

Lucas, C., Buckingham Shum, S. & Mantzourani, E. (2021). The Art of Reflection: Provisions and Companions in our Professional Learning Journey. *Workshop:* <u>13th International Conference on Life Long Learning in Pharmacy</u> (Dublin, IRE, 27-30 June, 2021). [Workshop Resources: https://cic.uts.edu.au/reflectionwkshp-pharmacy2021]

The Art of Reflection: Provisions and Companions in our Professional Learning Journey

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UTS CRICOS 00099F

AGENDA

- Welcome and Introduction (5 min)
- Registration requirements in Australia and the UK in relation to reflective accounts (10 min)
- Introduction to AcaWriter genres and research (10 min)
- AcaWriter Video screencast (5 min)
- Learning Context (Critical Reflection on practice: Reflective Account for Revalidation purposes) (10 min)
- Hands-on activity: Reflecting on a learning event from the Lifelong Learning Conference or Reflecting on Practice for Revalidation Purposes (15 min)
- Sharing and Discussion (15 min)

WELCOME & INTRODUCTION!

Registration/ Revalidation Requirements: Australia and UK

- Pharmacy regulators internationally are increasingly recognising reflection as pivotal to pharmacy professionals fostering their own growth and development.
- Even though the concept of reflection is not new, maximising its effectiveness via formal structured processes that contribute to maintaining registration to the profession is in its infancy in pharmacy, globally.
- Australia current requirements: CPD tasks with associated reflection
- UK current requirements: Annual submission of reflective accounts

Mantzourani E, Desselle S, Le J, Lonie JM, Lucas C. The Role of Reflective Practice for Healthcare Professionals: Next Steps for Pharmacy Education and Practice. *Res Soc Admin Pharm* 2019; 15(12) 1476-1479 https://doi.org/10.1016/j.sapharm.2019.03.011.

Australian CPD Requirements for Continued Registration

Areas I have identified requiring professional development	identified requiring professional my professional development (List of relevant competencies (standards and/or elements and/or performance criteria) take to meet my professional development needs? (planned activities)	Activities I have undertaken to meet my professional development needs and how these have impacted my practice (CPD activities and post-activity reflection) Reflection						
		Start and finish date of activity	Source or provider (e.g. journal name, provider name)	Type of activity (e.g. journal article, seminar, lecture, workshop)	Topics covered during activity (specify all topics covered)	Accreditation status (accredited or non-accredited)	CPD activity group (Group 1, 2 or 3)	Number of Board CPD credits assigned

https://www.pharmacyboard.gov.au/Codes-Guidelines

Structured reflection on (or self-assessment of) practice to identify learning needs

Information accessed through an activity

Demonstration of knowledge or skills gained e.g. through successful completion of assessment, role play etc. Application in practice and evaluation to reflect on practice improvement and outcomes relating to activity

Three CPD credits per hour for the activity

Examples of activities:

- Provide QUM services in aged care homes
- Deliver education to peers or staff members
- Active involvement in special interest groups
- Introduce a new (or improve an existing) professional service in your pharmacy

For any of these above examples you must be able to provide evidence demonstrating measurable practice change.

Group 3 CPD requirements: Pharmacy Board Australia 2015 (AHPRA), Guidelines on Continuing Professional Development.

CPD Reflection Prompts: Australia

What did I learn from the CPD activity in terms of developing my skills, knowledge and behaviours?

How have I put this into practice? (Provide an example of how you applied your learning, or how the activity has impacted your practice.)

Did it benefit my practice? (How did your learning affect outcomes?)

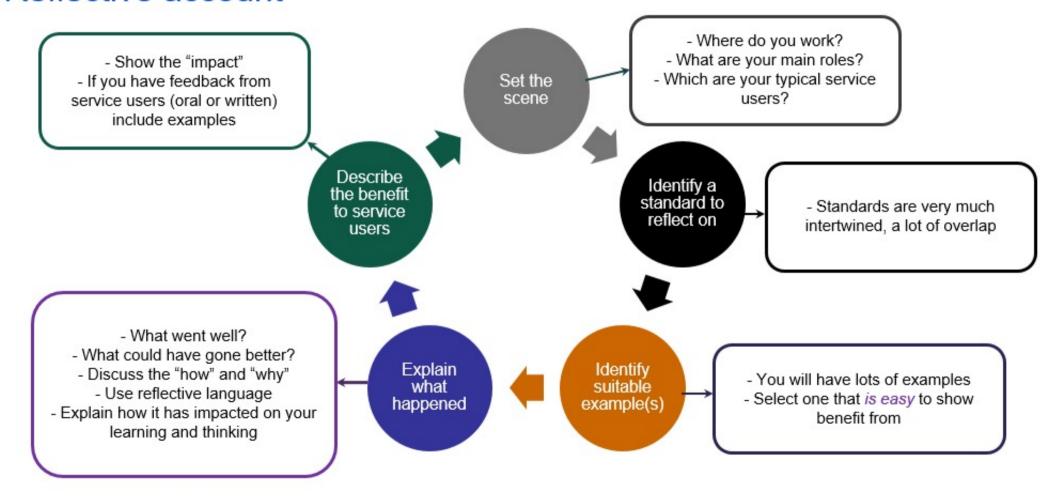
The Pharmaceutical Society of Australia: https://www.psa.org.au/cpd/about-cpd/

Revalidation Requirements: UK



UK current requirements (COVID): Submission of reflective account only

Reflective account



Record of peer discussion

Identify a suitable peer

Prepare the ground for the discussion

Have the discussion

i.e. similar to a short reflective account!

Record the impact of the discussion on your practice

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AcaWriter now a University of Technology Sydney, Australia (UTS) open source tool

May 2020 announcement to students:



Get instant feedback on your academic writing

Introducing AcaWriter, an online tool that uses artificial intelligence to give you detailed feedback on your writing. Developed in-house at UTS, AcaWriter can help you express your ideas clearly in formal academic language – and is available to help 24/7.

Learn how it works

https://www.uts.edu.au/current-students/news/get-instant-feedback-your-academic-writing

A long term R&D project in CIC

https://cic.uts.edu.au/tools/awa



Research publications

Learn more from the publications and replays below, visit our Writing Analytics blog, and browse the **Events** menu to see the workshops we convene, where many of the world's leading researchers meet to reflect on the state of the art and future of automated writing assessment.

(overview of 5 years research, joint with academics from Law, Accounting and Pharmacy) Knight, S., Shibani, A., Abel, S., Gibson, A., Ryan, P., Sutton, N., Wight, R., Lucas, C., Sándor, Á., Kitto, K., Liu, M., Mogarkar, R. & Buckingham Shum, S. (2020). AcaWriter: A learning analytics tool for formative feedback on academic writing. *Journal of Writing Research*, 12, (1), 141-186.

(insights into the academics' experience) Shibani, A., Knight, S., Buckingham Shum S. (2020). Educator Perspectives on Learning Analytics in Classroom Practice. *The Internet and Higher Education*, Volume 46. Available online 20 February 2020.

Buckingham Shum, S. and Lucas, C. (2020). Learning to Reflect on Challenging Experiences: An Al Mirroring Approach. Proceedings of the *CHI 2020 Workshop on Detection and Design for Cognitive Biases in People and Computing Systems*, April 25, 2020. [slides]

Shibani, A. (2019). Augmenting pedagogic writing practice with contextualizable learning analytics. *Doctoral Dissertation*, Connected Intelligence Centre, University of Technology Sydney, AUS.

(students' responses to reflective writing feedback) Lucas, C., Gibson, A. and Buckingham Shum, S. (2019). Pharmacy Students' Utilization of an Online Tool for Immediate Formative

AcaWriter

- AcaWriter is a web-based tool that provides formative feedback on rhetorical moves (structural elements) in writing
- Two types of writing genres are supported
 - 1. Analytical Writing e.g. Analytical reports, Research Paper/Abstract
 - 2. Reflective Writing e.g. Reflective accounts







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Rhetorical moves in analytical writing

A rhetorical move is "a discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (Swales, 2004).

Rhetorical move	Function	Example
Question	Raising a question or missing knowledge.	Little research exists on how automated feedback impacts students' writing.
Background	Consensus or background knowledge	Recent studies indicate that the Earth's climate is changing rapidly.
Contrast	Contrast, disagreement, tension, inconsistency	This approach fails to address the issue of bullying outside the classroom and schools.
Emphasis	Emphasis on significant, important ideas	Stormwater pollution is a significant environmental issue that arises from intense urbanisation.
Novelty	Novelty, improvement	This framework provides a new approach to tackling childhood obesity.
Surprise	An unexpected outcome	These results are unexpected considering the device was only a prototype.
Trend	A trend, growth, pattern or tendency	Futsal was introduced in 1930 and its popularity is growing worldwide.
Summary	Authors' goals, contribution or conclusion	We show how the constructs included in the model link to relevant research.

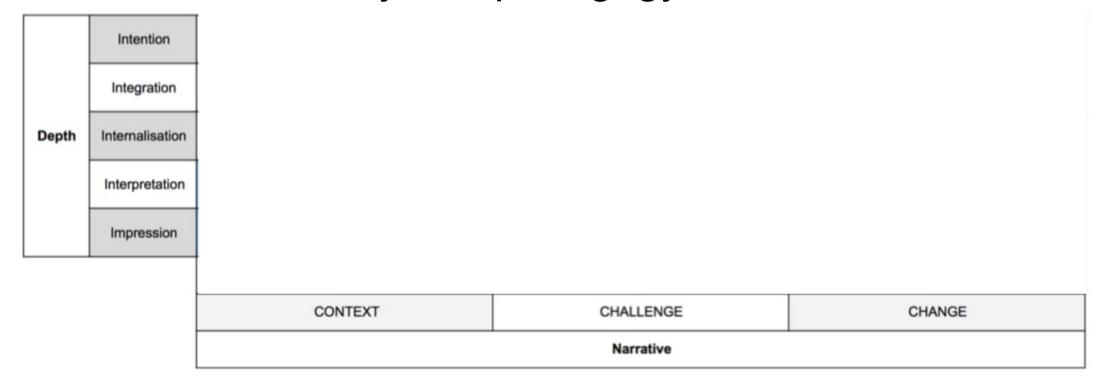
AcaWriter Screencast

LEARNING CONTEXT

Reflective Accounts

Learning reflective writing:

Distillation of theory and pedagogy into a framework



Learning reflective writing:

Distillation of theory and pedagogy into a framework

	Intention						What change is likely to lead to future benefits?
	Integration			What impact on my goals/aspirations?	What other ideas could I use to change myself?	How do others address these challenges?	How can I learn from other perspectives?
Depth	Internalisation		What do these feeling say about me?	How is this a problem that challenges me?	Why do I need to change?	How can I change?	
	Interpretation	What does it mean for me?	Why do I feel this way?				
	Impression	What do I notice about my situation?					
		Thoughts	Feelings	Challenge	Self critique	Potential solution	Learning opportunity
		CONTEXT		CHALLENGE CH			NGE
		Narrative					

Figure 1: The Reflection Framework which synthesises theories of reflection and narrative together with discipline approaches to assessing reflection.

Gibson, A., Aitken, A., Sándor, Á., Buckingham Shum, S., Tsingos-Lucas, C. and Knight, S. (2017). Reflective Writing Analytics for Actionable Feedback. *Proceedings of 7th International Conference on Learning Analytics & Knowledge*, March 13-17, 2017, Vancouver, BC, Canada. (ACM Press). DOI: http://dx.doi.org/10.1145/3027385.3027436

Learning reflective writing:

Simplification of framework → a visual language

	Intention						What change is likely to lead to future benefits?
	Integration			What impact on my goals/aspirations?	What other ideas could I use to change myself?	How do others address these challenges?	How can I learn from other perspectives?
Depth	Internalisation		What do these feeling say about me?	How is this a problem that challenges me?	Why do I need to change?	How can I change?	
	Interpretation	What does it mean for me?	Why do I feel this way?				
	Impression	What do I notice about my situation?					
		Thoughts	Feelings	Challenge	Self critique	Potential solution	Learning opportunity
		CON	TEXT	CHALI	LENGE	CHA	NGE

Gibson, A., Aitken, A., Sándor, Á., Buckingham Shum, S., Tsingos-Lucas, C. and Knight, S. (2017). Reflective Writing Analytics for Actionable Feedback. *Proceedings of 7th International Conference on Learning Analytics & Knowledge, March* 13-17, 2017, Vancouver, BC, Canada. (ACM Press). DOI: http://dx.doi.org/10.1145/3027385.3027436

Information design + Interface design

The key to automated annotations of the reflection

Important aspects of reflective writing:

- Initial thoughts and feelings about a significant experience.
- The challenge of new surprising or unfamiliar ideas, problems or learning experiences.
- A How new knowledge can lead to change

Bold: Deeper reflection, personally applied.

Plain: Expressions indicating belief, learning, or knowledge.

Dotted: Expressions indicating self critique.

Dashed: Words associated with strong feelings.

AcaWriter feedback on reflective writing

Reflective Report

Feedback

Resources

Initial thoughts and feelings about a significant experience.

The challenge of new surprising or unfamiliar ideas, problems or learning experiences.

Deeper reflection, personally applied.

How new knowledge can lead to a change

Expressions indicating belief, learning, or knowledge.

Expressions indicating self critique

Words associated with strong feelings

outcomes for the patient. Thus, this experience taught me that in future, I must take a patient-centred approach. Imust spend time addressing the patients concerns and demonstrate excellent communication with them so they can fully understand their clinical picture and history. This relates to Domain 2: Communication and Collaboration, Standard 4: Apply Interpersonal Communication Skills to Address Problems, which is a standard in the National Competency Standards Framework for Pharmacists in Australia (2016). The incident has taught me to use a whole range of communication techniques when counselling a patient. It gave me the opportunity to practice this sort of behaviour in my subsequent weeks of clinical placement. It has strongly encouraged me to shift my perspective to one that focuses more on patient-centred care. I personally think that this is crucial in ensuring that a patient's health objectives are met. This standard I have obtained is important for any practising pharmacist.

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Rubric for a Pharmacy Masters Critical Reflection Essay

Criteria Stage 1: Returning to	1.0 pts	0.5 pts	0.0 pts
experience	Critical Reflector Statement provides description of the learning event chronologically and clear of any judgments	Reflector Statement provides a description of the learning event	Non-Reflector Statement does not provide a clear description of the learning event itself
Stage 2: Attending to feelings	1.0 pts Critical Reflector Statement conveys personal feelings, thoughts (positive and or negative) of the learning event and relates to future personal learning	O.5 pts Reflector Statement conveys some personal feelings and thoughts of the learning event but does not relate to personal learning	0.0 pts Non-Reflector Statement provides little or no evidence of personal feelings, thoughts
Stage 3: Association: relates new knowledge with previous knowledge	1.0 pts Critical Reflector Statement clearly relates new knowledge learned with previous knowledge and sees how accommodating new knowledge will assist with future clinical pharmacy practice	O.5 pts Reflector Statement provides evidence that prior knowledge may be consistent with new knowledge gained through this task	0.0 pts Non-Reflector Statement does not provide any links between new knowledge and previous knowledge
Stage 4: Integration	1.0 pts Critical Reflector Statement clearly provides evidence of integration of prior knowledge, feelings or attitudes with new knowledge, feelings or attitudes, thus arriving at new perspectives	O.5 pts Reflector Statement provides some evidence of integration prior knowledge, feelings or attitudes with new knowledge, feelings or attitudes and arriving at a new perspective	O.0 pts Non-Reflector Statement shows no evidence of integration of prior knowledge, feelings or attitudes with new knowledge, feelings or attitudes, thus not arriving at new perspectives
Stage 5: Validation: ("Internal consistency") self-assessing our beliefs, approaches, assumptions	1.0 pts Critical Reflector Statements clearly conveys self-reflection and self-assessment of previously held beliefs, assumptions, approaches, consistently relating it to previous experience and previous knowledge	0.5 pts Reflector Statement demonstrates self-reflection, self- assessment of previously held beliefs, assumptions, approaches, and occasionally relates it to previous experience and previous knowledge	0.0 pts Non-Reflector Statement shows no evidence of self- reflection and self-assessing of previously held beliefs, assumptions, approaches and does not relate it to previous experience
Stage 6: Appropriation: internalising the knowledge gained in the learning event	1.0 pts Critical Reflector Statement clearly shows evidence that inferences have been made using their own prior knowledge and previous experience throughout the task	0.5 pts Reflector Statement shows appropriation of knowledge and makes inferences relating to prior inferences and prior experience	Non-Reflector Statement does not indicate appropriation of knowledge
Stage 7: Outcomes of reflection	1.0 pts Critical Reflector Clear evidence of reflection includes, with relevant examples: A change in behaviour or Development of new perspectives as a result of the task, Application of new knowledge feelings, thoughts, opinions, to enhance new future clinical pharmacy experiences and Details of progress towards attaining a given competency	0.5 pts Reflector Statement shows some evidence of reflecting on own work, shows evidence to apply new knowledge with relevance to future practice for improvement of future pharmacy practice. Provides examples of possible new actions that can be implemented most of the time.	0.0 pts Non-Reflector Statement shows little or no reflection on own work, does not show how to improve knowledge or behaviour and does not provide any examples for future improvement
Readability and accuracy To what extent does this document convey the effect of the learning event?	on the second seco	1.5 pts Reflector Accurate, understandable text, includes all key details.	0.0 pts Non-Reflector Difficult to understand, includes errors in spelling, grammar, documentation, and/or inaccurate key details.

Lucas et al. 2019 Can a reflective rubric be applied consistently with raters globally? A study across three countries. Currents in Pharmacy Teaching and Learning 11(2019) 987-994.

Elements of Reflection – How Summative Rubric is related to Formative Feedback prompted by AcaWriter?

Stages of Reflection¹

- Stage 1. Returning to the event (Describe incident,)- CONTEXT
- Stage 2. Attending to Feelings (AcaWriter: Blue Square prompt, words associated with strong feelings, also includes reactions and thoughts) **CONTEXT**
- Stage 3. Association (AcaWriter: Pink Circle prompt Challenges in New Knowledge learned) -CHALLENGE
- Stage 4. Integration (Bridging the gap; AcaWriter Expressions of self-critique) CHALLENGE
- Stage 5. Validation (AcaWriter: Beliefs, learning knowledge, depth- Internalisation) CHALLENGE
- Stage 6. Appropriation- Why you have these beliefs? (AcaWriter: Bold writing personally applied)- CHALLENGE
- Stage 7. Outcomes of reflection (Acawriter: Triangle prompt and Green Writing for self-critique: Knowledge leads to change in perspective, eg new strategy, tool **-CHANGE**
- 1. **Boud D**, Keough R, Walker D. Promoting reflection in learning: a model. Reflection: Turning Experience into Learning. London Kogan Page: NY, Nicols Pub: 1985:18-40

Co-designing feedback with an academic: Pharmacy placement reflection report

Highlighting Category	Positive feedback (Presence of highlighting)	Cautionary feedback (Absence of highlighting)
<icon> Context, clear of judgments</icon>	Well done, it appears that you've acknowledged your first thoughts, feelings and/or reactions to an incident, or learning task, within the first paragraph.	Perhaps consider introducing your first thoughts feelings and/or reactions to an incident, or learning task, within the first paragraph. AcaWriter couldn't spot this. (triangle without square) While it appears that you've reported on how you would change/prepare for the future, you don't seem to have described your thoughts, feelings and/or reactions to an incident, or learning task.
<icon> Challenge(strategies to overcome?)</icon>	Well done, it appears that you've reported on something you found challenging. Do you think you could expand the detail related to the challenge? (double circles) Well done, it appears that you may have expanded the detail on the challenge you faced.	It appears that you haven't commented on anything you found challenging. If you did find something challenging, please expand on this. (triangle without preceding circle) While it appears that you've reported on how you would change/prepare for the future, you don't seem to have reported first on what you found challenging. Perhaps you've reflected only on the positive aspects in your report?
<icon> Change new perspectives/ new</icon>	Well done, it appears that you've reflected on how you would change/prepare for the future. Is there anything further to say about these new	It appears that you haven't commented on what you would do differently should the same event occur in the future. Perhaps think about change



Co-design feedback (Contd..)

- The feedback template consists of a set of rules, which will trigger feedback device to students given the presence or absence of particular writing analytics features.
- An example of co-designed feedback rules in pharmacy. For a given feature (col.1), we considered what should be said to the student if it appeared (col.2) or was missing (col.3). More complex patterns can be defined.

Highlighting Category	Positive feedback (Presence of highlighting)	Cautionary feedback (Absence of highlighting)		
<icon> Context, clear of judgments</icon>	Well done, it appears that you've acknowledged your first thoughts, feelings and/or reactions to an incident, or learning task, within the first paragraph.	Perhaps consider introducing your first thoughts, feelings and/or reactions to an incident, or learning task, within the first paragraph. AcaWriter couldn't spot this. (triangle without square) While it appears that you've reported on how you would change/prepare for the future, you don't seem to have described your thoughts, feelings and/or reactions to an incident, or learning task.		
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Reflective Report

Feedback

Resources

- Perhaps consider introducing your first thoughts, feelings and/or reactions to an incident, or learning task, within the first paragraph. AcaWriter couldn't spot this within first paragraph
- You have reflected on your beliefs/learning/knowledge.
- You seem to have incorporated a deeper reflection indicating self-critique.
- lt appears that you have reflected on your feelings, thoughts or reactions.
- It appears that you have reflected in a deeper way about how your experiences connect with your professional development.
- It appears that you've reported on something you found challenging.
- It appears that you've reflected on how you would change/prepare for the future. Is there anything further to say about these new insights that have led to change.
- It appears that you may have expanded the detail on the challenge you faced. (3)
- It appears that you have expanded the detail on how you would change/prepare for the future. (2)
- While it appears that you've reported on how you would change/prepare for the future, you don't seem to have reported first on what you found challenging. Perhaps you've reflected only on the positive aspects in your report?.



Student Feedback

"It prompts you into developing those reflective ideas. ..you can only go so far on your own" 1

"It makes you think of things that you normally would disregard" 1

"because it (the feedback) was in front of me, I could see what I was thinking" 1

"Building self-confidence because it seems to provide "clarity" of your thoughts and reasoning" and "a better understanding of yourself" ¹

"makes you discover things not only about things that you're doing but things about yourself that you really never thought of" ¹

Utilising AW makes students more confident with writing submissions (pretest 3.2/5, posttest 3.7/5, p=0.05) ²

- "Prompted me to follow through with the reflection to the last step of the process I had written about my thoughts and feelings, discussed challenges, but had not followed through with reflecting on how this can lead to change" ³
- ¹ Lucas C, Buckingham Shum S, Liu M, Bebawy M. Implementing AcaWriter as a novel strategy to support pharmacy students' reflective practice in scientific research. *Am J Pharm Edu* (Accepted Manuscript)
- ²Lucas, C, Gibson, Buckingham Shum S. Pharmacy students' utilization of an online tool for immediate formative feedback on reflective writing tasks. Am J Pharm Edu 2019
- ³ Gibson et al. 2017 Reflective writing analytics for actionable feedback. Proceedings of the LAK'17 Conference, Canada (Best Full Paper Award) https://dl.acm.org/doi/proceedings/10.1145/3027385

ACAWRITER HANDS-ON ACTIVITY:

Reflecting on a learning event from the Lifelong Learning Conference Or Reflecting on Practice for Revalidation Purposes uts cic 2

Hands-on and Q&A

• Go to the demo version http://acawriter-demo.utscic.edu.au

• If you have a sample text to try, paste it in the editor and click on Get Feedback.

Question to the Audience

Question: Do you feel more confident with submitting your reflective account after engaging in this workshop and utilising the AcaWriter online web application?



This was just the conversation starter.

Do get in touch...

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Pharmacy Reflective Writing

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