

MIRRORS Reflection Materials

From the grant:

Following intervention activities (SBP, Streak Week, specific cohort advising sessions, etc.), S-STEM scholars will complete a short questionnaire for reflective thinking (modified from Kember et al. 2000) and a three-part, written reflection, informed by Jesuit pedagogy: **prepare** (am I open to this process?), **analyze** (e.g., how do I feel about this experience? does it challenge previously held views?), and **articulate** (what have I learned? how does this new information relate to my discernment/learning?).

The questionnaire includes Likert-type scale responses that assess the degree to which students engage in reflective thinking, whereas assessment of the written reflection will be achieved using a modification of the REFLECT rubric (Wald et al. 2012). The intent of reflection activities is to help students become self-directed learners and thinkers by employing the metacognitive practices of situational assessment, evaluation of strengths and weaknesses, plan development, strategy application and monitoring, and reflection and adjustment (*sensu* Ambrose et al. 2010). (proposal, p. 13)

Reflection will be evaluated by surveys for reflective thinking (modified from Kember et al. 2000) and assessment of the written reflection using a modification of the REFLECT rubric (Wald et al. 2012). (proposal, p. 14)

I would prefer to change the questionnaire in Kember as little as possible so we can preserve the work done in regards to validity and reliability in Kember. The questionnaire itself was originally designed for use in a traditional classroom/course setting, and we need it for wider use. I've chosen to use a more generic term (*this experience*) for their use of *class* or *course* and I've changed references to *teaching* specifically to *presenting*. The questionnaire itself can be given either on paper or electronically. The paper version is in an Excel file, so I could better control the formatting.

The REFLECT rubric is great, but based on its text and the example given in Wald, it really needs a narrative reflection, so I've designed the prompt accordingly. In crafting the prompt, I also consulted a few additional Jesuit resources:

https://www.xavier.edu/jesuitresource/online-resources/mission-focused-pedagogy/faculty-work-mentor-reflections#reflective_reading_and_experiencing

<https://www.loyola.edu/~media/department/ignatian-pedagogy/documents/template.ashx?la=en>

Instructions for Administering the Reflection Questionnaire on Paper

I'll be handing you a list of 16 statements. I'd like you to circle the letter that indicates your level of agreement with the statement in the specific context of {the Summer Bridge Program, the last three cohort advising sessions, etc.}. The statements frequently use the words *this experience*; when you see those words, I want you to think about that context.

Instructions for Administering the Reflection Questionnaire Online

I'll be providing you a link to a list of 16 statements. I'd like you to select your level of agreement with the statement in the specific context of {the Summer Bridge Program, the last three cohort advising sessions, etc.}. The statements frequently use the words *this experience*; when you see those words, I want you to think about that context. The first item at the link asks you to indicate which experience. Please type in {Summer Bridge Program, cohort advising sessions, etc.}

Link:

https://johnncarroll.az1.qualtrics.com/jfe/form/SV_bQJ8k97y8kV97fL

QR code:



Scoring the Reflection Questionnaire

Score each item by assigning Strongly Agree as 5 and Strongly Disagree as 1. Sum the four items indicated to calculate the scale score (ranges from 4 to 20).

$$\begin{aligned}\text{Habitual Action (HA)} &= 1 + 5 + 9 + 13 \\ \text{Understanding (U)} &= 2 + 6 + 10 + 14 \\ \text{Reflection (R)} &= 3 + 7 + 11 + 15 \\ \text{Critical Reflection (CR)} &= 4 + 8 + 12 + 16\end{aligned}$$

Reflective Journal

Some thoughts on writing a narrative reflection

Narrative reflection draws on the basic human experience of story-telling. Think back to the stories that inspired, impressed, or encouraged you as a child, and the impact they had on you. Or think of how people tend to tell stories after visiting friends, going on a trip, or encountering a new kind of experience. Good stories usually communicate a context so well that we can imagine it ourselves. They mention various people, describe what people were saying and doing and how they felt, and often conclude with some type of insight or conclusion.

Reflecting on our experiences as a story can help us to pinpoint who the crucial people are, pay closer attention to the details and concerns of their lives, and can help us to pay closer attention to what, in the end, they teach us or how they inspire us.

Part I: Preparing to Write

I want you to think about a significant moment during *this experience*: it may have been a moment of conflict or disorientation or something that made you feel something very strongly (positive or negative)—a moment of learning. Jot down some notes for yourself about which details are important and will help your reader experience the moment with you. Who was there? Where were you? What was said?

Here's a list of question to get you thinking in the right direction.

- What was your reaction at the time?
- What do you think about it now as you look back?
- What is it about you that makes this stand out?
- How does this relate to you? (for example, does this relate to your areas of interest, life experience, strengths, limitations, feedback you have been given before.)
- Try to connect this experience to who you are and why it is you are focusing on this.
- What does this tell you about who you are as a person and a scientist and what does it tell you about your future.
- What are the systems and structures that have shaped and are shaping my life, who I am, and who I am becoming as a person and a scientists?
- Can you apply these questions to JCU, to faculty and staff, to your peers?

Part II: The Writing Task

Your writing has four main components. You may write this in four separate sections with headings or you may weave the sections together in a way that makes sense for you and for your reader. The order of the sections is also your choice. Your primary audience is yourself and the person assigning you this task. This writing will also be used by the project team for program improvement but will not be shared with your peers or anyone else without your permission.

The Significant Moment

Tell the story

Preparation and Context

What led up to the moment? How open to what was about to happen were you? What about the past shaped your response and your subsequent thoughts?

Analysis

How do you feel about what happened? How does it relate to previously held views?

Articulation

What have I learned? How might this affect my future?

Scoring the Reflective Journal

1. Read the entire narrative
2. Fragmentation: Zoom in to details (phrases/sentences) of the narrative to assess the presence and quality of all criteria. Determine which level each criterion represents.
3. Gestalt: Zoom out to consider overall gestalt of the narrative (while taking into consideration the detailed analysis of Step 2). Determine which level the narrative as a whole achieves. If the Critical Reflection level is achieved, determine whether either or both learning outcomes (transformative or confirmatory learning) were also achieved.

At both stages, defend the assignment of level and learning outcomes with examples from the text. Do not “read between the lines.”

An example:

REFLECT Rubric Application Process

Writing Spectrum: The learner is reflecting on herself in the situation as well as the mentor, demonstrating Reflection on Action. There is clear “movement beyond reporting or descriptive writing to reflecting, i.e., attempting to understand, question, or analyze the event” for Reflection level. The narrative describes grappling with a more nuanced view of a family physician. The writer appears to be on the cusp of critical reflection–transformative learning level. The importance of “communication,” for example, is identified and described, though some more elaborated concrete examples of how this could be realized and integrated in future practice might have been helpful, possibly contributing to more comprehensive meaning making. **Overall Level: Reflection.**

Individual Criteria

Presence: An authentic voice permeates the writing and there is a sense of bringing the full self to the situation. Thus, the narrative fully conveys “being there.” The reader is brought into the exam room through provision of details and then into the writer’s “head.” The writer engages the reader in a powerful, meaningful way. **Level: Critical Reflection.**

Description of conflict or disorienting dilemma: The disorienting dilemma regarding perceived responsibility for such a medication mishap poignantly emerges (“unable to hold in my disbelief, *my mentor* dropped the ball? It was the patient who had dropped the ball!”). The potential conflicts within a developing professional identity (i.e., the “expert” not always getting it right, exuding competence while remaining open to improving with humility in approach, considering broader communications issues and issues of responsibility) are impressively identified, though the challenging of assumptions could be further elaborated. The dilemma of preserving clinical empathy within “dealing with what felt like drug seeker after drug seeker” is implied. **Level: Reflection.**

Attending to Emotions: “I had been frustrated” (“and completely unable to relate to this woman”) is an opening phrase, a reflective trigger. Critical analysis might include (1) considering how feelings of frustration or anger toward patients could arise out of one’s own vulnerability and/or (2) how self-awareness of emotional state can help maintain provision of quality care, potentially preventing/minimizing emotional distancing. “I’m embarrassed to say that I might have written her off as someone who just didn’t care”—self-reflective and authentic revelation. There could be further consideration of (attending to) patient’s emotional state (e.g., emotional upheaval, such as anxiety, in the clinical encounter potentially disrupting information processing). **Level: Reflection.**

Critical Analysis and Meaning Making: Salient themes include importance of individualized communication, humanizing of mentor, dedication to lifelong learning within the profession. Enhanced appreciation of “staying on one’s toes,” reflecting in action to ascertain patient “being on board” is described, and assumptions are beginning to be challenged. Though there is room for further elaboration of “communication” for more comprehensive meaning making, the student has introduced several notable elements and appears to have examined the dilemma on several levels. **Level: Reflection–Critical Reflection.**

The REFLECT (Reflection Evaluation For Learners' Enhanced Competencies Tool) Rubric

Criterion	Level				Axis II for critical reflection	
	Habitual action (Nonreflective)	Thoughtful action or introspection	Reflection	Critical reflection	Transformative reflection and learning	Confirmatory learning
Writing spectrum	Superficial descriptive writing approach (fact reporting, vague impressions) without reflection or introspection	Elaborated descriptive writing approach and impressions without reflection	Movement beyond reporting or descriptive writing to reflecting (i.e., attempting to understand, question, or analyze the event)	Exploration and critique of assumptions, values, beliefs, and/or biases, and the consequences of action (present and future)	Frames of reference or meaning structures are transformed. Requires critical reflection Integration of new learning into one's identity, informing future perceptions, emotions, attitudes, insights, meanings, and actions. Conveys a clear sense of a breakthrough	Frames of reference or meaning structures are confirmed. Requires critical reflection
Presence	Sense of writer being partially present	Sense of writer being partially present	Sense of writer being largely or fully present	Sense of writer being fully present		
Description of conflict or disorienting dilemma	No description of the disorienting dilemma, conflict, challenge, or issue of concern	Absent or weak description of the disorienting dilemma, conflict, challenge, or issue of concern	Description of the disorienting dilemma, conflict, challenge, or issue of concern	Full description of the disorienting dilemma, conflict, challenge, or issue of concern that includes multiple perspectives, exploring alternative explanations, and challenging assumptions		
Attending to emotions	Little or no recognition or attention to emotions	Recognition but no exploration or attention to emotions	Recognition, exploration, and attention to emotions	Recognition, exploration, attention to emotions, and gain of emotional insight		
Analysis and meaning making	No analysis or meaning making	Little or unclear analysis or meaning making	Some analysis and meaning making	Comprehensive analysis and meaning making		
Optional minor criterion: Attention to assignment (when relevant)	Poorly addresses the assignment question and does not provide a compelling rationale for choosing an alternative	Partial or unclear addressing of assignment question; does not provide a compelling rationale for choosing an alternative	Clearly answers the assignment question or, if relevant, provides a compelling rationale for choosing an alternative	Clearly answers the assignment question or, if relevant provides a compelling rationale for choosing an alternative		