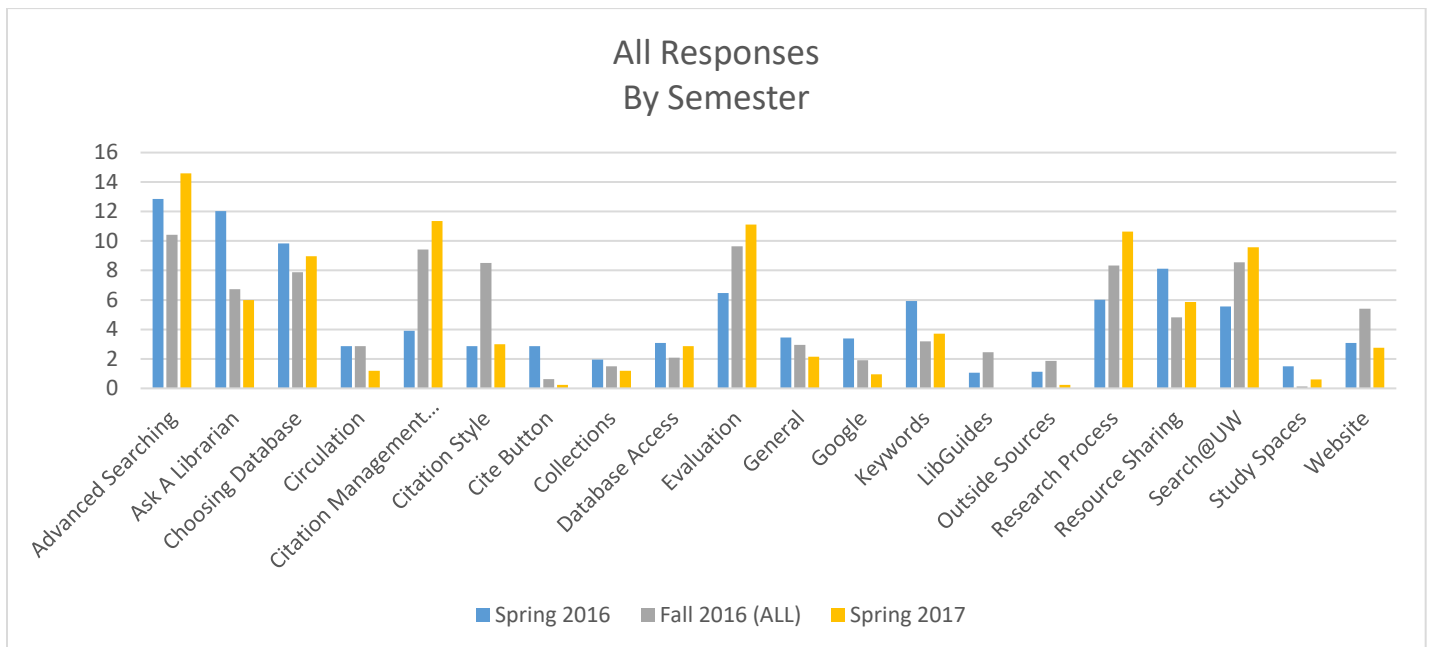


3-2-1 Assessment Results

During the Spring 2016 semester, the Research & Outreach Services team first implemented the 3-2-1 Assessment in ten instruction sessions as a pilot. The 3-2-1 Assessment asks students to write down three things they learned, two questions they still have and one thing they will now do differently when researching after their library instruction session. Fall of 2016, we expanded the assessment to 24 classes, then an additional 12 classes in Spring 2017. Approximately 1179 students attended the 46 classes that participated in the 3-2-1 Assessment which is 30% of the total number students who had library instruction Spring 2016-Spring 2017.

To code the responses, librarians entered the collected replies in an Excel document then created a list of categories to describe the students’ responses. Some of the categories are simple such as Circulation or Ask A Librarian, but others were more complex with several narrower subcategories fitting under an overarching category. For example, the category Advanced Searching includes any responses that mention subject terms, filters, Boolean search operators, phrase searching, truncation, narrowing or broadening a search, etc. We intended to avoid overly specific categories that would not provide workable data. The categories were assigned to individual responses collaboratively between the two project librarians. As the scope of the project grew, data was moved from the Excel spreadsheet to an Access database, which functions for entering, coding, and analyzing responses.

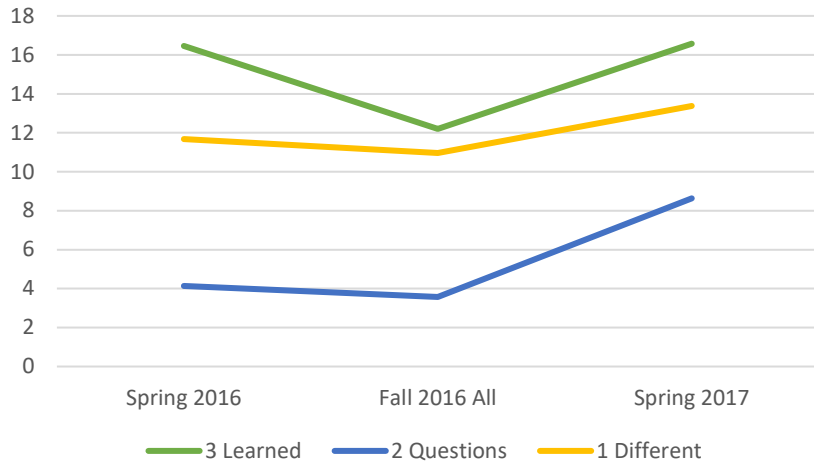
This chart shows the percentage of all responses in a given semester that fell into each coding category.



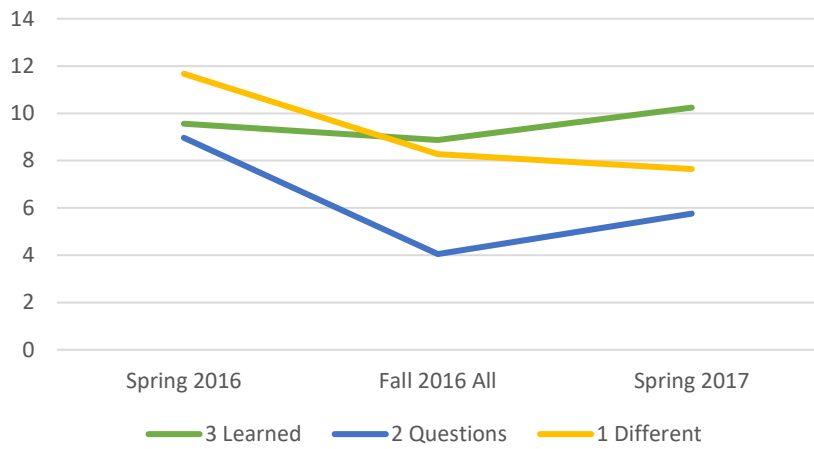
The following charts show the percentage of responses over time in a given category, separated by the prompts of three things students **learned**, two **questions** they still had, and one thing they would do **differently**. Upon examining this data, we noticed several trends repeated through the categories.

The first trend (see below) consisted of a higher percentage of Learned and Different responses compared to the Questions in that category, which may be an indication of successful instruction. This trend aligns with expectations that students understand and will use the concepts they learned so they do not have any pressing questions. We are pleased that many of the categories in this trend are among the most commonly mentioned overall. However, rather than resting on our laurels, seeing how important these areas are to the students has spurred us to consider if there are even more improvements we can make to our teaching of these topics. For example, we have worked on making the selection of good keywords a more explicit part of the research process, as students begin their searching.

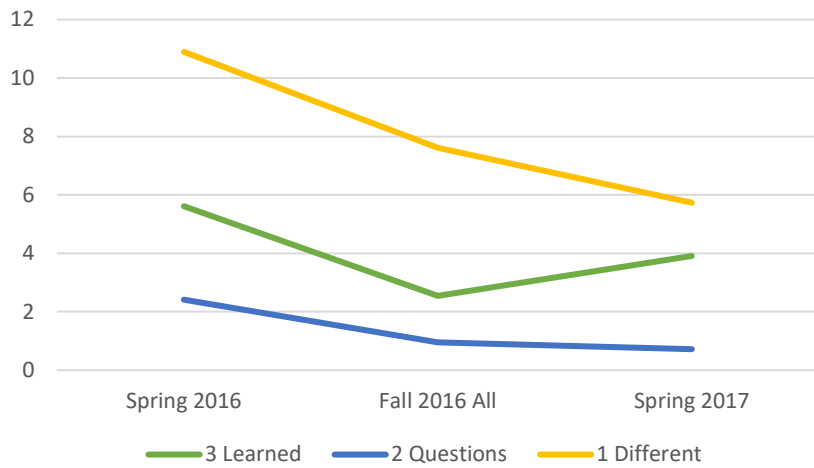
Advanced Searching

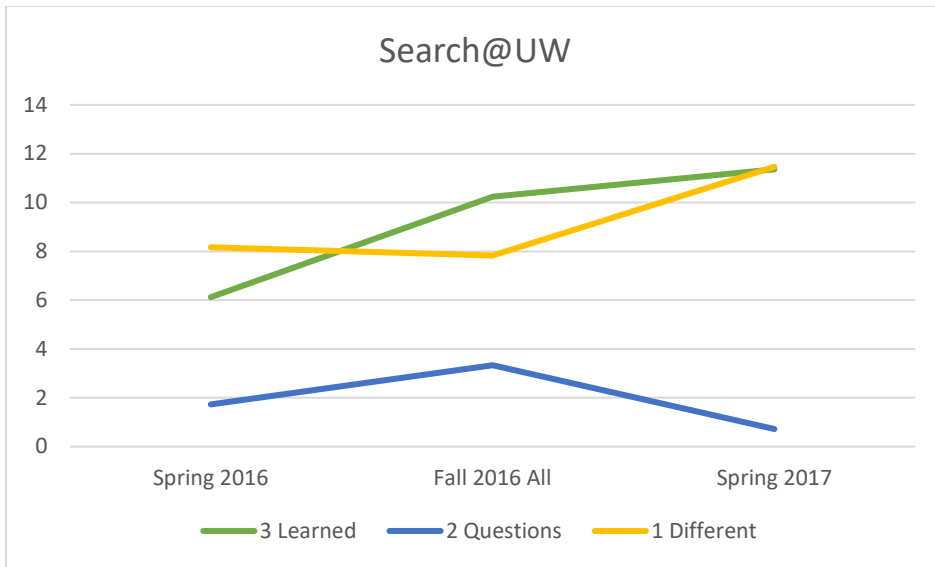


Choosing Database

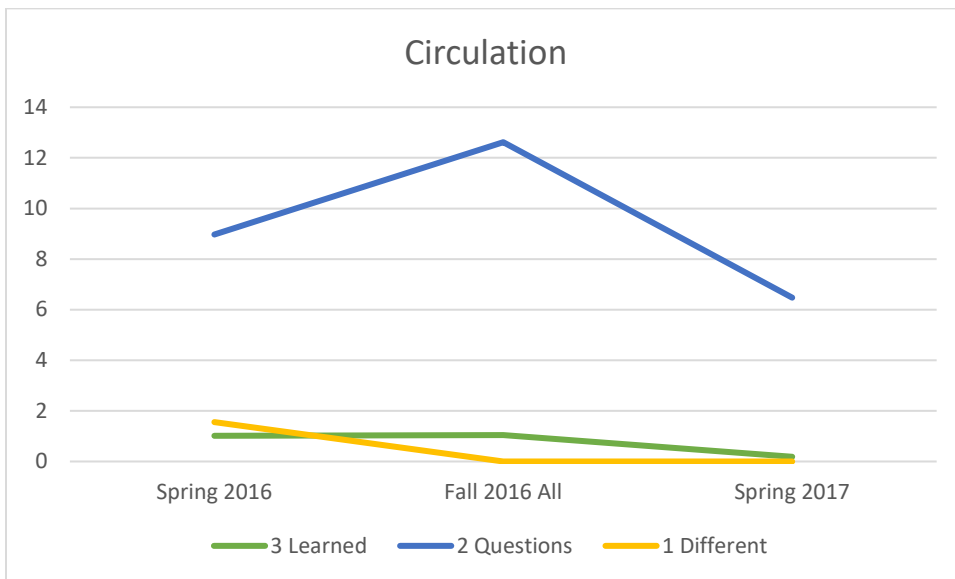


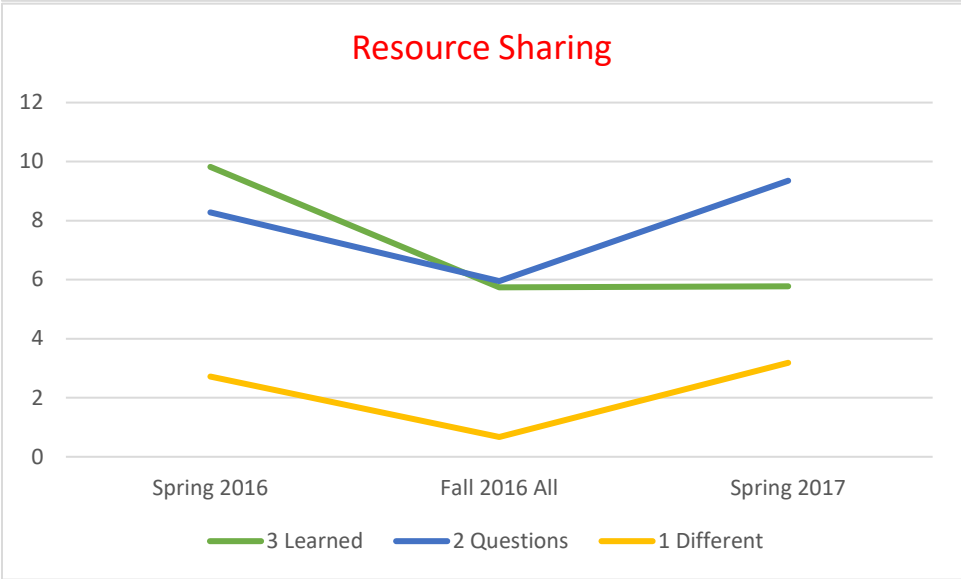
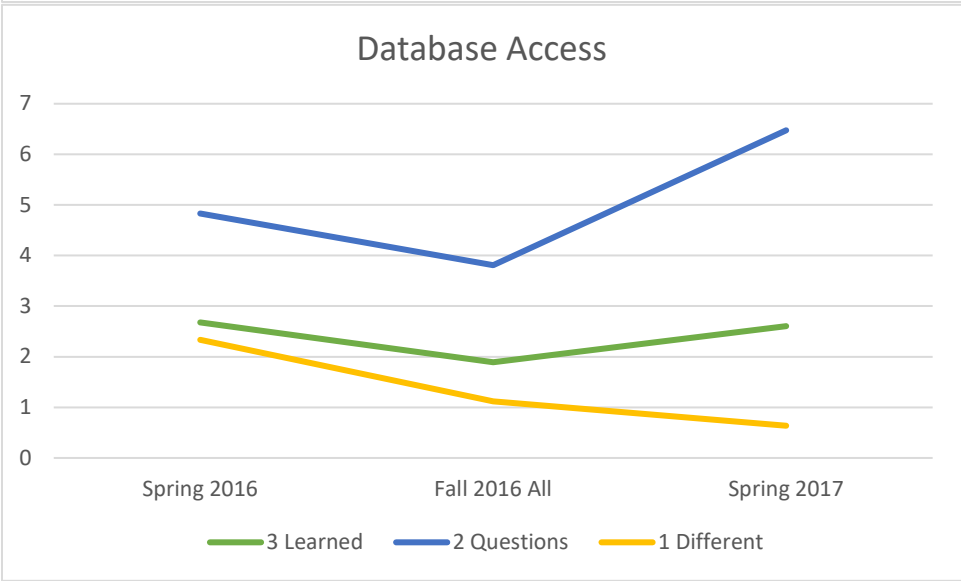
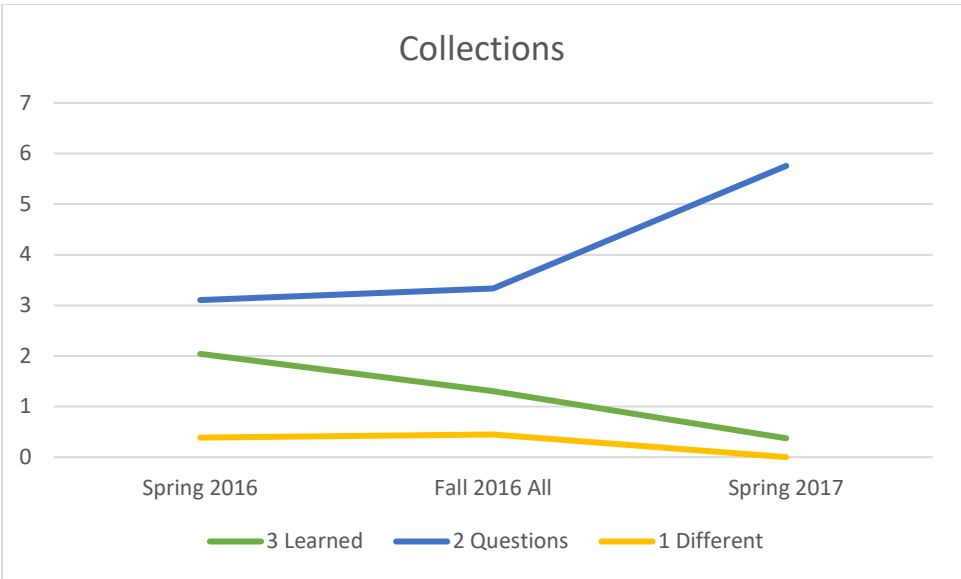
Keywords





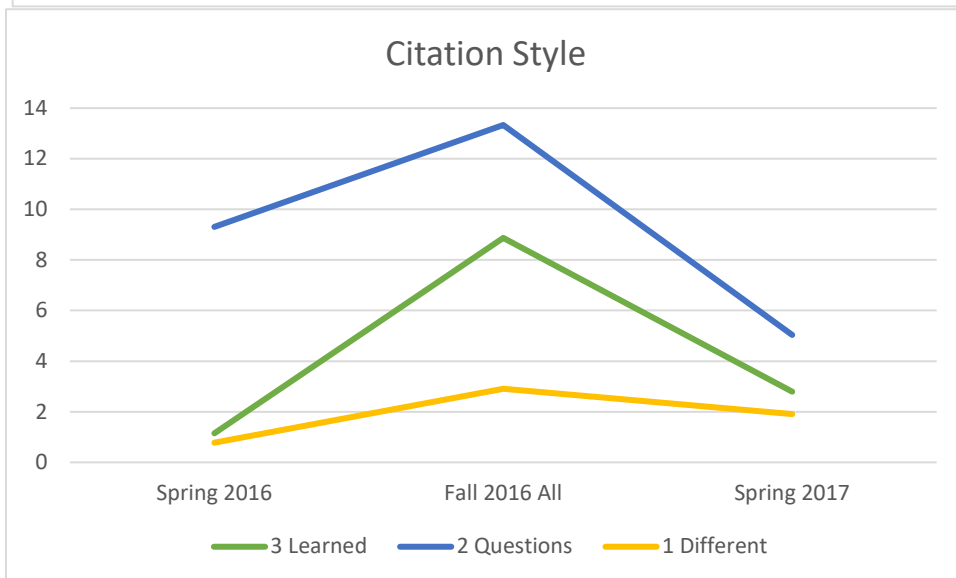
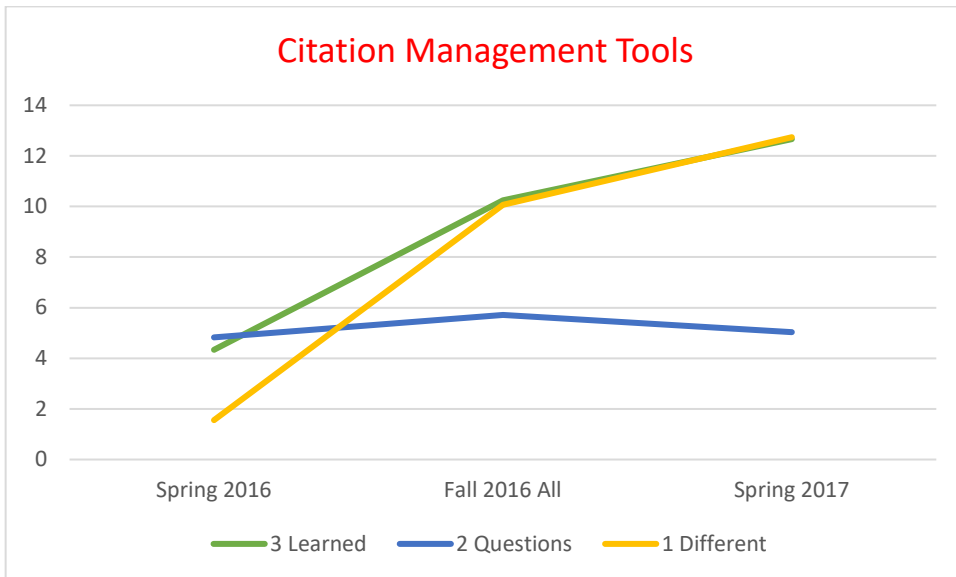
The second trend we recognized showed Questions with a higher percentage of responses than both Learned and Different and highlighted potential areas for improvement. Several of the categories in this trend are concepts generally not covered in-depth in instruction (see charts below) mainly due to time limitations. We noted that these are not among the most frequently mentioned categories, so we looked for the best ways to provide this information to students, without sacrificing valuable class time. We shared responses with the Public Services department, which they used in revising their FAQ and student-worker training.

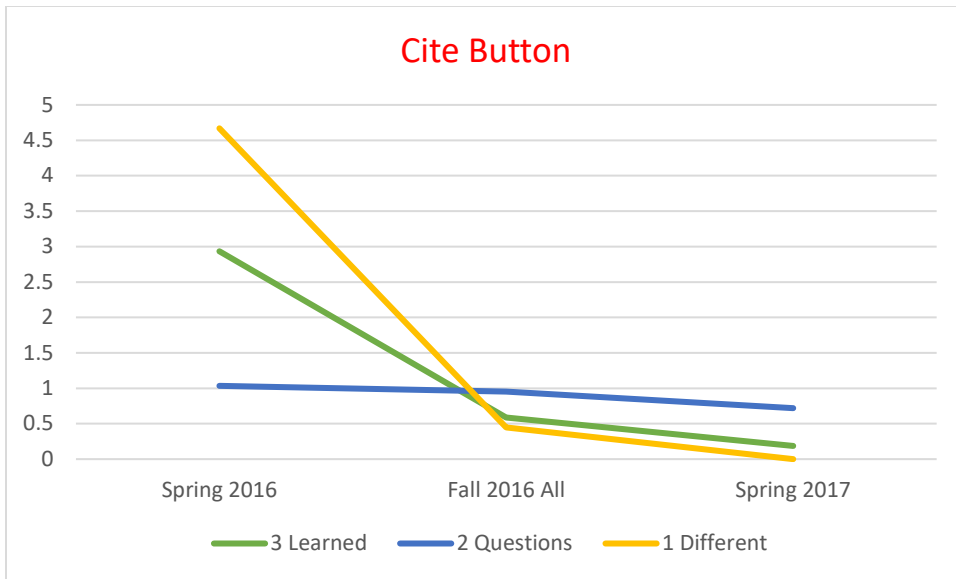




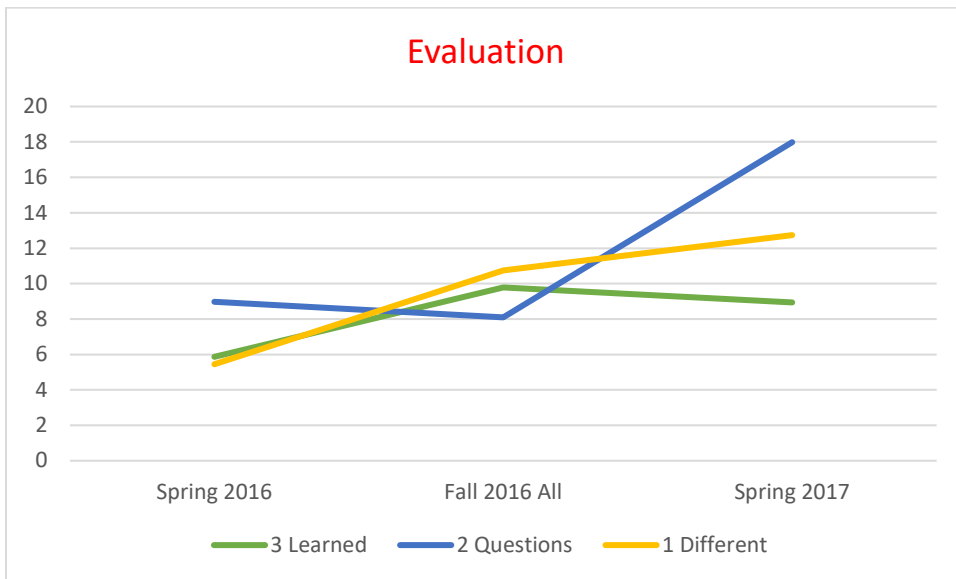
While we decided to move our efforts to answering questions in the above categories at the point of need, rather than focusing on them during instruction sessions, we saw some categories with high numbers of Questions that we believed were very important to improve upon. The three categories relating to citations were one such area. In the Spring 2016 semester the Citation Style category (mechanics of using APA, MLA, Chicago style, etc.) and Citation Management Tools

category (help students to create and organize citations) both saw more Questions than Learned or Different – by quite a lot in the case of Citation Style. In contrast, the results in the Cite Button category (represents the idea that automatically generated citations found in databases are generally full of mistakes and should be used with caution) showed that this was a new idea for many students, as they mentioned that not using the “cite button” was something they would do differently or had learned. Beginning in Fall 2016, we put additional effort into explaining citation management tools and how they can help students to master a citation style and the results show! (See charts below.) Many more students wrote that they learned about citation management tools or that the use of these is something students will do differently. Conversely, mentions in the category of Cite Button dropped to almost nothing, as students were more likely to respond about a more thorough method of citation. We still see high numbers of questions in the Citation Style category, showing that this is a consistently difficult area for students, and something we should continue to work on.



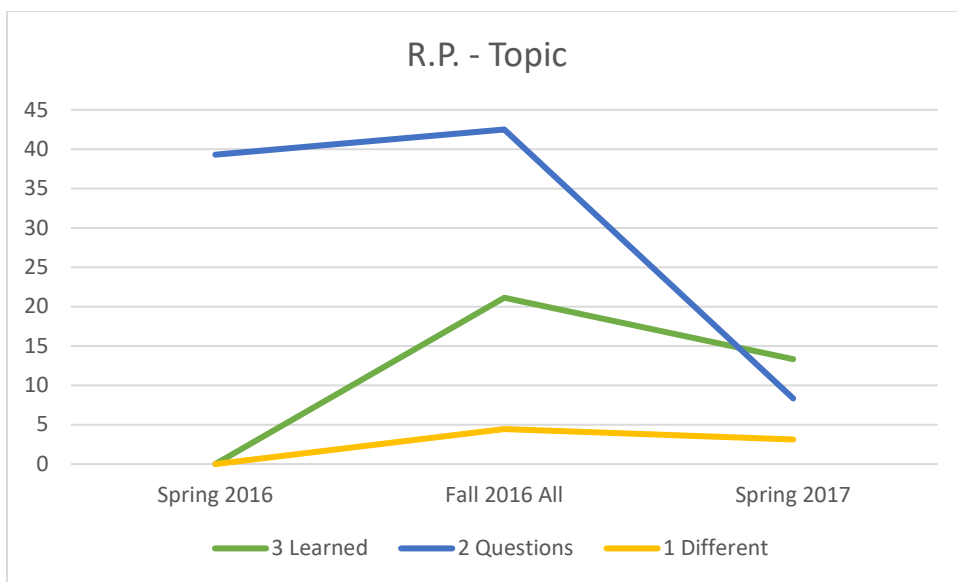
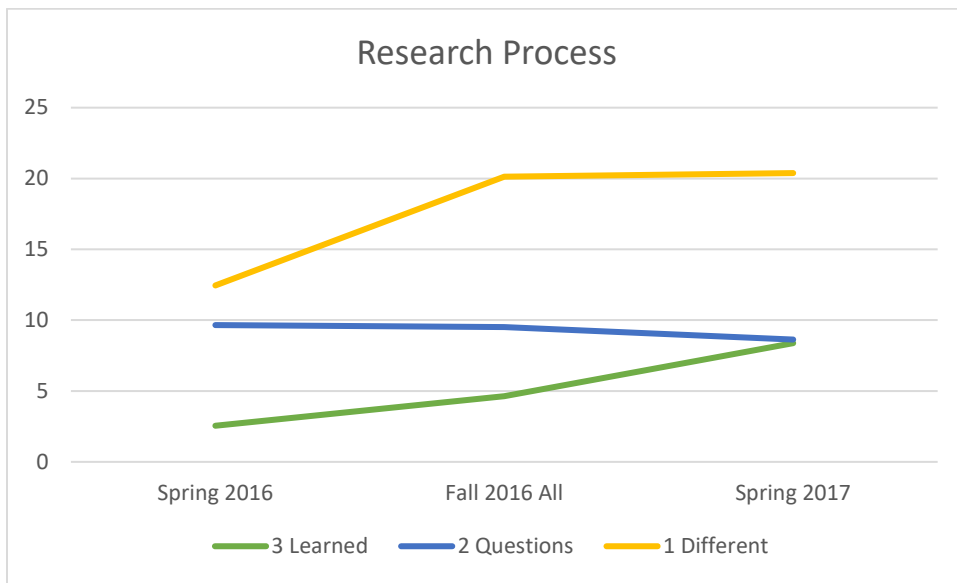


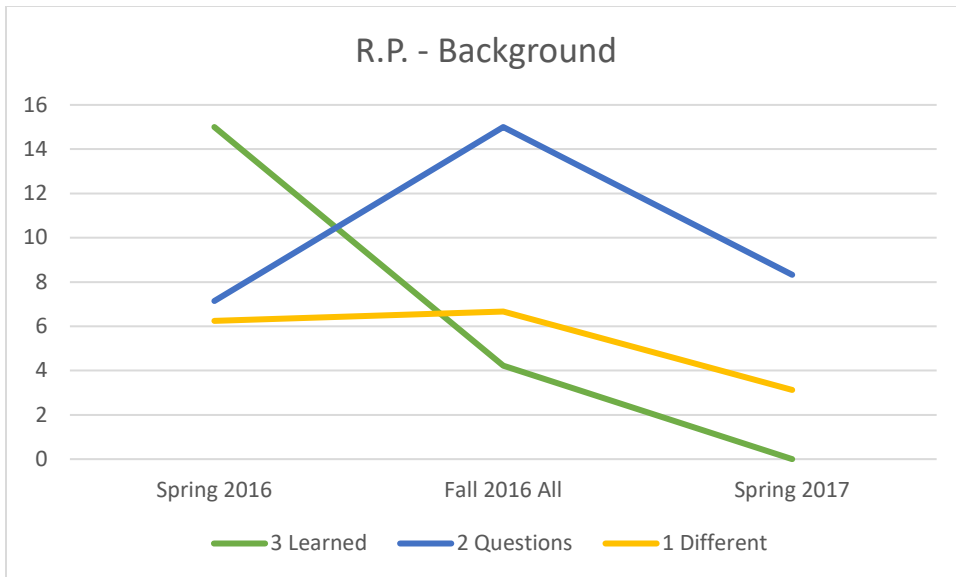
Based on the trend data from Spring 2016, the R&OS department identified Evaluation and Research Process as complex concepts that students struggle to fully understand. We investigated scaffolded instruction models (where librarians visit a class at multiple points in their research process rather than a traditional one-shot session), encouraged faculty to request instruction at the point of need, engaged students to think critically through activities and discussion, and implemented these changes in the Fall 2016 semester. In the chart below you can see the Evaluation responses changed trends each semester: Spring 2016 was Trend 2 (identifies areas to improve) then switched to Trend 1 (an indicator of successful instruction) in the Fall, and in Spring 2017 returned to Trend 2. The Spring 2017 data shifting back to Trend 2 indicates that students continue to struggle with the concept of evaluating sources of information.



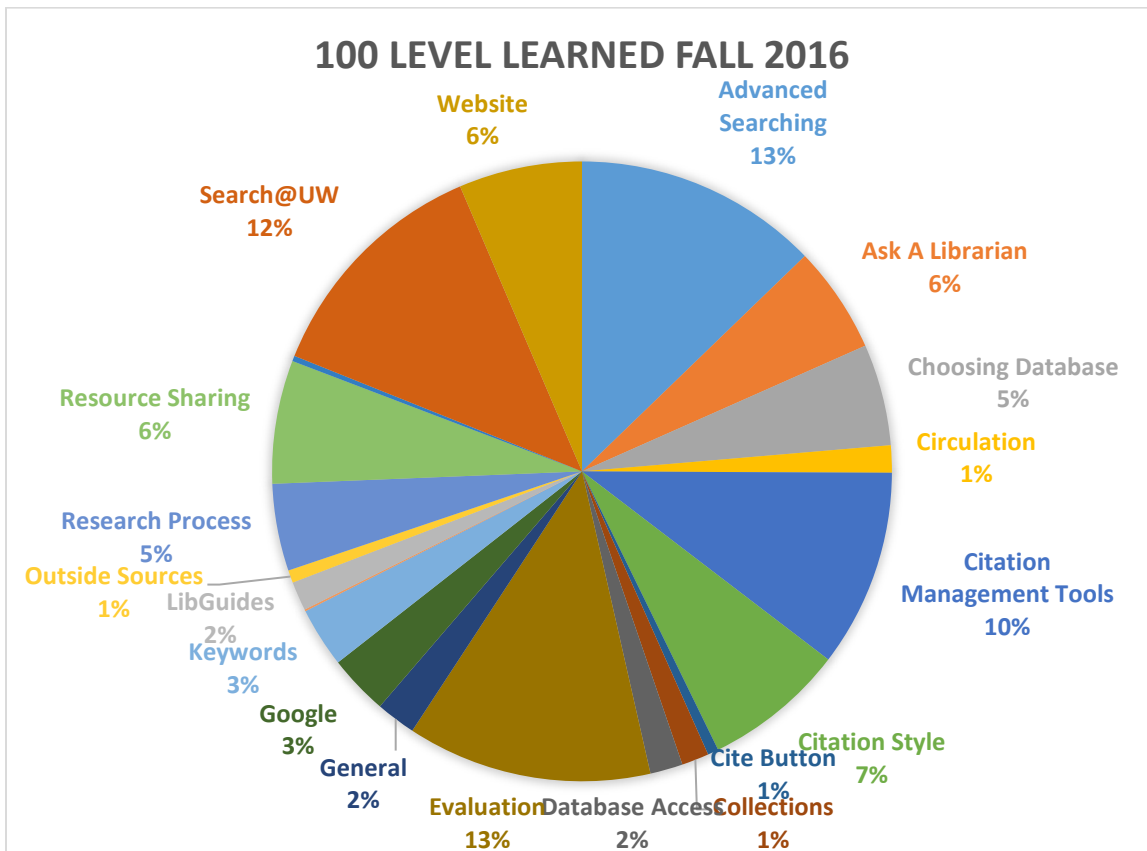
Out of our 23 categories two, Evaluation and Research Process, were broken down into narrow categories in the effort to gain further insight into the students' responses. This gave us the opportunity to measure how many responses mentioned a particular aspect of Evaluation (CAARP method, scholarly and popular source, and general) or the Research Process (developing a topic, background research, search strategy, and avoiding plagiarism). For example, the CAARP Method (evaluating sources by their Currency, Authority, Accuracy, Relevance and Purpose) was consistently identified as something students would do differently in their future research. This shows us there is value in teaching the CAARP Method.

In the chart below, the Research Process responses remained relatively steady over time, except for an increase in the percentage of responses in Fall 2016 and Spring 2017. However, when we took a closer look at the narrow categories we noticed that students had a higher percentage of questions about Topic in Spring 2016 and Fall 2016 and then dropped significantly in Spring 2017. For the narrow category Background, questions increased in Fall 2016 and Spring 2017. This can be attributed to changes we made to our instruction for the Spring 2017 semester. To address this issue of developing a topic and doing background research, we tried to spend more time in class covering these concepts. Attention was especially focused on English Composition courses where the librarian and faculty member collaborate using scaffolded instruction and a handout that encourages students to think deeply and critically about the Research Process. Even though questions remain about Evaluation and Research Process, it is significant that we can infer positive change across semesters as we adjust our pedagogy to meet students' needs.

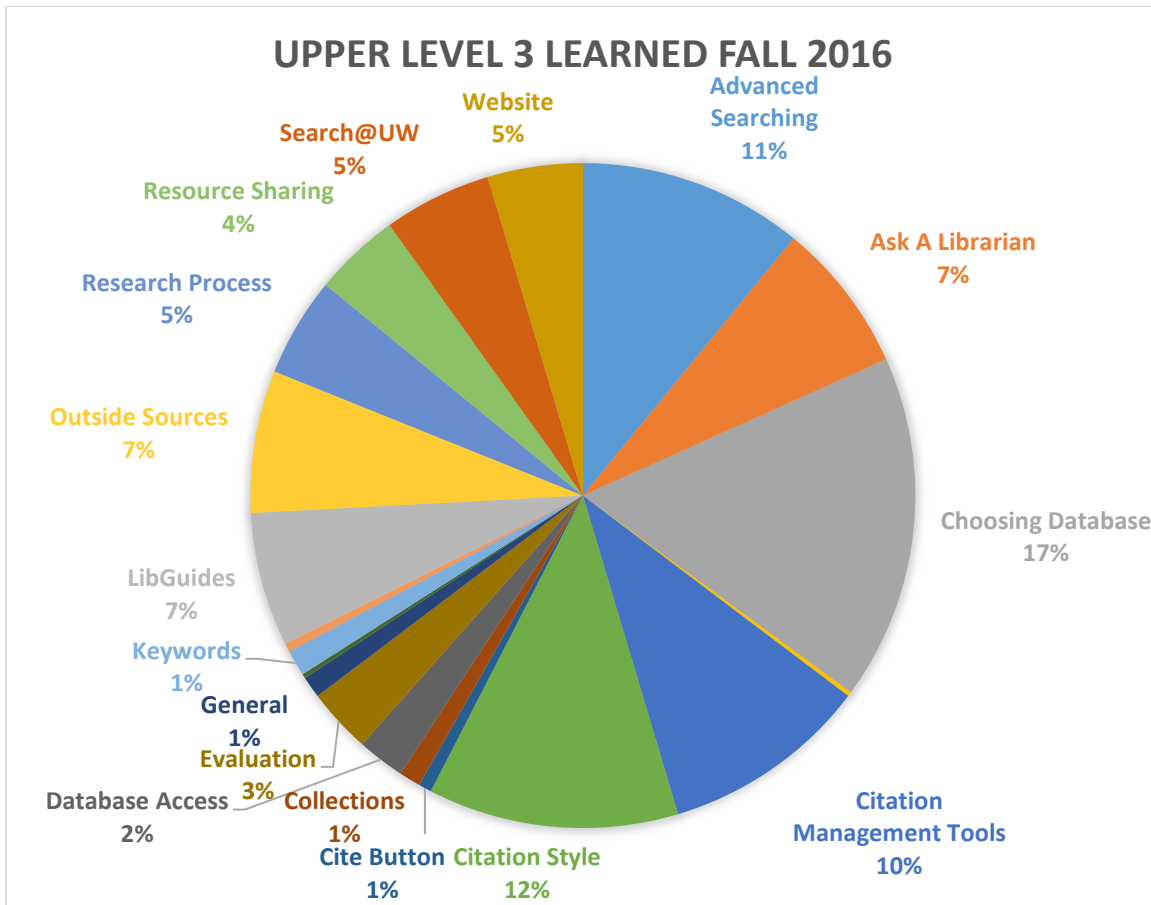




We also compared responses from upper and lower level classes. The charts below show Learned responses from 6 Upper Level and 18 100 Level courses in the Fall 2016 semester (the semester with the greatest number of responses.) Upper Level responses focused on Choosing Databases (selecting a database specific to their subject) and Citation Style whereas the 100 Level courses focused on Evaluation and Search@UW (a good resource for introductory searches.) This indicates these different populations have distinct research and information literacy needs at different times in their academic career, and stresses the importance of information literacy instruction across all course levels. Both groups frequently mentioned Advanced Searching and Citation Management tools, showing that some topics require time for mastery, or have different levels of knowledge within them where students can continue to grow.



UPPER LEVEL 3 LEARNED FALL 2016



The results of this analysis provides R&OS with areas to focus on in revamping or adjusting current information literacy instruction activities, lesson plans, and concepts covered. It also highlights concepts that may need to be repackaged or expanded either in or outside of the library instruction session. Circulation and Resource Sharing are good examples of concepts that we want students to know about but can't sacrifice class time to go over in detail. We have taken parts of the assessment (those responses and analysis that were collected under IRB regulations) and presented both at the Wisconsin Association of Academic Libraries (WAAL) and the Information Literacy Summit at the end of Spring 2017. Through presenting our research and methodology with other instruction librarians, we have identified how we may use this data more broadly.

With three semesters of data, the R&OS team is encouraged that this assessment helps us gauge how well students are learning information literacy both by course and overall trends with our current teaching practices. We've decided to continue collecting this data for the 2017-2018 school year to further adjust our pedagogy, identify students' research and information literacy needs, and as a way to practice reflective teaching. Adding two more semesters of data will also help us track challenges and trends of successful instruction by building on the data already collected.