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## Ignatian Information Literacy: Applying the Ignatian Pedagogical Paradigm to Library Instruction

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### Abstract

Instruction librarians in higher education specialize in information literacy, which is the set of skills needed to interact effectively with information. The guiding document for library instruction, the Association of College & Research Libraries' (ACRL) *Framework for Information Literacy*, calls for imparting the foundational wisdom and self-awareness which underlie these skills. Unfortunately, most library instruction is delivered in 50- or 75-minute "one-shots" focusing on the technical skills of searching library resources, which makes deeper information literacy instruction a challenge. One way to meet this challenge is to utilize the Ignatian Pedagogical Paradigm (IPP), which shares with the ACRL *Framework* the aim of not merely imparting facts but holistically transforming the student. This article details the use of the IPP's repeating cycle of five elements (context, experience, reflection, action, and evaluation) to guide the creation of a flipped library instruction module which provides more foundational information literacy instruction than is typically possible in a "one shot" library session.

### Introduction

Information literacy is defined by the American Library Association as "[t]he set of skills needed to find, retrieve, analyze, and use information."<sup>1</sup> This skill set is more crucial than ever in our divided "post-truth" world, but finding time to teach it to students can be difficult. This is especially true of library instruction; though librarians are information literacy experts, they are most often asked to provide "one-shot" instruction sessions which focus on the technical aspects of database searching, with only a cursory look, if any, at the broader foundations of information literacy such as the evaluation of information for reliability or the metacognition required to interact with information honestly. Deeper engagement is possible, but usually requires collaboration with highly motivated professors through embedded courses or other time-consuming programs that limit reach.

In an effort to impact more students with this crucial instruction, the First Year Engagement Librarian at Gonzaga University in Spokane, WA utilized the Ignatian Pedagogical Paradigm (IPP) to create an online, flipped module which introduces information literacy concepts within the constraints of a typical 50-minute one-shot .

### The Ignatian Pedagogical Paradigm and the Framework for Information Literacy

The Ignatian Pedagogical Paradigm is both an instructional philosophy and set of guidelines for effective teaching. The philosophy behind the IPP was summarized by Kowalik, Miles-Edmonson, and Rosen as "faculty . . . accompanying students in their intellectual, spiritual, and emotional development."<sup>2</sup> *Cura personalis*, or care for the [whole] person, is a central tenet of both Ignatian spirituality and Ignatian pedagogy.<sup>3</sup> The goal is not merely the imparting of knowledge, but the transformation of the student in a holistic manner. This is accomplished through an iterative cycle of the five elements of the IPP: context, experience, reflection, action, and evaluation. *Context* is the background situation in which the instruction occurs both for the students and the instructor, such as the instructional setting (in-person or online, large or small class, etc.) and also the internal landscape, background, or worldview of the human individuals on both sides of the instruction process. *Experience* is the process of instruction itself, as received by the students. *Reflection* is metacognition on the part of the both the students ("What am I learning? Why is it important?") and the instructor ("How is the instruction impacting the students?"); this self-

understanding is crucial to internalizing what is being learned. *Action* is the carrying forward and application of what was learned. *Evaluation* is a final overarching reflection on the success of the instruction. This cycle renews continually, with context informing experience, experience inspiring reflection, reflection leading to action, and action prompting evaluation.<sup>4</sup>

Like Ignatian pedagogy, library instruction seeks the transformation of the student by imparting the foundational wisdom that underlies the knowledge and skills being taught. The guiding document for library and information literacy instruction, the Association of College & Research Libraries' (ACRL) *Framework for Information Literacy for Higher Education*, supersedes an earlier, more prescriptive document, the *Information Literacy Competency Standards for Higher Education*. Where the *Standards* listed skills the student was expected to master, such as "determin[ing] the nature and extent of the information needed"<sup>5</sup> and "evaluat[ing] information and its sources critically,"<sup>6</sup> the *Framework* focuses on building the habits of thought and conceptual awareness that ground these skills, via a set of six interrelated "core ideas:" "Authority is constructed and contextual," "Information creation as a process, "Information has value," "Research as inquiry," "Scholarship as conversation," and "Searching as strategic exploration."<sup>7</sup> The goal is not the transferring of factual knowledge so much as the transformation of the student via deep understanding into a knowledgeable, careful, and competent user of information. This transformative outlook is exemplified by the *Framework's* expanded definition of information literacy as "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning."<sup>8</sup> Note the word "reflective" — a very Ignatian approach!

### Context for Students

The starting point of the IPP is context. This can be summed up by the expression, "Meet the students where they are." If the instructor does not understand the students, the instruction may not be of a type the students are equipped to receive.<sup>9</sup> Unfortunately, the context regarding

information literacy for students entering college is rather bleak. Incoming students feel at home in the digital world and the internet, but there is "an imbalance between well-developed digital skills and less developed critical awareness,"<sup>10</sup> with particular areas of weakness being the formation of effective search strategies and the accurate evaluation of online sources. In choosing sources, students tend to sacrifice content for convenience.<sup>11</sup> A 2016 study by the Stanford History Education Group reported that both high school and college students were swayed to trust sources by factors such as the professional appearance of the website or an interesting graphic more than the content, and usually did not take the time to investigate or verify the source. The authors report, "By high school, we would hope that students reading about gun laws would notice that a chart came from a gun owners' political action committee. And, in 2016, we would hope college students, who spend hours each day online, would look beyond a .org URL and ask who's behind a site that presents only one side of a contentious issue. But in every case and at every level, we were taken aback by students' lack of preparation."<sup>12</sup> Kim and Shumaker found that first year students self-rated their information literacy skills more highly than their instructors did, while simultaneously rating the value of information literacy as of lower importance than their instructors did.<sup>13</sup> In political matters, Smith and McMenemy found that the young people they studied "were aware that they passively encounter information sources as well as actively engage in debate and discussion with other sources," and they "did talk about some evaluative aspects of their experiences with political information sources." However, they had difficulty practicing evaluation, with some using "inaccurate terminology," and "conflat[ing] the notions of truth and opinion."<sup>14</sup> Their being digital natives does not automatically give students the ability to navigate the sea of information in which they are immersed.

### Context for Instruction Librarians

Context applies not only to students, but also to instructors. It is common to encounter a rather robotic idea of instruction in which oracular professors transfer facts from their brain to the brains of their students. In reality, instruction consists of a personal interaction between human

beings. Without self-understanding on the part of the instructor, the effectiveness of this interaction may suffer.

The instructional context for librarians can be summarized as, “Too much to teach, and not enough time!” The most common form of library instruction is the “one-shot” instruction session, in which librarians are brought in as guest instructors for what is most commonly a single 50- to 75-minute class session.<sup>15</sup> This is recognized as less-than-ideal. In *The One-Shot Library Instruction Survival Guide*, Buchanan and McDonough note that one-shots are sometimes seen as fitting more into the category of bibliographic instruction, alongside orientations, how-tos, and one-off presentations, rather than the more deeply pedagogic information literacy instruction.<sup>16</sup> The one-shot’s effectiveness even within its scope is questioned by some scholars. Howard et al. found that “library instruction adds little value” when looking at “the use of scholarly sources and diversity of sources”<sup>17</sup> by students, though students did tend to use the resources taught in the session, particularly the final resource covered. Similarly, Conway found that one-shots made library resource use more likely, but “did not increase the use of academic journals or the diversity of sources used.”<sup>18</sup> Walker and Pearce studied the possibility of increasing student engagement in a one-shot session via clickers and concluded that “one 50 or 75-min library instructional session does not provide ample opportunity for substantial levels of engagement to manifest.”<sup>19</sup>

Another limitation of the one-shot is the difficulty of integrating information literacy concepts into a short session which is usually focused on technical research skills such as how to search databases. Scott describes her experience fielding a faculty request that is common in library instruction: teach multiple databases in a 50-minute session.<sup>20</sup> The emphasis on non-transferrable, platform-specific technical skills leaves little time to create learning opportunities that integrate concepts such as metacognition or source evaluation.

Other forms of library instruction are possible, such as embedding librarians into a course to keep the students company throughout a full semester and see them multiple times for instruction

and/or consultations, or credit-courses devoted entirely to information literacy with the librarian as the instructor of record. However, these methods are difficult to scale with the resources available to most academic libraries. Embedded courses naturally take more time and effort to plan and run than one-shots. Saunders and Taylor describe the need for support from librarian colleagues for their embedded course, including coverage of reference desk hours to make up for class planning and teaching time; it was important for the other librarians to understand the value of the collaborative work the authors were engaging in in order to justify the support that was being asked.<sup>21</sup> This is also true of the credit-course. Jardine et al. surveyed librarians at fourteen institutions and found that one-shots were taught at each institution, while only half offered credit-courses. Interestingly, offering credit courses did not decrease the demand for one-shots, and in one case actually increased it. Comments and personal interviews with surveyed librarians revealed staffing limitations, lack of administrative support, and increased workload as challenges to implementing credit-courses.<sup>22</sup> Similarly, a comment to a survey by Yearwood et. al cited the burden of the “time sink” of credit-courses, which the authors concluded was a reason they are far less common than one-shots.<sup>23</sup>

Another reason for the prevalence of the one-shot is due to a third context: that of the course instructor. Though some motivated professors seek deeper collaboration with librarians via embedding librarians in their course, most instructors are already trying to balance a tight schedule, and to squeeze in more than one or maybe two “library days” would mean sacrificing something else from their syllabus. Thus, the most common instruction request received by librarians is likely to remain some variation of, “Can you come in for a class session and teach my students about databases?”

The struggle to impart deep understanding via the one-shot was an inspiration for Kowalik, Miles-Edmonson, and Rosen’s three-week course on the Ignatian Pedagogical Paradigm for librarians.<sup>24</sup> The FYE Librarian at Gonzaga took this course and benefitted from the discussion about applying the IPP to the one-shot. In particular, the flipped classroom was mentioned as potentially “useful in

the IPP model.”<sup>25</sup> Flipped instruction asks the students to engage with new content before class via readings, videos, or online tutorials, allowing class time to be spent in discussion and hands-on application of the concepts learned. This has the potential to turn the one-shot into a virtual “double-shot,” allowing time for dedicated information literacy instruction without sacrificing the course instructor’s learning outcome goals of database search instruction. The FYE Librarian had already created a successful Online Library Orientation guide for distance graduate students using the principles of the IPP and was confident that the IPP could be similarly helpful in guiding the creation of another online guide, this one aimed at on-campus freshmen and intended to precede an in-class discussion.<sup>26</sup>

### Experience

By understanding the context of the incoming students, the FYE Librarian determined that the flipped instruction should focus on source evaluation and should encourage metacognition, in order to help the students build the conceptual understanding and self-awareness needed to interact well with information.

The popular CRAAP Test was chosen as the online guide’s foundation. The CRAAP mnemonic stands for five criteria for evaluating the reliability of sources of information: currency, relevance, authority, accuracy, and purpose. Since its development by Blakeslee<sup>27</sup> at California State University, Chico, the CRAAP Test has become a *de facto* standard set of source evaluation criteria, widely taught in high school, undergraduate, and graduate classes.<sup>28</sup> Following the 2016 election, the CRAAP Test was presented as a tool for combating fake news, tweeted by libraries and librarians and mentioned in a 2017 interview with the then-president of the American Library Association, Julie Todaro.<sup>29</sup>

While the CRAAP Test rose to prominence during the era in which the ACRL’s older *Standards* were in place, since the introduction of the *Framework* librarians have mapped the CRAAP Test to the appropriate frames of the newer document. Berg notes that “The new ACRL Framework has allowances for website evaluation,”<sup>30</sup> and highlights the frame “Authority

is Constructed and Contextual” with its corresponding knowledge practices and dispositions: “Use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility,”<sup>31</sup> “Recognize that authoritative content may be packaged formally or informally and may include sources of all media types,” and “Develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview.”<sup>32</sup> In a presentation to the Georgia International Conference on Information Literacy, Campbell and Malone go further by breaking down each criterion of the CRAAP Test and mapping it to one or more frames of the ACRL Framework, i.e. “currency” to “Scholarship as Conversation” and “Searching as Strategic Exploration,” “Authority” to “Authority is Constructed and Contextual,” and so on.<sup>33</sup>

The benefits of the CRAAP Test, and the reasons for its enduring popularity, are its memorable acronym and its ability to package important evaluation concepts into a short, one-shot library session. Recently, however, the CRAAP Test has come under criticism for being “no match for the internet.”<sup>34</sup> Critics hold that students should be taught to approach sources more like internet fact-checkers, leaving the source under evaluation and gathering external information in a process called “lateral reading.”<sup>35</sup> Fielding writes, “As currently employed, the CRAAP method does not explicitly encourage leaving the site to place any content found there in a wider context.”<sup>36</sup> It is also important to note that the CRAAP Test contains no direct criterion for metacognition, which is crucial to both Ignatian pedagogy and the ACRL Framework. To address these concerns, Liu suggests using the CRAAP Test as one step in a “four step assessment strategy”<sup>37</sup> which includes separate steps for lateral thinking and reflection. The FYE Librarian at Gonzaga determined to use the CRAAP Test as a basic conceptual framework and mnemonic for the online pre-class guide, but to build in lateral reading and metacognition via both explicit emphasis in the guide and application in the guide’s concluding exercise and the following in-class discussion.

LibGuides, from Springshare, was chosen as the platform for the guide. LibGuides is a system for

designing and hosting library research guides. Each guide is a miniature website navigated via tabbed pages. Boxes of content are arranged visually around the page, lending the guide an information-rich but accessible feel. This “chunking” of information has been shown to be valuable.<sup>38</sup> To make the guide approachable and engaging to first-year students, images, memes, and cartoons are sprinkled throughout and a conversational tone is maintained.<sup>39</sup>

The guide consists of seven pages. The first page introduces the idea of and need for information literacy. The page lays out three examples of the dangers of problematic information: the Pizzagate shooter, *The Protocols of the Elders of Zion*, and the Apollo moon landing hoax conspiracy theory. To make the point that anyone can be affected by misleading information, the page also lists a few brain teasers which demonstrate how our brains are wired for efficiency and not necessarily accuracy, taking shortcuts and leaping to quick answers that are not necessarily true. Finally, the page emphasizes the value of self-awareness when interacting with information. The goal is to prompt students to engage in the metacognition that will help them to take into account their own responses to information when they evaluate it.

Each of the next five guide pages is devoted to one of the CRAAP criteria: currency, relevance, authority, accuracy, and purpose. Students are encouraged to think in an investigative fashion and with self-awareness at each step. For instance, to check the accuracy of a source, students are told to leave the source and find other articles or websites to put in conversation with it, looking for consensus or disagreement. Metacognition is encouraged via the inclusion of the concept of *worldview* in the Purpose section. *Worldview* is an idea borrowed from philosophy and sociology, and means, in a simple definition, “The overall perspective from which one sees and interprets the world.”<sup>40</sup> It serves as a useful alternative concept to *bias*, since it carries a less negative connotation. It prompts students to try to understand where the source is “coming from,” and also to reflect on why they might feel moved to trust or distrust a piece of information.

The final page of the guide presents an exercise which asks students to investigate the claim that

colloidal silver is helpful in treating or preventing the common cold. The FYE Librarian chose alternative medicine as the subject because he deemed it a clear example of poor interaction with information and a subject about which first year students at Gonzaga University would probably not have strong prior opinions. The exercise consists of three Google Forms which ask the students to give their impressions of three websites and state whether they would be inclined to use colloidal silver based on each. The responses also provide valuable talking points for kick-starting discussion on class day.

Each site is chosen for its applicability to elements of the CRAAP Test. The first, “8 Proven Colloidal Silver Benefits, Uses & Side Effects,” by Dr. Josh Axe, presents colloidal silver as a remedy for various conditions, including a cold or sinus infection.<sup>41</sup> This site provides a valuable look at *authority* as the class investigates Dr. Axe’s degrees. The first, Doctor of Chiropractic, is a semi-accepted but controversial degree in medicine with a non-scientific foundation.<sup>42</sup> The second, Doctor of Natural Medicine, or naturopath, is a degree which is not recognized as a physician by the American Medical Association.<sup>43</sup> The site also provides a good example of *purpose*: it has a prominent online store, and items mentioned throughout the site include purchase links, while pop-ups periodically appear and ask the reader to sign up for a newsletter and receive a free ebook. *Accuracy* is also a talking point, given that the sources listed on Dr. Axe’s site can be checked and are revealed to be a mixed bag, encompassing both valid studies and studies which are misattributed or irrelevant to the claim they are supposed to support. Dr. Axe’s sources also include Wikipedia and different pages on Dr. Axe’s own site.

The second site, an Amazon.com product page for a bottle of colloidal silver, provides a good opportunity to investigate *relevance*, as many of the positive reviews on the page are for animal or topical usage, not ingestion.<sup>44</sup> It also affords a chance to talk about anecdotal evidence: some reviews do claim that colloidal silver worked for the reviewer to either cure or prevent a cold, but this could be coincidental, since correlation does not equal causation.

The third site, the National Center for Complementary and Integrative Health's page about colloidal silver, gives the current state of knowledge about colloidal silver in the medical community and concludes that while silver has some antibacterial properties, it has no known benefits when taken by mouth.<sup>45</sup> This site prompts more discussion about authority. For instance, why should we trust the NCCIH, or the National Institutes of Health of which it is a part? After all, there are some who think the NIH is league with "Big Pharma" to suppress natural remedies. The site also illustrates the concept of a literature review as a way to get a balanced understanding of the state of knowledge on a subject.

### Reflection

The central element of the IPP is reflection. The International Commission on the Apostolate of Jesuit Education speaks of reflection as "a thoughtful reconsideration of some subject matter, experience, idea, purpose or spontaneous reaction, in order to grasp its significance more fully. Thus, reflection is the process by which meaning surfaces in human experience."<sup>46</sup> This metacognition helps students internalize what was learned, a process which is crucial to the transformation which the IPP seeks to bring about. Reflection is also crucial to information literacy. The *Framework* requires a "special focus on metacognition, or critical self-reflection."<sup>47</sup> Reflection is therefore the central element of the flipped module as well, and is introduced first on the "Worldview" section of the guide, and developed via an in-class discussion in the live class period following the completion of the online guide and exercise.

The FYE Librarian discusses each website from the exercise in order, and asks students to reflect upon and discuss what each site made them think and feel about the topic of colloidal silver. The librarian focuses on the thought process more than the conclusions: *why* did the students feel Dr. Axe wasn't trustworthy, or *why* did the product reviews make them want to try colloidal silver? The exercise demonstrates lateral reading, as multiple sources are consulted to investigate the claims about colloidal silver. The librarian emphasizes the active investigation of each source, for instance asking who Googled each of Dr.

Axe's listed degrees. The discussion is always lively and interesting, with a high level of student engagement.

After discussing each site, the librarian asks who in the class caught the section in the NIH's page that stated a possible side effect of ingesting colloidal silver: argyria, a graying or bluing of the skin. The librarian then brings up on the classroom's screen a YouTube video of Paul Karason, a man who turned a vivid blue from drinking colloidal silver. This gets a significant reaction from the class, and underscores the importance of good research. For instance, Dr. Axe mentions argyria in passing but claims it is caused by "misuse not of true colloidal silver, but through other cheaper products marketed as colloidal silver, such as ionic silver or silver protein."<sup>48</sup> The NIH's page, on the other hand, points out that argyria is a buildup of silver in body tissue and states, "People have developed argyria from using homemade and commercial colloidal silver products."<sup>49</sup>

Finally, the librarian turns the discussion to the nature of information as a two-way street: we don't simply receive it, we *interact* with it, and what we bring to the table can have a profound effect on whether we see a piece of information as threatening or attractive. For instance, people who are concerned about genuine abuses in the medical and drug industry, like Mylan's exorbitant pricing of the EpiPen or the Sackler family's history of encouraging over-prescription of OxyContin, may be more likely to distrust the established medical community, which might cause them to turn to alternative medicines that do not have scientific backing. Thus, even smart, well-meaning people, depending on the worldview or lens through which they evaluate and weigh information, can be led to make poor decisions if they are not self-aware of their own internal reactions to the information. The librarian concludes by confessing his own tendency to trust or distrust information based on his worldview, and encourages students to reflect carefully on their internal responses as they encounter information.

## Action

After the discussion, the FYE Librarian segues into the usual one-shot instruction covering database search strategies and library tools appropriate to the professor's research assignment. For the final ten minutes of class students are asked to begin their research and to find and evaluate one to three sources using a worksheet listing the CRAAP criteria, applying the concepts they have learned.

## Evaluation

Formal assessment of the module supported one of the Gonzaga University library's learning outcomes for instruction: "Students are able to explain the criteria they used to evaluate sources for credibility."<sup>50</sup> Three librarians independently assessed in-class worksheets from three class sessions using a common rubric, and then met to jointly decide on a score for each worksheet.

The worksheet required students to find a source for their professor's research assignment and evaluate it using the CRAAP criteria. Each of the five criteria was worth six points for a total of 30 points. Students were considered to have met expectations and were awarded three or four points if they correctly identified whether a source met or did not meet each of the CRAAP criteria, but were considered to have exceeded expectations and were awarded five or six points if they also explained the rationale for their decisions. A "superior" worksheet scored at least 27 out of 30 points. A "satisfactory" worksheet scored between 23 and 26. An "unsatisfactory" worksheet scored 22 or lower. The baseline requirement for the instruction to be considered successful was 80% or more of the worksheets receiving a "satisfactory" rating.

Of the 57 worksheets graded, 41 were rated "superior," 13 were rated "satisfactory," and three were rated "unsatisfactory." Thus, 95% of worksheets met the "satisfactory" or better requirement. Given that 72% of worksheets received "superior" ratings, most students were able to not only successfully identify whether a source was meeting each of the CRAAP criteria but also explain why.

Informal feedback from professors was uniformly positive. One professor went so far as to submit an unsolicited letter to the dean of the library in praise of the module. Every professor who used the module re-scheduled it the next semester if they taught the First Year Seminar again.

Beyond formal assessment, several lessons were learned. The ease with which this "double-shot" module can be incorporated into an existing class makes it suitable for promoting to most all professors in any discipline. Any class which can benefit from a one-shot about database research can easily add the double-shot component with minimal work on the part of the class instructor. For the librarian, the work is front-loaded. After the creation of the guide, it can be taught to dozens of classes with only minor adjustments and with no extra work except the grading of worksheets if that arrangement is made with the course professor. This allows the module to scale as easily as a one-shot, while providing an extra "shot" devoted specifically to information literacy.

## Discussion

Promotion of the module to faculty should consider the context of the course professors. Gonzaga University's recently revised core curriculum includes First Year Seminars which every freshman is required to take in their first or second semester. These courses are organized around topics of interest to the instructors, but all seek to explore the question, "How do we pursue knowledge and cultivate understanding?" This question is an ideal fit for information literacy instruction. Using a list of all professors teaching First Year Seminars, the FYE Librarian sent an email describing the module in depth, including a link to the online guide and attachments for the in-class worksheet and a rubric.<sup>51</sup> The email cited research to make a case for the value of information literacy instruction, emphasized the ease of integrating the module from the instructor's standpoint, and illustrated its flexibility for tailoring to individual class needs. Of the twenty-one professors emailed, six responded to schedule the module. An additional English professor requested it for her 101 classes after being told about it by a colleague who taught a First Year Seminar. Of these seven professors, five had never scheduled a library instruction



session before. In collaboration with these professors, a total of eleven class sessions were taught using the double-shot module in the first semester. The following semester the FYE Librarian again sent emails to all the new FYS instructors, but the email was shorter and used more informal language. It included additional details in an attached Word file which professors could consult if they were interested. The librarian thought the original email had sounded somewhat pretentious and a more colloquial approach might be an improvement. However, responses were more muted, with only two new professors signing up for the module. For the third, fourth, and fifth semesters the librarian returned to the original, detailed email, and responses were again strong. This is anecdotal, but it suggests that professors might react more favorably to professional language and research which positions the librarian as a subject expert on information literacy and a peer in instruction. This observation fits with prior research, such as that by Meulemans and Carr, who state that it is beneficial to portray librarians as partners and peers in education rather than as service providers.<sup>52</sup> Furthermore, it suggests that the bulk of the information should be in the body of the email, not hidden or requiring an extra click to be accessed by busy faculty.

The context of the students should be kept in mind during the design of the online guide. “Chunked” information, informal language, and visual images are helpful in holding student attention, according to informal feedback from students. Similarly, student engagement should be considered when selecting the topic for the final exercise and in-class discussion. Non-academic examples generate more engagement than academic ones. The topic should contain enough controversy to generate discussion, but not so much controversy that students will already have strong, pre-conceived opinions about it. The FYE Librarian chose a topic from alternative medicine because it provided an obvious example of erroneous information but was unlikely to be controversial in the context of most first-year students at Gonzaga University. The librarian received pushback from a student only once in five semesters of teaching the module. However, student populations at other schools might find alternative medicine a more controversial subject

and might benefit from a different example. Librarians seeking to implement a double-shot in their own institution can tailor the design of the module and class discussion to their own interests and to their institution’s students.

### The Cycle Renews


The IPP cycle is iterative, with reflection and evaluation directly informing each renewed cycle. The flipped information literacy module was therefore not “done” when it was first successfully implemented. First, small revisions were made to the guide as points of confusion came to light. Then, with the benefit of several semesters of experience teaching the module to reflect upon, the FYE librarian recognized that certain elements of the CRAAP Test, such as “Relevance,” were not as important to the work of source evaluation, while the consideration of worldview was *more* important than its position buried in “Purpose” would suggest. The FYE Librarian therefore created an updated version of the module using a revised set of evaluation criteria, titled “Have a CCOW: Investigate Claims, Credentials, Objectives, and Worldview.”<sup>53</sup> “CCOW” retains the CRAAP Test’s strengths of a memorable acronym and convenient packaging of information literacy concepts, while more strongly encouraging an investigative mindset and, importantly, elevating “Worldview” to its own criterion, thus underlining the importance of metacognition and self-reflection when interacting with information. This version of the module has been rolled out for two semesters and is in the process of being formally assessed.

The success of using a flipped method to turn the one-shot into a “double-shot” also prompted the FYE Librarian to create a second pre-class module focusing on database search skills, to be used in one-shots in which source evaluation instruction is not appropriate, such as when students are not allowed or expected to use the internet for research. Students complete an interactive online tutorial about database searching before class, allowing instruction to be streamlined in the following class session and leaving more time for hands-on work by the students with one-on-one help from the FYE Librarian. The next step is formal assessment of this new module to ensure that the new approach is meeting learning

objectives, as well as an examination of other potential opportunities where students may benefit from the introduction of flipped, IPP-informed instruction.

## Conclusion

The Ignatian Pedagogical Paradigm's reflection-centered methodology is an ideal match for information literacy instruction, which similarly

seeks to bring about a transformation of the students via building deep foundational understanding through self-reflection. By keeping the IPP's five elements clearly in mind, it is possible to create and deliver an effective learning experience about information literacy concepts even in the challenging venue of the one-shot library instruction session. 

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## Notes

<sup>1</sup> Association of College & Research Libraries (ACRL), "Information Literacy Glossary," 2006, accessed August 6, 2020, <http://www.ala.org/acrl/issues/infolit/overview/glossary>.

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<sup>3</sup> Barton T. Geger, S.J., "Cura Personalis: Some Ignatian Inspirations," *Jesuit Higher Education* 3, no. 2 (2014), <https://epublications.regis.edu/jhe/vol3/iss2/2>

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