

## REPORTING OR RECONSTRUCTING?

### The zine as a medium for reflecting on research experiences

Silvia Vong

*University of St. Michael's College in the  
University of Toronto*

In a research-based course, undergraduate third year students were asked to submit their reflections on their research experience in the zine medium. While the literature shows that the medium can encourage students to reflect meaningfully about their experiences, evaluating the medium, which is a mix of text and visuals, can be challenging for the instructor. This paper explores the value of zines as a medium for reflection using the 4R Reflection Scale as a framework. The 4R Scale by Ryan and Ryan (2015) outlines four levels—reporting and responding, relating, reasoning, and reconstructing—to determine the depth of thinking in the reflection. The analysis using this scale shows that students were likely to report and respond on their research experience (lowest level on the scale) rather than reconstruct (highest level on the scale).

## INTRODUCTION

Reflection on professional practice is often advocated in nursing, medicine, social work, education, and librarianship. It can help identify key themes or lessons in an experience and it can provide a more holistic view of an experience where both positive and negative parts of one's experience are discussed and evaluated in detail. While reflection has been shown to have a positive impact on professional practice, student learning can also benefit from it. Reflection-based activities can take the form of sharing thoughts with a fellow student or small groups (i.e. pair and share), or thinking about concepts and challenges individually (i.e. 3-2-1 and one-minute papers). While these activities are very helpful in prompting students to think about their learning after a class, a more holistic view of an experience requires deep and critical reflections that can take longer than 15 minutes. Formative reflections encourage students to provide an overall assessment of their experience as well as an assessment of their own actions and practice. Journaling over a course of a research experience can provide more opportunities for students to record their changing attitudes, emotions and perspectives. Brewer and Jazefowicz (2006) found that the use of reflection journals throughout a course provided students an opportunity to think about course concepts in relation to their everyday lives. They also found that "students recognized a change in their mental perceptions of various situations as economics became more deeply rooted in their analyses" (p. 209).

In the context of information literacy, Bruce (2004) identified the value of reflection in

IL and wrote that "information literacy education involves bringing real life experiences of information use into the classroom, and creating opportunities for critical reflection on the learning process, to foster an awareness in learners of what they have learned" (p. 11). While in-class activities, assignments and tests can help assess students' progress in learning, reflective activities such as journaling or other written reflection activities take a student-centered approach to learning. The research experience is typically a long process over a series of weeks, months or longer. This experience is non-linear and students experience challenges that cause a shift in their emotions, perspectives or actions. Zines present a unique opportunity for students to reflect on their experience in a visual manner. The medium can be described as "non-commercial, non-professional, small circulation magazines, which their creators produce, publish and distribute themselves" (Duncombe, 1997, p. 6). While zines are relatively easy to produce, depending on material and method of binding, topics can vary from personal stories, politics, art and literature, and fanzines. The content can be presented as drawn images, a mini-comic, poetry or a collage of images and text. This medium encourages students to curate their ideas and thoughts, leading the student to reflect more deeply about the information they are presenting to the reader. It is important to note that zines have been used in various educational settings for different ages.

## BACKGROUND

Since 2012, the author has taught an undergraduate third year course in the Book and Media Studies program SMC300:

Libraries, Archives, and Special Collections. Students in the course learned how to find, evaluate and use primary sources and scholarly secondary sources. The required assignments were typically an annotated bibliography, a final research paper, an exhibit proposal, and a reflection paper. In the past, some students did not complete the assignment or submitted reflection papers with little depth or details about their experience. In order to encourage deeper and better student reflections, the format of the final product was changed to a zine. Students were shown samples that varied in content. For example, some were text-based in the form of a story or poetry and others were highly visual with some text. Many of the examples shown in class demonstrated self-reflective thought such as *Sick* by Annie Murphy, which was a visual and textual example about her struggles with an illness in a narrative form. Another example was *Quit Your Job and Eat Pizza* by Amy Burek, a text-based narrative focused on the writer's journey from working in a pharmaceutical lab to her exploration of the letterpress and the zine-making world. Students were also provided with paper, glue sticks and staplers to assist with the creation of booklets, magazines and newspapers. The decision to turn the reflection assignment from a paper into a zine arose during an exploration of literature on the medium in the context of education and the potential the medium held for deeper student thinking and reflection.

## LITERATURE REVIEW

There is literature that has shown the value of using the zine medium for reflection and learning. Cohen (2004) found that the process of writing and creating zines

facilitated self-discovery for students. Cohen's case study cites that some of the students, after the production of a zine, were able to reflect on their role as writers. Klein (2010) also uses the production of content as a way to encourage students to reflect on professional practice. Klein (2010) frames the analysis of the pre-service teachers' zines around LaBoskey's (1994) work in which she identifies two types of reflection, "common sense and novice thinking" (p. 45). In this framework, common sense thinking is defined as reflection that focuses on "attention to self and/or subject matter, short-term views, reliance on personal experiences, the teacher as transmitter, lack of awareness of the need to learn, and making broad generalizations" (p. 29). Novice thinking is defined as "attention to the needs of students, long-term views, differentiation of teacher and learner roles, recognizing teachers as facilitators and openness to learning, having tentative conclusions, strategic and imaginative thinking, and reasoning grounded in knowledge of self, children and subject matter" (p. 29). In Klein's (2010) analysis, she found that students displayed both forms of reflection depending on the context. Yang (2010) utilized the medium for participatory literacy to better engage students on the topic of science; he wrote "zines can combine personal and academic engagement with public outreach, activating students' curiosity toward research, reflection, and articulation of a topic to serve a wider audience" (573). Yang used the medium to teach students science content by allowing them to become creators of the information. Through this method, students produced information and they reflected on the course content. Cohen and Klein used the medium as a way for

students to reflect on their skills and practice. In Cohen's case, the reflection takes place after the production of the zine rather than during the process of creating one. On the other hand, Yang used it to facilitate learning content.

McCue (2007) and Desyllas and Sinclair (2014) focused on the creative aspect of zines that encourages depth in the students' reflections. McCue (2007) discussed the value of having a creative outlet for students to engage in deeper thinking; she writes:

Being immersed in a creative encounter teaches us all to pay attention, instilling a habit of mindfulness that softens the rigidity of what we come across in and out of the classroom. Things no longer live in black-and-white clichés: we see complexity and nuance where, before, we took things for what we might have seen only on the surface. More than anything, art tells us we're alive; we have bodies, minds, spirits, and presences in some small corner of the world. (p. 593)

Reflection papers are in some sense, constraining, setting parameters for length, structure, and topic. McCue (2007) demonstrated through her own experience, the positive impact that community-based art has on engaging students. Desyllas and Sinclair (2014) provided a more focused discussion on reflection and creativity; they write, "For many students, the zine assignment was a space to have a visual voice without inhibitions and an opportunity for creative self-disclosure. Zine-making allowed greater freedom of expression through art" (p. 310). Many of the students

indicated that the creative outlet allowed them to have or gain a voice as well as explore their experiences.

The literature includes discussions of zines as a way to empower the writer. Poletti (2005) and Jacobi (2007) asserted it as a medium for giving a voice to young writers. Poletti (2005) writes:

Within DIY [do-it-yourself] cultures, zine culture specifically challenges the traditional distinction between readers and writers, encouraging people to create their own textual and/or visual products and trade them, in preference to commonplace positioning of young people outside the domain of cultural production through practice of consumption. DIY culture facilitates sites of cultural practice and engagement which are self-defining and empowering, and is one of the few instances of young people exerting cultural and political power. (p. 186)

Poletti's (2005) work showed that as zine culture and the various narrative strategies emerge from the medium, young writers and readers experience a sense of empowerment. Jacobi (2007) discussed how the medium is appealing to young female writers who may feel constraints from societal pressures; she wrote that it breaks barriers through "creative rebellion" (p. 44) and allows experimentation with ideas. However, Jacobi also recognized the challenge of introducing a non-conventional medium in a prescriptive educational environment that requires assessment.

Chu (1997), Guzzetti and Gamboa (2004),

Jacobi (2008), and Hemphill and Leskowitz (2012) focused on themes that are typically associated with zine-making: social justice and the development of self-confidence. Chu (1997) and Hemphill and Leskowitz (2012) discussed the zine or DIY cultures that engage youth and students in critical thinking. Chu observed the way that the medium engages youth in the experiences of self-publishing. Hemphill and Leskowitz discussed the community that is built around DIY culture; for example, zines as a way for individuals and groups to share information. However, the writers also noted that sharing information through the medium is typically confined to a select group rather than a wider community. Guzetti and Gamboa (2004) presented the medium as a way to engage girls in a conversation about gender stereotypes. Many of their interview participants indicated that they had developed a voice or a measure of self-confidence on the topic. Jacobi (2008) also discussed how women gained self-confidence through zine-making at a women's detention facility; she wrote:

Alternative literacies draw upon multiple traditions in enacting classroom pedagogy and practices. Writing workshops often blend the discovery exercises of expressive writing theories with the political components of critical literacy to create hybrid spaces focused both on identity work and public education. Such practices work to increase the self-esteem and motivation of student writers by engaging them in self-study... (p. 81)

Jacobi advocated for the value of alternative literacies in engaging youth who are

incarcerated as a way to reflect, gain confidence and develop writing skills. Guzetti and Gamboa (2004) and Jacobi also discussed the therapeutic, writing, and critical thinking potential of zine-making.

The literature on how to better engage students includes standard procedures such as prompts and scaffolding in order to encourage creative reflection. Ash and Clayton (2004) use the DEAL model, a series of guiding questions, to prompt students. The questions used by the authors ask students to identify the progression of their experience such as "How did I learn it?" and "Why is it significant?" (p. 142). Jacobi (2007) focused on scaffolding and discussed the use of weekly online discussions as a way to build the depth of the reflection with students. Carrington and Selva (2010) presented the need for facilitation, prompts and scaffolding to properly engage students in a meaningful reflection. Yang (2010) outlined unique prompts that shift the focus to the reader experience; questions such as "Why will people read your zine?" (p. 575). It should be noted that the above literature focuses solely on the standard procedures of using prompts and scaffolding to illicit reflection, creative reflection per se is not discussed.

The literature demonstrates that zines and zine-making have pedagogical value, whether it is interpersonal growth or the development of critical thinking and writing skills. It is interesting to note that the literature on the topic of reflection via the medium typically involves North American teenagers. Overall, reflective writing can offer an opportunity for students to think about their research process and practice.

The zine reflection assignment discussed in this paper is unique because it allows students to reflect on their research experience in a creative manner. As discussed in the literature, the medium gives a voice to creators and allows them to explore their thoughts and experiences in an unconstrained way.

## METHODOLOGY

It is a challenge to assess reflections; this is especially true of the zine format due in part to the interpretative and subjective nature. As noted by Ryan and Ryan (2013), “Implementing a shared language to describe levels of reflection for both faculty staff and students is an important cohesive element in a systematic approach to reflection” (p. 254). In order to effectively analyze the content of projects discussed in this paper, the author used a framework with parameters for evaluating reflections.

Analyzing the content proved challenging; the education literature on assessing reflective practice is largely focused on text or essay-based responses. While rubrics can be used to examine the content, most of them include standard categories related to evaluating organization and text in an essay format, which conflicts with the zine medium. The majority of the literature that presents evaluation methods for reflections takes the form of rubrics that include categories such as organization, spelling and/or writing style (Stupans, March, & Owen, 2013; Beylefeld, 2014; Ogan-Bekiroglu, 2014). While this can be helpful in guiding students through assignments, the zine format allows for unstructured content and text written as poetry or as a collage. The rubrics pose a challenge in evaluating

zines because structure and text are a category. In addition, the rubrics typically scale reflections from “excellent” to “needs improvement” rather than scaling the reflections by depth of thinking and content. Sulzen (2011) presented a rubric that uses *evidence* markers, a term used to describe positive and negative characteristics of a reflection. While the rubric is comprehensive, the tool was specifically designed for preservice teacher reflections resulting in irrelevant *evidence markers* such as “taking responsibility for pupil learning” (p. 235). Kember, McKay, Sinclair and Wong (2008) developed a four-category scheme for assessing reflections that examines habitual action, understanding, reflection and critical reflection. While the four category scheme offers some method of assessing reflections, there were other models that provided more detailed prompts and descriptions that clearly defined the categories that would set parameters for assessing the zines.

The Describe, Examine, and Articulate Learning (DEAL) model, and Pappas’s Taxonomy of Reflection model based on Bloom’s Taxonomy (Pappas, 2010) were also considered, along with the 4R reflection scale. Although the DEAL model seemed to meet the assessment needs of the zine format, it is largely used as a prompt. However, in one study it was used to code essay-based reflections (Molee, Henry, Sessa, & McKinney-Prupis, 2010). The DEAL model is a scaffolded process in which students describe their experience, evaluate it and articulate their learning (Molee et al., 2010). Reflections include three perspectives: academic enhancement (understanding concepts), personal growth (interpersonal development), and civic

engagement (development of knowledge in making a difference in the community). Pappas's Taxonomy of Reflection is also helpful in scaffolding reflection exercises. The Taxonomy of Reflection helps a student develop and discuss future plans or steps based on their current experience. Both the DEAL and Taxonomy of Reflection models were useful frameworks for developing reflections skills as well as assessing reflections because they identified various levels of thinking. Much like the models discussed above, Ryan and Ryan's (2015) 4R Reflection Scale also identifies various levels of thinking. The 4R Reflection Scale was selected for this zine project based on a study on the effectiveness of the model with first year and final year students (O'Connor, Obst, Furlong & Hansen, 2015). In the study, students indicated that the 4R Reflective Model was easy to understand for facilitation and "some final year students also commented that the 4R model was better than some they had used for previous reflections" (p. 89). Ryan and Ryan (2015) saw the possibility of using the 4R Reflection Scale for multiple formats. They write, "We see the potential for reflection to be represented in multimodal forms, thus the pedagogical patterns encompass these different modes" (p. 23). Since Ryan and Ryan considered multimodal forms of reflection, the 4R Reflection Scale was used here to evaluate the zine reflections.

The scales for the 4R Reflection Scale were determined by developing categories for coding student reflection journals and research on reflection practices. Bain et al. (1999) presented *reporting* as a student who "describes, reports or re-tells with minimal transformation, no added observations or insights" (p. 60). *Responding* is described as

a student who:

Uses the source data in some way with little transformation...makes an observation or judgment without many any further inferences or detailing...asks a 'rhetorical question' question without attempting to answer it...reports a feeling such as relief, anxiety, happiness, etc. (p. 60)

Level two or *relating* is when a student can identify:

A personal meaning or which connect with their prior or current experience...seeks a superficial understanding of relationships... identifies something they are good at, something that they need to improve, a mistake they have made, or an area in which they have learned from their practice experience. (p. 60).

Level three or *reasoning* is when a student is able to connect their observations with personal experience and show:

A deep understanding of why something has happened...attempts to explain their own or others' behaviour or feelings using their own insight, inferences, experiences or previous learning...explores the relationship between theory and practice in some depth. (p. 60)

Finally, level four or *reconstructing* is when a student "displays a high level of abstract thinking to generalize and/or apply

learning...draws an original consultation from their reflections...extracts general principles...plans their own further learning on the basis of their reflections” p. 60). In the present study, the zines were analyzed based on the descriptions by Bain et al. (1999) and the questions or prompts outlined by Ryan and Ryan (2015) (see Table 1).

A research assistant was used to recruit and communicate with the students so that the author was removed from the process of collecting the data. The students that opted to submit their assignments for the study (after they received the assignment mark) signed a consent form, and their submissions were anonymized. No control group was used due to the class size. The goal of the assignment was to encourage the students to reflect on their experience

holistically and in more detail rather than to focus on the experience of writing the research paper. Based on past reflection assignments in the course, students wrote reflective papers that focused more on the production of the research paper rather than an analysis of their research steps. To keep the identities of the participants confidential, pseudonyms were used to identify the zines.

## RESULTS

Twelve out of 18 students consented to submitting their assignments for this study; all were in their third or fourth academic year. Participating students were also asked to submit a short explanation about their work if the content was abstract or highly interpretive. The 4R Reflection Scale by Ryan and Ryan (2015) and descriptions of the categories by Bain et al. (1999) were

TABLE 1—4R REFLECTION SCALE BY RYAN AND RYAN (2015)

Level	Questions to get started
Reporting & Responding	Why is it relevant?
Relating	Have I seen this before? Were the conditions the same or different? Do I have the skills and knowledge to deal with this? Explain.
Reasoning	Explain and show why they are important to an understanding of the incident or issue. Refer to relevant theory and literature to support your reasoning. Consider different perspectives. How would a knowledgeable person perceive/handle this? What are the ethics involved?
Reconstructing	How would I deal with this next time? What might work and why? Are there different options? What might happen if? Are my ideas supported by theory? Can I make changes to benefit others?

From “A Model for Reflection in the Pedagogic Field of Higher Education,” by M. Ryan and M. Ryan, 2015, *Teaching Reflective Learning in Higher Education*, p. 25. Permission was granted by M. Ryan and M. Ryan (2015) to reprint their 4R Reflection Scale.

used to analyze the content of students' zines for level or depth of reflective thinking. Overall, a majority of the zines demonstrated reporting and responding; only two participants demonstrated reasoning or reconstructing (see Table 2).

### *Reporting and Responding*

In the description for *reporting and responding* by Bain et al. (1999), students provide observations of events rather than analyses of their own actions. Moreover, students at this level do not demonstrate an ability to make connections with their personal experience or larger concepts or lessons learned. A majority of the participants in this study presented a summary of their experiences or summarized the content they learned without making personal connections. The zine by Torres was a summation of his research steps with some observation of emotions or feelings through the process. For example, Torres wrote, "How do I express my thoughts? Frustration sets in. Research involved thinking." Each sentence was accompanied by an image reflecting each question or statement; however, little detail was given on where Torres needed to improve or identifying his mistakes (relating), why he felt frustration (*reasoning*), or what large concepts or

lessons were drawn from the experience (*reconstructing*).

In another zine by participant, Wilson, a metaphor of walking through a tunnel is used to describe his research experience. Wilson merely demonstrates superficial thinking by recounting the steps and describing his feelings of being lost. In some zines, students demonstrated elements of *reconstructing*, but lacked the connection to their personal experience and thus, fell under the category of *reporting and responding*. For example, Clark likened the research experience to a maze (see Figure 1), where the beginning was labelled "idea" and the end was a "new idea" (see Figure 2). While Clark essentially re-told each step of the research experience, there was little information about the mistakes, motivations and learned lessons from her research experience.

At the *reporting and responding* level students often merely summarized or provided an observation of their steps but did not provide further discussion on their mistakes, emotions, or lessons learned. Furthermore, most students did not make connections to their personal experiences, relying instead on summaries of what they perceive to be proper research steps.

TABLE 2—ANALYSES OF ZINE REFLECTIONS USING THE 4R REFLECTIVE SCALE

4R Reflection Scale	Zines
Reporting and Responding	10
Relating	0
Reasoning	1
Reconstructing	1

*Relating*

*Relating* is described by Bain et al. (1999) as a level at which students identify or connect past personal experiences with current ones. These students typically provide reasons for mistakes or significant events that happened during their experience on a superficial level; they also identify the need to change particular practices. Interestingly, there were no participants in the present study who fell under the *relating* level. Most students provided a summary of their research steps, but lacked connections to personal meaning or to past experience with conducting research. Students also focused on the emotional aspects (e.g. frustration, relief, etc.), but failed to recognize or address the underlying reasons for the emotions or the mistakes they made that evoked their various affective states.

*Reasoning*

Students that display characteristics of the *reasoning* level show that they have thought about or provided in-depth reasoning for

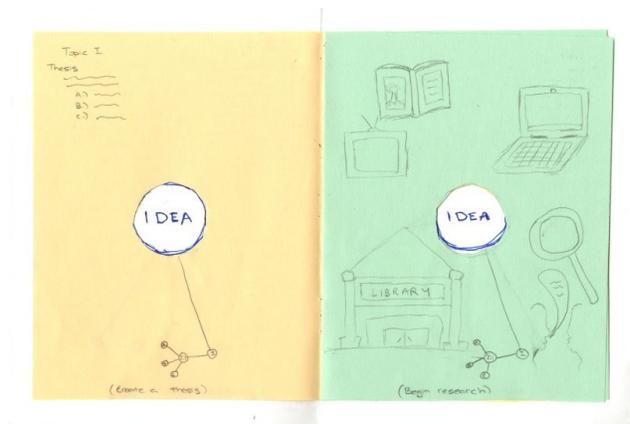
their actions. These students also make connections to their past personal experiences, but attempt to examine and evaluate their practices. Perry, in the present study, demonstrated this level of reflection in their assignment, often exploring concepts taught in the course in relation to her experience with research.

Perry asked the questions, “Scholars: Can they be trusted?” and “How can I believe what is being written about my subject?” She followed this by citing a reading on analyzing primary sources by Miriam Dobson and Benjamin Ziemann, and then she explored the idea that additional research on the context would provide her more information and understanding of her subject (see Figure 3). In this particular case, Perry “explores or analyses a concept...asks questions and looks for answers, considers alternatives, speculates or hypothesizes about why something is happening” (Bain et al., 1999, p. 60). In addition, this student drew from a reading in the course to analyze her question, thus “exploring the relationship between theory

FIGURE 1—COVER FROM CLARK’S ZINE



FIGURE 2—TWO PAGES FROM CLARK’S ZINE



and practice in some depth” (Bain et al., 1999, p. 60). Perry also recognized that the research paper she produced for the course was an attempt to re-create the life of her subject, Sheila Watson. Perry demonstrated her ability to analyze and connect the experience of conducting biographical research, as demonstrated in this zine entry:  
 I feel a tension in research my subject. All of these records are incomplete. Yet what I find is much information to examine...I will create not something complete but an incomplete portrait, similar to Sheila Watson’s sketch of a boat [an item in the Sheila Watson archive].

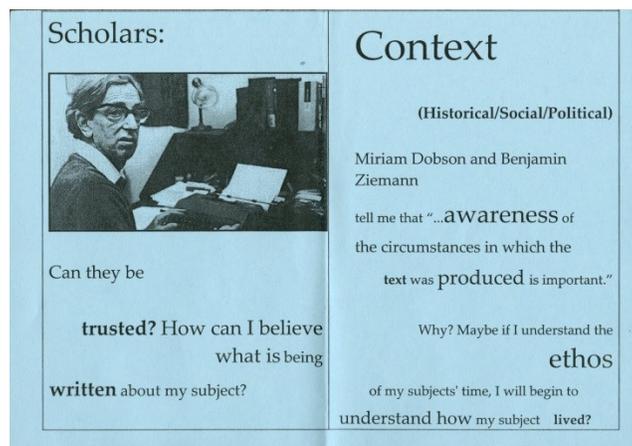
Perry reached the realization that while she can continue to conduct research, the information she presented is her interpretation based on the sources she consulted and her analysis of them. Moreover, she demonstrated awareness of bias and considerations when using other sources. Perry wrote at the end of her zine, “Is my voice too strong? Have I contorted my subjects to my own beliefs and values?...The process will not end. My

subjects will continually be recreated by another...” She made a personal connection and showed understanding of her own biases in interpreting Sheila Watson’s archive as well as acknowledging that the research process is a continual process.

### Reconstructing

The highest level of reflective thinking is *reconstructing*; this is described as students who are able to synthesize various aspects of their experience and provide links to general concepts (Bain et al., 1999). *Reconstructing* students are able to identify how they would change or apply these concepts in the future to better their practice. Students who reach the *reconstructing* stage are able to recognize their mistakes, but are able to identify the need to improve as well as provide concrete descriptions and examples of how they can improve upon their practice. This level of self-awareness shows that students have reflected on their experience and taken, to some extent, measures to improve upon their practice. In the present study, Green

FIGURE 3—TWO PAGES FROM PERRY’S ZINE



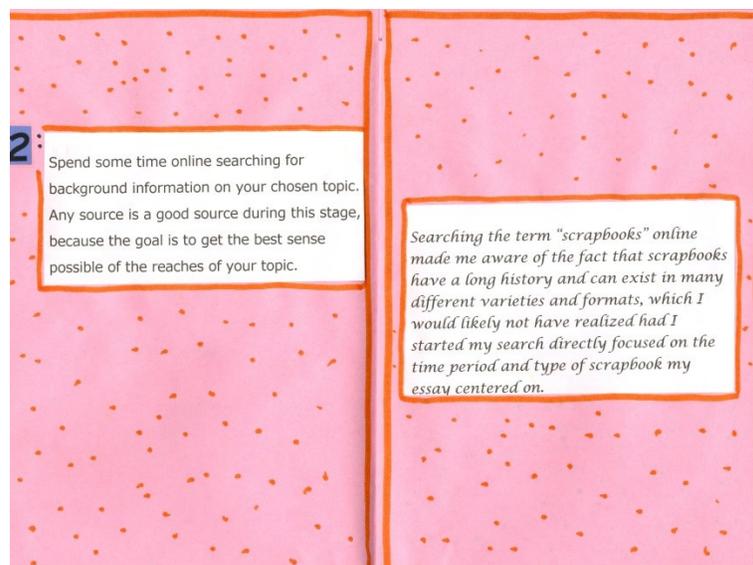
demonstrated the ability to “extract and internalize the personal significance of [her] learning and/or plans their own further learning on the basis of their reflections” (Bain et al., 1999, p. 60). Green’s zine initially seemed to fall under *reporting and responding*. However, she connected her personal experience with larger concepts and presented the content as lessons learned. Green structured her submission as five steps for conducting research and wrote, “Using my own recent research on scrapbooks to elaborate, here are my top 5 tips for making this process as easy and fruitful as possible...” She presented a lesson learned as a step followed by a connection to her personal experience. For example, Green wrote, “Spend some time online searching for background information on your chosen topic. Any source is a good source during this stage because the goal is to get the best sense possible of the reaches of your topic” (see Figure 4). She followed this by

discussing her experience:

Searching the term “scrapbooks” online made me aware of the fact that scrapbooks have a long history and can exist in many different varieties and formats, which I would likely not have realized had I started my search directly focused on the time period and type of scrapbook my essay centered on.

The next step Green discussed was the use of trusted online databases available through the library. With this, Green provided a conclusion that aligns with Bain et al’ (1999) explanation that restructuring students plan “their own further learning on the basis of their reflections” (p. 60). As Green wrote in her zine, “following this prescribed set of easily-identifiable steps proved to be very successful for me in my research paper as described here, and is a method I will continue to use in all future

FIGURE 4—TWO PAGES FROM GREEN’S ZINE



research papers...” She extended the research steps she outlined and demonstrated her ability to connect the lessons learned beyond academic life. Green ended this zine by writing:

Not only can this experience apply to research papers, but this top-down approach, in its purest form, can be used in everyday life for decision-making purposes, for instance, and for any type of research-based tasks which we all conduct in one way or another every day (whether it be searching for a restaurant for the upcoming birthday of a friend, or considering which new car to purchase).

This level of self-awareness is an excellent example of a student that has *reconstructed* her experience and extended the application of the lessons learned beyond academic life.

## DISCUSSION

Most of the third-year students demonstrated a superficial level of reflection, mostly reporting or responding to the research experience and providing step-by-step accounts of their experiences. The lack of depth in their reflections may be due to a variety of factors, such as lack of experience or skills with these type of assignments, lack of guidance on the content of a reflection, or the anxiety over being assessed. Although the format may be a challenge, much of the literature on assessing reflections in the form of a journal or paper show similar issues (Sumsion & Fleet, 1996; Welch, 1999; Stewart & Richardson, 2000; Ash & Clayton, 2004; Kember et al., 2008; Dymont & O’Connell,

2011).

One of the limitations of a reflection project is the challenge of introducing it as an assignment. Kelly (2010) argued that reflection requires observational and empathic skills that can lead to the development of “students’ affective learning skills” (p. 4). Instructors may not include a reflection assignment or in-class reflections due to a lack of time or a lack of knowledge in assessing them. Participants in the present study found the reflection process to be foreign and challenging, and a few were anxious about being assessed on their reflections. Most of the students in the course asked for parameters such as word count or page counts, focusing on minor details rather than the depth of content. To this point, Welch (1999) wrote:

Many instructors quickly discover that merely telling students ‘it is now time to reflect’ is a clumsy approach for them and students alike. Students typically respond to this method with catatonic stares and silence or questions regarding how to reflect and on what to reflect. Similarly, instructing students to reflect in their journals often produces a ‘dear diary’ account of events that transpired during a service-learning experience with little or no application of concepts discussed in class. (p. 22)

Most often, the assumption is that students have the ability to identify mistakes, make connections between their experience and the theory as well as outline changes to their practice. Since it was challenging to introduce the assignment, in the future, formative reflections will be used

throughout the course with feedback to help develop students' reflection skills so that summative reflections will offer more insight into their research experience. By providing feedback on the in-class reflections without the pressure of grades and building their reflection skills throughout the course, students will be able to further develop reflection skills.

The evaluation of the zines requires working with the medium and interpreting the content. As Weber (2008) wrote, "Images are open to interrogation and interpretation, and there are so many questions to consider. How do the images mean? What or whose reality, if any, do images represent? Whose gaze?" (p. 50). To mitigate the potential for vague interpretations, students in the present study were encouraged to accompany their zines with explanations to clarify content. Unfortunately, students appeared to struggle to produce zines with meaningful reflections. Very few elaborated on their thoughts and statements. Most students fell within *reporting and responding* rather than *relating, reasoning* or *reconstructing*. The lack of structure and parameters may have been a barrier for, especially students who are unfamiliar with reflection assignments. While the medium is meant to allow for creative freedom, some structure is needed to help guide students through the assignment. For the future, the 4R Reflection Scale with the questions or prompts will be presented to students throughout the course. By introducing the questions by Ryan and Ryan (2015) with in-class reflections and as an assignment, it can scaffold and build students' reflection skills. The scale can guide the students' reflections while also allowing for creative freedom.

Another challenge involves students who may withhold or experience anxiety when writing or creating their reflections, especially if they are being graded. The subjectivity of evaluating reflections can cause anxiety because students may not understand the assessment rubrics. Students may also feel that their honesty will result in lower grades. In a study by Stewart and Richardson (2000), the authors found:

There was great concern by students over how this piece of work could be marked with any consistency. The personal nature of the task and that it was seen as such an abstract concept contributed to their perception that faculty would be unable to make sensible judgments about the level of their work. The fact that they were not sure what aspect of reflection was being marked and that it depended on their ability to write in a reflective manner all contributed to an unease that persisted right into third year. (p. 374)

This kind of anxiety was observed during the reflection assignment in the present study. Students wanted to know what would constitute an appropriate reflection. While examples of zines were shown, students provided reports or accounts of their research steps rather than reconstructions of their work based on their research experiences. In addition to introducing the questions or prompts outlined by Ryan and Ryan (2015), a clear rubric and description of each level for the 4R Reflection Scale will be introduced to future students. Similarly, a rubric will be developed based on the descriptions provided by Bain et al. (1999).

Allotted time is another factor to consider for reflection paper projects. Both the zine and paper format require prompts and scaffolding; however, from an instructor's perspective, a zine requires an introduction and mini-session to acquaint students with the particulars of the medium, and to teach them how to express reflections in a creative way. The introduction of the medium can be challenging for students who are unfamiliar with counterculture. The lack of experience with such a format might discourage students from expressing themselves truthfully or deeply if they feel uncomfortable or intimidated. The paper format, on the other hand, requires no introduction or session on developing creativity skills. From the students' perspective, the zine medium requires more time to produce, from creating to curating the content in an intuitive manner for the reader. A reflection paper requires less work and makes the experience simple and focused solely on the prompting questions. While time could be considered a major factor in determining the value of zines in one learning context, it may hold value in another. For example, Jacobi (2008) wrote:

Alternative writing and publication projects such as writing workshops or zine writing are productive ways for youth offenders to engage in critical reading practices, to overcome negative stereotypes of schooling, of working against dominant narratives of the deviant youth by publishing and circulating their stories in their own voices. (p. 74)

In order to better understand the value of zines and reflective practice in the context

of library instruction, further study that evaluates a variety of mediums for reflection is required.

## CONCLUSION

According to the theory of reflective practice, in order to grow and improve upon an experience, one must identify problems in order to be able to address them. (Schön, 1983). A majority of students in this study fell within the first level of the 4R Reflection Scale, *reporting and responding*, rather than the advanced level, *reconstructing*. Much like the reflections in journals or papers, students experience similar lack of skills, understanding, and confidence with reflections. It is important to practice and develop students' reflection skills through formative reflection exercises throughout a course. In addition, students need a recognizable semblance of structure through prompts and questions, so they can produce reflections with substance rather than superficial descriptions of their research experiences. Moreover, clear instructions and rubrics can provide ease anxieties over the assessment of reflections.

While the unstructured nature of zines has the potential to engage students in deeper reflection, it seems that students need an introduction to the medium in addition to prompts and rubrics to guide them through the reflection experience. Unless the medium is significant to the course's content, or the learning goals are related to creative expression, students may perceive reflections in the form of a zine as burdensome or intimidating. As the analysis of submitted reflections in this study show, students, when offered an unstructured and open format for reflection, still require

traditional procedures such as prompts and scaffolding. Only select students were able to use the medium to enhance and strengthen their reflection. Rather than confine students to one medium for reflection, students should be offered a variety of possible media as ways of producing reflections. Each learner's experience with information literacy as well as reflection practices is different, and as such, alternative formats should always be offered.

## REFERENCES

- Ash, S. L. & Clayton, P. H. (2004). The articulated learning: An approach to guided reflection and assessment. *Innovative Higher Education*, 29(2), 137-154.
- Bain, J. D., Ballantyne, R., Packer, J., & Mills, C. (1999). Using journal writing to enhance student teachers' reflectivity during field experience placements. *Teachers and Teaching: Theory and Practice*, 5(1), 51-73. <http://dx.doi.org/10.1080/1354060990050104>
- Beylefeld, A. A. (2014). They went, they saw, they learned: Medical students' reflections on community clinic visits. *Innovations in Education and Teaching International*, 51(2), 118-129.: <http://dx.doi.org/10.1080/14703297.2013.771966>
- Brewer, S. M., & Jozefowicz, J. J. (2006). Making economic principles personal: Student journals and reflection papers. *Journal of Economic Education*, 37(3), 202-216. <http://dx.doi.org/10.3200/JECE.37.2.202-216>
- Bruce, C. (2004). Information literacy as a catalyst for educational change: A background paper. In Danaher, Patrick Alan, Eds. *Proceedings Lifelong Learning: Whose responsibility and what is your contribution?* The 3rd International Lifelong Learning Conference, (pp. 8-19), Yeppoon, Queensland. <http://eprints.qut.edu.au/4977/>
- Burek, A. (2014). *Quit your job and eat pizza*. Alameda, CA: Awkward Ladies Club.
- Carrington, S., & Selva, G. (2010). Critical social theory and transformative learning: Evidence from pre-service teachers' service reflection logs. *Higher Education Research & Development*, 29(1), 45-57. <http://dx.doi.org/10.1080/07294360903421384>
- Chu, J. (1997). Navigating the media environment: How youth claim a place through zines. *Social Justice: A Journal of Crime, Conflict and World Order*, 24(3), 71-85.
- Cohen, B. (2004). The zine project: Writing with a personal perspective. *Language Arts*, 82(2), 129-38.
- Desyllas, M. C. & Sinclair, A. (2014). Zine-making as a pedagogical tool for transformative learning in social work education. *Social Work Education: The International Journal*, 33(3), 296-316. <http://dx.doi.org/10.1080/02615479.2013.805194>
- Dewey, J. (1916). *Democracy and education*. New York, NY: The MacMillan Company.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston, MA: Houghton-Mifflin.

Duncombe, S. (1997). *Notes from underground: Zines and the politics of alternative culture*. London, England: Verso.

Dyment, J. E. & O'Connell, T. S. (2011). Assessing the quality of reflection in student journals: A review of the research. *Teaching in Higher Education*, 16(1), 81-87.

Eyler, J. & Giles, D. E. (1999). *Where's the learning in service-learning?* San Francisco, CA: Jossey-Bass.

Guillemin, M. (2004). Understanding illness: Using drawings as a research method. *Qualitative Health Research*, 14, 272-289. <http://dx.doi.org/10.1177/1049732303260445>

Guzzetti, B. J. & Gamboa, M. (2004). Zines for social justice: Adolescent girls writing on their own. *Reading Research Quarterly*, 39(4), 408-436. <http://dx.doi.org/10.1598/RRQ.39.4.4>

Hemphill, D. & Leskowitz, S. DIY activists: Communities of practice, cultural dialogism, and radical knowledge sharing. *Adult Education Quarterly*, 63(1), 57-77. <http://dx.doi.org/10.1177/0741713612442803>

Jacobi, T. (2007). The zine project: Innovation or oxymoron? *English Journal*, 96(4), 43-49.

Jacobi, T. (2008). Writing for change: Engaging juveniles through alternative literacy education. *The Journal of Correctional Education*, 59(2), 71-93.

Kelly, M. (2010). Professional pedagogies and research practices: Teaching and

researching reflective inquiry through a medical portfolio process. In N. Lyons (Ed.), *Handbook of reflection and reflective inquiry: Mapping a way of knowing for professional reflective inquiry* (pp. 351-381). New York, NY: Springer.

Kember, D., McKay, J., Sinclair, K., & Wong, F. K. Y. (2008). A four-category scheme for coding and assessing the level of reflection in written work. *Assessment & Evaluation in Higher Education*, 33(4), 369-379. <http://dx.doi.org/10.1080/02602930701293355>

Klein, S. (2010). Creating zines in preservice art teacher education. *Art Education*, 63(1), 40-46.

LaBoskey, V. K. (1994). *Development of reflective practice: A study of preservice teachers*. New York: Teachers College Press.

Martschinke, H., Waugh, C., Beamish, W., & Davies, M. (2004). Layering the reflective process: An approach used to induct new staff into Griffith's practicum model for special education. In B. Bartlett, F. Bryer, & D. Roebuck (Eds.), *Educating: Weaving research into practice* (pp. 260-269). Brisbane, Queensland, Australia: Griffith University.

McCue, F. (2007). The arts and civic space: An experiment in community education. *Teachers College Record*, 109(3), 590-602.

Molee, L. M., Henry, M. E., Sessa, V. I., & McKinney-Prupis, E. R. (2010). Assessing learning in service-learning courses through critical reflection. *Journal of Experiential Education*, 33(3), 239-257.

Murphy, A. (n.d.). *Sick: A visual account of an invisible disability*. Portland, OR: Grimoire Comics & Curiosities.

O'Connor, E., Obst, P., Furlong, M., & Hansen, J. (2015). Using the TARD model in psychology: Supporting first and final year students to compose reflections. In M. E. Ryan (Ed.), *Teaching reflective learning in higher education* (pp. 77-91). New York, NY: Springer. [http://dx.doi.org/10.1007/978-3-319-09271-3\\_6](http://dx.doi.org/10.1007/978-3-319-09271-3_6)

Ogan-Bekiroglu, F. (2014). Quality of preservice physics teachers' reflections in their teaching portfolios and their perceived reflections: Do they intersect? *Action in Teacher Education*, 36, 157-170. <http://dx.doi.org/10.1080/01626620.2014.901197>

Pappas, P. (2010). A taxonomy of reflection: Critical thinking for students, teachers, and principals (Part 1). In *Copy/Paste*. Retrieved from <http://www.peterpappas.com/2010/01/taxonomy-reflection-critical-thinking-students-teachers-principals.html>

Poletti, A. (2005). Self-publishing in the global and local: Situating life writing in zines. *Biography*, 28(1), 183-92. <https://muse.jhu.edu/journals/biography/v028/28.1poletti.html>

Ryan, M., & Ryan, M. (2015). A model for reflection in the pedagogic field of higher education. In M. E. Ryan (Ed.), *Teaching reflective learning in higher education* (pp. 15-27). New York, NY: Springer. [http://dx.doi.org/10.1007/978-3-319-09271-3\\_2](http://dx.doi.org/10.1007/978-3-319-09271-3_2)

Ryan, M. & Ryan, M. (2013). Theorizing a model for teaching and assessing reflective

learning in higher education. *Higher Education Research and Development*, 32(2), 244-257.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.

Stewart, S. & Richardson, B. (2000). Reflection and its place in the curriculum on an undergraduate course: Should it be assessed? *Assessment & Evaluation in Higher Education*, 25(4), 369-380. <http://dx.doi.org/10.1080/713611443>

Stupans, I., March, G., & Owen, S. M. (2013). Enhancing learning in clinical placements: Reflective practice self assessment, rubrics and scaffolding. *Assessment & Evaluation in Higher Education*, 38(5), 507-519. <http://dx.doi.org/10.1080/02602938.2012.658017>

Sulzen, J. T. (2011). Identifying evidence of reflective ability in preservice teacher electronic portfolios. *Journal of Technology and Teacher Education*, 19(2), 209-237.

Sumsion, J. & Fleet, A. (1996). Reflection: Can we assess it? Should we assess it? *Assessment & Evaluation in Higher Education*, 21(2), 121-130. <http://dx.doi.org/10.1080/0260293960210202>

Weber, S. (2008). Visual images in research. In J. G. Knowles (Ed.), *Handbook of the arts in qualitative research: Perspectives, methodologies, examples, and issues* (pp. 42-55). Thousand Oaks, CA: SAGE Publications. <http://dx.doi.org/10.4135/9781452226545>

Welch, M. (1999). The ABCs of reflection:

A template for students and instructors to implement written reflection in service-learning. *NSEE Quarterly*, 25(2), 22-25.

Yang, A. (2010). Engaging participatory literacy through science zines. *The American Biology Teacher*, 72(9), 573-577.  
[https://www.nabt.org/websites/institution/File/pdfs/american\\_biology\\_teacher/2010/Nov2010ABTOOn.pdf](https://www.nabt.org/websites/institution/File/pdfs/american_biology_teacher/2010/Nov2010ABTOOn.pdf)