

 **AdvanceHE**

Reflection for learning: a scholarly practice guide for educators

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Glossary

Educator

Teacher, facilitator, lecturer

Learner

Student, participant

Learning activity

Exercise

Session

Class, lecture, tutorial

WIL (Work Integrated Learning)

Cooperative education, service learning, experiential learning

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Preface

How to use this guide

This guide has been designed so that you can either read it from cover to cover or locate an activity or practice that you would like to experiment with and go straight to that. Reading the earlier sections of the guide will provide you with contextual and background information.

The Reflection for Learning activities are grouped by category to scaffold you from familiar cognitive and text-based approaches, through to approaches to practice that are more sensory and creative (Harvey and Vlachopoulos, 2019). These categories are suggestive only, as activities could belong to more than one category, based on adaption, individual experience, and context. That is, it is possible to engage in deep and creative reflection even through a simple activity. While each activity can be used independently, you can also mix and match, adapt, and adjust the activities to best respond to the learning needs of your context.

In addition to Reflection for Learning activities, this resource also includes a series of mindfulness activities. The intention to scaffold mindfulness as a foundation skill for reflective practice, as mindfulness is inherently a reflective practice and reflective practice is inherently mindful.

Aims of the guide

This Reflection for Learning scholarly practice guide is designed for educators who are interested in supporting reflective practice for their students' learning and for their own learning and career development.

With the many time constraints in the academy, a criterion for most of the activities presented here was that they could be short in duration to allow for easier embedding in the curriculum.

The aims of the guide are to:

- + introduce a spectrum of approaches to reflective practice spanning analytical, personalistic, critical, and creative
- + consider the scholarship underpinning good reflective practice in higher education.

There is no one best way to reflect.

Readers are encouraged to experiment with the activities practise be able to make judgements about which activities offer the best fit for their educational context, based on the needs of learners, their learning environments, and their disciplines.

which to experiment with reflective practice, core membership of the R4L Circle was stabilised, with new members slowly invited and visitors welcomed.

Underpinning the steering of a successful journey were the regular R4L Circle gatherings. These monthly gatherings could be viewed as analogous to the crew on the bridge of the ship. After opening with a reflective-practice experiment (with the successful ones being published in this guide), each gathering focused on charting the direction and outcomes of a series of funded scholarly projects led by the R4L Circle. At times, the waters were uncharted and troubled, and we had to create our own maps. Essential to maintaining clear direction was the stabilising role of the R4L Circle: one of trust, shared values, collaboration, collegiality, and open and regular communication.

A key element for our successful journey was that all members of the circle shared the captaincy. A distributed approach to leadership meant that each person rowed this boat – based on their strengths, some people rowed more strongly at times, less at other times. Collectively and collaboratively, this crew provided the power to make the journey.

A flow of ideas

Refuelling stops enabled the R4L Circle opportunities to facilitate and practice reflection and disseminate our resources and research. All refuelling activities focused on participant engagement and continual reflective and evaluative feedback – including our own. Fellow travellers, or participants, included a diverse representation of academics and professional staff with an interest in good learning and teaching practice. While the crew and travellers were initially based at one institution, the reach of activities engaged participants nationally and internationally.

Visits to many ports were part of our itinerary. Our shore excursions included national and international conferences, fora, and summits (where we shared our research and practices), together with hosting our own practice-based events. Other ports included multiple publication avenues where we aimed to disseminate our research and learnings.

Refuelling enabled us to maintain a flow of ideas, so in addition to our monthly R4L Circle gatherings, we also held our own Reflection for Learning retreat, reflected in the beautiful outdoors of an Indigenous learning circle and shared reflective practice with many colleagues through learning summits. These events all fuelled our creativity and collaboration for developing new reflective practices.

What have we learnt?

We find that having a relational, strengths-based approach of shared values, trust, collaboration and integrity has enabled us to ride the rapids together, to acknowledge and support each other's strengths. Having principles and ground rules in place enables us to maintain our vision and continuity. We share a deep commitment to the needs of the practitioner community of learners and educators, and individually we are committed to the

reflective practice that we enact in our educational and personal lives. Our outputs reflect this through co-authoring publications, running workshops, and sharing our open-access resources. We stay on course for this exciting river journey by knowing our boundaries and capacities and balancing this work with other commitments. We are motivated to reach a final destination of sharing diverse reflective practices with many educators and many learners.

1. Section 1: reflection for learning in higher education

1.1 Editorial

The act of reflection – which can be defined, albeit perhaps too briefly, as a deliberate and conscientious process that employs a person’s cognitive, emotional and somatic capacities to mindfully contemplate past, present or future actions in order to learn, and to better understand and potentially improve their actions (Harvey, Coulson and McMaugh, 2016) – has become the subject of increasing scholarly attention. A range of robust, empirically supported theoretical approaches to reflection as an aspect of teaching and learning is emerging from the literature (Harvey, Coulson and McMaugh, 2016). These approaches have in common the assumption that reflection can be taught: that it consists of component skills that can be built up over time through various approaches and activities (Harvey et al 2016). This guide aims to provide a scaffolded series of activities to support teachers at all levels in introducing reflection into their teaching, and in helping learners to build their reflection skills as they undertake activities of increasing complexity and depth (Coulson and Harvey 2012).

At the same time, reflective practice is a professional requirement for teachers as they develop applications for professional recognition. Many of the peak professional bodies – for example, Advance HE, the Staff and Educational Development Association, and the Higher Education Research and Development Association – embed reflective practice and reflective accounts of practice in their fellowship schemes. Educators engaging in the Scholarship of Teaching and Learning (SOTL) to enhance their practice are encouraged to use Action Research; this, too, requires a “reflexive mindset” (Arnold and Norton, 2018, p. 21). At the level of the university organisation, reflective practice is common across Foundations and Graduate Certificate programs in higher-education learning and teaching (Kandlbinder and Peseta, 2011).

Learners benefit in many ways from developing skills in reflection. Of course, many universities now include the ability to reflect as an attribute they expect all their graduates to acquire by the time they finish their education (Harvey, 2016); thus, in a very pragmatic sense, it helps learners accomplish the goal of getting their degree. However, there are other benefits – less tangible, but perhaps more profound – associated with learning to reflect. These “soft” or professional skills help students build cognitive bridges between classroom learning, practical application of that learning in an unpredictable, all-too-human world, and personal insights that deepen the learner’s understanding (Harvey et al, 2014). This, in turn, increases their resourcefulness, mental and emotional flexibility, problem-solving skills, and ability to critically interrogate complex issues and questions.

Moreover, if teachers are to support learners with reflection, they themselves need to engage with reflective practice as they develop, deliver and refine their teaching materials and approaches. Through reflection, they can juxtapose and integrate seemingly disparate

concepts to form an overarching understanding of their area of expertise that includes how to enthuse learners about its relevance to the wider society, present it to people who learn in varying ways and have various strengths, and assess learning authentically, flexibly, validly, and transparently. For this reason, teachers need to recognise the diversity of their student cohorts and offer diverse ways of practising and documenting reflection (Harvey et al, 2016). This guide provides activities that start with familiar cognitive, text-based approaches and move beyond text to sensory and creative approaches.

The growing presence of a cohort of mindful, avid and critical thinkers within universities – and, over time, the institutions and societies in which they participate after graduation – also benefits the wider world. As the availability of information continues to grow at the same time that traditional relationships of trust with commentators and media channels are breaking down, the need for such critical thinkers is growing increasingly acute.

Numerous studies have documented the rising prevalence of reflection as an activity not just for learners, but for their teachers. At every phase of developing and delivering course content, reflection is increasingly being shown to play a crucial role in ensuring that content is relevant and authentic, that it is presented in a clear way and assessed transparently, and that learners themselves have a chance to explore not just the course content, but its deeper meaning for their professional and personal lives. Notably and specifically, reflection is increasingly being incorporated into face-to-face course delivery. The spontaneity of personal interaction and the ability to collaborate in real time with peers and instructors can give a profound resonance and value to learners' reflective activities and processes. It should, however, be noted that the usefulness of reflection is not limited to face-to-face classroom situations. In fact, many learners find that being in their own familiar surroundings, rather than a classroom, is conducive to reflection. You'll find that many of these activities can be adapted to online use as part of a distance-education or blended-delivery course.

Along with the mechanics of incorporating reflection into teaching practice, it's important to carefully and constantly consider learners' wellbeing. Reflection is a whole-of-body experience, and as such will involve emotions (Harvey, Baumann and Fredericks, 2019). For some, it may trigger reactions and experiences that they might find unnerving or distressing (Harvey et al, 2012). Some guidelines for ensuring that learners have a safe and respectful environment include:

- + if possible, make reflection-related activities voluntary. If they must be attempted as part of the subject or course, be willing to flexibly provide an alternative learning or assessment activity for participants who find reflection problematic
 - + consider assessing reflection-based assignments as “complete/incomplete”, rather than giving participants a numerical mark
 - + ensure that you have a list of institutional support and counselling resources to which you can refer participants who need support
-

- + give participants a chance to offer feedback to you about the activities and processes, which you can then incorporate into enhancing your teaching.

Reflection is, at its heart, about empowering learners to seek and trust their own insights. In incorporating reflection into your teaching, you have the opportunity to help learners rely on themselves and on their ability to reflect and think critically: not just in your classroom, but for the rest of their lives. They are developed as lifelong learners, another graduate attribute that many universities share.

The activities in this resource guide are a starting point in your own explorations into reflection as an integral part of learning and teaching. Each of them is supported by peer-reviewed scholarship and aims to build specific competencies related to reflection, critical thinking, and independence in learning. Because they are underpinned by empirical research, they form a reliable base on which to build your own practice in reflective learning and teaching. However, one of the positives of reflection is that there's no wrong way to do it. Therefore, we urge you to feel free to alter and expand on these activities, to seek out other examples in the literature, and to invent your own activities based on your unique situation and the learners with whom you are working.

We hope you will find, as we have, that the more you incorporate reflection into your learning and teaching, the more your learners will find themselves making sophisticated and insightful connections between what they are encountering in your class and their lives as individuals, as well as their participation in their families, institutions, and cultures. We also invite your feedback on any of the activities from this guide that you choose to experiment with.

Yours in good reflective practice,

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1.2 References

Arnold, L, and Norton, L (2018). Action research: Practice guide. Heslington: Higher Education Academy. www.heacademy.ac.uk/knowledge-hub/action-research-practice-guide.

Coulson, D, and Harvey, M (2013). Scaffolding student reflection for experience-based learning: a framework. *Teaching in Higher Education*, 18(4), 401-413.
doi:10.1080/13562517.2012.752726

Harvey, M (2016). Editorial – Reflection for Learning in Higher Education. *Journal of University Teaching and Learning Practice*, 13(2). ro.uow.edu.au/jutlp/vol13/iss2/1.

Harvey, M, Coulson, D, and McMaugh, A (2016). Towards a theory of the ecology of reflection: reflective practice for experiential learning in higher education. *Journal of University Teaching and Learning Practice*, 13(2). ro.uow.edu.au/jutlp/vol13/iss2/2

Harvey, M, Baumann, C, and Fredericks, V (2019). A taxonomy of emotion and cognition for student reflection: introducing emo-cog. *Higher Education Research and Development*, 38(6), 1138-1153. doi: 10.1080/07294360.2019.1629879.

Harvey, M, Baker, M, Fredericks, V, Lloyd, K, McLachlan, K, Semple, A, and Walkerden, G (2014). Reflection: Alignment of practice as a strategy for building capacity for learning. In Moore, K (Ed.), *Work Integrated Learning: Building Capacity – Proceedings of the 2014 ACEN National Conference*, 1-3 October, Tweed Heads, (pp. 167-171).

Harvey, M, Baker, M, Bosanquet, A, Coulson, D, Semple, A, and Warren, V (2012). Moving beyond the diary: innovation in design and delivery of reflection. Paper presented at the 2012 ACEN Collaborative education: Investing in the future conference, 31 October-2 November, Geelong. researchers.mq.edu.au/en/publications/moving-beyond-the-diary-innovation-in-design-and-delivery-of-refl.

Kandlbinder, P, and Peseta, T (Eds) (2011). *Higher education research and development anthology*. Milperra: Higher Education Research and Development Association (HERDSA).

1.3 A quick guide to reflection

The practice of reflection offers a way for you to make the most of your learning activities. Reflecting on the many new experiences, challenges, and opportunities of learning will improve your ability to respond effectively to situations and incidents, meet the intended academic learning outcomes and develop graduate attributes that will serve you throughout your life. Reflection is useful for making sense of the sometimes competing expectations of the lecturer or tutor, the university and others involved in your learning activity. Reflection may provide quiet time to step back from the pressures of study, work and life to sort and process and learn from the experience or activity and your thoughts and feelings.

1.3.1 What is reflection?

There is no agreed definition of reflection in the literature; however, most approaches would include purposeful thought (Loughran, 2006) about beliefs, thoughts or actions in order to improve or learn.

Some examples include:

- + a deliberate and conscientious process that employs a person's cognitive, emotional, and somatic capacities to mindfully contemplate on past, present, or future (intended or planned) actions in order to learn, better understand and potentially improve future actions (Harvey, Coulson and McMaugh, 2016, p.9)
- + deliberately thinking about action with a view to its improvement (Hatton and Smith, 1995, p.34)
- + the ability to think about what one does and why – assessing past actions, current situations, and intended outcomes (Richert, 1990, p.525)
- + reflection helps students make stronger connections between theoretical perspectives and practice. We view reflection as a skill that can assist students in making sense of their service-learning experience (Correia and Bleicher, 2008, p.41)
- + an active, persistent, and careful consideration of any belief or supposed form of knowledge (Dewey, 1933)
- + critical reflection is taken to mean a deliberate process when the candidate takes time, within the course of their work, to focus on their performance and think carefully about the thinking that led to particular actions, what happened, and what they are learning from the experience, in order to inform what they might do in the future (UK Qualifications and Curriculum Authority in King, 2002, p.2).

There are also many different terms for reflection. Depending on your discipline you might be more familiar with terms such as analysis, review, evaluation, critical thinking, investigation, making sense, making meaning, contemplation, contemplative practice, meditation, introspection, or felt knowing.

1.3.2 When to reflect?

Reflection may be used to support learning at any time. Reflection is one of the four main phases of the experience-based learning cycle (Kolb, 1984). In this model, reflection follows experience and leads to conceptualisation and experimentation.

In practice, learning to reflect may start before you commence your learning activities and continue through and beyond the activities. Indeed, once started, the development of reflective skills may be ongoing to become a lifelong learning practice, and is a requirement in some professions.

A reflective phase that may be termed reflection for action usually occurs before engaging in an activity. This phase is about preparing for the experience through reflecting on issues such as: what do I hope to get out of this activity (class, session, off-campus experience), what might others (eg lecturers, peers, on-site supervisor) expect of me, what do I have to contribute, what do I most need to learn, how will I get the most out of this experience? Exploring the many reflective tools and ways to reflect is useful at this stage to further develop reflective skills and help identify the reflective processes that will best support your learning.

Reflection in action (Schön, 1987), as the term suggests, occurs during the learning activity. This is the phase during which you may explore putting theory from your studies into action or practice; this process is called “praxis” (Habermas, 1973). New experiences, even the most positive ones, may challenge your thinking and previous assumptions, stir up emotions, or present issues you are not immediately sure how to address. There are many reflective tools and processes that can help make meaning of your experience during this phase, including critical-incident analysis, to help work through and make sense of a significant issue or event; online or face-to-face discussion sessions that may help you to explore others’ perspectives; reflective writing, blogging, or journaling to assist exploration of new ideas and feelings and to develop insights; and creative or expressive media such as poetry, art, music, and video-making that enable you to draw on your senses and engage in cognitive and affective (emotion) learning processes, known as whole-person learning (Yorks and Kasl, 2002).

Reflection on action (Schön, 1987) is the phase during which reflection is most valuable, as it involves reviewing and synthesising learning and considering any future application. This phase may also involve debriefing or discussing events, issues, emotions, and lessons that have arisen during the experience. A reflective debriefing process such as that proposed by Gibbs (1988) has been found to support learning (Figure 1):



It is during this phase that final assessments are usually completed, which may involve a synthesis of your reflections and learning during class, throughout certain experiences, or during the whole semester. There are many ways to express and communicate your learning, which are briefly outlined in the next section. How you present your final reflections will be guided by your teacher's requirements and your own learning.

1.3.3 How to reflect

There are many ways to approach reflection, and a diversity of techniques to use depending on what works for you and your learning requirements. A useful place to start is to consider your experiences from different lenses or perspectives (Brookfield, 2017). Useful lenses through which to reflect on your learning activities include:

- + you – what is your view of this (situation)?
- + your peers – how might your fellow students' or work colleagues' approaches differ from yours?
- + your teacher – what would your teacher's perspective be?
- + your course – what does the literature or theory associated with your course say?

Reflection techniques vary in their approach and skill requirements. Exploring techniques that use different skills such as writing and art, or critical-incident analysis and drama, will help you to find ways that work for you in different circumstances. Techniques for reflection include:

- + writing/blogging/journaling/social media (structured or unstructured)
- + essays and reports
- + organising tools such as mind maps, Venn diagrams, and flow charts
- + analytical approaches including critical-incident analysis and force-field analysis
- + individual or group presentations and performances
- + creative/expressive media including video, photography, storytelling, poetry, dance/movement, drama, music/song, and art
- + contemplative practices including meditation, mindfulness and dream play.

Remember: There is no one best way to reflect, so if what you are doing isn't working for you, try another technique or take a different perspective.

1.3.4 References

Brookfield, SD (2017). *Becoming a critically reflective teacher* (2nd edn). San Francisco: Jossey-Bass.

Correia, MG, and Bleicher, RE (2008). Making connections to teach reflection. *Michigan Journal of Community Service Learning*, Spring, 41-49.

Dewey, J (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Heath.

Gibbs, G (1988). *Learning by Doing: A Guide to Teaching and Learning Methods*. Oxford: Further Education Unit, Oxford Polytechnic.

Habermas, J (1973). *Theory and Practice*. Oxford: Beacon Press.

Harvey, M, Coulson, D, and McMaugh, A (2016). Towards a theory of the ecology of reflection: reflective practice for experiential learning in higher education. *Journal of University Teaching and Learning Practice*, 13(2). ro.uow.edu.au/jutlp/vol13/iss2/2

Hatton, N, and Smith, D (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33-49.

King, T (2002). Development of student skills in reflective writing. *Proceedings of the 4th World Conference of the International Consortium for Educational Development in Higher Education*, 3-6 July, 2002.

Kolb, DA (1984). *Experiential Learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall

Loughran, JJ (2006). A response to 'reflecting on the self'. *Reflective Practice*, 7(1), 43-53.

Richert, AE (1990). Teaching teachers to reflect: A consideration of programme structure. *Journal of Curriculum Studies*, 22(6), 509-527.

Schön, DA (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

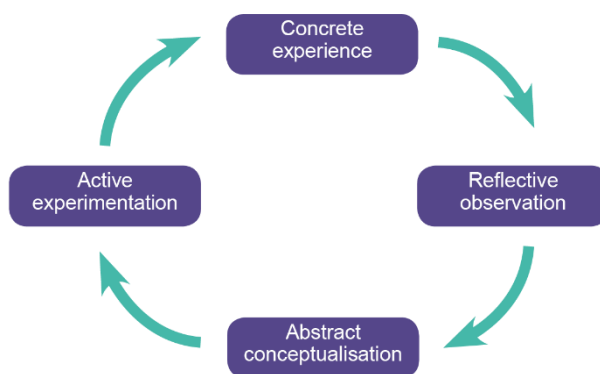
Yorks, L, and Kasl, E (2002). Toward a theory and practice for whole-person learning: Reconceptualizing experience and the role of affect. *Adult Education Quarterly*, 52(3), 176-92.

1.4 Quick guide to debriefing

While closely related, debriefing is a separate concept to reflection. Learning through reflection may place students in situations that trigger emotions and challenge their values and beliefs. Debriefing processes enable students to diffuse emotional residue from their activities and explore their learning. Debriefing is beneficial in supporting students to achieve deeper learning through reflection (Winchester-Seeto and Rowe, in press).

Debriefing is considered to be of central importance to experience-based learning (Boud, Keogh and Walker, 1985). Using a structured approach such as that proposed by Kolb (1984), Boud, Keogh, and Walker (1985), or Gibbs (1988) increases the potential for cognitive and affective learning, which Yorks and Kasl (2002) call whole-person learning. Debriefing provides opportunity for the development of praxis (Habermas, 1973) and graduate capabilities as learners apply their learning to their course and future work.

Figure 2. Experiential learning cycle (Kolb, 1984)



The experiential learning cycle may be entered at any point in the cycle; however, it is recommended that each element be addressed in the order shown in the figure to maximise student learning (Kolb, 1984). Questions such as “What happened?”, “What did you notice/observe about your/others reactions?”, “What can you learn from that?”, “How does this relate to what you have learnt in your course?”, and “How might you do that differently next time?” help students debrief their reflective-learning experiences.

A debriefing model proposed by Boud, Keogh and Walker (1985) emphasises the importance of emotion in learning by specifically designating a step for attending to feelings connected with the experience. The three steps after an experience are:

1. returning to the experience

Questions such as ‘what did you do or say?’, ‘how would you describe your experience?’, and ‘what happened?’ provide useful aids to commencing a reflective approach to the learning activity.

2. attending to the feelings connected with the experience

Naming or describing emotions or bodily sensations that you felt during their learning activity will support debriefing and encourage whole-person learning (Yorks and Kasl, 2002).

Questions may include ‘how did you feel when that happened?’, ‘what was your emotional response to that (or them)?’, ‘what, if any, residual feelings do you hold about that?’, and ‘what do you need to do to resolve those feelings?’

3. re-evaluating the experience through recognising implications and outcomes

Stepping back from your experiences and emotions to consider alternative approaches, other perspectives, and implications for future action will encourage learning. Questions may include ‘what might (the other’s, another’s) perspective be of that?’, ‘what is another way of dealing with that?’, ‘what would you do differently next time?’, ‘what did you learn from that person/experience?’, ‘what strengths did you use in that situation?’, and ‘how might you build on those strengths?’

Gibbs (1988) offers a third, self-explanatory model for debriefing reflection for learning experiences (Figure 3):



Figure 3. Gibbs’s (1988) model for debriefing

Carefully structured and crafted debriefing exercises that challenge assumptions and beliefs or offer alternative social or political perspectives may lead to transformative learning (Mezirow, 1991). Using a variety of debriefing approaches may support your learning. For example, written reflection has been found to provide a stronger link to learning outcomes when combined with discussion-type reflection as it moves students beyond sharing feelings

to deeper levels of intellectual analysis (Eyler and Giles, 1999). A critical-incident approach may be used to structure reflection during and after learning activities, provide authentic learning experience, and contribute to debriefing and deepening learning outcomes (Santoro and Allard, 2008; Whiteford and McAllister, 2006).

1.4.1 References

Boud, D, Keogh, R, and Walker, D (Eds) (1985). *Reflection: Turning experience into learning*. London: Kogan Page.

Eyler, JS, and Giles, DE (1999). Where's the learning in service-learning? *Michigan Journal of Community Service Learning*, 2, 112-22.

Gibbs, G (1988). *Learning by doing: A guide to teaching and learning methods*. Oxford: Further Education Unit, Oxford Polytechnic.

Habermas, J (1973). *Theory and practice*. Oxford: Beacon Press.

Kolb, DA (1984). *Experiential Learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Mezirow, J (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Santoro, N, and Allard, A (2008). Scenarios as springboards for reflection on practice: stimulating discussion. *Reflective Practice Journal*, 9(2), 167-76.

Whiteford, GE, and McAllister, L. (2006). Politics and complexity in intercultural fieldwork: The Vietnam experience. *Australian Occupational Therapy Journal*, 2006, 1-10.

Winchester-Seeto, T, and Rowe, A D (in press). Who is holding the mirror? Debriefing and reflection in work-integrated learning. *International Journal of Work-integrated Learning*.

Yorks, L, and Kasl, E (2002). Toward a theory and practice for whole-person learning: Reconceptualizing experience and the role of affect. *Adult Education Quarterly*, 52(3), 176-92.

2. Section 2: preparing for reflection: mindfulness

This section offers some introductory mindful practices as skills development for reflective practices. These activities are deliberately short to enable them to be more easily incorporated into learning sessions. Additional mindful practices are provided at the end of this resource.

2.1 Overview

2.1.1 Why Mindfulness?

Mindfulness can facilitate and scaffold reflective practice. It is associated with “enhanced executive functioning, better self-regulation, greater autonomy, and enhanced relationship capacities” (Brown, Ryan and Creswell, 2007, p.227) that all contribute to awareness and attention to self, others, and situations and inform choices, decisions, and actions.

2.1.2 Overview

While contemplation, or the paying of intentional, non-judgmental attention to some idea, situation, or object, has been distinguished from the broader concept of critical reflection (Bright and Pokorny, 2013), the mindfulness involved in contemplation contributes to the capacity for reflection more generally. As Hart (2004, pp. 29-30) writes:

Inviting the contemplative simply includes the natural human capacity for knowing through silence, looking inward, pondering deeply, beholding, witnessing the contents of our consciousness, and so forth. These approaches cultivate an inner technology of knowing and thereby a technology of learning and pedagogy.

Mindfulness has been linked to many benefits, including enhanced cognitive functioning and academic learning (Shapiro, Brown and Astin, 2008). A strong positive correlation between mindfulness and both reflection and cognitive complexity was identified by Goonetilleke (2016). Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Therapy (MBCT) have been found to contribute to positive functional and structural changes in the brain and improved emotion regulation (Gotink et al, 2016).

Participants should be encouraged to develop strengths in each of the techniques in these activities, as overuse of one or relying on limited reflection techniques may contribute to what has been described as a mindless failure to consider new “possibilities or results that live outside of our expectations and current understandings” (Stewart and Alrutz, 2012, p. 306). The Tree of Contemplative Practices (www.contemplativemind.org/practices/tree) on the next page gives an overview of the relationships among various forms of mindfulness and contemplation.

2.1.3 The mindfulness activities

The activities were gathered from a range of sources, highlighting how widely mindfulness is now recognised and applied. A key element of Buddhist practice and psychology, mindfulness is said to also share conceptual kinship with many philosophical and psychological traditions including phenomenology, humanism, ancient Greek philosophy, and existentialism (Brown, Ryan and Creswell, 2007).

The section first offers a range of mindfulness exercises that encourage students to pause and reflect on reactions and responses to stimuli and experiences, and to develop their capacity for presence, supporting the development of awareness, insight, and compassion (Kabat-Zinn, 2003). Examples of activities include “Give your brain a break” and “Three senses”.

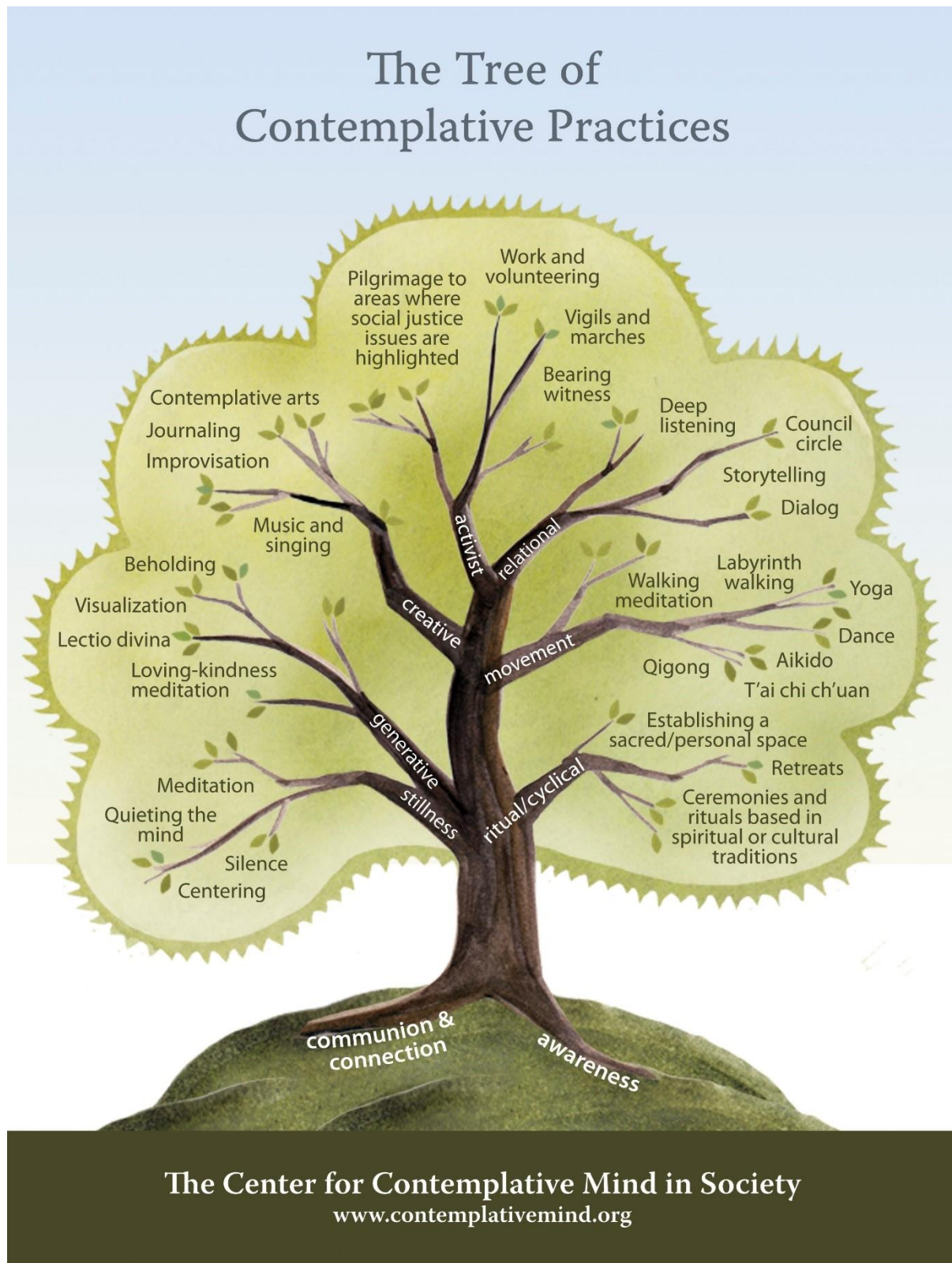
Mindfulness activities that incorporate breathing exercises are introduced in the “More Mindfulness” section of this guide. Examples include “Team Breath” and “Counting Breaths”. Mindful focus on breathing has been shown to be one way to encourage a contemplative and reflective mindset (Ekerholt and Bergland, 2008; Miller, 2014, pp. 156-157; Keiser and Sakulkoo, 2014).

2.1.4 Application

These exercises, many of which are based on those from the Guided Meditation Site (www.the-guided-meditation-site.com/mindfulness-exercises.html), build reflective skills in two main ways: helping participants become more able to sense when they are on ‘autopilot’ and consciously bring themselves to awareness of the present moment; and supporting participants in developing meta-awareness of the range of reflective and learning styles, identify strengths and areas for development.

Applications include:

- + at the beginning of class to focus students’ attention
- + at the end of class to focus reflection on learning
- + during class to focus reflection on learning
- + before exams or other stress-inducing activities (Ramsburg and Youmans, 2013)
- + after discussions or exercises to encourage awareness and presence
- + as daily exercises to strengthen mindful awareness of self and the environment
- + to assess one’s own pre- and post-course or session reflective ability
- + to encourage participants to think and behave collaboratively
- + to foster embodied and whole-person learning.



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Concept and design by Maia Duerr; illustration by Carrie Bergman

2.1.5 References

Barbezat, DP, and Bush, M (2014). *Contemplative practices in higher education: Powerful methods to transform teaching and learning*. San Francisco, CA: Jossey-Bass.

Bright, J, and Pokorny, H (2013). *Contemplative practices in higher education: Breathing heart and mindfulness into the staff and student experience*. *HERDSA News*, 35(1), 9-12.

Brown, KW, Ryan, RM, and Creswell, JD (2007) *Mindfulness: Theoretical foundations and evidence for its salutary effects*. *Psychological Inquiry*, 18(4), 211-237.

Ekerholt, K., and Bergland, A (2008). *Breathing: A sign of life and a unique area for reflection and action*. *Physical Therapy*, 88(7), 832-840.

Goonetilleke, D (2016). *Cognitive complexity, mindfulness, and reflection in Mental Health Professionals*. Dissertation, Minnesota State University, Mankato, ProQuest Dissertations Publishing, 10117592.

Gotink, RA, Meijboom, R, Vernooij, MW, Smits, M, and Hunink, MGM (2016). *eight-week mindfulness-based stress reduction induces brain changes similar to traditional long-term meditation practice – a systematic review*. *Brain and Cognition*, 108, 32-41.

Guided Meditation Site (n.d.). www.the-guided-meditation-site.com/mindfulness-exercises.html.

Guo, PJ, Kim, J, and Robin, R (2014). *How video production affects student engagement: An empirical study of MOOC videos*. *ACM Conference on Learning at Scale (L@S 2014)*. groups.csail.mit.edu/uid/other-pubs/las2014-pguo-engagement.pdf.

Hart, T (2004). *Opening the contemplative mind in the classroom*. *Journal of Transformative Education*, 2(1), 28-46.

Kabat-Zinn, J (2003). *Mindfulness-based interventions in context: Past, present and future*. *Clinical Psychology: Science and Practice*, 10, 144-156.

Kolb, DA (1984). *Experiential Learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Miller, JP (2014). *The contemplative practitioner: Meditation in education and the workplace* (2nd edn). Toronto: University of Toronto Press.

Ramsburg, JT, and Youmans, RJ (2013). *Meditation in the Higher-Education Classroom: Meditation Training Improves Student Knowledge Retention during Lectures*. *Mindfulness*. doi: 10.1007/s12671-013-0199-5

Shapiro, S, Brown, KW, and Astin, J (2011). *Towards the integration of meditation into higher education: A review of research evidence*. *Teachers College Record*, 113(3), 493-528.

Stewart, T, and Alrutz, M (2012). Comparison of the effects of reflection and contemplation activities on service-learners' cognitive and affective mindfulness. *McGill Journal of Education*, 47(3), 303-322.

2.2 How mindful am I?

2.2.1 Materials

- + printouts of the quiz sheet (on the next page)
- + pens for each participant (or an online version of the quiz that they can access with their devices).

2.2.2 Time

Allow five to 10 minutes to complete the quiz and at least 20 minutes for discussion, or longer if the quiz is being used to teach mindfulness and reflection skills.

2.2.3 The process

Each participant receives a copy of the quiz. It should be emphasised that the quiz is designed to aid in learning to reflect and developing mindfulness, and that the participants will not be assessed on the result.

When the participants have completed the quiz, the instructor guides a reflection on the results, exploring areas such as:

- + which technique do you use most often?
- + how confident are you using this mindfulness technique?
- + which do you use least?
- + are there any that you never use or do not understand?
- + what could you do to develop the techniques that you use least?

Participants may answer these questions individually, and some groups may also be comfortable discussing these questions collaboratively.

2.2.4 Acknowledgement

Adapted from Mindful Teachers: www.mindfulteachers.org/2015/04/how-mindful-am-i-quiz.html

2.2.5 Quiz sheet: How mindful am I?

Source: www.mindfulteachers.org/2015/04/how-mindful-am-i-quiz.html

In a spirit of non-judgmental awareness, read the list of present moment tools below, and rank them from 1-10 based on how often you use them.

Reflection for learning: a scholarly practice guide for educators

Marina Harvey, Kate Lloyd, Kath McLachlan, Anne-Louise Semple, Greg Walkerden

1 = used most often

10 = used least often

0 = never used

1. Tool 1: Breathe Mindfully

Use your breath as an anchor to still your mind and bring your focus back to the present moment.

2. Tool 2: Listen Deeply

Listen with intention; let others fully express themselves and focus on understanding how they think and feel.

3. Tool 3: Cultivate Insight

See life as it is, allowing each experience to be an opportunity for learning.

4. Tool 4: Practice Compassion

Consider the thoughts and feelings of others and let tenderness, kindness, and empathy be your guides.

5. Tool 5: Limit Reactivity

Observe rather than be controlled by your emotions. Pause, breathe and choose a skilful response based on thoughtful speech and non-violence under every condition.

6. Tool 6: Express Gratitude

Practice gratitude daily and expand it outward, appreciating everyone and everything you encounter.

7. Tool 7: Nurture Mutual Respect

Appreciate our common humanity and value different perspectives as well as your own.

8. Tool 8: Build Integrity

Cultivate constructive values and consistently act from respect, honesty, and kindness.

9. Tool 9: Foster Leadership

Engage fully in life and in community. Share your unique talents and generosity so that others can also be inspired.

10. Tool 10: Be Peace

Cultivate your own inner peace, becoming an agent for compassionate action and social good.

Reflect on your answers:

- + which tools do you use most often? (Why?)
- + which tools do you use least often? (Why?)
- + can you think of ways to incorporate those tools into your life?
- + which one could you try today?

2.3 Give your brain a break

2.3.1 Materials

None, but encourage participants to keep an open mind.

2.3.2 Time

One minute of class time per iteration can work well. If desired, participants can spend five minutes after an in-class 'brain break' discussing how they felt and reacted.

2.3.3 The process

Participants are asked during class to stop what they are doing and give their brain a break: look at something out the window, get up and walk around the room and observe something they had paid little attention to in the past, stand and stretch, and note how they feel.

Participants can also be requested to consider, instead of checking their email between classes, spending a few seconds watching out the window or mindfully walking with their senses open to notice sights, sounds, feelings, and smells. For example, they could give attention to leaves fluttering on trees, count their steps, and notice how the ground feels under their feet and the breeze on their skin.

2.3.4 Acknowledgement

Adapted from: www.psychologytoday.com/blog/in-practice/201302/6-mindfulness-exercises-each-take-less-1-minute

2.4 Mindfulness cues

2.4.1 Materials

None, but encourage participants to keep an open mind.

2.4.2 Time

One minute of class time can work well. Participants may also wish to practice this exercise outside of class.

2.4.3 The process

A cue is used to prompt a mini-mindfulness activity. For example, the instructor rings a bell, chime, or singing bowl, or uses any other auditory or visual cue, and the class stops while students practice mindfulness for one minute. Participants may use this moment of mindfulness to think about some positive aspect of the cue or the situation they're in, or just to perceive the sights and sounds of the environment or their own breathing or feelings.

Outside of the class, participants are requested to choose a specific environmental cue they will use to remind them to focus their attention on their breathing. These could include physical cues such as hearing a bird singing, looking in a mirror, washing their hands, or opening their computer, or mental cues such as a negative thought (which they may then choose to follow with a welcome thought).

2.4.4 Acknowledgement

Adapted from:

www.the-guided-meditation-site.com/mindfulness-exercises.html:

www.pocketmindfulness.com/6-mindfulness-exercises-you-can-try-today/

2.5 Mindfulness hand awareness

2.5.1 Materials

None, but encourage participants to keep an open mind.

2.5.2 Time

One minute of class time per iteration can work well. If desired, participants can spend five minutes after the exercise discussing how they felt and reacted. Participants may also wish to practice this exercise outside of class.

2.5.3 The process

Participants are asked to clasp their hands together tightly and hold for five to 10 seconds, then release and pay attention to how their hands feel. They should keep their attention focused on the feeling for as long as they can, intensifying their awareness of the sensations, and should notice any thoughts or feelings they may have.

2.5.4 Acknowledgement

Inspired by: www.practicingmindfulness.com/16-simple-mindfulness-exercises/

2.6 Ten-second count

2.6.1 Materials

None, but encourage participants to keep an open mind.

2.6.2 Time

Allow up to three minutes of class time. If desired, participants can spend five minutes after the exercise discussing how they felt and reacted. Participants may also wish to practise this exercise outside of class.

2.6.3 The process

Participants are asked to close their eyes (only if they are comfortable doing so; this is not an essential part of the exercise) and focus their attention on slowly counting to 10. If their concentration wanders off, they should start back at one.

For example, a participant's inner monologue might be: "One...two...three...am I out of laundry detergent? Whoops. One...two...three...four...that clicking pen is driving me nuts! Oh, rats. One...two...three...four... five...six...nearly there! Ugh! One..."

If they reach 10 before the class exercise is finished, they should restart from one, counting slowly again.

2.6.4 Acknowledgement

Adapted from: www.the-guided-meditation-site.com/mindfulness-exercises.html

2.7 Three senses

2.7.1 Materials

None, but encourage participants to keep an open mind.

2.7.2 Time

One minute of class time per iteration can work well. If desired, participants can spend five minutes after the exercise discussing how they felt and reacted. Participants may also wish to practice this exercise outside of class.

2.7.3 The process

Participants are asked to notice what they are experiencing at the moment through three senses: sound, sight, touch. They are asked to take a few slow breaths and think about these questions:

- + what are three things I can hear (for example, the clock on the wall, a car going by, music in the next room, my breath)?
- + what are three things I can see (for example, this table, that sign, that person walking by)?
- + what are three things I can feel (for example, the chair under me, the floor under my feet, my phone in my pocket)?

2.7.4 Acknowledgement

Adapted from: youth.anxietybc.com/mindfulness-exercises

2.8 Undivided attention

2.8.1 Materials

None, but encourage participants to keep an open mind.

2.8.2 Time

On participants' own time, as they desire.

2.8.3 The process

Participants are encouraged to do something around the university campus (classroom, lab, library, or wherever they are that day) that they've never done before, and to do it with intention and focused attention. Suggested activities may include having participants:

- + walk down a path they have never walked down before
- + cross a lawn on a path they have never used before
- + eat something unfamiliar from a food outlet
- + sit in a seat they have never sat in before
- + enter a building they have never been into before
- + talk to a person they have not spoken to before
- + hug a tree they have not touched before
- + touch something they have not touched before (eg a plant, a statue, a sign, a door)
- + zoom their attention in and out on any object, or walk closer to and further from it, and notice how it changes
- + walk to two different spots and notice the differences in smell

This exercise is particularly useful for helping those who may struggle with stillness-based practices to develop their mindfulness skills.

3. Section 3: practising reflection: text-based activities

3.1 Minute paper

3.1.1 Overview

Minute papers, one of the most commonly used classroom assessment techniques in higher education (Angelo and Cross, 1993), are designed to give teachers non-identified feedback on what students are learning in class.

As well as a feedback strategy, the minute paper can be used as a “student-centred reflection strategy designed to help students discover their own meaning in relation to concepts covered in class, and to build instructor-student rapport” (Cuseo, n.d.). Additional research indicates that students can learn to engage in metacognitive strategies if they are asked self-assessment questions on a regular basis. Asking students to reflect on their own learning encourages them to think deeply and critically (Resnick, 1986). The minute paper encourages students to reflect beyond surface learning. Moreover, some research suggests that when students reflect on the material presented to them at the end of class, they retain almost twice as much of its factual and conceptual content (Menges, 1988).

3.1.2 Application

This exercise is typically used at the end of a session to provide teachers with feedback on what participants have learned about a particular topic and to allow participants to reflect on their own learning. It can also be used at any stage in a session.

Applications include:

- + developing critical thinking skills through reflection
- + enabling participants to take an active part in their own learning
- + encouraging participants to engage in metacognitive strategies.

3.1.3 Materials

- + copies of the template
- + pens (alternatively, you could ask participants to post their reflections in an online discussion forum)
- + other questions relevant to your teaching needs could be developed for use with this template.

3.1.4 Time

- + one or two minutes for participants to reflect and write
- + allow yourself some time to read through the responses (it usually takes around one minute to read through four responses)
- + allow about 10 minutes in the following session to discuss the responses with your class.

3.1.5 Process

At the end of a session, ask the group to write responses to one or two short questions prepared by the facilitator. It is more time-effective to prepare forms or cards for participants to write on, but you can also display the questions for all participants to see or use an online forum.

Allow your group one or two minutes to write their responses before collecting them. To keep to the one-minute time frame, this exercise should focus on a single concept.

Share the responses with your class when you next meet.

3.1.6 References

Angelo, TA, and Cross, PK (1993). Classroom assessment techniques: A handbook for college teachers. San Francisco: Jossey-Bass.

Cuseo, J (n.d.). One minute paper. Retrieved from oncourseworkshop.com/self-awareness/one-minute-paper/

Menges, R (1988). Research on teaching and learning: The relevant and redundant. *Review of Higher Education*, 11, 259-268.

Stowe, K (2010). A quick argument for active learning: The effectiveness of one-minute papers. *Journal for Economic Educators*, 10(1), 33-39.

3.1.7 Minute paper template

In one minute, please answer the two questions below in one or two brief sentences.

What was the most significant (useful, meaningful, surprising, etc) thing you learned during this session?

What question(s) remain in your mind at the end of this session?

3.2 Seeking clarity

3.2.1 Overview

This exercise is inspired by the “Muddiest Point”, a teaching-assessment technique developed in 1989 by Dr Frederick Mosteller, a Harvard University professor of statistics. Asking students to reflect on their misconceptions encourages deep conceptual learning (Wandersee, Mintzes and Novak, 1994).

This version of the activity has been redesigned to adopt a strengths-based approach (Harvey, 2014) that supports students’ development of their metacognitive skills as they reflect on what they know and what they need to know.

Asking students to reflect on their own learning and asking self-assessment questions on a regular basis encourages them to think deeply and critically (Resnick, 1986). Variations include changing the reflective question to focus on, for example, the most “interesting” or most “surprising” point (Carlson, n.d.).

3.2.2 Application

This is a simple activity you can use at the end of a session (such as a lecture or tutorial) to assess how well the learners have understood the subject and to allow them to reflect on their own learning. It can also be used at any stage in a session.

Applications include:

- + encouraging participants to reflect on their learning and to increase retention of information
- + enabling participants to take an active part in their own learning
- + encouraging participants to engage in metacognitive strategies
- + improving listening skills
- + updating the educator on participants’ progress and supporting planning for the next session.

3.2.3 Materials

- + copies of the template
- + pens (alternatively, you could ask participants to post their reflections in an online discussion forum).

3.2.4 Time

- + allow three to five minutes for participants to write
- + allow yourself some time to read through the responses
- + allow a further 10 to 15 minutes in the following session to discuss the responses.

3.2.5 Process

At the end of a session, ask the participants to write responses to the question: “What was the one thing so far in this session that you would like to have more explanation about?” They can write on their own paper or on a copy of the template below, or you can post the question in an online class discussion forum.

Collect the responses at the end of class and discuss the issues with the participants in the following lesson, or post the responses online.

3.2.6 References

Carlson, A (n.d.) Centre for Instructional Innovation and Assessment.

pandora.cii.wvu.edu/cii/resources/modules/muddiestpoint/

Harvey, M (2014). Strengths-based theory and practice. In D. Coughlan and M. Brydon-Miller (Eds). *Encyclopaedia of Action Research*. London: SAGE.

Resnick, LB (1986). *Education and learning to think*. Special report. Pittsburgh: University of Pittsburgh, Commission on Behavioral and Social Sciences and Education.

Wandersee, JH, Mintzes, JJ, and Novak, JD (1994). Research on alternative conceptions in science. In DL Gabel (Ed.). *Handbook of research on science teaching and learning* (pp. 177-210). New York, NY: MacMillan.

3.2.7 Seeking clarity template

Please answer the question below in one or two brief sentences.

What was the most significant (useful, meaningful, surprising, etc.) thing you learned during this session?

3.3 Five main points

3.3.1 Overview

Some research suggests that when students reflect on the material presented to them at the end of class, they retain almost twice as much of its factual and conceptual content (Menges, 1988).

This exercise encourages students to stop and reflect on what they have learned. But more than simply recall information, this exercise also encourages students to conceptualise the information by listing what they believe to be the pivotal issues.

3.3.2 Application

This exercise is typically used at the end of a session to gauge how well the learners have understood a particular topic or idea. It can also be used at any stage in a session.

Applications include:

- + providing the teacher with an insight into learning
- + helping learners to retain new information
- + encouraging deep critical reflection and conceptualisation of new information.

3.3.3 Materials

- + copies of the template
- + pens (alternatively, you could ask participants to post their reflections in an online discussion forum).

3.3.4 Time

Allow five minutes for participants to write, as well as 10 to 15 minutes in this or the following session to discuss the responses.

3.3.5 Process

Towards the end of a session, ask participants to use the template below to respond succinctly to two questions regarding the ideas and issues raised in the session.

It is best to leave some time in the same session to discuss the responses, but this may also be done the following class.

Participants' ideas could be brainstormed on a whiteboard, or you may compile them into a resource for learners.

3.3.6 References

Cuseo, J (n.d.). One minute paper. oncourseworkshop.com/self-awareness/one-minute-paper/

Stowe, K (2010). A quick argument for active learning: The effectiveness of one-minute papers. *Journal for Economic Educators*, 10(1), 33-39.

3.3.7 Five main points template

Please answer the question below in one or two brief sentences.

Reflecting upon today's session, write down the main ideas in one or two sentences.

List up to five pivotal issues addressed in this session.

1)

2)

3)

4)

5)

3.4 Critical incidents

3.4.1 Overview

This exercise is taken from Stephen Brookfield's book 'Becoming A Critically Reflective Teacher' (1995), in which he argues that critical reflection is essential to the improvement of teaching practices.

Brookfield proposes that it is necessary for teachers to go beyond reflection on their own practice and draw on student reflections to understand students' perspectives. This requires the creation of a student-centred learning environment, in which the teacher responds to the needs of the class. Brookfield argues that excellent teachers "continually attempt to shape teaching and learning environments into democratic spaces of knowledge exchange" (p. 44).

Not only is this exercise useful for teachers to reflect on their own practice, it also encourages students to become active participants in their own learning.

3.4.2 Application

This exercise, which is typically used at the end of a session, allows teachers to gain an insight into what their learners think about their methods and the classroom environment. It also provides an opportunity for learners to reflect on their learning experience and an outlet for them to express themselves, thus giving them a voice and promoting active learning.

This exercise is best used early on in the subject so that the teacher can identify areas for improvement and implement changes.

In the context of Work Integrated Learning, this exercise could be used when critical incidents arise.

Two variations of the template that are particularly suitable for work-integrated, community-based or professional learning contexts are also included.

3.4.3 Materials

- + copies of one of the templates.
- + pens (alternatively), you could ask participants to post their reflections in an online discussion forum).

3.4.4 Time

Allow five minutes for participants to write, as well as 10 to 15 minutes in the following session to discuss the responses.

3.4.5 Process

At the end of a session, ask participants to write responses to the five questions in the template below (alternatively, you can use questions that you find more relevant). Collect the responses at the end of class and allow some time the following week to discuss the responses with them.

To encourage a collaborative learning approach, you may also wish to collate the responses into a resource for learners.

3.4.6 References

Brookfield, SD (2017). *Becoming a critically reflective teacher* (2nd edn). San Francisco, CA: Jossey-Bass

Brookfield, SD (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass

3.4.7 Critical Incidents 1: The basic template

Please take about five minutes to respond to the questions below about this week's session(s). Don't put your name on the form – your responses are non-identified. When you have finished writing, put the form on the table by the door. At the start of next week's session, I will be sharing the group's non-identified responses with all of you. Thanks for taking the time to do this. What you write will help me make our sessions more responsive to your learning needs.

At what moment in this week's session did you feel most engaged with what was happening?

At what moment in this week's session did you feel most distanced from what was happening?

What action that anyone (teacher or participant) took in this week's session did you find most affirming or helpful?

What action that anyone (teacher or participant) took in this week's session did you find most puzzling or confusing?

What was it about the session this week that surprised you the most? (This could be something about your own reactions to what went on, or something that someone did, or anything else that occurs to you).

3.4.8 Critical Incidents 2: Exploring different approaches template

Please take about five minutes to respond to the questions below about this week's session(s). Don't put your name on the form – your responses are non-identified. When you have finished writing, put the form on the table by the door. At the start of next week's session, I will be sharing the group's non-identified responses with all of you. Thanks for taking the time to do this. What you write will help me make our sessions more responsive to your learning needs.

Reflecting upon the past week, identify one incident, situation or event that for some reason was of particular significance to your university studies.

Write a brief statement describing the situation.

What were the main issues as you understand them?

How effectively were these issues addressed?

What are three or four different approaches that could be taken to address these issues? You might like to consider aspects of your course of study that may suggest different approaches.

What could you have done differently in this situation?

What might help you to take a different approach in the future?

What have you learnt from considering different approaches to this situation?

Adapted from Peavey, F (1997). Strategic questioning: An approach to creating personal and social change. V Hutchinson (Ed.). www.jobslatter.org.nz/

3.4.9 Critical Incidents 3: Work-integrated learning

Please take about five minutes to respond to the questions below about this week's session(s). Don't put your name on the form – your responses are non-identified. When you have finished writing, put the form on the table by the door. At the start of next week's session, I will be sharing the group's non-identified responses with all of you. Thanks for taking the time to do this. What you write will help me make our sessions more responsive to your learning needs.

Reflecting upon the past week, identify one incident, situation or event that for some reason was of particular significance to your university studies.

Briefly describe the incident.

What approaches, ideas or concepts in your university studies may be relevant to this incident?

If there were others involved in the incident (e.g. someone from your host organisation, a recipient of the service, a fellow student), how might their view of the incident differ from yours?

What might you do differently in similar situations as a result of considering perspectives other than your own?

3.5 The Application List

3.5.1 Overview

The applications list is a classroom assessment technique devised by Angelo and Cross (1993) used to provide feedback to the teacher on student learning. However, it also encourages students to become active learners. By asking students to apply what they have learned to a particular situation, this activity requires students to engage with the new material by relating it to prior knowledge. The student must not only reflect on what they have learned in class but demonstrate a deeper understanding of the topic by thinking about the new material's implications beyond the classroom.

3.5.2 Application

This exercise can be used a few weeks into a subject after learners have been introduced to new material such as a particular principle, theory or procedure. Applications include:

- + developing critical and practical thinking skills through reflection
- + enabling learners to take an active part in their own learning
- + encouraging learners to connect with prior knowledge and reflect on the new material's implications beyond the classroom.

3.5.3 Materials

- + copies of the applications list.
- + pens (alternatively, you could ask participants to post their reflections in an online discussion forum).

3.5.4 Time

- + allow participants at least five minutes to reflect, as well as 10 to 15 minutes in the following session to discuss the responses.

3.5.5 Process

Near the end of a session, hand out copies of the applications-list template to participants and give them five minutes to write their responses. Collect the lists for discussion in the following session, paying particular attention to the themes that emerge. Compile the responses into a resource to encourage shared learning.

3.5.6 References

Angelo, TA, and Cross, PK (1993). Classroom assessment techniques: A handbook for college teachers. San Francisco: Jossey-Bass.

3.5.7 The Applications List Template

Take a moment to recall the ideas, techniques and strategies we've discussed – and those you've thought up – to this point in the session. Quickly list as many possible applications as you can. Don't censor yourself! These are merely possibilities. You can always evaluate the desirability and/or feasibility of these ideas later.

Interesting IDEAS/TECHNIQUES from this session	Some possible APPLICATIONS of those ideas/techniques to my learning or my work

3.6 One word at a time

3.6.1 Overview

Improvisation has been variously defined as “an adaptive behaviour to a real-time unpredicted event, based on creativity and divergent skills, providing a wide scale set of stimuli” (Biasutti, 2017) and “spontaneous creativity with little or nothing planned in advance” (Sarath, 2014, p. 40). It involves a mindset where one cannot “foresee or choose to foresee [sic]” and where one “reach[es] beyond what is readily available” (Douglas and Gulari, 2015).

Long used to improve actors’ sensitivity, responsiveness, intuition, and mental and emotional flexibility, improvisation is finding increasing use in the classroom as both a teaching approach and a learning technique (Holdhus, et al 2016; Biasutti, 2017). Berk and Trieber (2009, p. 33) propose four reasons why improvisation is particularly appropriate for learning contexts: it is consistent with a desire to learn by inductive discovery, experience, social interaction, and collaboration; it taps into students’ multiple and emotional intelligence; it fosters collaborative learning by helping to build trust, respect, and team spirit as well as listening, verbal and nonverbal communication, ad-libbing, role-playing, risk-taking, and storytelling skills; and it promotes deep learning through active engagement with new ideas, concepts, or problems. Similarly, Westerlund, Partti, and Karlson (2015, p. 71) have found that improvisation helps student teachers “develop trust and new patterns of interaction, peer-collaboration and teaching partnerships”.

One important aspect of improvisation is its ability to bring participants outside of preconceived boundaries and constraints through the application of intuition, thus giving them the perspective to perceive complex situations in a more holistic and integrated way (Crossan, 1998; Caines and Heble, 2015; Douglas and Gulari, 2015). The One Word at a Time activity, which by its nature encourages participants to relinquish control over the process of collaboratively making meaning, allows them to practise openness to others’ ideas. By extension, it also encourages them to be open to their own intuitive discoveries and reflections.

3.6.2 Application

The exercise (based on Berk and Trieber 2009, pp. 40-42) can be used to help participants learn to access their intuition and work collaboratively with peers when making meaning from ambiguous and unpredictable situations.

Applications include:

- + stimulating creativity
- + encouraging attentive listening
- + cultivating flexible thinking and spontaneity

- + building resilience
- + building confidence in handling ambiguity
- + encouraging metacognition on the concept of reflection
- + encouraging collaboration and trust.

3.6.3 Materials

None, but encourage learners to approach the activity with open minds.

3.6.4 Time

About 15 minutes should be allocated:

- + five minutes for explanation
- + five minutes for the exercise
- + five minutes for group reflection and discussion once all desired iterations are complete.

3.6.5 Process

Participants stand or sit in a circle; sitting is preferable, as a configuration where all (including the educator) are sitting has been shown to improve engagement (St. Onge and Eitel, 2017). The educator explains that the participant to the left of the instructor will begin a sentence by saying the word 'reflection'. Note: Any word suitable to any context or topic can be used to prompt the start of this improvisation.

The participant to the left of that student adds one – and only one – word to the sentence. Each participant, in turn, adds only one word, keeping any pauses to a minimum. Every word, no matter how short (including words like 'and', 'the', and 'a'), counts as that participant's contribution to the sentence.

When a participant feels that their addition has completed the sentence, that participant claps their hands once. The next participant resumes with the word "Reflection" (or whichever word has been chosen for the exercise).

When every participant has had a chance to contribute to a sentence, the instructor facilitates a discussion about students' reactions to the exercise and what insights they have gained about reflection from the process of building the sentences as a group.

3.6.6 References

Berk, RA, and Trieber, RH (2009). Whose classroom is it, anyway? Improvisation as a Teaching Tool. *Journal on Excellence in College Teaching*, 20(3), 29-60.

Biasutti, M (2017). Teaching improvisation through processes: Applications in music education and implications for general education. *Frontiers in Psychology*, June 2.
doi.org/10.3389/fpsyg.2017.00911

Caines, R, and Heble, A (Eds) (2015). *The improvisation studies reader: Spontaneous acts*. Abingdon: Routledge.

Crossan, MM (1998). Improvisation in action. *Organization Science*, 9(5), 593-599.

Douglas, A, and Gulari, MM (2015). Understanding experimentation as improvisation in arts research. *Qualitative Research Journal*, 15(4), 392-403.

Holdhus, K, Høisæter, S, Mæland, K, Vangsnes, V, Engelsen, KS, Espeland, M, and Espeland, Å (2016). Improvisation in teaching and education – roots and applications. *Cogent Education*, 3(1). www.tandfonline.com/doi/citedby/10.1080/2331186X.2016.1204142

St. Onge, J, and Eitel, K (2017). Increasing active participation and engagement of students in circle formations, *Networks*, 19(1), Article 7.

Sarath, EW (2013). *Improvisation, creativity, and consciousness: Jazz as integral template for music, education, and society*. Albany: State University of New York Press.

Westerlund, H, Partti, H, and Karlsen, S (2015). Teaching as improvisational experience: Student music teachers' reflections on learning during an intercultural project. *Research Studies in Music Education*, 37(1), pp. 55-75

4. Section 4: practising reflection: beyond text (to sensory)

4.1 Drawing with two hands

4.1.1 Overview

The act of drawing has been shown to be associated with relaxation, reflection, creativity, and mindfulness (Belkofer, Van Hecke, and Konopka, 2014), which in turn has been linked to enhanced cognitive and academic performance (Shapiro, Brown, and Astin, 2008).

This activity involves participants drawing with both hands simultaneously using three different approaches, and then participating in personal and group reflection on the activity.

Recent research has discredited the notion that the brain's left and right hemispheres house particular functions such as analytical ability or artistic creativity (Geake, 2008; Lindell and Kidd, 2011). Other investigations, however, suggest that individuals become more strongly 'handed', possibly through habit, as they mature (Labak et al 2011). The approaches in this activity therefore stem from the idea that individuals have preferences for left- or right-handedness, and that the simultaneous use of both hands to draw in various ways can sometimes be a challenge. This conscious attempt to draw with both hands at once can thus encourage mindful attention to what is generally an automatic activity.

Moreover, the act of reflecting through writing and discussion on the experience of creating art, as in this activity, has been associated with a deeper understanding of one's own creativity (Catterall, 2005).

4.1.2 Application

The activity has many applications, ranging from a fun warm-up exercise to a reflective exploration of the experience of using both hands simultaneously. Applications include:

- + serving as a warm-up prior to reflective activity
- + serving as a means for mindfulness, such as when learners reflect both in and on (Schön, 1983) the experience of using both hands simultaneously
- + helping participants focus while reflecting
- + encouraging creativity, adaptability, and flexibility.

4.1.3 Materials

- + three pieces of unlined paper, as large as practicable for the workspace, per person
- + at least two differently coloured biros, felt pens, crayons, or pencils, etc. per person.

4.1.4 Time

Allocate a minimum of 35-40 minutes:

- + five to 10 minutes for explanation and set up
- + five minutes for each of the three approaches (total of 15 minutes)
- + five minutes for personal reflection
- + at least 10 minutes for group reflection, depending on your purpose for using the activity.

4.1.5 Process

The process involves a three-part drawing activity followed by personal and group reflections:

1. Following

Taking a pen in each hand, draw with both hands at the same time, not letting the hands touch each other. The dominant hand leads and the non-dominant hand follows (copies) the lead hand around the page exactly and at the same time (Figure 1). Encourage learners to try switching lead hands so that the non-dominant hand also leads. Encourage learners to use the whole page and to continue the process for at least five minutes.

2. Mirroring

Take a new page and, with a pen in each hand, draw a mirror image using both pens at the same time (Figure 2). Continue mirror drawing for at least five minutes, longer if the process is being used as a reflective tool.

Encourage learners to use the whole page.

3. Free flow

On a new page, allow both hands to draw freely in whatever unique way feels comfortable (Figure 3). Encourage learners to use the whole page and to vary the speed at which they draw. Continue this process for at least five minutes.

4. Personal reflection

Immediately after all three drawings have been completed, encourage learners to reflect in writing on their experience. This could include a free flow of reactions, ideas, and thoughts, as well as suspension of judgement for the first few minutes. Allow at least five minutes for personal written reflection.

5. Group reflection and discussion

The degree of group reflection and discussion will depend on the purpose for which the activity is being used. Drawing on models for facilitating reflection (eg Boud, Keogh and Walker, 1984; Kolb, 1984), questions for personal or group reflection for each stage of the cycle may include:

- + concrete experience
 - what am I feeling and thinking during (each of) these activities?
 - what's happening in my body and my felt sense during each of these activities?
- + reflection observation you
 - what did I do?
 - what happened?
 - what did I feel, think and experience during each activity?
 - was there any difference in how I felt, thought and experienced during each activity?
- + abstract conceptualisation
 - how did each activity influence or detract from my reflection and learning?
 - what can I learn (eg about myself, others, a topic, a specific reflective issue) from this experience?
 - how can I apply this learning?
 - what other applications are there for this activity?
 - what could I do differently?
- + active experimentation
 - what happens if I do this?
 - what changes or adaptations are needed?
 - how might this be done?

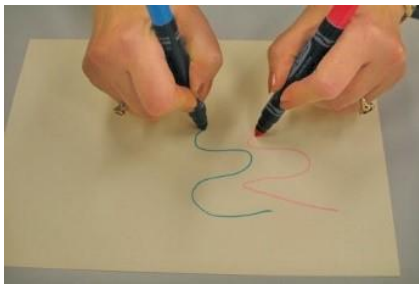


Figure 1
Dominant hand leads

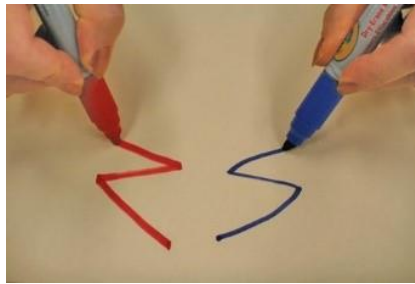


Figure 2
Mirror drawing



Figure 3
Free flow drawing

4.1.6 References

Boud, D, Keogh, R, and Walker, D (Eds.) (1985). *Reflection: Turning experience into learning*. London: Kogan Page.

Belkofer, CM, Van Hecke, AV, and Konopka, LM (2014). Effects of drawing on alpha activity: A quantitative EEG study with implications for art therapy. *Art Therapy*, 31(2), 61-68.

Catterall, JS (2005). Conversation and silence: Transfer of learning through the arts. *Journal of Learning Through the Arts*, 1(1), escholarship.org/uc/item/6fk8t8xp.

Geake, J (2008). Neuromythologies in education. *Educational Research*, 50(2), 123-133.

Kolb, DA (1984). *Experiential learning*. Englewood Cliffs, NJ: Prentice Hall.

Labak, I, Šnajder, D, Kostović-Srzentić, M, Benšić, M, Ništ, M, Ilakovac, V, and Heffer, M (2011). Writing and drawing with both hands as indicators of hemispheric dominance. *Collegium antropologicum*, 35(supplement 1).

Lindell, AK, and Kidd, E (2011). Why right-brain teaching is half-witted: A critique of the misapplication of neuroscience to education. *Mind, Brain, and Education*, 5(3), 121-127.

Schön, D (1983). *The reflective practitioner*. New York: Basic Books.

Shapiro, SL, Brown, KA, and Astin, JA (2008). *Toward the integration of meditation into higher education: A review of research*. Center for Contemplative Mind. www.contemplativemind.org/resources/research.html.

4.2 Food for thought

4.2.1 Overview

This activity, adapted from a resource by Dave Lehman (2005), is a creative and fun way to encourage students to think differently about a topic using text-based reflective prompts. Reflective prompts can help generate evaluative reflection on past behaviours (Rodway et al, 2010), and are often used in reflective journal writing.

Johns's model of structured reflection (2000) supports the need for the learner to work with a supervisor throughout their learning experience. He refers to this as a guided reflection and recommends that students use a structured diary (pp. 21-22). Johns's model (1995), which is influenced by the seminal work of Carper (1978), is based on five cue questions that help the learner break down their experiences and reflect on the process and outcomes. Adapting Johns's approach, this activity is a flexible way to prompt creative reflection on any subject matter and in various contexts.

4.2.2 Application

This is a simple activity you can use at the beginning or end of a session (such as a tutorial) to engage learners and to stimulate new ways of understanding what they have learnt.

Applications include:

- + ice-breaker activity with a new group
- + encouraging group or individual reflection
- + stimulating ideas for writing
- + encouraging group discussion.

4.2.3 Materials

- + fortune cookies – one for each member of the class

These could be edible cookies, generated online, or you can make or purchase reusable fabric "cookies" where you can insert your own prompts. The "fortunes" could even include key terms relevant to content or audience.

4.2.4 Time

This activity can take as little as 10 minutes depending on the size of the group and the amount of discussion you wish to have.

Allow participants about two to three minutes to reflect on their fortune, and then another few minutes for each participant to share their reflections. If time is limited or the group is large, you could ask a few volunteers to share, or participants could form smaller groups.

4.2.5 Process

Give each participant a fortune cookie and ask them to open it, but not to read the fortune aloud or to share it with anyone else. For example, fortunes may entail:

- + your luck will be completely changed today
- + a journey of a thousand miles begins with a single step
- + we don't see things as they are, we see them as we are.

Ask participants to think about how this “fortune” may relate to a particular topic or theme, for example, “How does the fortune in your cookie relate to your ideas about the role of reflection for learning?”. Ask them to write notes if they would like, as they will be asked to share their ideas. This activity is equally successful in any discipline as any theme, issue or concept can be used as a focus.

Go around the group or ask for volunteers to share their fortunes and their reflection.

4.2.6 References

Carper, B (1978). Fundamental patterns of knowing in nursing. *Advances in Nursing Science*, 1(1), 13-23.

Johns, C (1995). Framing learning through reflection within Carper's fundamental ways of knowing in nursing. *Journal of Advanced Nursing*, 22(2), 226-234.

Johns, C (2000). *Becoming a Reflective Practitioner: a reflective and holistic approach to clinical nursing, practice development and clinical supervision*. Oxford: Blackwell Science.

Lehman, D (2005). Fortune cookie warm up.

schoolreforminitiative.org/doc/fortune_cookie.pdf

Rodway, P, Schepman, A, Reynolds, Hartley, P, and Coleman, G (2010). The role of reflection in enhancing academic skills: An empirical investigation. Final report.

www.advance-he.ac.uk/knowledge-hub/role-reflection-enhancing-academic-skills-empirical-investigation

4.3 Imagine a tea cup

4.3.1 Overview

This exercise is adapted from a chapter on developing design education through encouraging designerly thinking by Ken Baynes (1989). Baynes defines design as “the ability to imagine and then bring about desired changes in places, products and communications” (p. 70). Drawing on psychological studies, Baynes suggests that this ability to bring about change depends on the “ability to form in the mind a complex and realistic model of external reality or imagined things” (p. 71).

While written in a design context, this exercise can be used in various disciplines and settings to encourage reflection, creativity, and mindfulness. The variety of imagined teacups generated by the group can act as a powerful reminder of the value of creative approaches to reflection. This activity can also be used to emphasise multiple perspectives, illustrating to participants the diversity and potential of what we perceive and what we imagine, and serving as a reminder of the inherent and diverse creativity we all have.

4.3.2 Application

This is a simple activity you can use at the beginning or end of a session (such as a tutorial) to engage learners and to stimulate new ways of understanding what they have learnt.

This exercise can be used for a number of applications including:

- + ice-breaker activity with a new group
- + warm-up exercise at the beginning of a session
- + encouraging creativity
- + stimulating the imagination.

4.3.3 Materials

None, but encourage learners to approach the activity with open minds.

4.3.4 Time

Allow approximately three minutes for the guided reflection, then another five to 10 minutes for the group to describe and discuss what they imagined.

4.3.5 Process

Ask your group to have their eyes comfortably lowered or closed, and to imagine a cup and saucer.

Give the group a moment to visualise the cup and saucer then instruct them to imagine they are picking up a teaspoon and hitting the side of the cup with it.

Wait a few more moments, then ask the group to imagine balancing the spoon across the cup.

Ask the group to open their eyes and then ask the following questions:

- + describe the cup you imagined
- + was there tea in the cup?
- + was there a sound when you hit the cup?
- + how did you balance the spoon?
- + was the spoon placed with its bowl facing up or down?

Depending on how the group responds you might like to include additional prompts.

Group members can then discuss and compare what they imagined in order to illustrate diverse ways of sensing and the multiple perspectives that participants have.

4.3.6 References

Baynes, K. (1989). The basis of designerly thinking in young children. In A. Dyson (Ed.). *Looking, making and learning: Art and design in the primary school* (pp. 70-85). London: Bedford Way Papers 36, Institute of Education, University of London.

4.4 Invisible whiteboard

4.4.1 Overview

We have created this activity as a mindful and focusing activity for learners, an activity that aims to support learners to develop “focused attention and personal readiness to learn” (Kováčiková and Reid, 7). This exercise has been inspired by Hargreaves (2016) and the relationship of movement to perception. Although there appears to be insufficient evidence to support this approach (Spaulding, Mostert, and Beam, 2010), there is anecdotal support amongst teachers that may indicate some contribution to learning (Stephenson, 2009).

The idea of particular functions (such as creativity or analytical ability) residing in particular hemispheres of the brain has been replaced by the idea of functional connectivity: that the brain uses any and all functional areas in a connected way for the task at hand (Geake, 2008; Doidge, 2007). Moreover, the linkages between mind and body in the process of learning have attracted the attention of an increasing number of researchers under the broad heading of “embodied cognition” (similar terms include “embodied learning” and simply “embodiment”): “the enactment of knowledge and concepts through the activity of our bodies” (Lindgren and Johnson-Glenberg, 2013, p. 445), or, more technically, the idea “that cognition is mediated by representations expressed in the vocabulary and format of sensory and motor representations” (Mahon, 2016, n.p.).

As Stoltz (2015, p. 484) writes,

...one of the primary roles of education is to provide and explore different learning environments from the students' perspective so students gradually come to understand how things relate to each other and to themselves. To do this we need to locate the body as the focal point in the production of the lived experience, and also recognise the role corporeal movement and embodiment plays in learning, in, by, and through education.

In this context, physical movement can perform an important role in helping learners make connections between thoughts, actions, and their own agency.

4.4.2 Application

This activity aims to help participants to increase their own physical awareness of being in the world, and to connect their bodies and their cognition through consciously expressing abstract concepts (numbers) in a physical way that requires more attentiveness than merely writing the numbers by habit.

Applications include:

- + helping participants get to know each other
- + developing spontaneity and collaboration

+ strengthening the links between body and brain, thus encouraging embodied cognition.

4.4.3 Materials

None, but participants should be able to stand and spread out so that they can do the activity without interfering with others' space.

4.4.4 Time

While a minimum of five minutes should be allocated for participants to try the exercise on their own, the total time will depend on whether participants then move on to partner work, and how many iterations the instructor asks them to do.

4.4.5 Process

The steps in the process are a guide of instructions for the educator to provide to the participants.

1. Stage one

Stand with everyone facing the same direction and check that you can stretch your arms out and to the side without touching anyone else. For each step, the educator must demonstrate the activity first, with clear instructions, before participants undertake the activity.

Imagine you are standing in front of a whiteboard and your index fingers are marker pens. You will be writing two-digit numbers on your imaginary board with both hands moving the same way.

Start with a number such as 77, and demonstrate drawing the two sevens, side-by-side, starting together at the top and ending simultaneously at the bottom. Then, call out a number such as 72, demonstrating how this is to be written simultaneously – using the left hand to write seven, while the right hand is writing two, from top to bottom and side-by-side. Ask participants to do this independently.

Call out additional numbers for participants to write; eg 11, 00, 13, 57, etc.

2. Stage two

Imagine you are writing on a large sheet of glass, with someone at the other side of the glass reading the numbers you are drawing.

Write the numbers in reverse: 13, 77, 38, etc.

Choose a partner. Work in pairs with one choosing the two-digit number for the other to write in reverse, so that someone facing them could read the numbers properly. The partners then swap roles so that each participant has the opportunity to write numbers in reverse as well as choose the numbers to be written.

The educator can then ask reflective questions:

- + what was that activity like for you?
- + what did you find easy?
- + why do you think it was easy for you?
- + what did you find challenging/difficult?
- + what made it difficult for you?
- + what was it like to choose the numbers versus writing the numbers'?
- + what worked, what didn't?
- + what could you have done differently?
- + what's one thing you learnt about yourself from this exercise?
- + how can you apply this learning?

4.4.6 References

Doidge, N (2007). *The brain that changes itself*. New York, NY: Viking Books.

Geake, J (2008). Neuromythologies in education. *Educational Research*, 50(2), 123-133.

Hargreaves, K (2016). *Reflection and brain gym exercise*. Leeds: Faculty of Medicine, Leeds University

Kováčiková, E, and Reid, E (2018). Using total physical response and brain gym exercises to increase mindfulness in the English language learning classroom.

www.researchgate.net/publication/328956247_Using_Total_Physical_Response_and_Brain_Gym_Exercises_to_Increase_Mindfulness_in_the_English_Language_Learning_Classroom.

Lindgren, R, and Johnson-Glenberg, M (2013). Emboldened by embodiment: Six precepts for research on embodied learning and mixed reality. *Educational Researcher*, 42(8), 445-452.

Mahon, BZ (2016). What is embodied about cognition? *Language, Cognition and Neuroscience*, 30(4), 420-429.

Spaulding, LS, Mostert, M.P., and Beam, AP (2010). Is Brain Gym® an effective educational intervention? *Exceptionality*, 18, 18-30.

Stephenson, J (2009). Best practice? Advice provided to teachers about the use of Brain Gym® in Australian schools, *Australian Journal of Education*, 53(2), 2009, pp.109-124.

Stolz, SA (2015). Embodied learning. *Educational Philosophy and Theory*, 47(5), 474-487.

4.5 Notice Five Things

4.5.1 Overview

Mindfulness can be understood in terms of a practice that is available to anyone to encourage the development of qualities such as awareness, insight, and compassion (Kabat-Zinn, 2003).

Mindfulness of the five senses and raising awareness of this through a conscious level of thinking can facilitate reflective practice. When learners are encouraged to become more aware of their thoughts and feelings, they learn how to reflect (Kabat-Zinn, 1990). Furthermore, if learners are encouraged to be mindfully aware of their surroundings and their relationship with them, it becomes possible to think beyond themselves and gain insights into the perceptions of others (see Bolton, 2010, p. 15; Leigh and Bailey, 2013, pp. 165-166). Mindfulness can also offer the practitioner “an opportunity to deepen the relationship with themselves; and a chance to see and do things differently” (Nugent et al, 2011, p. 7).

This mindfulness exercise encourages learners to pause and refocus, allowing deeper engagement with learning and observation.

4.5.2 Application

This exercise is best used at the beginning of a session to encourage learners to refocus their attention.

Applications include:

- + practising the experience of being mindful
- + aiding sensory awareness
- + encouraging whole-person learning
- + serving as an ice-breaker activity.

4.5.3 Materials

None, but encourage participants to approach the activity with mindful attention.

4.5.4 Time

About five to 10 minutes

4.5.5 Process

Begin by inviting everyone to make themselves comfortable.

It is recommended that you only undertake this activity if you have already scaffolded participants with earlier mindful activities to ensure that participants are comfortable and into the right frame of mind for this activity.

Guide learners through the following short mindfulness and focusing exercise. Allow about one minute for each step.

1. notice five things you can see
2. notice five things you can hear
3. notice five things you can feel in contact with your body (eg your feet in your shoes, the air on your face, your back against the chair, or the fabric of your clothes touching your legs)
4. now bring together all 15 things at the same time (the five things you could see, the five things you could hear, and the five things that you could feel)
5. depending on how much time you have, you can finish the activity at this point, or you may want to discuss (in pairs or groups) how this activity aided sensory awareness and what insights it brought up.

4.5.6 References

Bolton, G (2010). *Reflective practice: Writing and professional development* (3rd edn). London: Sage.

Kabat-Zinn, J (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology: Science and Practice*, 10, 144-156.

Leigh, J, and Bailey, R (2013). Reflection, reflective practice and embodied reflective practice. *Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice*, 8(3), 160-171.

Nugent, P, Moss, D, Barnes, R, and Wilks, J (2011). Clear(ing) space: mindfulness based reflective practice. *Reflective Practice: International and Multidisciplinary Perspectives*, 12(1), 1-13

4.6 River Journey

4.6.1 Overview

Storytelling in general and autobiography in particular have been shown to be important tools for building identity, creating meaning, and increasing competence in interacting with those of other cultures (McDrury and Alterio, 2004; Mendez Garcia, 2016; Milam et al, 2014); importantly, they give people “the chance to reconsider themselves in the light of feelings since introspective accounts are characterised by an emotional undercurrent” (Mendez Garcia, 2016, p. 92). As Andonoro et al (2012, p. 106) write,

People define themselves through the past, present, and future, as well as imagined involvements with people and things. One of the most important functions of narrative is to situate particular events against a larger horizon of what people consider to be human passions, virtues, philosophies, actions, and relationships.

This exercise has been adapted from the Classroom of Many Cultures resources (www.classroomofmanycultures.net) and was shared by youth-based community organisations in India. Bilous et al (2018) assert the importance of “the unpredictable, emotional, and personal reality of bringing together diverse ideas and perspectives”, and point out the need for “opening up possibilities for more creative ways of communicating and listening to what is seen, heard and felt” (p. 165).

4.6.2 Application

This activity is useful for allowing participants to understand their own and each other’s backgrounds and cultural and social contexts. It can also be used as a group activity, reflecting on team or common learning journeys.

Applications include:

- + encouraging empathy.
- + cultivating self-awareness.
- + recognising the role of emotions in making meaning.
- + encouraging respect for others’ experiences.
- + creating connections and shared understanding.

4.6.3 Materials

- + pens and paper.

4.6.4 Time

Fifty minutes is recommended:

- + five minutes for explanation
- + 10 minutes to draw the map
- + 10 minutes for partner reflection and discussion
- + 20 minutes for all participants to present their partner's map (this may vary depending on group size)
- + Five minutes for group reflection.

4.6.5 Process

It is important to explain the entire process to participants before they begin so that they can make an informed choice about what they wish to disclose.

Give each participant paper and ask them to draw a river that represents their own personal journey. The river should start with their birth and include the most important moments or biggest turning points in their life that brought them to this session today. Ask them to also think about where this might lead to.

Next, ask participants to find a partner and share elements of their river journey with each other.

Bring the group back together and ask each participant to summarise their partner's river journey. The group discussion should be moderated to ensure that the exercise fosters positive learning and feedback.

Finish with five minutes of group reflection about the process of drawing and discussing the river journeys.

This activity can also be adapted in several ways. It can be used as an individual activity to enhance self-awareness. It can also be used as a team reflection activity to map a team's history, goals, and vision, while building connection and understanding.

4.6.6 References

Andonoro, C, Popa, AB, Bletscher, CG, and Albert, J (2012). Storytelling as a vehicle for self-awareness: Establishing a foundation for intercultural competency development. *Journal of Leadership Studies*, 6(2), 102-109.

Bilous, R, Hammersley, L, Lloyd, K, Rawlings-Sanaei, F, Downey, G, Amigo, M, Gilchrist, S., and Baker, M (2018). All of us together in a blurred space: principles for co-creating curriculum with international partners. *International Journal for Academic Development*, 23(3), 165-178.

McDrury, A, and Alterio, M (2004). Learning through storytelling in higher education. London: Kogan Page.

Mendez Garcia, MC (2016). Intercultural reflection through the Autobiography of Intercultural Encounters: Students' accounts of their images of alterity. *Language and Intercultural Communication*, 17(2), 90-117.

Milam, JL, Jupp, JC, Hoyt, MW, Kaufman, M, Grumbein, M, O'Malley, MP, Carpenter, BS, and Slattery, P (2014). Autobiography, disclosure, and engaged pedagogy: Toward a practical discussion on teaching foundations in teacher education programs. *Teacher Education and Practice*, 27(1), 12-43.

5. Section 5: practicing reflection: creative

5.1 Body parts debrief

5.1.1 Overview

This debriefing activity, developed by Michelle Cummings (n.d.), was designed to foster a tactile, embodied approach to reflection

This version employs a strengths-based approach (Harvey, 2014) to allow students a safe space in which to debrief, and which encourages them to reflect on the role of their emotions as part of their overall learning.

The role of emotion in learning has often been overlooked in educative and reflective studies, but a growing body of literature highlights the important role that it has to play in both learning and reflection (Harvey, Baumann and Fredericks, 2019; Kabat-Zinn, 1990). Day and Leitch (2001, p. 406), for instance, maintain that feelings and emotion play a crucial role in the development of learning since it is through people's subjective emotional world that they make sense of the world at large. Raelin (2001) suggests that emotions can act as catalysts for reflection.

5.1.2 Application

This debriefing activity can be used in smaller classes or small groups at the end of a session. Applications include:

- + fostering a safe environment for participants to share and reflect
- + encouraging participants to identify and connect with emotions
- + summarising or synthesising learning from different perspectives
- + applying abstract and tactile prompts to reveal a deeper meaning.

5.1.3 Materials

Objects that are shaped like or symbolise each body part, or alternatively, you can bring in images of each body part.

A list of body parts is given below (you may also wish to add others that you think of):

- + brain
- + liver
- + heart
- + foot

- + ear
- + lungs
- + hand
- + spine/Bone
- + eye
- + nose
- + stomach
- + time

Allow a few minutes for the participants to reflect and/or write, then allow each one about two or three minutes to share their responses to the class or in small groups.

5.1.4 Process

Ask each participant to select a body part from the bag. Then ask them to respond to at least one reflective prompt attached to the body part, either within a group or as a journal entry.

The following metaphors can be used for each body part:

Brain: Share something new you learned about yourself, a teammate, or the class.

- + what thoughts do you have?
- + what did you learn through your experience?

Ear: Describe something you heard or something that was hard to hear.

- + what was a good idea you heard?
- + what was something that you really listened to?
- + was there some feedback that was difficult for you to hear?

Eye: Share a vision you had for yourself or the class, something you saw, or an observation you made.

- + what was something new that you saw in yourself or someone else?
 - + what vision do you have for yourself or the class?
 - + what qualities do you see in yourself?
 - + how did you see yourself perform within the class?
-

+ what was an important observation you made?

Foot: Reflect on what you will leave with today.

+ what is something (an idea, something learnt) you will “walk” away with after today?

+ was today a good balance or is there something else you need to know more of?

+ in what direction would you like to see the class go?

Hand: Reflect on a moment when you felt supported, or felt that you would like to offer a hand to support someone else.

+ in what way did the class or individual support you?

+ who is someone you would like to give a hand to (applause or congratulate) for a job well done?

+ how did you or will you lend a hand (support the class)?

Heart: Name something you felt or a feeling you experienced.

+ what is something you experienced that pulled at your heartstrings (that heightened or activated your emotions)?

+ how did you feel?

Liver: Explain a moment when you felt you were able to “digest” or “metabolise” something new.

+ do you have an example of being able to “break down” something into smaller parts or understandings?

+ was there a moment when you were able to build or “metabolise” a new piece of knowledge?

Lungs: Share about how an experience has challenged you or motivated you to think differently.

+ when was a time when you needed to take a deep breath?

+ was there an experience when you felt like you wanted to yell aloud or scream?

Nose: Tell us about what you feel “smells good” about a particular experience.

+ have you ever stuck your nose in (enquired about) somebody else’s business?

+ what was something that “stank” (smelled or felt bad) about the activity?

- + what is something that “smells fishy” (or you are still questioning) about what you learned?

Spine/Bone: Think about your strengths and your class’s strength or “backbone”.

- + what do you consider your backbone/the class’s backbone?
- + who or what is integral to the class’s success?
- + what is a strength you have identified for yourself or the class?
- + have you thought of areas where you could develop strengths?

Stomach: Explain something that took guts or a strong stomach (personal strength) for you to do, or pushed you outside of your comfort zone.

- + what pushed you outside your comfort zone?
- + were there any sick feelings you have felt before?
- + was something hard to stomach (difficult to understand, tolerate, or digest) for you?

5.1.5 References

Cummings, M (n.d.). Effective debriefing tools and techniques.

aee.memberclicks.net/assets/docs/Webinar/MCummings/effective%20debriefing%20tools%20and%20techniques%20webinar1.pdf.

Day, C, and Leitch, R (2001). Teachers’ and teacher educators’ lives: the role of emotion. *Teaching and Teacher Education*, 17, 403-415.

Ghaye, T (2007). Is reflective practice ethical? (The case of the reflective portfolio). *Reflective Practice: International and Multidisciplinary Perspectives*, 8(2), 151-162.

Harvey, M (2014). Strengths-based approach. In Coughlan, D and Brydon-Miller, M (Eds), *The SAGE encyclopaedia of action research*, Volume 2. Thousand Oaks: SAGE, 732-735.

Harvey, M, Baumann, C, and Fredericks, V (2019). A taxonomy of emotion and cognition for student reflection: introducing emo-cog. *Higher Education Research and Development*, 38(6), 1138-1153. doi.org/10.1080/07294360.2019.1629879

Kabat-Zinn, J (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology Science and Practice*, 10, 144-156.

Leigh, J, and Bailey, R. (2013). Reflection, reflective practice and embodied reflective practice. *Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice*, 8(3), 160-171

Raelin, JA (2001). Public reflection as the basis of learning. *Management Learning*, 32(1), 11-30.

5.2 Circular response

5.2.1 Overview

This exercise is from Brookfield and Preskill's (1999) book on using discussion as a way of teaching. They argue that many students find it hard to acquire attentive listening skills.

The circular-response exercise is used as a way of democratising participation, promoting continuity, and providing students with the experience of the effort required to listen respectfully (Brookfield and Preskill, 1999, pp. 64-65).

5.2.2 Application

This exercise can be used to facilitate class discussion about a particular topic in a way that allows all participants to contribute. The optimal size for this exercise is six to eight participants, but it can also work in larger tutorial groups. Applications include:

Providing everyone with the opportunity to participate in learning through class discussion.

Encouraging active-listening skills.

Developing critical and informed thinking skills.

5.2.3 Materials

None, although you could have copies of the activity's guidelines (listed under PROCESS) available.

5.2.4 Time

Three minutes for each participant to talk, then another 10 to 15 minutes for group discussion, although you can choose whatever lengths of time suit your group and discussion topics.

5.2.5 Process

Ask your participants to sit in a circle so that they can all see each other.

The group agrees on a relevant theme to discuss. This could be something that has emerged in the lecture or assigned readings for the week or could apply to the course more broadly.

Nominate a volunteer to begin the discussion. This person speaks for three minutes on the chosen topic.

Participants agree to adhere to the following set of guidelines (and these should be displayed clearly for the class to see):

- + no one may be interrupted while speaking
- + No one may speak out of turn in the circle
- + each person is allowed only three minutes to speak (if you have a larger group, you may shorten the length of time)
- + each person must begin by paraphrasing the comments of the previous speaker
- + each person, in all comments, must strive to show how his or her remarks spring from or respond to the comments of the previous speaker
- + after three minutes, the first person must stop speaking, and the discussion moves to the person sitting to their left
- + the next person is also allowed the same amount of time to speak, but they must begin by paraphrasing what the previous speaker said, and then demonstrate how their response is related to the previous comments
- + after three minutes, the second speaker stops and the person to their left becomes the third speaker, and so on until the discussion has moved all the way around the circle. If the speaker finishes before the time is up, the turn passes to the next speaker. Everyone must have a turn; participants may not pass their turn without saying anything
- + after each speaker has had a turn, the floor is opened for general conversation, and the guidelines are no longer in force.

5.2.6 References

Brookfield, SD, and Preskill, S (1999). Discussion as a way of teaching: Tools and techniques for university teachers. Buckingham: Society for Research into Higher Education and Open University Press.

5.3 Images as reflective prompts

5.3.1 Overview

This exercise encourages participants to think creatively.

Sometimes people can find it difficult to understand or articulate an idea through language. Using an arts-based approach to learning can often help deepen understanding (Barone and Eisner, 2012; Samaras, 2010). Photo elicitation, where photos or images are used to promote reflection, can stimulate learners to “project their thoughts for reflection” (Gray, et al, 2018, p.232). This may be explained by the fact that the parts of the brain that process visual information are evolutionarily older than the parts that process verbal information. Thus images evoke deeper elements of human consciousness than do words; exchanges based on words alone utilize less of the brain’s capacity than do exchanges in which the brain is processing images as well as words (Harper, 2002, p. 13).

5.3.2 Application

This exercise can be used as a short activity or incorporated into a regular class or tutorial to engage participants with course content and to stimulate new ideas. Applications include:

- + serving as an ice-breaker activity with a new group
- + serving as a group or individual reflection
- + stimulating ideas for writing
- + encouraging group discussion.

5.3.3 Materials

A large stack of postcards (you may be able to collect free postcards from various public venues)

Alternatively, you can use:

- + photos
- + a series of images copied from, for example, art and photography books
- + a collection of magazines from which participants can choose an image that resonates with them.

5.3.4 Time

- + five to 15 minutes

5.3.5 Method

The facilitator asks the class to split into pairs or small groups. Each group is provided with a pile of postcards, images, or magazines and asked to spread the images out so that everyone in the group can see them.

Group members select an image that best represents the answer to a particular question or a series of questions that you can tailor to your class and needs. For example, if you were to use this as a learning activity, you could ask your group to select an image that best represents the most important learning point in the lecture or tutorial, or a particular theory or methodology.

Each member of the group takes up to a minute to share their reflections with their group, explaining the idea and its relevance to the picture. At the end of the activity, have a class discussion asking people to describe anything interesting that they may have learned. For instance, you could ask them if the image provided a different perspective on a topic, or if one of their group members offered another way of looking at an idea.

5.3.6 References

Barone, T, and Eisner, EW (2012). *Arts based research*. Thousand Oaks: Sage.

Gray, T, Downey, G, Jones, BT, Truong, SA, Hall, T, and Power, A (2018). Generating and deepening reflection whilst studying abroad: Incorporating photo elicitation in transformative travel. In Hall, T, Gray, G, Downey, G and Singh, M (Eds). *The Globalisation of Higher Education. Developing Internationalised Education Research and Practice* (pp. 229-251). Chalm, Switzerland: Palgrave Macmillan.

Harper, D (2002) Talking about pictures: a case for photo elicitation, *Visual Studies*, 17(1), 13-26.

Samaras, AP (2010). Explorations in using arts-based self-study methods. *International Journal of Qualitative Studies in Education*, 23(6), 719-736

Casey, B (2009). Arts-based inquiry in nursing education. *Contemporary Nurse*, 32(1-2), 69-82.

5.4 Reflectories: reflective storytelling

5.4.1 Overview

This activity aims to help participants make a transition from being immersed in an experience to reflecting on it, with the act of digital storytelling giving the learner some objective distance (Reflect 2.0, 2009) while supporting them in displaying or documenting this reflection (Hamilton, Rubin, Tarrant and Gleason, 2019). In this context, the term reflectories (www.reflectories.de/, Brendel, 2018) has been adapted and repurposed to encompass digital and multi-modal reflective storytelling.

Storytelling is one of the oldest reflective techniques in human history (Ribeiro, 2017, p. 213). Through narrative and its components (including theme, motif, conflict and resolution, characterisation, and setting), both the storyteller and the listener/viewer/reader achieve insights into real-world issues and personal reactions. Sharing stories can also serve to develop communities of practice (see, for example, Hardy, 2017), and even support mental wellbeing (Hall, 2018).

Diverse students and diverse learning activities call for more creative, diverse reflection options than the traditional written journal (Harvey et al, 2016). Telling the story of their learning through multi-modal, creative presentations of reflection provides storytellers with diverse opportunities to reflect on and express what they have learned. Sandars and Murray (2009, p. 441) point out that “the creative aspect of obtaining, selecting and presenting the media as a story also appeared to facilitate [storytellers’] reflective learning by increasing their ability in ‘noticing’”.

Erstad and Wertsch (2008, p. 58) consider that digital storytelling embodies “the idea that each person has a voice and a story, and there could be a place where that story is gathered with other stories for exchange and reflection”. Digital technologies allow even amateur storytellers to integrate speech, text, music, and still and moving images into their narratives (Lundby, 2008, p. 4); in other words, they “democratise” digital storytelling to make it accessible to a wide range of storytellers and audiences.

Digital storytelling can be considered as:

- + a constructivist approach to education, in that it allows students to represent interactions through their choice of reality, viewpoint and focus (McKillop, 2005)
- + an active and social learning process that builds on the notion that reflection can be enhanced when others are involved (McDrury and Alterio, 2002; Jenkins and Gravestock, 2009; Jenkins and Lonsdale, 2007) that allows other students to comment on stories by peers and takes learning beyond simply telling a story to having to reflect more deeply upon its meaning and lessons to be learnt from the experiences. This enhances the reflection through storytelling, moving it from considering what has happened to considering what could be done differently and how changes could be implemented in the future (McKillop, 2005).

This activity may be used to reflect on learning at different stages of a course:

- + after an experience or learning activity
- + at the end of a subject or program
- + as a meta-reflection on reflections recorded throughout an event, placement, program
- + on completion of a course of study.

Although this activity encourages the use of any storytelling modality, digital storytelling, with its technological currency and familiarity for the current generation of students may enable the storyteller to capture emotions and events. This activity helps storytellers to learn more about combining words and imagery, writing effectively, and presenting their memories in efficient, powerful ways. Moreover, it allows participants to reflect at different levels; for example, the micro-level of an individual experience or what they have learned from a particular module, or the macro level of the course as a whole or their lives outside of the learning environment.

Digital storytelling can offer this freedom of expression within the framework of a “strictness of construction” (Meadows, n.d.). This framework can include limits on word count, duration, or the amount of time given to complete the story. These limits can help participants structure their stories, choosing among various media, themes, content, and expressive techniques. Participants should at the same time be reassured that the most important aspect of this activity is not technical polish, but the meaning they express in their stories.

If the participants you are working with are less familiar with digital storytelling, you may want to encourage them to begin practising in the weeks before the activity begins by taking photographs with their phones or tablets; you can encourage them during this practice time to think about how to capture effective images that also respect privacy and copyright. The Arts Law Centre of Australia has comprehensive information about these concerns at www.artslaw.com.au/info-sheets/info-sheet/street-photographers-rights/.

Note: further information on learning design for student-generated digital storytelling is outlined in Kearney (2011).

5.4.2 Application

Applications include:

- + encouraging reflection (through collecting digital artefacts) and meta-reflection (through compiling and editing the narrative)
 - + stimulating creativity and the symbolic representation of experiences and emotions
 - + encouraging learners to communicate in multiple modes
-

- + providing a means of expression for participants who are less skilled in or comfortable with communicating in written English.

5.4.3 Materials

- + phone, digital still and/or movie camera, tablet, or another device for recording still and moving images and sound
- + computer for editing raw digital materials into a narrative
- + software for editing text, sound, graphics, and video and combining them into a narrative
- + tutorials and reference materials to support learners' use of the materials. For example, some institutions using this activity have held workshops to teach participants to use Photo Story 3 (Reflect 2.0, 2009).

While participants can use any story-telling media, including written stories, poems and spoken-word performances, journals, presentations, newsletters, plays, song lyrics, dance, blogs, web pages, films, videos, and animations, you may wish to stress that the presentation itself needs to be in some form of digital media.

5.5 Reflectories: short version

5.5.1 Time

This short version of the activity is ideal when time is limited. The activity could be completed in one in-class session; however, for maximum reflective benefit further time would be beneficial, particularly if participants are being asked to use the activity for meta-reflection on a course or subject. A suggested timeline for a two-hour session could be:

- + thirty minutes to gather digital material based on a topic you provide them
- + one hour to edit material and compose the narrative
- + thirty minutes to present narratives.

5.5.2 Process

It's best to give participants a clear purpose for the activity – for example, constructing a digital story as a reflection on their academic journey to date or what they have learned from their field experience – rather than letting them choose a topic themselves, which can take some participants a disproportionately long time.

Clearly state the requirements for the story and the timeframe for completion:

Their story should be between two and five minutes long.

It should include a 250-to-300-word reflection.

It should include images that illustrate or symbolise learning. Creative Commons (creativecommons.org/) can be a useful resource for materials they can use without the need to seek permission, as the people and organisations posting them have already agreed to share them according to a standard agreement (creativecommons.org/licenses/by/4.0/). Participants should, in any case, be encouraged to avoid images that others might consider embarrassing, hurtful, or offensive.

5.6 Reflectories: extended version

5.6.1 Time

This activity can quickly expand to unmanageable lengths of time unless the learners have a clear structure within which to work. A sample timeline might be:

- + one week to determine a topic and draft a narrative
- + two weeks to gather digital material
- + two weeks to edit material and compose the narrative
- + one to two weeks to present narratives.

5.6.2 Process

Participants can choose their own topic relevant to the subject matter and draft a story that springs from that topic. While there is great latitude in structuring a narrative, learners may find it useful to think in terms of the traditional three-act structure (beginning, middle, and end). It may also be useful to think about the story's point of view and how to use conflict and resolution to create a satisfying narrative. They should be given clear guidelines for how long their story should be (in minutes, rather than the number of words).

Learners then gather multimedia and digital artefacts such as images, music, narration, sound clips, and diagrams, which are used to form a narrative.

Learners should be encouraged to reflect on their decisions at every step, choosing artefacts for their relevance to and impact on the story, and how they work with other artefacts (for example, images could be juxtaposed to produce surprise, humour, or unease).

It should be noted that learners are also free to collect artefacts first and use them as a stimulus for choosing a topic and developing a narrative.

Depending on the number of learners and the length stipulated for each story, learners will be given time over one or two weeks to present their story to the group.

5.6.3 References

Brendel, N (2018). Förderung reflexiven Denkens im Kontext Globalen Lernens mithilfe von Weblogs im Geografieunterricht. 1'18 ZEP.

Digital Storytelling. Classroom of many cultures.
classroomofmanycultures.net/modules/digital-storytelling/.

Erstad, O, and Wertsch, JV (2008). Tales of mediation: Narrative and digital media as cultural tools. In K Lundby (Ed.). *Digital Storytelling, Mediatized Stories: Self-representations in New Media*. New York: Peter Lang.

Hall, T (2018). *Education, narrative technologies and digital learning: Designing storytelling for creativity with computing*. London: Palgrave Macmillan.

Hamilton, A, Rubin, D, Tarrant, M, and Gleason, M (2019). Digital storytelling as a tool for fostering reflection. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XXXI(1), 59-73.

Hardy, P (2017). Physician, know thyself: Using digital storytelling to promote reflection in medical education. In Jamissen, G, Hardy, P, Nordkvelle, Y and Pleasants, H (Eds). *Digital storytelling in higher education: International perspectives* (pp. 37-54). New York: Palgrave Macmillan US.

Harvey, M, Walkerden, G, Semple, AL, McLachlan, K, Lloyd, K, and Baker, M (2016). A song and a dance: being inclusive and creative in practising and documenting reflection for learning, *Journal of University Teaching and Learning Practices*, 13(2), 2016.

Jenkins, M, and Gravestock, P (2009). Digital storytelling synthesis. A Higher Education Academy-funded enhancing learning and teaching through the use of technology synthesis project. www.advance-he.ac.uk/knowledge-hub/digital-storytelling-synthesis.

Jenkins, M, and Lonsdale, J (2007). Evaluating the effectiveness of digital storytelling for student reflection. In *ICT: Providing choices for learners and learning*. Proceedings Ascilite, Singapore 2007. www.ascilite.org/conferences/singapore07/procs/jenkins.pdf.

Kearney, M (2011). A learning design for student-generated digital storytelling, *Learning, Media and Technology*, 36(2), 169-188.

Lundby, K (Ed.) (2008). *Digital storytelling, Mediatized stories: Self-representations in New Media*. New York: Peter Lang.

McDrury, J, and Alterio, M (2002). *Learning through storytelling in higher education: using reflection and experience to improve learning*. London: Kogan Page.

McKillop, C (2005). *Storytelling grows up: Using storytelling as a reflective tool in higher education*. Paper presented at the Scottish Educational Research Association conference (SERA 2005), November 24-26, Perth, Scotland.

Meadows, D (n.d). Photobus – Digital storytelling. www.photobus.co.uk/digital-storytelling.

Reflect 2.0 (2009). *Digital approaches to academic reflection: A digital storytelling study guide*. Leeds: University of Leeds.

Ribeiro, SPM. (2017). Digital storytelling: Learning to Be in higher education. In G. Jamissen, G, Hardy, P, Nordkvelle, Y and Pleasants, H (Eds). *Digital storytelling in higher education: International perspectives*. New York, NY: Palgrave Macmillan US.

Sandars, J, and Murray, C (2009). Digital storytelling for reflection in undergraduate medical education: a pilot study. *Education for Primary Care*, 20, 441-44.

5.7 Reflection as exploration

5.7.1 Overview

This activity aims to give participants the opportunity to engage in creative reflection and mindful awareness through an exploration of their physical surroundings. It has been adapted from Smith's book 'How to be an explorer of the world' (2008). Encouraging students to become mindfully aware can assist with developing accurate observation and communication skills and the ability to use "implicit knowledge in association with explicit knowledge, and insight into others' perceptions" (Bolton, 2010, p. 15). This activity also stimulates embodied self-awareness by encouraging students to be aware of what is happening within the physical and physiological self, and how that relates to emotions, feelings, and thoughts (Leigh and Bailey, 2013, p. 167). The teaching of embodied self-awareness provides a valuable tool for learning reflective practice (Leigh and Bailey, 2013, p. 167).

5.7.2 Application

The activity can be used to extend participants' understanding and practice of reflection in a creative way.

Applications include:

- + stimulating creativity
- + cultivating mindfulness and inner awareness
- + encouraging embodied learning.

5.7.3 Materials

Participants should be given the template and requested to use one of the following when documenting their reflection:

- + a camera, video camera, or phone camera
- + a digital recorder
- + art supplies such as coloured pencils or pastels and paper, string, or modelling clay
- + pen and paper
- + a laptop or iPad
- + any other materials that might help them capture or document reflection.

5.7.4 Process

While a minimum of 10 to 15 minutes should be allocated, and the total time will depend on the context and purpose of the exercise; 45 minutes in total is recommended:

- + five minutes for explanation
- + 20 minutes for the exploration
- + 20 minutes for group reflection and discussion.

5.7.5 Process

Ask participants to read the 14 mission points (refer to the template) and then to explore nearby surroundings, observing and documenting an object, a feeling they have during the exploration, an experience that occurred during their exploration, or a sense of something that evolved as a result of their exploration. Emphasise the need to slow down to sense something in a new way. It could be completely unrelated to the setting but important to the individual simply because they have had a few minutes to slow down and reflect on things.

Whilst participants are doing this, you may want to prompt them by asking them to think about:

- + what they see
- + how they feel
- + how this observation connects to their broader situation
- + what this means to them
- + what it might imply about future experiences
- + why they chose the medium that they did.

Once participants return from their explorations, ask them to share their documentation and reflections with the group, should they wish to do so.

5.7.6 References

Bolton, G (2010). *Reflective practice: Writing and professional development* (3rd edn). London: Sage.

Leigh, J and Bailey, R (2013). Reflection, reflective practice and embodied reflective practice. *Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice*, 8(3), 160-171.

Smith, K (2008). *How to be an explorer of the world. Portable Life Museum*. New York: Penguin Group.

5.7.7 Reflection as exploration template

How to be an explorer of the world.

Your mission is to document and explore the world around you as if you've never seen it before:

- + always be looking (notice the ground beneath your feet)
- + consider everything alive and animate
- + everything is interesting. Look closer
- + alter your course often
- + observe for long durations (and short ones)
- + notice the stories going on around you
- + notice patterns. Make connections
- + document your findings in a variety of ways. Take notes. Copy. Trace
- + incorporate indeterminacy (randomness)
- + observe movement
- + create a personal dialogue with your environment. Talk to it
- + trace things back to their origins
- + use all of the senses in your investigations
- + record what you are drawn to.

Smith, K (2008). How to be an explorer of the world. Portable Life Museum. New York: Penguin Group, pp. 5, 1

5.8 Roll the dice

5.8.1 Overview

This activity is a participant-directed processing technique that encourages collaborative reflection and creative thinking. It is adapted from Epstein's *The Big Book of Creativity Games* (2000, pp. 149-151). Tremmel (1993) argues that to learn through reflection, it is important to gain fresh and differing perspectives. The reflective mind is not simply theoretical, but is "flexible and pliable...it is, moreover, the mind that has the capacity to reach into the centre of confusing situations, to see itself, and to shift the base of its operations..." (Tremmel, 1993, p. 436). This exercise encourages participants to think on the spot and to make links or gather insights that they may not have thought about initially.

5.8.2 Application

This exercise can be used at the end of a course or subject to reflect on what has been learned over a particular time period. Applications include:

- + facilitating reflective revision of course material
- + encouraging participants to reflect on different perspectives and to make links in creative ways.

5.8.3 Materials

- + a pair of dice
- + whiteboard or blackboard

5.8.4 Time

Five to 10 minutes

5.8.5 Process

The facilitator draws a table with two columns, with the rows numbered 1-6 on the left and two headings (Figures 1 and 2). The two headings are determined by the facilitator, and therefore can be anything related to the subject being studied.

Figure 1.

	Topic	Issue
1		
2		
3		
4		
5		
6		

Figure 2.

	Methodology	Challenge
1		
2		
3		
4		
5		
6		

The facilitator asks the group for ideas to fill up the first column, and then the second. Then the facilitator asks for a volunteer to roll the dice, using the numbers to discuss how the corresponding columns on the table are linked. For example, if the participant rolled a two and a four, then the class would discuss ‘topic two’ and how it relates to ‘issue four’, or how ‘methodology two’ relates to ‘challenge four’. This process can be repeated as desired.

5.8.6 References

Epstein, R (2000). *The big book of creativity games*. New York: McGraw Hill.

Tremmel, R (1993). Zen and the art of reflective practice in teacher education. *Harvard Educational Review*, 63(4), 434-458.

5.9 Daydreaming for productive reflection

5.9.1 Overview

Recent studies in education research suggest that engaging students in productive, mindful introspection and self-directed, internal processing can be beneficial, improving both their socio-emotional wellbeing and their academic skills (see Immordino-Yang and Sylvan, 2010; Yeager and Walton, 2011). “Relaxed daydreaming” is particularly important for processing the “social and emotional implications of everyday situations and relationships and connecting them to personal experiences and future goals” (Immordino-Yang et al, 2012, p. 359; see also Baird, Smallwood, and Schooler, 2011). This activity, which was adapted from Epstein’s *The Big Book of Creativity Games* (2000, pp. 73-75), is a focused internal activity that is “potentially important for making meaning of new information and for distilling creative, emotionally relevant connections between complex ideas” (Immordino-Yang et al, 2012, p. 359).

5.9.2 Application

This activity can be used to encourage participants to think imaginatively and creatively. Applications include:

- + encouraging creative and innovative thinking
- + engaging participants in productive reflection
- + improving emotional intelligence
- + stimulating critical thinking skills.

5.9.3 Materials

- + none, but encourage participants to approach the activity with an open and flexible mind.

5.9.4 Time

- + five to 10 minutes

5.9.5 Process

As this activity may call up vivid images or sounds, refer participants to the list of institutional support and counselling resources you have compiled before beginning. Ask participants to sit in a relaxed position. Speaking slowly and calmly, ask them to close their eyes (but only if they are comfortable doing so), take a deep breath, and let the breath out slowly. Ask them to let their minds wander freely for a few minutes without trying to control, edit, or judge what comes up in their thoughts.

After two to three minutes, ask people to open their eyes and return to reality. Then call on people and ask what they experienced.

You may want to ask a series of discussion questions such as:

- + did you leave the room? What did you experience? Did you experience anything strange or impossible or beautiful?
- + did you have difficulty with this exercise? If so, why? Was doing this activity in this environment a challenge? Under what conditions might you be able to feel more comfortable with the exercise?
- + were you surprised by how far your daydreams took you? How so?
- + do you think daydreaming might have any practical value? In what way?
- + how might an artist or inventor use daydreaming deliberately for creative purposes? How might you do the same?
- + what stops us from daydreaming more than we do?

Alternatively, you could ask the participants to respond in writing about their experience.

5.9.6 References

Baird, B, Smallwood, J, and Schooler, JW (2011). Back to the future: Autobiographical planning and the functionality of mindwandering. *Consciousness and Cognition*, 20(4), 1604-1611.

Epstein, R (2000). *The big book of creativity games*. New York: McGraw Hill.

Immordino-Yang, MH, and Sylvan, L (2010). Admiration for virtue: Neuroscientific perspectives on a motivating emotion. *Contemporary Educational Psychology*, 35(2), 110-115.

Immordino-Yang, MH, Christodoulou, JA, and Singh, V (2012). Rest is not idleness: Implications of the brain's default mode for human development and education. *Perspectives on Psychological Science*, 7(4), 352-364.

Yeager, DS, and Walton, G.M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research*, 81(2), 267-301.

6. Section 6: preparing for reflection: more mindfulness

6.1 Team Breath

While contemplation, or the paying of intentional, non-judgemental attention to some idea, situation, or object, has been distinguished from the broader concept of critical reflection (Bright and Pokorny 2013), the mindfulness involved in contemplation contributes to the capacity for reflection more generally. As Hart (2004, pp. 29-30) writes:

Inviting the contemplative simply includes the natural human capacity for knowing through silence, looking inward, pondering deeply, beholding, witnessing the contents of our consciousness, and so forth. These approaches cultivate an inner technology of knowing and thereby a technology of learning and pedagogy.

Mindful focus on breathing has been shown to be one way to encourage a contemplative and reflective mindset (Ekerholt and Bergland, 2008; Miller, 2014, pp. 156-157; Keiser and Sakulkoo, 2014).

6.1.1 Application

Applications include:

- + helping participants bring their focus to the current moment and place
- + helping participants who are experiencing stress to achieve a calmer state
- + encouraging participants to think and behave collaboratively.

6.1.2 Materials

- + no materials are required.

6.1.3 Time

- + fifteen seconds for each iteration.

6.1.4 Process

The educator tells the participants that whenever they say “team breath”, participants are invited to take a deep breath at the same time. Once the explanation has been given, the educator can use the exercise whenever the group seems unfocused, overwhelmed, or tired, or if some participants are distracting others. Alternatively, you could program an alarm at some point during a class.

You can also use other prompts for this activity, such as ringing a bell, clapping your hands, or turning the lights on and off.

6.1.5 Acknowledgement

This exercise is based on the “Team Breath” exercise used by Training Wheels (training-wheels.com/).

6.1.6 References

Bright, J, and Pokorny, H (2013). Contemplative practices in higher education: breathing heart and mindfulness into the staff and student experience. *HERDSA News*, 35(1), 9-12.

Ekerholt, K, and Bergland, A (2008). Breathing: A sign of life and a unique area for reflection and action. *Physical Therapy*, 88(7), 832-840.

Hart, T (2004). Opening the contemplative mind in the classroom. *Journal of Transformative Education*, 2(1), 28-46.

Keiser, DL, and Sakulkoo, S (2014). Fitting in breath hunting: Thai and U.S. perspectives on contemplative pedagogy. In Gunnlaugson, O, Sarath, EW, Scott, C and Bai, H (2014). *Contemplative Learning and Inquiry across Disciplines* (pp. 81-96). Albany: SUNY Press.

Miller, JP (2014). *The contemplative practitioner: Meditation in education and the workplace* (2nd edn). Toronto: University of Toronto Press.

6.2 Counting Breaths

6.2.1 Materials

No materials are required, but encourage participants to keep an open mind.

6.2.2 Time

Five to 10 minutes of class time, followed by a group discussion if desired.

6.2.3 Process

Ask participants to breathe calmly and normally, and to count each exhalation until they reach 10, focusing on each breath. Tell them that if they get distracted and lose count, they should not worry about trying to remember what breath they were on; instead, they should start back at one. Assure them that losing count is in no way a mistake or a failure; instead, it is an opportunity to practice returning their focus to observing each breath.

6.2.4 References

This activity is adapted from:

Gibbs, JJ, and Gibbs, RP (2013). *The mindful way to study: Dancing with your books*. San Bernardino: O'Connor Press.

6.3 'I' Exercise

6.3.1 Materials

No materials are required, but encourage participants to keep an open mind.

6.3.2 Time

A few seconds per iteration. This can be practised both during and outside of classroom time.

6.3.3 Process

Urge participants to become aware of every time they use the word "I" in a sentence and to choose not to use it. The underlying principle here is that the word "I" can act as a barrier, separating the speaker from the present moment and activity (Gibbs and Gibbs, 2013) Once participants have engaged in this exercise for a period of time (perhaps one or two days), they may wish to ask themselves:

Are there circumstances in which I use "I" a lot?

What are my feelings when I use "I"? Am I wanting to be noticed? To put my point of view across? Am I feeling left out or not listened to?

Am I simply expressing myself?

This exercise can encourage participants to become aware of the boundary between themselves and the situations in which they find themselves, and to become aware of how they respond to and engage with different circumstances.

6.3.4 References

Gibbs, JJ, and Gibbs, RP (2013). *The mindful way to study: Dancing with your books*. San Bernardino: O'Connor Press.

6.4 Mental Focus

6.4.1 Materials

No materials are required, but encourage participants to keep an open mind.

6.4.2 Time

About five minutes of class time. Participants may also wish to practise this exercise outside of class. When practised outside, in a natural environment, it becomes the Mindful Observation Activity.

6.4.3 Process

Ask participants to stare at any object and try to remain focused on just that object for as long as possible. Encourage them to simply return their focus to the object whenever they notice their mind wandering. You can ask the participants to notice whether they can remain focused for longer as they continue to practise the exercise over the next few days and weeks.

6.5 Mindful Observation

6.5.1 Materials

None, but encourage participants to keep an open mind. Move to a place with some plants or animals, such as a lawn, garden, or patch of native vegetation.

6.5.2 Time

Ten minutes, or any length of time that is suitable to the environment, plus time for discussion in class if desired. Participants may also perform this exercise outside of class if they wish.

6.5.3 Process

This exercise is designed to connect participants with the beauty of the natural environment. Ask them to pick a natural organism within their immediate environment, such as a flower, insect, clouds, or the moon, and focus on watching it for a minute or two. Tell them that they do not need to do anything except notice the thing they are looking at – but really notice it. Encourage them to look at it as if they are seeing it for the first time – without judgement or expectation. Urge them to visually explore every aspect of what they are looking at, and to reflect deeply on its presence and possibilities as they allow themselves to just “be”.

Adapted from: www.pocketmindfulness.com/6-mindfulness-exercises-you-can-try-today/

6.6 Mindful and Active Listening

Active listening is a conscious process (Low and Sonntag, 2013). Active listening can be understood “both as a mindful (controlled) and a mindless (automatic) process and thus invites a dual-process analysis of listening” (Burlison, 2011, p27). Effective listening is “a process that involves the interpretation of messages that others have intentionally transmitted in the effort to understand those messages and respond to them appropriately” (Burlison, 2011, p. 27). “Listening factors” influence the extent of effective listening (Caspersz and Stasinska, 2015). Entering this activity mindfully, allows listeners to dispel judgement, reactions, and irrelevant thoughts to ensure that the speaker “feels truly heard” (Barbezaqt and Bush, 2014, p. 144). Active listening is a multifaceted and demanding activity that requires practice to develop the skills for effective listening. This activity provides an opportunity to develop such skills.

This activity is presented as an activity that can develop mindful skills. However, it can also be transferred to numerous applications; for example, it can be useful for learners who wish to develop qualitative research skills for interviewing.

6.6.1 Materials

No materials are required, but encourage participants to keep an open mind.

6.6.2 Time

Twenty minutes of class time, including a group discussion if desired.

6.6.3 Process

Ask participants to find a partner. Each partner gets the same length of time (you can decide how long, but between one and three minutes works well) to speak in response to a prompt you give them about the class material (for example, “What I learned from that lecture was...” or “My favourite part of the class was...”). Alternatively, you can choose a neutral topic such as “my trip to university today”. Each speaker’s time is their own: they can say as much or as little as they like during that time. If they run out of things to say, they can sit in silence, and resume speaking if something more occurs to them.

The listener remains silent, giving their full attention to the speaker (Step 1). They may use facial expressions or body movements to acknowledge what the speaker is saying, but may not ask questions or make comments. Advise the listener that they may feel an impulse to coach, correct, reinforce, contradict or question what the speaker is saying, but that they must remain silent and return their focus to what the speaker is saying. If the listener feels an emotional response to the speaker, they should acknowledge it and let it go, returning their focus to the speaker. If the speaker runs out of things to say, both remain silent to give the speaker space to continue if they wish.

Once the speaker's time is up, the listener tells the speaker what they understood from what the speaker has said (Step 2). There is no need to repeat exactly; paraphrasing is fine. The speaker can correct or explain to make sure the listener understands what the speaker meant, and the listener can ask questions and request clarification. Once both are satisfied that the listener understands the speaker, they switch roles.

After both have had a turn (Steps 3 and 4), encourage participants to reflect on how it feels to be listened to and to listen so closely. Remind them that the tone and emotional undercurrents of what someone is saying are an important part of communication and that this way of listening can be a useful way to establish or strengthen a connection with another person, particularly when it is difficult to connect with the ideas or opinions they are expressing.

Ask participants to thank each other for listening.

Steps	Activity
1	Person one tells a story. Person two listens.
2	Person two recounts the story. Person one reports on accuracy.
3	Swap roles.
4	Person two tells a story. Person one listens.
5	Person one recounts the story. Person two reports on accuracy.

6.6.4 References

Barbezet, DP and Bush, M (2014). *Contemplative practices in higher education*. San Francisco: Jossey-Bass.

Burleson, B (2011). A Constructivist approach to listening. *International Journal of Listening*, 25(1), 27-46. doi: 10.1080/10904018.2011.536470

Caspersz, D, and Stasinska, A (2015). Can we teach effective listening? An exploratory study. *Journal of University Teaching and Learning Practice*, 12(4), <https://ro.uow.edu.au/jutlp/vol12/iss4/2>.

Gibbs, JJ, and Gibbs, R.P. (2013). *The mindful way to study: Dancing with your books*. San Bernardino: O'Connor Press.

Low, BE, and Sonntag, E. (2013) Towards a pedagogy of listening: teaching and learning from life stories of human rights violations. *Journal of Curriculum Studies*, 45(6), 768-789. doi: 10.1080/00220272.2013.808379

6.7 Challenge your beliefs

6.7.1 Materials

- + pens and paper
- + time
- + ten minutes

6.7.2 Process

Ask the participants to take one long-held belief and pretend that they believe the direct opposite. Questions they can ask themselves include:

- + what would I have to accept as true to believe this?
- + what evidence do people use to support this belief?
- + are there aspects of this belief that could be accurate?
- + could this belief be interpreted as morally good? On what basis?

Ask them to make written or mental notes of how they feel, what thoughts come into their mind, and any physical responses they may have. After two or three minutes, ask them to reflect on this experiment – has thinking the opposite of their long-held belief changed their belief in any way?

This exercise can form the basis of a larger-scale learning activity by asking participants to present their long-held belief or philosophy; this presentation could range from a simple statement to a piece of scholarly research. Then ask them to find and read a piece of credible research that supports the opposite view. (This is a chance to review with them how to think critically about sources when identifying credible points of view.) They can then reflect, as above, on how they felt and what they thought when reading the article with the opposite point of view, and on whether (and how) this process may have changed their own beliefs.

For example, the participant may believe in constructive alignment or student-centred learning and states this. Next, they develop a list of points to counter-argue their belief: in this case, to assert that student-centred learning is not as effective as didactic, teacher-led teaching. This may involve reading one or two articles about didactic teaching and noting the key tenets of the arguments presented.

6.8 Melting

6.8.1 Materials

None, but encourage participants to keep an open mind.

6.8.2 Time

Five minutes, or any length of time that is suitable to the environment, plus time for discussion in class if desired.

6.8.3 Process

Ask participants to sit and relax, and imagine themselves melting into everything around them. Some people report beginning to feel at one with everything after they have practised this exercise for a time.

Encourage participants to notice that these modes of awareness are choices and that skilled reflective practice involves becoming more sensitive to when different modes of awareness are helpful. It may also help to mention that more complex versions of this practice are possible; for example, simultaneously feeling the melting into the environment and a sense of differentiation.

NOTE: Activities such as this may produce an “altered state of awareness” in participants. It is important to ensure that they have returned to an alert, awake and embodied state before ending the session. When the exercise is drawing to a close, ask participants to gradually differentiate themselves from their environment: becoming aware of their physicality, their distinctive personal point of view, and the people around them. When completing this exercise, discussion, activity, movement, drawing, and journal-writing can all help participants become grounded again.

6.9 Musical Stimulus

6.9.1 Materials

Learners may wish to bring headphones and a device on which they can listen to the piece of music of their choice. Alternatively, the educator may provide one or more pieces of music.

6.9.2 Time

Ten minutes, or any length of time that is suitable to the environment, plus time for discussion in class if desired.

6.9.3 Process

Ask participants to listen to their favourite song or another piece of music, and to pay attention to how it makes them feel. What memories come up, and how do those memories, in turn, make them feel? As an alternative to asking questions you can have participants draw or write their responses to a piece/s of music that you choose and play.

Next, ask them to listen to a completely different piece of music and notice how they respond. Do their responses differ? Does their mood change with the music?

NOTE: Activities such as this may produce an “altered state of awareness” in students. It is important to ensure that they have returned to an alert, awake, and embodied state before ending the session. Before introducing this exercise, please review the precautions listed in the introduction.

When completing this exercise, discussion, activity, movement, drawing, and journal-writing can all help participants become grounded again.

6.10 Silence

6.10.1 Materials

None, but encourage participants to keep an open mind.

6.10.2 Time

As long as desired, but it should be noted that lengthy periods of silence can evoke strong reactions in some learners. As for many mindfulness activities, scaffold the practice, starting with a short, one-minute session that can be extended when the activity is repeated.

6.10.3 Process

Ask participants to sit in complete silence and immerse themselves in their surroundings. Ask them to reflect on what they noticed, and on anything they learned about themselves.

NOTE: Activities such as this may produce an “altered state of awareness” in students. It is important to ensure that they have returned to an alert, awake and embodied state before ending the session. When the exercise is drawing to a close, ask participants to gradually return to the room: becoming aware of sitting in the room, and of the people around them.

When completing this exercise, discussion, activity, movement, drawing, and journal-writing can all help participants become grounded again.

6.11 Feeling Meaning

6.11.1 Overview

This exercise has its origins in Eugene Gendlin's work on how individuals make and experience meaning (Gendlin 1981, 1997). He emphasises the somatic ground of understanding: how what people experience and sense underpins how they understand the meaning of words. One place where this is obvious is when defining terms: for example, when people are asked to come up with a new definition because the definitions that are currently available fail to help others to understand the term, they characteristically return to a felt understanding and speak from that felt understanding in a different way.

The exercise takes this example and turns it into a small reflective-practice experiment (Walkerden 2009). It aims to help participants explore the meaning of a key term, and in the process introduces them to this pervasive felt understanding, which is a foundation for thinking creatively.

At the same time, it helps participants achieve greater clarity and deeper understanding of the key terms. Gendlin (1997) refers to this as explication.

6.11.2 Application

This exercise is useful when you want to draw participants' attention to how they can creatively explain what they understand.

6.11.3 Materials

+ Pencil and paper, or digital devices for participants.

6.11.4 Time

- + allow five minutes for participants to write three definitions for each term
- + allow a further five to eight minutes for participants' exploration of their own process
- + allow a further 10 to 15 minutes for discussion of definitions and process when this is wanted.

6.11.5 Process

The scaffold for this exercise can be placed on a series of slides to lead participants through the process.

Identify a key term to be defined. Ask participants to write down their definition of this term.

Ask them to imagine someone with a very different academic background saying, “I don’t understand,” and ask them to come up with another definition that they think might help this person, and to write it down.

Then ask them to imagine that this person still says, “I’m sorry, I still don’t understand,” and come up with a further definition that you think might help them and write it down as well.

Point out to the participants that the exercise they have just done shows a kind of everyday creativity, and that you’d like them to take some time to explore that.

Ask participants to think about their three definitions, and to consider how each definition adds to an understanding of the key term. Ask them to notice what is novel, fresh, or interesting in the definitions they have come up with and the connections between them, and invite them to notice the taken-for-granted creativity involved in coming up with a fresh way of saying what they mean when someone is puzzled by what first comes to mind.

Then ask participants to think back to the process they followed as they were coming up with fresh definitions, and pay particular attention to the pauses they experienced when the words of a further definition had not yet come: what was happening then, what were they attending to, how did the new words come? What kind of “listening to themselves” were they doing?

The process can be extended by asking participants to compare their definitions of each term with each other’s, and discuss how their processes differed.

A more challenging extension is to ask participants to notice how the terms they have not defined – the terms they have simply used in their definitions – are functioning: how their meaning is not explicit, but their contribution is distinctly felt (For more on this point see Gendlin, 1997).

Many other variants are possible. For example, instead of focusing on a key term, research students can focus on their research question or a key claim.

6.11.6 References

Gendlin, ET (1981). *Focusing*. New York: Bantam.

Gendlin, ET (1997). *Experiencing and the creation of meaning: a philosophical and psychological approach to the subjective*. Chicago: Northwestern University Press.

Hendricks, M (2001). *Focusing-oriented/experiential psychotherapy*. In D. Cain and J. Seeman (Eds), *Humanistic psychotherapy: handbook of research and practice*, (pp. 221-251). New York: American Psychological Association.

Walkerden, G (2005). *Felt knowing: a foundation for local government practice*. In Keen, M, Brown, VA and Dyball, R (Eds), *Social learning in environmental management: towards a sustainable future* (pp.170-187). London: Earthscan.

Walkerden, G (2009). Researching and developing practice traditions using reflective practice experiments. *Quality and Quantity*, 43(2), 249-263.

6.12 Capstone Activity: metareflection

6.12.1 Materials

- + a copy of the blank version of the Tree of Contemplative Practices (next page) for each participant.

6.12.2 Time

- + thirty minutes, plus time for class discussion if desired.

6.12.3 Process

Give each participant a copy of the blank version of the Tree of Contemplative Practices. Ask them to reflect and decide which of the mindful and reflection activities that they have tried (or are interested in) would best support their learning. Ask them to map these activities on their copy of the blank tree in any way they wish; this can serve as a personal summary of their mindfulness and reflection work.



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7. Section 7: additional materials

7.1 List of our publications

Coulson, D and Harvey, M. (2013). Scaffolding student reflection for experience-based learning: A framework. *Teaching in Higher Education*, 18(4), 401-413.
[doi:10.1080/13562517.2012.752726](https://doi.org/10.1080/13562517.2012.752726).

Coulson, D, Harvey, M., Winchester-Seeto, T, and Mackaway, J (2010). Exploring the evidence for the role of reflection for learning through participation. In Campbell, M (Ed.). *Work Integrated Learning – Responding to Challenges: Proceedings of the 2010 ACEN 2010 National Conference* (pp. 92-103), September 29-October 1, Perth.
www.acen.edu.au/conferences/archive/ACEN-2010-Proceedings.pdf.

Harvey, M, Baumann, C, and Fredericks, V (2019 online). A taxonomy of emotion and cognition for student reflection: Introducing emo-cog. *Higher Education Research and Development*, 38(6), 1138-1153. doi.org/10.1080/07294360.2019.1629879

Harvey, M, Walkerden, G, Semple, A, McLachlan, K, and Lloyd, K (2019). What we can learn from the iReflect project: Developing a mobile app for reflection in WIL. *International Journal of Work Integrated Learning*, 20(1), 55-69.

Harvey, M and Vlachopoulos, P (2018 online). What a difference a day makes: Reflection retreats as academic development in higher education. *Journal of Further and Higher Education*. doi.org/10.1080/0309877X.2018.1541976.

Harvey, M, Baker, M, Fredericks, V, Lloyd, K, McLachlan, K, Semple, A, and Walkerden, G (2017). Reflection for learning: a holistic approach to disrupting the text. In J. Sachs and L. Clarke (Eds). *Learning through community engagement – Vision and practice in higher education*. Singapore: Springer, 171-184.

Harvey, M (2016). Editorial – Reflection for Learning in Higher Education. *Journal of University Teaching and Learning Practice*, 13(2). ro.uow.edu.au/jutlp/vol13/iss2/1

Harvey, M, Coulson, D, and McMaugh, A (2016). Towards a theory of the ecology of reflection: reflective practice for experiential learning in higher education. *Journal of University Teaching and Learning Practice*, 13(2). ro.uow.edu.au/jutlp/vol13/iss2/2.

Harvey, M, Baker, M, Lloyd, K, McLachlan, K, Semple, A, and Walkerden, G (2016). A song and a dance: Being inclusive and creative in practising and documenting reflection for learning. *Journal of University Teaching and Learning Practice*, 13(2).
ro.uow.edu.au/jutlp/vol13/iss2/3.

Harvey, M, Baker, M, Fredericks, V, Lloyd, K., McLachlan, K., Semple, A, and Walkerden, G. (2014). Reflection: Alignment of practice as a strategy for building capacity for learning. In K. Moore (Ed.). *Work Integrated Learning: Building Capacity – Proceedings of the 2014 ACEN National Conference* (pp. 167-171), 1-3 October, Tweed Heads.

Harvey, M and Baumann, C (2012). Using Student Reflections to Explore Curriculum Alignment. *Asian Social Science*, 8(14), 9-18. [doi:10.5539/ass.v8n14p9](https://doi.org/10.5539/ass.v8n14p9).

Harvey, M, Baker, M, Bosanquet, A, Coulson, D, Semple, A, and Warren, V (2012). Moving beyond the diary: innovation in design and delivery of reflection. Paper presented at the 2012 ACEN Collaborative education: Investing in the future conference, 31 October-2 November, Geelong. researchers.mq.edu.au/en/publications/moving-beyond-the-diary-innovation-in-design-and-delivery-of-refl.

Harvey, M, Coulson, D, Mackaway, T, and Winchester-Seeto, T (2010). Aligning reflection in the cooperative education curriculum. *Australia Pacific Journal of Co-operative education*, 11(3), 137-152. www.apjce.org/files/APJCE_11_3_137_152.pdf

Walkerden, G (2014). Developing platform skills for the workplace: weaving reflective practice experiments into everyday life. In K. Moore (Ed.), *Work Integrated Learning: Building Capacity – Proceedings of the 2014 ACEN National Conference* (pp. 167-171), 1-3 October, Tweed Heads.

Walkerden, G (2019). Sustaining places: sensibility models as decision support tools for messy problems, *Sustainability*, 11(6), 1-37.

Walkerden, G (2009). Researching and developing practice traditions using reflective practice experiments, *Quality and Quantity*, 43, 249-263.

Walkerden, G (2005). Felt knowing: a foundation for local government practice. In M. Keen, M. Brown, V and Dyball, R (Eds). *Social Learning in Environmental Management*. London: Earthscan, 170-187.

7.2 Conference presentations (refereed abstracts)

Harvey, M (2018). Reflection for learning and learning to reflect (or practice makes perfect). *Talking Teaching 2018. Engaging Teaching, Inspiring Learning*. Ako Aoteroa Academy of Tertiary Teaching Excellence Conference, 29-30 November, Christchurch.

Harvey, M, Walkerden, G, Semple, A, McLachlan, K, and Lloyd, K (2018). Reflection for learning and learning to reflect (or practice makes perfect). Roundtable at the 2018 ACEN Conference, *WIL: Creating Connections, Building Futures*, 4-5 October, Brisbane.

Harvey, M, Baker, M, Lloyd, K., McLachlan, K., Semple, A, Walkerden, G, and Vlachopoulos, P (Reflection for learning circle)(2017). Practice makes perfect: Reflection for learning showcase. Presented at the HERDSA Curriculum Transformation Conference, 28-30 June, Sydney.

Harvey, M, Baker, M, Lloyd, K, McLachlan, K, Semple, A, and Walkerden, G (2017). What students want in a mobile app: reflection for WIL and cooperative education. Paper presented at the 20th Annual NZACE Celebrating 25 Years with Lifelong Learning Conference, 26-28 April, Queenstown, New Zealand.

Harvey, M and Vlachopoulos, P. (2015). Imagining higher education as a reflective world of work. Paper presented at the 31st EGOS European Group for Organizational Studies Organizations and the Examined Life: Reason, Reflexivity and Responsibility Colloquium, 2-4 July, Athens, Greece.

Harvey, M, Reyna, J, Baker, M, Fredericks, V, Hamilton, J, Lloyd, K, McLachlan, K, Semple, A, Smith, S, and Walkerden, G (2015). iReflect: Mobile reflection for learning. Poster presentation at the EdMedia 2015: World conference on Educational Media and Technology, Association for the Advancement of Computing in Education (AACE), 22-25th June, Montréal.

Harvey, M, Baker, M, Fredericks, V, Lloyd, K, McLachlan, K, Semple, A, and Walkerden, G (2014). Reflection: Alignment of practice as a strategy for building capacity for learning. In Moore, K (Ed). Work Integrated Learning: Building Capacity – Proceedings of the 2014 ACEN National Conference (pp. 167-171), 1-3 October, Tweed Heads.

Qin, KL, Tayar, M, and Harvey, M (2014). Reflexivity in entrepreneurship education: Critical reflection for entrepreneurs and for students. 2014 European Academy of Management Conference, Waves and Winds of Strategic Leadership for Sustainable Competitiveness, 4-7 June, Valencia, Spain.

7.3 List of videos

Title	URL
Reflection for Learning – Debriefing	http://youtu.be/dKuoCmvSHZw
Reflection for Learning – How do you assess reflection?	http://youtu.be/q5xaJMMZRkY
Reflection for Learning – Methods of reflecting	http://youtu.be/H691EPbH3r4
Reflection for Learning – Planning for reflection in learning and teaching	http://youtu.be/izJK3a7ID8c
Reflection for Learning – What does reflection mean to you?	http://youtu.be/MfL5zavoT8A
Reflection for Learning – Why do you use/teach reflection?	http://youtu.be/ZLs7mZmCCLo
Macquarie University Reflection for Learning – The student perspective: What is reflection?	http://youtu.be/BzFckjPepr0
Reflection for Learning – The student perspective: What are the benefits?	http://youtu.be/6iMWjjCKQG4
Reflection for Learning – The student perspective: How do you reflect?	http://youtu.be/RHwcFV0Z7Ko

Reflection for learning: a scholarly practice guide for educators

Marina Harvey, Kate Lloyd, Kath McLachlan, Anne-Louise Semple, Greg Walkerden

Reflection for Learning – The student perspective: Challenges of reflective practice	http://youtu.be/IXGdeBz3H1I
	http://youtu.be/Anuo87syy4Q
Reflection for Learning: Discipline case study – Science (Dr K-Lynn Smith)	http://youtu.be/9rYhnbPZipU
Reflection for Learning: Discipline case study – Museum studies (Dr Theresa Winchester-Seeto)	http://youtu.be/oiBggENPr_g
Reflection for Learning: Discipline case study – Marketing (Dr Chris Baumann)	http://youtu.be/0U6CAWrIngc
Reflection for Learning: Discipline case study – Adaptive management (Dr Greg Walkerden)	https://youtu.be/IFmGRsFKbyI
Teaching as Performance: Contemplative preparation	https://youtu.be/v9YZy3owTms
Maximising Reflection (for professional adjunct teachers)	https://youtu.be/5q38anKN96g
Rapid Reflection (for professional adjunct teachers)	https://www.youtube.com/watch?v=yJa536Cl5IU#action=share
Documenting Reflection	https://youtu.be/pFOSAm6tOfI
What is reflective practice?	https://youtu.be/XZSECF9m8js
A continuum of reflective practices	https://youtu.be/S9qnsaq5WHc
Levels of reflective practice	http://youtu.be/dKuoCmvSHZw

7.4 Workshop powerpoint with notes

A workshop has been designed as an accompanying resource to the “Reflection for Learning” practice guide.

This presentation is available to download here:

www.advance-he.ac.uk/knowledge-hub/reflection-learning-workshop-presentation



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