Not a Blank Slate: Information Literacy Misconceptions in First-Year Experience Courses

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Abstract

Information literacy is the primary instructional focus of many librarians. With the development of a core set of information literacy threshold concepts, librarians often strive to impart these concepts to undergraduate students during their years of study. However, when students come to school, they are not blank slates. They arrive with preconceived ideas or misconceptions which can impede this process. In this article, the authors report on the results of focus groups held with first-year students at a private, liberal arts university. During the focus groups, participants were asked to share their perceptions of the misconceptions identified by Hinchliffe et al. (2018) in their information literacy misconception inventory. This study adds support for some of the misconceptions included in the Hinchliffe et al. inventory. However, it was not able to add support to all of them. In some cases, participants indicated conflicting results; in others their responses opposed the misconception.

Keywords: misconceptions, first-year students, information literacy

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Information literacy is the primary instructional focus of many librarians. With the development of a core set of information literacy threshold concepts, librarians often strive to impart these concepts to undergraduate students beginning in their first year of study. However, misconceptions about information literacy can impede or delay this process.

One way librarians can improve instruction is by identifying common information literacy misconceptions among student populations in order to develop lesson plans and curricula that enable students to overcome these barriers. Educational researchers Wiggins and McTighe (2005) note that misconceptions arise from “prior experience and a plausible inference based on that experience” (p. 142). Because misconceptions are based in prior experience, they are often hard for students to let go of especially when they have been successful in the past. According to Wiggins and McTighe, in order to remove misconceptions, students need to be open to recognizing their misunderstandings and critically evaluating their current ways of thinking.

In a recent study on information literacy misconceptions, Hinchliffe et al. (2018) conducted focus groups with librarians who work with first-year undergraduate students in order to develop an inventory of first-year students’ information literacy misconceptions. They were inspired to investigate this topic based on a 2017 survey of academic librarians conducted by Library Journal in conjunction with Credo Reference. The purpose of the First Year Experience Survey: Information Literacy in Higher Education was to determine the “need for and extent of information literacy (IL) instruction for first-year college/university students” (Library Journal, 2017, p. 1). Respondents to the survey ranked recognizing reliable sources/evaluating sources, lack of awareness of library sources, identifying appropriate sources, not receiving enough IL training, and difficulties with proper citations as the top challenges for first-year students. Hinchliffe et al. (2018) reviewed the results of the survey to create a draft inventory of misconceptions and then conducted focus groups with academic librarians to refine and validate the inventory.

Both the Hinchliffe et al. (2018) study and the First Year Experience Survey questioned librarians about their perceptions of students, not students directly. In 2019, the authors of this article conducted focus groups with first-year undergraduate students in first-year
experience courses to test the validity of the information literacy misconception inventory developed in the Hinchliffe et al. study.

**Literature Review**

Several studies (Ganley et al., 2013; Gross & Latham, 2009; Perry, 2017; Yearwood et al., 2015) have investigated perceptions of information literacy; however, only the recent study by Hinchliffe et al. (2018) has focused specifically on identifying predictable misunderstandings in information literacy learning. *Misconceptions*, defined by Hinchliffe et al. (2018) as “a belief held by students that is incorrect but held based on prior experience” (p. 8), are distinct from misunderstandings that arise from ignorance or a lack of prior knowledge. For this reason, misconceptions are particularly troublesome because though incorrect, they have a grounding in truth, and this grounding in truth makes misconceptions seem valid until they are corrected.

Hinchliffe et al. (2018) conducted focus groups with librarians who work with first-year students in order to identify predictable misconceptions and ultimately create an inventory of nine information literacy misconceptions of first-year college students. Because their focus groups focused on librarians’ perceptions of students’ misconceptions, they suggested that future research explore whether the misconceptions are perceived by the students themselves. It should be noted that, due to the academic expectations required of first-year students, their inventory primarily focuses on basic research skills and knowledge of the library without getting into some of the more complex information literacy threshold concepts expected of upper division students.

When investigating student perceptions and performance, first-year experience courses provide researchers with a centralized pool of incoming students at a university. Researchers have used first-year experience courses to measure the effectiveness of information literacy instruction as related to student success metrics (Marineo & Shi, 2019), comfort in using the library (Goldman et al., 2016), and performance on information literacy learning outcomes (Lowe et al., 2015). Others have used first-year experience courses to qualitatively investigate changes in students’ perceptions through research journal reflections (Insua et al., 2018) and interviews (Kirker & Stonebraker, 2019). Some studies on first-year students have noticed a disconnect between student perceptions and use of the library. For example, one of the seminal reports on first-year students from Project Information Literacy found that the majority of first-year students struggle to
effectively use their library’s research portal and that many of them lack familiarity with how an academic library can help them meet their needs (Head, 2013).

Researchers have also used focus groups to determine student perceptions of library resources and services. For example, Voelker (2006) ran focus groups with students in two first-year learning communities to learn more about first-year students and their needs, and Fagerheim and Weingart (2005) conducted focus groups with students to understand their perceptions of the library. Focus groups have also been used to understand the library needs of students who are deaf and hard of hearing (Saar & Arthur-Okor, 2013) and Indigenous university students (Hare & Abbot, 2015).

Though focus groups can be used to gather opinions and perspectives of students, it must be noted that they are not without limitations. The focus group moderator must skillfully manage differing personalities to ensure that all participants are engaged and that the group remains on topic (Guest et al., 2013). If a focus group is not led by an experienced moderator who is adept at using probing questions, one participant may dominate a group, or the group may lose focus. However, when facilitated by a skilled moderator, focus groups provide librarians with the unique opportunity to discover the thoughts and perceptions of students in their own words.

**Background**

This study was conducted at a private, liberal arts university located in a metropolitan area in the Southeastern United States. Most of the study body is comprised of traditional, undergraduate day students ranging in age from 17 to 22. At the time that this study was conducted, the total undergraduate enrollment was 2,883; of this, 520 were first-time freshmen (Office of Institutional Research and Effectiveness, 2019).

**Methods**

In the fall of 2019, after receiving approval from the Institutional Review Board, the researchers solicited participants for focus groups via the student listserv. Interested individuals completed a brief demographic survey confirming that they were first-year students. They were notified that they would receive a $15 gift card for their participation; the cost of these gift cards was covered by an institutional grant received by the investigators to encourage faculty and faculty-student teams to engage in research efforts.
Eligible respondents were contacted by the primary investigator and given additional details regarding the location where the focus group would take place.

Following the recommendation of Guest et al. (2017) that 80% of all possible themes are discoverable in two to three focus groups, the researchers facilitated three focus groups during the first week of October 2019. Upon arrival to the focus group, participants signed a consent form acknowledging that their responses would be kept anonymous. To further contribute to the anonymity of the attendees, individuals selected aliases to use for the duration of the focus group. The focus groups were recorded using two TASCAM DR-05 digital voice recorders that were placed in a visible area on the surface of the table around which the participants were seated. Both investigators viewed training videos on facilitating focus groups and practiced facilitation techniques prior to the first focus group.

While each focus group had a minimum of 10 participants registered, some participants did not attend, resulting in a total sample size of 25 which was 5% of all first-time freshmen at the university. Each focus group had at least six participants, with the largest group having 11 attendees. The focus groups were comprised of 24 females and one male. While most of the undergraduate student body is female, the actual ratio is closer to 63% female and 37% male. The researchers acknowledge that the study population is not reflective of the gender makeup of the student body.

The primary investigator facilitated the focus groups using questions based on the misconception inventory created by Hinchliffe et al. (2018) while the secondary investigator took notes. (See Appendix for the focus group protocol). When creating the focus group protocol, the investigators combined some items on the inventory and changed some wording for clarity. For example, items 4 and 5 in the inventory were combined into the single question, “We’ve heard that students believe they can find enough information through Google to write their papers. What do you think about that?” and items 6 and 7 were assessed indirectly by asking the question, “What do you do when you are asked to write a research paper or project?” Finally, for item 9, rather than using the term “information literate” which may be unfamiliar to first-year students, the participants were asked, “We’ve heard that students believe they are good at finding the information they need. What do you think about that?” The questions on the focus group protocol were also beta tested with a library student worker to further clarify the wording prior to the first focus group. However, the investigators acknowledge that these changes in wording and the use of indirect questions are a limitation of the study.
Following the conclusion of the final focus group, the audio recordings from each session were uploaded to GoTranscript.com, an online, paid transcription service. The cost for these transcriptions was covered by the grant received by the researchers. Once the transcriptions were received, the investigators reviewed the transcripts independently and deductively assigned codes line-by-line with each code corresponding to one of the nine misconceptions identified in the misconception inventory created by Hinchliffe et al. (2018). The researchers then checked for coding agreement for each of the three focus groups and revised their codebook until the inter-rater reliability for each code was over 80%. For each of the misconceptions, the researchers then weighed the amount of agreement or disagreement among the participants.

**Findings**

**Misconception #1: Research Assistance**

The first misconception on the Hinchliffe et al. (2018) misconception inventory is that “first year students believe that they are supposed to do their research without assistance” (p. 13). The findings of this study do not add support for this claim. Contrary to the misconception inventory, the students in this study indicated a willingness to seek out assistance when necessary. They expressed a desire to be able to initially do the research independently. However, they were willing to seek assistance if they were unsuccessful in their initial, independent attempts. They most often mentioned seeking assistance from the library’s service desk, which is predominately staffed by fellow students, though they also discussed reaching out to their classmates, friends, and professors.

When further questioned regarding their preference for receiving assistance from peers or professors, participants were divided. Some students indicated that they appreciate being able to ask other students for assistance. Several noted that their peers have been through a similar experience and perhaps even taken the same course with the same professor and therefore might be able to offer assistance based on their experience. Other students indicated that they prefer to ask their professors because they are more knowledgeable about the assignments and topics.

Regarding seeking assistance from librarians, no clear response arose. It should be noted that the librarians do not staff a traditional reference desk but instead stand at a computer in the reference area. The students seemed unsure why a librarian was stationed there.
However, they mentioned that their professors recommend asking librarians for assistance with finding sources for research papers.

Misconception #2: Library as Place

The second misconception on the misconception inventory is that “first year students perceive the library as only a place to get books or to study” (Hinchliffe et al., 2018, p. 13). The findings of this study do not add support for this claim. The students expressed a firm understanding that the library is more than a repository for books. They gave several examples of using the study rooms, socializing with friends, and using the Center for Writing Excellence and the Peer Tutoring services that are available in the library.

The university in this study does not have a large student center, so this may contribute to the use of the library as a place for socializing. Furthermore, the library building houses additional campus departments, such as the Center for Writing Excellence where students may receive free assistance from fellow students with reviewing and revising their papers, Peer Tutoring, where students may receive free assistance from fellow students for specific courses, and the Office of eLearning, where individuals may receive assistance with the learning management system, Canvas.

Misconception #3: Credibility of Library Sources and Discovery Tools

The third misconception on the misconception inventory is that “first year students believe that all library sources and discovery tools are credible” (Hinchliffe et al., 2018, p. 13). The findings were split on this misconception. Slightly more of the participants expressed a need to assess a resource themselves even when the resource came from the library. For example, one participant stated, “I believe they’d be more credible than just anything you’d find in a public library or bookstore, but I definitely would want more research to make sure it’s applicable to my paper.”

However, there were an almost equal number of responses that indicated a belief in the credibility of all library sources, especially if they were not given further guidelines by their professors. For example, one participant stated, “It’s kind of dependent on the professor’s preference for that assignment. If he says or she says don’t use this article or this organization or something, well then, no, it’s not all applicable to the paper anymore. But, if you have no guidelines to go by, then it’s all kind of relevant.” Another participant agreed explaining, “People do come to the library to find resources, so they are pretty reliable.”
Misconception #4: Sufficiency of Internet Resources

The fourth misconception on the misconception inventory is that “first year students believe that freely available internet resources are sufficient for academic work” (Hinchliffe et al., 2018, p. 13). Students appear to be split on their beliefs regarding the sufficiency of resources freely available on the internet. In some instances where participants stated that internet resources were insufficient, it was tied to a direct request from their professor. For example, one participant explained, “I feel like you can find plenty of resources online, but a lot of teachers require that you actually have some physical resources besides online sources.” However, other students felt that freely available internet resources were sufficient. One participant stated, “I feel like the web is a very good resource. Obviously, there’s stuff on it that’s not reliable, but I feel like for the most part, it’s been pretty refined. Most of the stuff you find on there is pretty good.”

Misconception #5: Sufficiency of Google as a Search Tool

The fifth misconception on the misconception inventory is that “first year students think Google is a sufficient search tool” (Hinchliffe et al., 2018, p. 13). As with their beliefs regarding the sufficiency of freely available internet resources, students were split on their beliefs regarding the sufficiency of Google. Many of the students recognized that Google was sufficient for some tasks but not for others. For example, one of the participants stated, “I think the only time I’ve had to use Google as far as research goes would be to look on a news website. Not necessarily looking for a scholarly article or something along those lines, but if I needed a current event, I think then I would use Google. Otherwise, if it’s research, then yes, you use JSTOR or one of those.”

Some students expressed a belief that the sufficiency of Google thus far in their academic career was due to a lack of rigorous research assignments. One participant stated, “I really haven’t had to research a bunch of articles yet, but just some quick little answers like, what is the definition of this and the scientific term? I’ll just look it up on Google.” Other participants agreed and indicated a belief that future assignments will require additional resources, thereby making Google alone insufficient for their research needs. For example, another participant stated, “I don’t really need to use those tools for the classes that I have right now. That’s a problem for later.”
Misconception #6: Accessibility as an Indicator of Quality

The sixth misconception on the misconception inventory is that “first year students believe that accessibility is an indicator of quality” (Hinchliffe et al., 2018, p. 13). The findings on this misconception were inconclusive. Several participants mentioned convenience as a key factor in their desire to use a resource, but that doesn’t necessarily suggest that the participants think the source is also high quality. This was particularly true when describing their use of online sources instead of print resources available in the library. One participant stated, “You can get quicker results by just typing in something. In the library you have to go in, like find resources, and it might take a little bit of time to sit and read when you could just pull it up online.” Another participant agreed stating, “If I’m in my dorm or if I want to go to a coffee shop or something like that and just do work there, it’s just easier just to type it up. If I go into the library, then I come back and realize I forgot a source, I’m not going to go back down again and try to find it, so I’ll just Google it.”

Misconception #7: Research as a Linear, Uni-Directional Process

The seventh misconception on the misconception inventory is that “first year students believe that research is a linear, uni-directional process” (Hinchliffe et al., 2018, p. 13). The findings on this misconception were inconclusive. The first-year students were not familiar enough with the research process yet to describe it as a directional or cyclical process. However, when asked to describe the steps they took when working on a research project, some participants described their workflow in a linear fashion, while others referred to more cyclical processes such as re-evaluating sources and revising rough drafts.

Misconception #8: Every Question has a Single Answer

The eighth misconception on the misconception inventory is that “first year students think that every question has a single answer” (Hinchliffe et al., 2018, p. 13). The findings of this study do not add support for this claim. Participants had a firm understanding that most research questions have multiple answers. For example, one participant said, “I feel like there can’t be one answer because people are constantly collecting new data. Research changes all the time. I don’t think there’s one definite answer. I think the answer changes.”

When pressed to see if they could think of any questions that would have a single answer, a few participants indicated a belief that questions in mathematics and the sciences can have single answers. For example, one participant stated, “It depends on what the subject is. If it’s...
mathematical, it’s like there’s only one answer. If it’s like history or something, then it’s like it could be very, very broad.”

Misconception #9: Students Believe They Are Information Literate

The ninth misconception on the misconception inventory is that “first year students believe that they are information literate” (Hinchliffe et al., 2018, p. 13). The findings of this study support this claim. The participants indicated a belief in the sufficiency of their information literacy skills, but they gave several examples of not possessing adequate information literacy skills. For example, when asked if they were more knowledgeable in using the library than some of their classmates, one participant said, “I think that I am. I know I can come here if I need help with someone at the resource desk, but then like if not, I can stay and get all my work done and then do what I need to do and exit.” However, at the beginning of the focus group when participants were asked if they had accessed books or articles through the library yet, the same participant said, “I honestly don’t even know how to go online or do like he says and find resources yet, so I will have to look into that.”

Limitations

The investigators acknowledge that the presence or absence of misconceptions will vary between schools and even within schools as students come and go each semester; this fact limits the generalizability of this study. Additionally, the focus groups in this study were conducted early in the academic year which may have affected the students’ exposure to information literacy concepts. The investigators also acknowledge that this study is limited by its small number of participants and by the fact that students were asked to respond directly to the misconceptions. Though care was taken to exclude library student workers and students who were taking courses taught by the investigators, it is still possible that participants were hesitant to express their actual beliefs because the focus groups were moderated by librarians.

Future opportunities for research would be to conduct this study at other schools with larger student populations or to conduct follow up studies with the participants as they enter their final year at college to determine if the misconceptions were corrected as their academic career progressed. Future studies should also incorporate direct observation of students’ information literacy skills to identify misconceptions while continuing to integrate student voices.
Conclusion

The researchers found that this study did not add support for several of the misconceptions identified by Hinchliffe et al. (2018). Of particular note are misconceptions one and two, which also had less consensus among librarians in the Hinchliffe et al. study. Based on the findings from this study, librarians should take into consideration misconceptions three through seven and misconception nine when designing library instruction or working with first-year students one-on-one. Librarians should also share these misconceptions with course instructors and should encourage them to highlight the benefits of using the library to the students in their classes. Additionally, librarians can work with instructors to design academically rigorous assignments that require the use of scholarly sources. Through targeted library instruction and collaboration with course instructors, librarians can begin to dispel the information literacy misconceptions held by students in first-year experience courses.

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References


Appendix: Focus Group Protocol

Hello and thank you for agreeing to participate in this focus group. My name is [insert name] and today I’ll be asking you a few questions about the library and how students use the library. My colleague, [insert name], will be taking notes. We’re interested in what students think about libraries and research. We’ve heard some things from other schools, and we would like to check with you to see if you feel the same way.

[Include guidelines for discussion and information about informed consent and confidentiality from your university here.]

Let’s start off by introducing ourselves. Please tell us the name you will be using today and what you’re studying at [insert school name].

Now let’s move on to your perception of the library.

What do you all think you know about using the [insert school name] library?

What puzzles you about using the [insert school name] library? (Probing Question: if they only talk about using the library building, ask what puzzles you about finding research?)

What do you do when you are asked to write a research paper or project? (If necessary, clarify that they can talk about a research project from Public Speaking or English Composition. Probing Question: if they only talk about emotions, ask them what actions they take)

Now we want to ask you about a few things we’ve heard others say.

We’ve heard that students believe they are supposed to do their research without assistance. What do you think about that?

We’ve also heard that students believe the library is only a place to get books or to study. What do you think about that?

We’ve heard that students believe that everything they find through the library is appropriate to use in a research paper. What do you think about that?

We’ve heard that students believe they can find enough information through Google to write their papers. What do you think about that?

We’ve heard that students believe that every research question has a single, correct answer. What do you think about that?

We’ve heard that students believe they are good at finding the information they need. What do you think about that?

Finally, does anyone have anything else they would like to add?