

Assessing commitment to reflection: perceptions of medical students

L'évaluation de l'engagement à la réflexion : les perceptions des étudiants en médecine

Joanie Poirier,¹ Kathleen Ouellet,² Valérie Désilets,³ Ann Graillon,³ Marianne Xhignesse,⁴ Christina St-Onge^{5,6}

¹Department of psychology, Faculty of letters and human sciences, Université de Sherbrooke, Québec, Canada; ²Centre de pédagogie et des sciences de la santé, Faculty of medicine and health sciences, Université de Sherbrooke, Québec, Canada; ³Department of Pediatrics, Faculty of medicine and health sciences, Université de Sherbrooke, Québec, Canada; ⁴Department of Family and Emergency Medicine, Faculty of medicine and health sciences, Université de Sherbrooke, Québec, Canada; ⁵Department of Medicine, Faculty of medicine and health sciences, Université de Sherbrooke, Québec, Canada; ⁶Research chair in medical education, Paul Grand'Maison de la Société des médecins de l'Université de Sherbrooke, Québec, Canada.

Correspondence to: Christina St-Onge, Department of Medicine, Faculty of medicine and health sciences, Université de Sherbrooke, 3001 12th Avenue North, Sherbrooke, Québec, J1H 5N4; telephone: 819-821-8000; email: Christina.St-Onge@USherbrooke.ca

Published ahead of issue: Aug 8, 2023; CMEJ 2023 Available at <https://doi.org/10.36834/cmej.74265>

© 2023 Poirier, Ouellet, Désilets, Graillon, Xhignesse, St-Onge; licensee Synergies Partners. This is an Open Journal Systems article distributed under the terms of the Creative Commons Attribution License. (<https://creativecommons.org/licenses/by-nc-nd/4.0>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is cited.

Abstract

Background: While developing reflection skills is considered important by educators, the assessment of these skills is often associated with unintended negative consequences. In the context of a mandatory longitudinal course that aims to promote the development of reflection on professional identity, we assessed students' commitment to reflection. This study explores students' perception of this assessment by their mentor.

Methods: We conducted a qualitative descriptive study using semi-structured interviews with twenty-one 1st and six 2nd year medical students. Thematic analysis was informed by Braun and Clarke's six-step approach.

Results: We identified four main themes: 1- assessment as a motivator, 2- consequences on authenticity, 3- perception of inherent subjectivity, and 4 - relationship with the mentor.

Conclusions: In the context of assessing reflection skills in future physicians, we observed that students –when assessed on the process of reflection– experienced high motivation but were ambivalent on the question of authenticity. The subjectivity of the assessment as well as the relationship with their mentor also raises questions. Nevertheless, this assessment approach for reflective skills appears to be promising in terms of limiting the negative consequences of assessment.

Résumé

Contexte : Malgré l'importance que les éducateurs attribuent à l'acquisition de compétences de réflexion, l'évaluation de ces compétences entraîne souvent des conséquences négatives involontaires. Dans le cadre d'un cours longitudinal obligatoire visant à promouvoir le développement de la réflexion sur l'identité professionnelle, nous avons évalué l'engagement des étudiants à cultiver leurs compétences de réflexion. Cette étude explore leur perception de cette évaluation menée par leur mentor.

Méthodes : Nous avons réalisé une étude qualitative descriptive à l'aide d'entrevues semi-structurées avec vingt-et-un étudiants en médecine de première année et six étudiants en médecine de deuxième année. Notre analyse thématique repose sur l'approche en six étapes de Braun et Clarke.

Résultats : Nous avons identifié quatre thèmes principaux : 1 – l'évaluation comme facteur de motivation, 2 – les conséquences sur l'authenticité, 3 – la perception de la subjectivité inhérente, et 4 – la relation avec le mentor.

Conclusions : Dans le contexte de l'évaluation des compétences de réflexion des futurs médecins, focalisée plus particulièrement sur le processus de réflexion, les étudiants se sont montrés très motivés, mais incertains quant à son authenticité. La subjectivité de l'évaluation et la relation avec leur mentor soulèvent également des interrogations. Néanmoins, cette approche d'évaluation des compétences réflexives semble prometteuse dans la mesure où elle permet de limiter les conséquences négatives de l'évaluation.

Introduction

While educators agree that developing skills in reflection is important, the assessment of these skills poses challenges.¹ Assessing reflection skills could lead to consequences such as dishonest/superficial reflection or to a feeling of being judged.¹⁻⁷ These consequences could greatly reduce the validity of assessment scores, and consequently, decisions based on those scores.^{8,9} However, the assessment of students' commitment to reflection—instead of the reflection itself—remains under explored. Asking students to be reflective, without assessing the quality of their reflection, could be a way to recognize the importance of this skill. Indeed, shifting the focus of assessment onto the processes adopted by students to commit to reflection might mitigate the potential negative consequences associated with the assessment of reflection skills.

In the context of a mandatory longitudinal course that aims to promote the development of reflective skills to support professional identity formation, we assessed students' commitment to reflection regarding their professional identity formation. The course, based on Kolb's experiential learning framework, (see Figure 1)^{10,11} consists of three types of learning activities (workshops, reflections deposited in an electronic portfolio, and individual discussions with a mentor) occurring within a one-week time span, three to five times per year throughout the four-

year curriculum. While the themes of the workshops are predetermined, topics of discussion with the mentor are unstructured. The purpose of this study was to explore students' perception of this assessment to potentially inform other educators aiming to assess reflection skills. More specifically, our research question was: How do medical students perceive an assessment of their commitment to reflection in a longitudinal course that aims to promote the development of reflective skills to support professional identity formation?

Methods

Assessing commitment to reflection

Approximately thirty (depending on the cohort size) trained clinical educators (herein referred to as mentors) were assigned to a group of 6 students for the entire four-year curriculum. They provided verbal and written feedback to their group two to five times per year (depending on the year of training) and identified student strengths, difficulties and, where applicable, any concerns (see Appendix A). To minimize impacts on student-mentor relationships, mentors couldn't fail students, however, they could express any concerns they identified. The decision to pass or fail a student was the responsibility of the course coordinator.

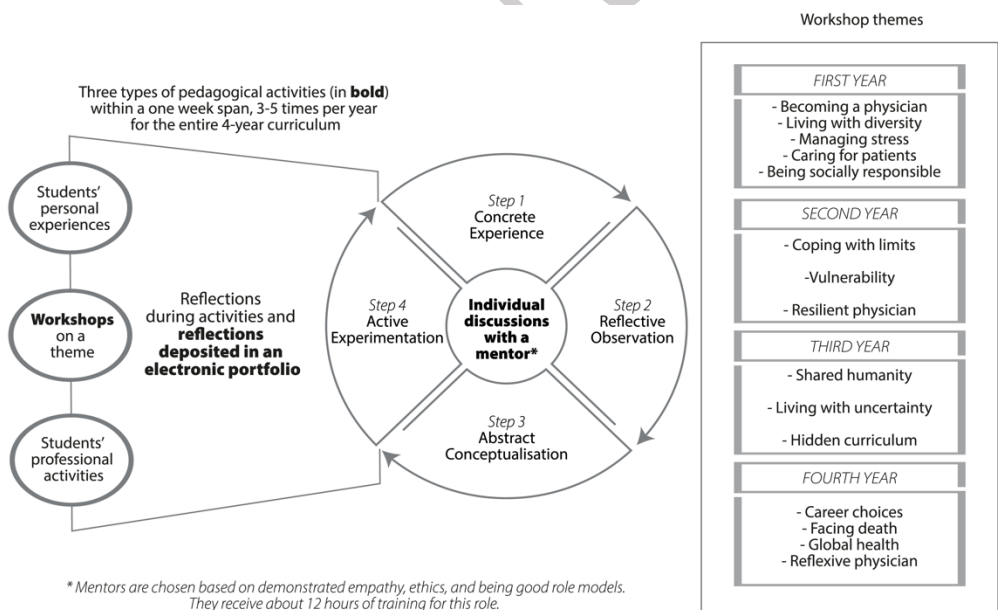


Figure 1. Structure of a 4-year course that aims to promote the development of reflection and professional identity in an Undergraduate Medical Education program

Study design

We conducted a qualitative descriptive (QD) study. Using this methodology allowed us to stay close to participants' points of view and describe a complex and nuanced phenomenon using participants' language.¹² We obtained ethics approval from the university's research ethics board , 2017-1485-ESS.

Participant recruitment

Recruitment of undergraduate medical students occurred in the second year following implementation of the course. We recruited participants who experienced the course for at least one complete year (1st and 2nd year students). In the context of in-person courses, one team member not involved in the course or program (KO), informed students of the research project. We also used snowball sampling with students who agreed to participate in the study by inviting them to share the study invitation with their peers. Two team members acted as mentors as well as course coordinators; we excluded their students to limit potential conflicts of interest.

Data collection

We sent the consent form and a short sociodemographic questionnaire to students who volunteered to participate. One team member who had no connection with students conducted semi-structured interviews of approximately 30 minutes duration with 27 volunteer students. We conducted most interviews (22/27) by telephone. The interview guide is presented in Appendix B. We recorded the interviews, and an independent firm transcribed them verbatim. We anonymized data before importing them into Dedoose, our analysis software.¹⁴ We conducted the interviews in French, the native language of the participants.

Data analysis

We used Braun and Clarke's¹⁵ six-phase approach to thematic analysis to identify, analyze and report patterns (i.e., themes) across a data set. The analysis started with one team member (KO), familiarizing herself with the data (phase 1) and generating an initial set of codes (phase 2). This preliminary coding structure was subsequently vetted by four team members. The coding structure was then refined and applied to all interview transcripts by another team member (JP). Three team members (CSO, KO, JP) iteratively reviewed the coding for consistency. In phase 3, JP selected pertinent codes related to potential themes which were discussed and refined (phase 4) by three members (CSO, KO, JP). Phase 5 consisted of defining and

naming themes. The same team members refined the themes and their definitions. A different team member (AG) did a final review of all the coding. The themes are presented below (phase 6).

Results

Twenty-seven students from our program participated in this study; 21 were in their 1st year while 6 were in their 2nd year of training. The average age was 21.3 years (SD = 3.45; min. = 19.00; max. = 35.00), and 66.7% of the participants were women.

Thematic analysis

We identified four themes of interest: 1) assessment as a motivator, 2) consequences on authenticity, 3) perception of inherent subjectivity, and 4) relationship with the mentor.

Assessment as a motivator. Several participants reported that being assessed on their commitment to reflection kept them motivated and encouraged them to take the course seriously. This type of assessment also stimulated their participation in the various activities proposed; it made them *"maybe more motivated to participate better during every meeting [workshop]" (P25-Y1)*. This may be linked to the fact that students appreciated not *"having the feeling of being assessed" (P3-Y2)* during the course.

Consequences on authenticity. According to participants, the fact that the assessment focused on the process rather than the content of their reflections allowed them to be sincere. It gave them more leeway when deciding about their reflections, since they had *"no limits" (P15-Y1)*. The reflection could take several forms, thus opening *"up a lot of doors and [allowing them to be] really more authentic" (P15-Y1)*. This approach allowed them to focus their reflections more on their personal development rather than on their performance. Students realized that to be useful on a personal level, their interventions in the course had to be *"spontaneous and sincere" (P26-Y1)*. If they see it that way, the course allows them to reflect *"without worrying if they're doing it "right" (P14-Y1)*.

However, some participants felt that the simple fact of being assessed could lead to a loss of authenticity. Some participants reported having generated content during meetings with their mentor for the sole purpose of meeting the course requirements. To minimize this loss of authenticity, participants suggested that mentors could offer a list of topics for discussion (e.g., a societal issue related to the health care system) on which to share their

reflections with their mentor. Students who made this suggestion felt that it could “lead to something more meaningful”(P23-Y1).

Perception of inherent subjectivity. Some participants mentioned the subjective nature of the assessment done during the course, especially during discussions with mentors. Participants were divided on this issue. For some, the subjectivity associated with an assessment like this one was not an issue. For example, one participant said that subjectivity wasn’t a problem “as long as the feedback is constructive and doesn’t prevent the student from succeeding” (P14-Y1). For other participants, however, this subjectivity “can eventually cause problems, depending on how mentors view the assessment” (P3-Y2).

Relationship with the mentor. For most participants, the fact that a mentor accompanied a specific student throughout the course was considered a positive factor in the assessment of their reflection process. The mentor was seen as the person “best placed to assess our reflection process” (P17-Y1).

However, several participants expressed a concern that the mentor-student relationship biased the assessment. Some students talked about a positive bias: in the context of a positive mentor-student relationship, in which they are “talking and laughing,” it may result in a lack of criticism or “good feedback.” (P25-Y1) Other students perceived that the relationship could also negatively bias the assessment “when the chemistry is off between the mentor and the student” (P24-Y1).

Discussion

Assessing students’ reflection is often associated with unintended negative consequences, such as a decrease in self-esteem, an increase in anxiety,³ self-disapproval and self-rejection,² dishonest reflection,⁴ superficial reflection,¹ decreased motivation,⁵ and feeling judged.^{6,7} We observed that assessing the process—instead of the content— can generate a positive perception, but still raise some concerns.

The course engages the students and most felt they could be authentic. Nevertheless, some felt uncomfortable with the idea of an assessment “around” their reflections. Recognizing that authenticity is fragile, we wonder whether sharing a reflection (oral or written) decreases students’ authenticity and potentially changes the nature of their reflection.¹⁶ Students who focused solely on meeting expectations (i.e., completing a given task) may

not have done an in-depth reflection. This is what De la Croix and Veen call the Reflective zombie: “someone who displays all the outer traits of reflection, without having actually reflected.”^{16(p394)} Our assessment of reflection, despite several precautions, might not have been spared from this reflective zombie phenomenon. One way to increase authenticity, promote in-depth reflection, and avoid the reflective zombie phenomenon might be to increase students’ opportunities to engage in reflective practice.¹⁷ The use of triggers (probes or prompts) can encourage reflection and counterbalance the reflective zombie phenomenon.¹⁸ Moreover, introducing reflective practice early on in their career path can benefit students: most of them will improve their reflection skills over time—and those experiencing difficulties can be identified.¹⁹

Working with a mentor also offers opportunity to develop reflection skills.^{1,20} When students are in a relationship with a mentor who provides support and constructive feedback, a student might feel free to “lay bare.” However, when the mentor is also assessing the student, this might affect how the student presents themselves. Trede and Smith⁶ suggest that engaging students in their learning practice may mitigate potential negative consequences of this dual role for the mentor through a reciprocal and open relationship.

Surprisingly, the inherent subjectivity of the assessment was perceived as both positive and negative. Students questioned the potential impact of the subjectivity on the assessment decision. Even with an object of assessment as subjective as reflection—especially when the reflection focuses on the development of professional identity—this highlights that the subjectivity in assessment appears to continue to be linked with the fear of potential unfairness.

This study has certain limitations. First, we recognize the small number of participants in 2nd year. Second, we opted for short phone interviews to limit the time required for students to participate in the study. This may however have also limited the amount of information obtained. Finally, our results are based on the views of the students who were willing to participate.

Conclusion

In the context of promoting and assessing reflection skills in undergraduate medical students, we observed that students—when assessed on the process of reflection—experienced high motivation but were ambivalent on the question of authenticity. The subjectivity in the assessment and the relationship with the mentor also raises questions.

While our approach probably contributed to limiting potential negative consequences of assessment, subjectivity remains a concern since every mentor has a unique way of supporting students and providing feedback. Nevertheless, this assessment approach for reflective skills appears to be promising in terms of limiting the negative consequences of such an assessment. Future research could focus on how assessing content, process or no assessment at all of reflection might influence students' reflection.

Conflicts of Interest: None

Funding: This work was funded by the Société des Médecins de l'Université de Sherbrooke (Fonds de développement pédagogique 2017).

References

- Chaffey L, de Leeuw E, Finnigan G. Facilitating students' reflective practice in a medical course: literature review. *Educ Health*. 2012;25(3):198. <https://doi.org/10.4103/1357-6283.109787>
- Quinn FM. *Reflection and reflective practice*. In: Davies C, Finlay L, Bullman A, editors. *Changing Practice in Health and Social Care*. London, UK: SAGE Publications Ltd; 2000. p. 81-90.
- Harlen W, Deakin Crick R. Testing and motivation for learning. *Assess Educ Princ Policy Pract*. 2003;10(2):169-207. <https://doi.org/10.1080/0969594032000121270>
- Hargreaves J. So how do you feel about that? Assessing reflective practice. *Nurse Educ Today*. 2004;24(3):196-201. <https://doi.org/10.1016/j.nedt.2003.11.008>
- Grant A, Kinnersley P, Metcalf E, Pill R, Houston H. Students' views of reflective learning techniques: an efficacy study at a UK medical school. *Med Educ*. 2006;40(4):379-388. <https://doi.org/10.1111/j.1365-2929.2006.02415.x>
- Trede F, Smith M. Teaching reflective practice in practice settings: students' perceptions of their clinical educators. *Teach High Educ*. 2012;17(5):615-627. <https://doi.org/10.1080/13562517.2012.658558>
- Bulman C, Schutz S. *Reflective Practice in Nursing*. 4th ed. Oxford, UK: John Wiley & Sons; 2013.
- Messick S. Standards of validity and the validity of standards in performance assessment. *Educ Meas Issues Pract*. 1995;14(4):5-8. <https://doi.org/10.1111/j.1745-3992.1995.tb00881.x>
- American Educational Research Association., American Psychological Association., National Council on Measurement in Education., Joint Committee on Standards for Educational and Psychological Testing (U.S.). *Standards for Educational and Psychological Testing*. Washington, DC: American Educational Research Association; 2014.
- Kolb D. *Experiential learning: experience as the source of learning and development*. Vol 1. Prentice-Hall; 1984.
- Désilets V, Graillon A, Ouellet K, Xhignesse M, St-Onge C. Reflecting on professional identity in undergraduate medical education: implementation of a novel longitudinal course. *Perspect Med Educ*. 2021. <https://doi.org/10.1007/s40037-021-00649-w>
- Varpio L, Martimianakis MA, Mylopoulos M. Qualitative research methodologies: embracing methodological borrowing, shifting and importing. In: Cleland J, Durning SJ, eds. *Res Med Educ*. Wiley Online Library; 2015. p. 245-256. Available from: <https://doi.org/10.1002/9781118838983.ch21>
- Sandelowski M. What's in a name? Qualitative description revisited. *Res Nurs Health*. 2010;33(1):77-84. <https://doi.org/10.1002/nur.20362>
- Dedoose Version 8.2. Web application for managing, analyzing, and presenting qualitative and mixed method research data [Internet]. Los Angeles, CA: SocioCultural Research Consultants, LLC; 2018. Available from: www.dedoose.com
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101. <https://doi.org/10.1191/1478088706qp063oa>
- de la Croix A, Veen M. The reflective zombie: Problematizing the conceptual framework of reflection in medical education. *Perspect Med Educ*. 2018;7(6):394-400. <https://doi.org/10.1007/s40037-018-0479-9>
- Fragkos KC. Reflective practice in healthcare education: an umbrella review. *Educ Sci*. 2016;6(3):27. <https://doi.org/10.3390/educsci6030027>
- Law S. Using narratives to trigger reflection. *Clin Teach*. 2011;8(3):147-150. <https://doi.org/10.1111/j.1743-498X.2011.00446.x>
- Chambers S, Brosnan C, Hassell A. Introducing medical students to reflective practice. *Educ Prim Care*. 2011;22(2):100-105. <https://doi.org/10.1080/14739879.2011.11493975>
- Schaub-de Jong MA, Schönrock-Adema J, Dekker H, Verkerk M, Cohen-Schotanus J. Development of a student rating scale to evaluate teachers' competencies for facilitating reflective learning. *Med Educ*. 2011;45(2):155-165. <https://doi.org/10.1111/j.1365-2923.2010.03774.x>

Appendix A. Assessment tool

Assessment component	Observations (strengths, challenges)	Concerns (description)
Engagement in the workshop		
<i>Descriptors (examples) :</i>		
Intervenes on the basis of preparatory work completed		
Agrees to share questions, emotions, and experiences		
Expresses ideas clearly and constructively		
Shows interest in the situation being discussed		
Accepts the existence of different points of view		
Structured approach to reflection (reflections in the portfolios)		
<i>Descriptors (examples) :</i>		
Reports the particularities of a situation that brings up questions and expresses these		
Provides a detailed description of their way of acting and thinking taking emotion into account		
Takes a critical distance, makes connections generalizes, discriminates the contexts in which the resources apply, draws lessons		
Identifies a next step		
Reflections following individual discussions with mentor		
By drawing on the exchanges and the feedback received, highlights a new aspect of their reflection or enriches their existing one		
End of the year synthesis		
<input type="checkbox"/> Pass	The student is able to take a reflective stance, enriched by a community of professors, peers, patients and professionals, on their representation of themselves as a medical student and future doctor with regard to different themes and experiences, both professional and personal.	
<input type="checkbox"/> Concerns	Ongoing concerns regarding the development of the reflective skills essential for adopting a reflective stance.	

Signature : _____ Date : _____

Appendix B. Interview guide used to conduct semi-structured interviews with participants

Section 1: Course	
<p>Context: Development of reflection on professional identity and practice</p> <ul style="list-style-type: none"> - What do you think of the idea of integrating a course on developing reflection on professional identity and practice in the undergraduate curriculum? <p>Prompt: In your opinion, is it important? Why?</p>	
<p>1st year students:</p> <p>Engagement in the course</p> <ul style="list-style-type: none"> - What components help you to engage in the reflection process? - Through the workshops? - Through discussions with your mentor? - Through completion of your portfolio? - Other? 	<p>2nd year students:</p> <p>Development of professional identity</p> <ul style="list-style-type: none"> - How does the course help you reflect on your professional identity? - Through the workshops? - Through discussions with your mentor? - Through completion of your portfolio? - Other?
Section 2: Assessment	
<p>Perceived consequences of the assessment</p> <ul style="list-style-type: none"> - How has the assessment process gone for you so far? <p>Prompts (if needed) :</p> <ul style="list-style-type: none"> o Time available (workshops, discussions, for submitting documents, etc.) o Portfolio o Personal experience o Understanding the task, objectives of the assessment o Oral and written feedback received from mentors o Relationship with mentor o Frequency of assessment <p>Perceived issues & advantages of the assessment</p> <ul style="list-style-type: none"> - Do you perceive any issues, or potential issues, with assessing reflection as we do in this course? - Do you perceive any advantages of assessing reflection as we do in this course? <p>Prompts for both (if needed):</p> <ul style="list-style-type: none"> o With the mentor/assessor? o With the assessment itself? o With the starting point/object of reflection? o With the assessor's judgement/subjectivity <p>Ideal world</p> <ul style="list-style-type: none"> - In an ideal world, keeping in mind that the course is associated with university credits, how would you assess reflection? 	