 2011). A first-year student who is overwhelmed with the high expectations and new independence of college may not prioritize a library session in their first-year

seminar. That same student may become a junior who has to write a large original research assignment and the college assumes that they have known how to do this all along. Insight from students on the IL skills they feel they still need to develop or what they wish they had learned earlier can be a valuable communication tool in making the case for a robust information literacy program, delivered at the point of need.

Challenges and Dangers

The one-minute paper is just one tool in our assessment toolbox. It will not tell us what learners apply in practice or if they are information literate (Turnbow & Zeidman-Karpinski, 2016). It will give us some information about the learner reaction (how satisfied are students with the lesson). Some students give positive feedback about the session generally in response to the prompts, and some respond that the most valuable thing they learned was 'nothing.' The one-minute paper will also give us an incomplete picture of level two of Turnbow and Zeidman-Karpinski's (2016) adaptation of Kirkpatrick's four levels of learning: Learning: What have students learned? It is an incomplete picture because it only asks for one example (what is the most important thing you learned?) and it is relying on self-reported information, rather than the demonstration of skills you may be able to see in a pre-test/post-test model where students are asked to demonstrate and apply a particular skill (Turnbow & Zeidman-Karpinski, 2016).

In the literature on one-minute papers, many instructors cite the difficulty of finding class time to implement the one-minute paper. Despite its name, it is recommended that you allow students three to five minutes to respond to allow them to reflect on the session and identify their needs. This time crunch may be even more stressful for librarians who may have only 60 to 90 minutes with a specific group of students. However, this has not been my experience, especially in classes where there is time for students to work on their projects. Students in these sessions are typically winding down in the last five minutes, and some might even be growing antsy. Although each minute is valuable, the benefits of the one-minute paper make it a valuable use of those last five minutes of class time.

Another time-related challenge is making time to respond to student questions individually. Using the one-minute paper to answer unasked student questions is vital for student learning and library outreach, but you might not always be able to find the extra hour needed to model and type up individual responses. To try to counter this challenge, I have found that I am often able to 'group' responses (four students asked about narrowing their topic, five students asked about citing, two students asked about evaluating articles) and provide several similar responses with personalization and a few variations. Expanding on that idea, I have also created a Google Drive folder with boilerplate responses to some of the more frequently asked 'wish I learned' questions, ready to be adapted to an individual student's question and then sent out.

One enduring challenge of using one-minute papers is constructing questions that ask students what they would like to know. There are numerous variations of each of the two basic questions which will likely impact how students interpret and answer the question. There seems to be an especially wide variation in the second question asked, which usually focuses on student-identified gaps in their knowledge. Librarians looking to use one-minute papers should consider which question(s) will inspire the most thought in the students they are working with. Experimentation might be necessary to revise and refine questions that most effectively develop the learner-centered experience that you are hoping to create.

Going Forward

Overall the minute paper has been a helpful tool in connecting with students, understanding how I can better support their learning, and communicating with faculty about student learning. There are many opportunities to continue and expand upon this practice going forward. Of course, the benefit of helping students individually (and

hopefully more with each new school year), will never diminish. Going forward, I would like to see how changes to instruction, sometimes in reaction to the needs students articulated in the OMPs, change the questions that students have. I can also undertake a large-scale project to compare in aggregate the types of questions asked compared to the group's previous research experience to better understand which skills and content might best match each year/major. I can, of course, also see how the development of more intentional, scaffolded IL impacts articulated student learning and articulated student needs.

Of course, one of the potential dangers noted in the literature of OMPs in courses is that if used week after week, student participation will drop off and students may find overuse of one-minute papers to be monotonous. Although I am unlikely to see any one student in more than two or three classes per semester, I do not want to rely on the one-minute paper to the point where students see it as a gimmick. I also acknowledge that while the OMP is useful for a wide range of classes and contexts, it will not always be the best tool for each class. While I will continue to use the one-minute paper, and encourage the reader to use it as well, we should all be looking to find, use, and if need be, develop, a range of tools that will help us engage students and learn more about their learning.

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