

# FOCUS

*on*

# FORMATIVE FEEDBACK

Taylor Institute  
Guide Series #3

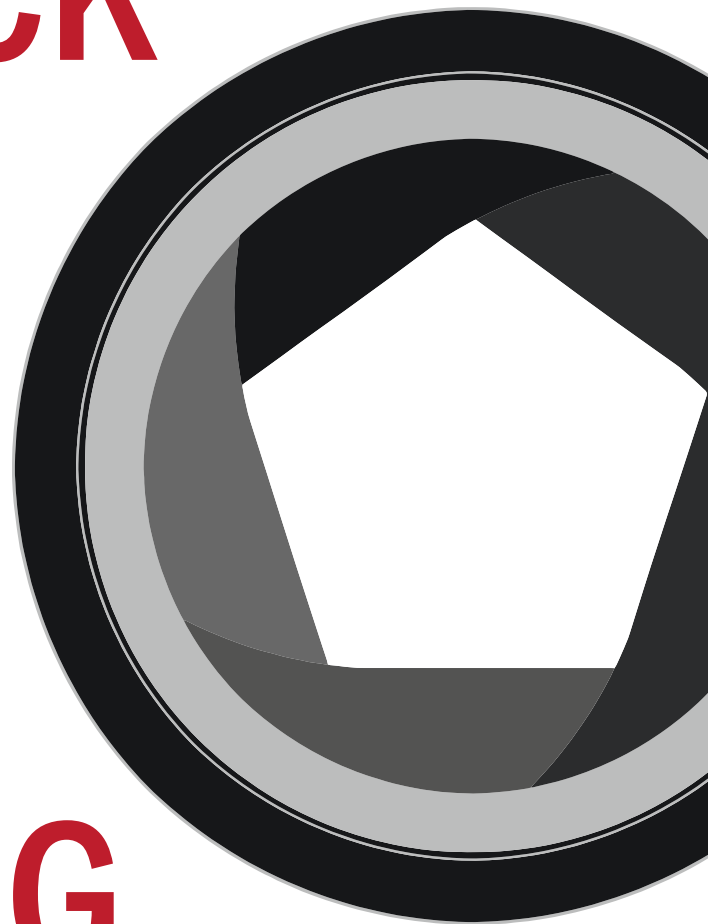


**UNIVERSITY OF CALGARY**  
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July 2016

*for*

# TEACHING DEVELOPMENT



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## Formative feedback in action

The following is an instructor's experience with formative feedback. It demonstrates how he was curious about a classroom issue, and that he wanted to know more about his teaching, in order to improve student learning. By intentionally asking, receiving, and reflecting on student feedback, and making changes based on this feedback, it was a valuable experience for the instructor, and in this case, it enhanced the learning outcomes.

### Tipping point to ask for student feedback

*I noticed that students' performance on a midterm in numerical/computational methods was below expectations, based on my past experience with a similar course. I was curious to know what happened in this class.*

*I decided to solicit feedback from students following the midterm on why they thought the midterm did not go very well. It was a small class so I was able to engage the students in a discussion in the first class after the midterm exam.*

### What I found out from the feedback

*The students noted that the format of the midterm (hand-written) was significantly different from how they had practiced the course material. Previous assignments had been completed by writing a computer program or using spreadsheet software to perform the calculations. Some of the students were graduate students who had returned to university after several years working in industry and did typically work using the approach specified in the mid-term. I realized, based on the students' feedback that calculations are rarely written by hand since the data almost always needs to go into a report or other record summarizing the work.*

### What I did with the feedback

*I re-assigned the midterm to be completed as a homework assignment using the computational aids that students are more likely to work with in the future. I also gave the final exam for the course in a computer lab, so that students could complete the calculations using the computer. The feedback also led me to reflect on the relevance of handwritten exams in courses on applied mathematics in general. I feel that the assessment mode should be modelled as closely as possible on how students are likely to use the theory/skills from the course in the future. I will strongly consider organizing future examinations involving computations in a computer lab.*

### Outcomes of my actions

*The students' performance on the midterm improved significantly. In addition, this incident changed my way of approaching assessments in future courses.*

Permission granted to use this vignette (Formative feedback in action) from Brandon Karchewski, PhD, Department of Geoscience, University of Calgary, Calgary AB (2016).



## Introduction

If you have ever found yourself wondering why students sometimes experience difficulty with an assignment or with a particular teaching strategy, you are not alone. The 'inner world' of learning is not something we can readily observe. Formative feedback can provide a window on how students are learning to enable us to respond to learning challenges in real time, and – most importantly – to support students more effectively in their learning.

This guide is for anyone who teaches in higher education, or who is preparing to teach. The focus of this guide is on how formative feedback can be used to improve both the learning experiences of students and the teaching experiences of instructors.

The purpose of this guide is to provide a model for effectively approaching the process of collecting, interpreting and responding to formative feedback, and practical resources to begin, or enhance your formative feedback practice. This guide includes:

- an explanation of formative feedback;
- evidence that formative feedback is a valuable strategy for enhancing teaching and learning;
- lenses to view the perspectives of formative feedback (Brookfield, 1995);
- a model to guide the formative feedback process, which builds upon Brookfield's (1995) lenses;
- sample techniques and strategies;
- resources (online and print) to support formative feedback practices; and,
- a summary of scholarly literature related to formative feedback.

Formative feedback is a process, and this document is designed to introduce the concepts, guide you through the process, and apply a formative feedback model.

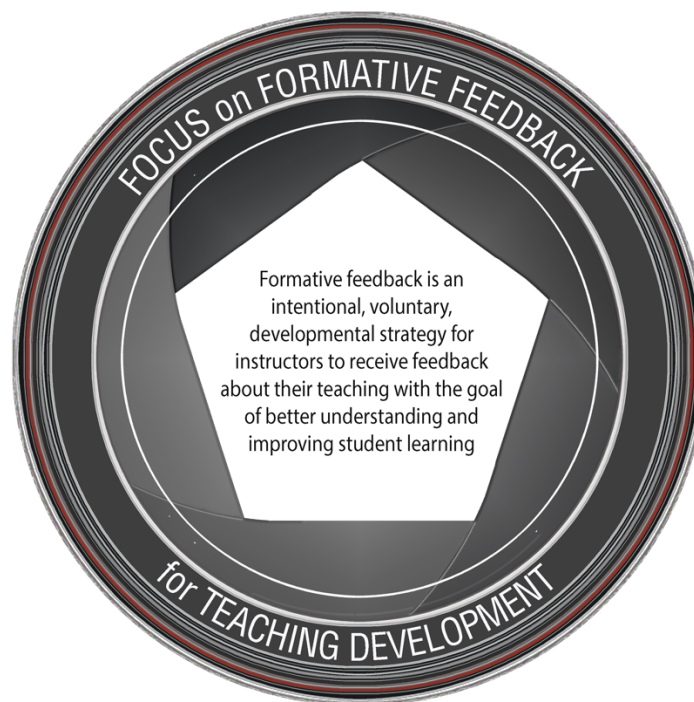
## What is formative feedback for teaching development?

The focus of this guide is formative feedback to and for instructors for the purpose of enhancing teaching and better understanding and improving student learning. Smith (2001) defines formative feedback as:

“... the actions and activities initiated by the individual teacher with the intent to collect information to inform decisions about how to improve” (p. 52).

As depicted in Figure 1, the formative feedback process is:

- an intentional activity, whereby feedback about teaching and student learning is invited and provided from peers and students (Smith, 2001);
- self-reflective and informed by scholarly literature, with the intent to provide a perspective on the activity of teaching and ultimately, to better understand and improve student learning;
- developmental, supportive, timely and specific (Shute, 2008). Formative feedback focuses on understanding and improving the learning experiences of students with respect to a specific aspect of a course; and,
- an activity that contributes to the stages and various levels of instructor development, with the goal of continuous improvement (Weimer, 2013).



*Figure 1. Focus on formative feedback for teaching development.*

Interpreting formative feedback is a highly reflective process, which incorporates the instructor's beliefs, intentions, and strategies, and the learners' experiences. Interpretation may also involve consulting with colleagues and/or scholarship in the field, in order to provide perspective on the activity of teaching and ultimately, to improve student learning.

It is important to note that the intent of the formative feedback process is to better understanding and improve teaching and student learning. Any data and information gathered during the formative feedback process should remain the property of the instructor, and it is the instructor alone who determines whether and how the results are shared (Berk, 2005; Huntley-Moore & Panter, 2006).

## **Why is formative feedback valuable?**

With a global shift in higher education from a focus on research, to include a stronger focus on teaching, individuals and institutions are searching for proven strategies, techniques and tools to enhance teaching and learning (Evers & Hall, 2009; Vajoczki, Fenton, Menard & Pollon, 2011). Jungst, Licklider and Wiersema (2003) write that, "many dedicated faculty with genuine interest in improving classroom instruction grope for better ways of doing their jobs" (p. 71). The formative feedback process is a strategy that any instructor can incorporate into his or her practice.

The case for gathering formative feedback is that it is practical, doable, and that it does enhance teaching and student learning (Courneya, Pratt & Collins, 2008; Hubbal & Clarke, 2011; Shute, 2008). Furthermore, according to Smith (2001), gathering and responding to formative feedback is essential to improving teaching and student learning.

## **What does formative feedback look like?**

Formative feedback is context-specific and the process of collecting formative feedback is driven by the instructor. Formative feedback can take diverse forms, such as:

- informal or formal data and information;
- quick, immediate (real-time) or retrospective comments and reflections; and,
- impromptu or scheduled feedback and input from others (Smith, 2001).

The first principle of the formative feedback process is that it is voluntary and initiated by the instructor. A second principle is that it is truly developmental and growth-oriented. Formative feedback is most often collected from learners, through strategies ranging from a short, focused questionnaire, to focus groups, and class representatives (Heise & Himes, 2010), or more comprehensive assessments of a specific learning activity (Angelo & Cross, 1993; Weimer, Parrett & Kerns, 2002).

Formative feedback from colleagues may also be valuable. As Smith (2001) emphasizes, "Colleagues, working together, invite, offer, and receive information about the quality of what they are doing ... with a view to improving its quality" (p. 59). He further provides and describes several peer formative feedback techniques and models which include: teaching circles; mentoring and coaching; teaching teams; collaborative inquiry; and, conducting classroom visits and observations. Some of these examples are expanded on further in this guide and in Appendix 1.





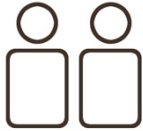

## Lenses of feedback

Brookfield (1995) provides a model of four lenses of perspective to consider for reflective teaching. The lenses are: 1. Self, 2. Students, 3. Colleagues and 4. Scholarship. These four lenses are useful to contextualize the formative feedback process, and have been adapted in Table 1 to frame the sources of formative feedback.

*Table 1*

*Four lenses of formative feedback*

Adapted from Brookfield (1995)

Lens	Sources of feedback for the instructor
<b>1. SELF</b> 	<ul style="list-style-type: none"><li>• Instructors' self-awareness and reflection (e.g. What have you noticed? What do you need to know about your teaching?)</li><li>• Instructors' reflection journals and notes</li></ul>
<b>2. STUDENTS</b> 	<ul style="list-style-type: none"><li>• Gathering real-time feedback from students</li><li>• Gathering structured student feedback and input on particular assignments and/or teaching and learning activities</li><li>• Implementing a classroom assessment technique (CAT) (see Angelo and Cross, 1993)</li></ul>
<b>3. COLLEAGUES</b> 	<ul style="list-style-type: none"><li>• Asking colleagues for feedback</li><li>• Joining (or starting) a peer-learning group</li><li>• Participating in a teaching square or peer mentoring process</li></ul>
<b>4. SCHOLARSHIP</b> 	<ul style="list-style-type: none"><li>• Consulting the literature</li><li>• Participating/presenting at conferences</li><li>• Engaging in teaching and learning research</li><li>• Applying research to one's teaching and learning practice</li></ul>

## The CARRA model of formative feedback

The CARRA Model: Curiosity, Ask, Receive, Reflect, Act (Figure 2) provides a framework for collecting formative feedback. The model starts with **CURIOSITY** (individual awareness, and self-reflection of what is going on in the class), where the instructor then **ASKs** for feedback and consults the literature. The instructor then **RECEIVES**, **REFLECTs** and interprets the feedback. These processes provide an opportunity for the instructor to respond to the feedback, and **ACT**, change, or adapt, their teaching and learning strategies. The CARRA model was developed by Jeffs and Piera (2016).

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*Figure 2. CARRA model of formative feedback.*

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## A question-based approach to the CARRA model

What do you want to know about your teaching or student learning? What are you curious about? Table 2 provides a question-based approach to guide you in thinking about what you want to know about your teaching and student learning, applying the CARRA model, and incorporating formative feedback in order to better understanding and improve student learning.

*Table 2*

*A question-based approach to applying the CARRA model*

<b>CURIOSITY</b>	<i>What questions do you have about your teaching or student learning in your course? Be as specific as possible.</i>
<b>ASK</b>	<i>Who will you ask/consult? Consider the four lenses of gathering feedback (Table 1).</i>
<b>RECEIVE</b>	<i>What type of feedback would you like to receive?</i>
<b>REFLECT</b>	<i>How will you assess and interpret the feedback?</i>
<b>ACT</b>	<i>How will you act on the feedback? What teaching or learning strategies will you change, adapt, or try?</i>

## Giving and receiving feedback

Throughout the formative feedback process, information is gathered through various means:

- we listen to what our students and colleagues say;
- we reflect on what is happening in our classrooms;
- we observe what our colleagues are saying and doing; and
- we read feedback from our students and colleagues in-person and online.

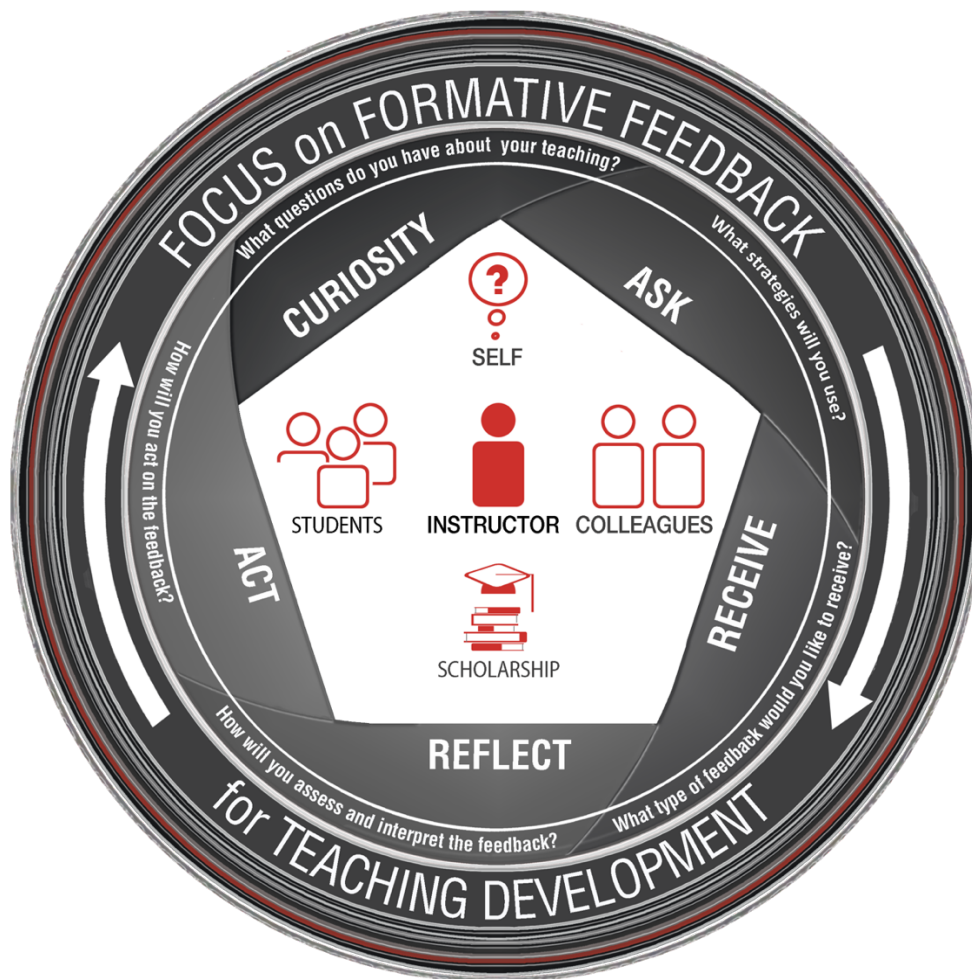
Once feedback has been received, it is time to interpret, respond, and determine what actions we can take for continuous improvement. It is important to acknowledge that feedback has been received, demonstrate appreciation for others' contributions to providing feedback, and to inform those who have provided feedback how their input will be used to improve your development as an instructor. Table 3, adapted from Piccinin (2003) provides practical strategies for giving and receiving feedback. He suggests that when receiving feedback we should be aware of how we feel. Consider your level of self-confidence, mood, and the context. How well do you know the material? What is your relationship with the person giving feedback? Instructors might want to introduce and model the process of giving and receiving feedback effectively. Boud and Molloy (2013) suggest both instructors and students have different perceptions and experiences with feedback. Unless there is a shared understanding of the intent, the formative feedback process might not be as effective.

**Table 3**  
***Giving and receiving feedback***  
Adapted from Piccinin (2003)

<b>Giving feedback effectively</b>	<p>Effective feedback is appreciative, respectful, thoughtful, and an intentional activity with a focus on development. Being prepared to give feedback is the first step. Before you consent to offer feedback, ask yourself, do you have the time and energy to participate? Will it be written, or verbal feedback? Review the purpose, and feedback process, guidelines, and expectations. Ask for some specific guidance about the feedback requested. In giving feedback. Be aware of confidentiality (avoid hallways or public spaces).</p> <ul style="list-style-type: none"> <li>• Use I statements – your personal opinions, rather than ‘you’</li> <li>• Be specific, clear and direct</li> <li>• Show empathy</li> <li>• Provide suggestions for improvement</li> <li>• Cushion the negative – frame as developmental and future-focused</li> <li>• Check for understanding</li> <li>• Control emotions</li> <li>• Be aware of facial expressions, body posture, gestures, and tone of voice.</li> </ul>
<b>Receiving feedback effectively</b>	<p>Be prepared and aware when you are about to receive feedback. How do you feel? Consider your level of self-confidence, mood, and the context. How well do you know the material? What is your relationship with the person giving feedback?</p> <ul style="list-style-type: none"> <li>• Remember, we all have room to improve, develop and grow. Feedback can facilitate this process.</li> <li>• “The key is to perceive what is said as objectively as possible” (p. 47) - easier said than done, but this will improve with practice and knowledge about feedback.</li> <li>• Feedback can be accepted, rejected, or used (think of it as a gift). It is up to the receiver to use or adapt as he/she wishes.</li> <li>• Listen or read the feedback carefully. Take the time needed to process the feedback. Don’t interrupt the speaker or argue. Re-read written feedback as necessary. If appropriate, you could debrief with a colleague.</li> <li>• Paraphrase the feedback, clarify what is being said. If the feedback is helpful, the receiver can accept it, if it needs clarification, the receiver can offer additional information. Listen openly without interrupting the speaker.</li> <li>• Indicate how you will, or will not use the feedback, and if there is a further opportunity to participate in a feedback process.</li> </ul>
<b>Reflecting on the feedback</b>	<ul style="list-style-type: none"> <li>• Reflect on the process and how it may impact your teaching and learning practices. Allow yourself the time to do this. A trusted colleague might be consulted to help process the feedback.</li> <li>• The feedback might be accurate even if you don’t want to hear it. It is up to you to use it in whatever way you wish.</li> </ul>

## Visualizing the formative feedback process

Figure 3 combines all of the components of the formative feedback process including the CARRA model (Jeffer & Piera, 2016). As stated at the beginning of this guide, formative feedback is an intentional, voluntary, developmental strategy for instructors to receive feedback about their teaching, with the goal of better understanding and improving student learning. The four lenses of formative feedback – 1. Self, 2. Students, 3. Colleagues and 4. Scholarship – are adapted from Brookfield (1995) and included in this framework.



*Figure 3. A framework for the formative feedback process.*

## Application of the CARRA model

If you haven't had much experience with the process of gathering, interpreting, and responding to formative feedback, the best way is to start with a simple feedback technique. In Table 4, the CARRA model is applied to illustrate a University of Calgary's instructor's experience with formative feedback as was previously presented at the beginning of the guide.

**Table 4**  
*An Example of the application of the CARRA model*

<b>CURIOSITY</b>	<b><i>What questions do you have about your teaching or student learning in your course? Be as specific as possible.</i></b> I noticed that students' performance on a midterm in numerical/computational methods was below expectations, based on past experience with a similar course. I was curious to know what happened in this class.
<b>ASK</b>	<b><i>Who will you ask/consult? Consider the four lenses of gathering feedback.</i></b> I decided to solicit feedback directly from students following the midterm on why they thought the midterm did not go very well. I was teaching a small class so I was able to engage the students in a discussion in the first class after the midterm exam.
<b>RECEIVE</b>	<b><i>What type of feedback would you like to receive?</i></b> During the discussion, the students noted that the format of the midterm (hand-written) was significantly different from how they had practiced the course material. Previous assignments had been completed by writing a computer program or using spreadsheet software to perform the calculations.
<b>REFLECT</b>	<b><i>How will you assess and interpret the feedback?</i></b> I realized, based on the students' feedback, that calculations are rarely written by hand since the data almost always needs to go into a report or other record summarizing the work. Some of the students were graduate students who had returned to university after several years working in industry and did not use the method allocated in the mid-term.
<b>ACT</b>	<b><i>How will you act on the feedback? What teaching or learning strategies will you change, adapt, or try?</i></b> I re-assigned the midterm to be completed as a homework assignment using the computational aids that students are more likely to work with in the future. I gave the final exam for the course in a computer lab, so that students could complete the calculations using the computer. The feedback also led me to reflect on the relevance of handwritten exams in courses on applied mathematics in general. I feel that the assessment mode should be modelled as closely as possible on how students are likely to use the theory/skills from the course in the future. I will strongly consider organizing future examinations involving computations in a computer lab.

## Resources and sample activities



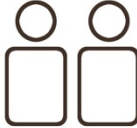

Instructors need opportunities, practice, and support to enhance their skills and development, and all combined, engaging in the formative feedback process is a worthwhile endeavor (Jungst, Licklider & Wiersema, 2003). While there are some quick self-assessments that can be done to capture immediate feedback, (Davis, 2001), Courneya, Pratt and Collins (2008) contend that teachers require training to be effective at providing, and processing formative feedback. In the next section, selected formative feedback strategies and activities are provided. Additional resources (print and online) can be found on the Taylor Institute for Teaching and Learning website:

<http://ucalgary.ca/taylorinstitute/http%3A//ucalgary.ca/taylorinstitute/resources/formative-feedback>

Table 5 includes a few selected examples of activities for each of the four lenses: 1. Self, 2. Student, 3. Colleague, and 4. Scholarship (adapted from Brookfield, 1995). At the beginning of each of the activities, one of the icons depicting the lens of formative feedback will be displayed, as follows:

*Table 5*

*Selected examples of activities for each of the four lenses*

Lens	Activity
<b>1. SELF</b> 	<ul style="list-style-type: none"><li>• What, So What, Now What?</li><li>• Reflective Teaching Journal</li><li>• Preparing, reviewing or revising a Teaching Philosophy Statement</li></ul>
<b>2. STUDENTS</b> 	<ul style="list-style-type: none"><li>• One-Minute Paper</li><li>• Stop, Start, Continue</li><li>• Class Representatives</li><li>• Classroom Assessment Techniques (CAT) (See Angelo and Cross, 2992)</li></ul>
<b>3. COLLEAGUES</b> 	<ul style="list-style-type: none"><li>• Peer consultation and feedback</li><li>• Classroom observation</li><li>• Teaching Square</li><li>• Mentoring</li></ul>
<b>4. SCHOLARSHIP</b> 	<ul style="list-style-type: none"><li>• Exploring the literature</li><li>• Engaging in scholarly professional development (e.g. teaching-related conference presentations)</li><li>• Engaging in the scholarship of teaching and learning (SoTL)</li></ul>

In addition to these activities, there is a selected list of annotated resources on formative feedback provided in Appendix 1 of this guide.



## SELF LENS: Reflection. What? So What? Now What?



Rolfe et al., (2001), provide a framework for reflection (Table 6: What, So What, Now What?) that can be useful in our teaching practice. Three (3) simple statements provide a method for tracking teaching experiences, curiosities, and goals. This framework can be used in most situations and kept as a reference.

*Table 6*

*What? So What? Now What?*

<p><b>1. What?</b> What did you experience in your class that you are curious about, or felt great, or that didn't feel right? Was this something new or have you experienced it before? What do you want to know more about? Jot down the details and be as specific as possible.</p>
<p><b>2. So What?</b> How did this experience impact your teaching, and how do you think it impacted your students' learning?</p>
<p><b>3. Now What?</b> How will you proceed to examine your experience? Is there something you will try or change in your teaching?</p> <p>What else do you want to learn about? How will you accomplish this? What are your goals for development?</p>

Adapted from Rolfe, G., Freshwater, D. & Jasper, M. (2001). Critical reflection for nursing and the helping professions: A user's guide. New York: Palgrave MacMillian.

## STUDENT LENS: One Minute Paper



Perhaps one of the most used formative feedback techniques (Chizmar & Ostrosky, 1998) is the 'One-Minute Paper' (Table 7). It is a quick and simple method to obtain feedback from students, to and for the instructor. This can be used at any time, and adapted to fit the instructors' needs. You can prepare a form to handout, or ask students to take out a blank piece of paper to answer the questions you have prepared (2 or 3 questions max). Critical to the success of this strategy, instructors summarize the input gathered, as well as specific strategies and changes they will implement based on the students' feedback at a future class meeting.

*Table 7*  
*One-minute paper*

Please take a minute to respond to the following questions.
<b>1. What is the most important thing you learned today?</b>
<b>2. What are some questions that remain for you after today's session?</b>
<b>3. What are some of the things you don't even understand well enough to ask about after today's session?</b>
<b>Other comments or suggestions:</b>

Adapted from: Chizmar & Ostrosky, 1998; and Queens University, 2008.

## STUDENT LENS: Start. Stop. Continue.

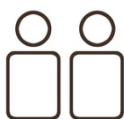


There is evidence that the 'Start, Stop, Continue' (Table 8) method contributes to higher quality feedback than non-structured feedback (Hoon, Oliver, Szpakowska, & Newton, 2015). The following template can be used and adapted to gather immediate feedback from students.

*Table 8*

*Stop. Start. Continue.*

<p><b>1. START...</b> Please tell me anything you would like me to start doing in class to help improve your learning in this course.</p>
<p><b>2. STOP!</b> Please tell me anything that you would like me to stop doing in class to help improve your learning in this course.</p>
<p><b>3. CONTINUE...</b> Please tell me anything that you would like me to continue doing to help improve your learning in this course.</p>



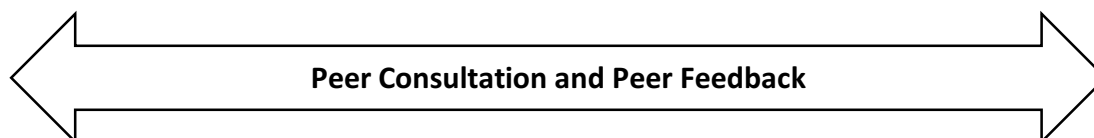
## COLLEAGUE LENS: Peer consultation and peer feedback

Any peer consultation or invitation for peer feedback should be initiated by the instructor (Cassidy & Lee, 2010). Consider what you want to know. What are your specific teaching and learning goals? This reflection will inform the type of activity you engage in to receive formative feedback (Table 9). There are additional options and models for peer consultation and structured programs in the resources section of this guide.

**Table 9**

*Peer consultation and peer feedback options*

	<b>Informal</b> <b>Not structured</b> <b>Quick</b> <b>Simple</b>	<b>More formal</b> <b>Drop-in and/or</b> <b>Scheduled</b> <b>Variable time</b>	<b>Formal</b> <b>Structured</b> <b>Significant time</b> <b>Complex</b>
<b>Activity</b>	<ul style="list-style-type: none"> <li>Consult with a trusted colleague who has teaching experience to discuss a particular teaching challenge, or a specific element of your course outline, assignment, lesson plan</li> <li>Consult with someone who is not as experienced and you can learn together</li> </ul>	<ul style="list-style-type: none"> <li>Learning circles</li> <li>Discussion groups</li> <li>Drop in sessions</li> <li>Request a consultation with an educational development consultant</li> </ul>	<ul style="list-style-type: none"> <li>Peer mentorship</li> <li>Teaching squares</li> </ul>
<b>Process</b>	<ul style="list-style-type: none"> <li>Invite a colleague to have a cup of coffee or a quick meeting to discuss a curiosity you have about teaching</li> <li>Be aware of confidentiality if you are in a public place</li> <li>Use any mode of communication that works - in person, phone, skype, email</li> </ul>	<ul style="list-style-type: none"> <li>Your faculty, department, or institution may have scheduled activities to support peer learning about teaching</li> <li>Start a learning or discussion group focused on teaching development</li> </ul>	<ul style="list-style-type: none"> <li>Your faculty, department, or institution may have scheduled mentorship activities</li> <li>If there isn't a structured activity offered in your department or faculty, initiate one</li> </ul>



## SCHOLARSHIP LENS: Exploring teaching and learning literature



Maryellen Weimer's (2013) teaching journey took her full circle from guessing, reflecting, experimenting, and implementing, to eventually realizing how she was teaching was in fact supported by evidence and theory. Her writings and work guide us as teachers, and describe how theory informs our teaching and learning practices (Weimer, 2006).

Britzman (2003) writes about how reading theory can help instructors understand their experiences in the classroom, by providing scholarly insights into what is occurring. Reading, studying, and researching teaching and learning, all contribute to the development of the teacher, inform practice, and in turn, impact students' learning (Table 10).

Brookfield (1995) recognizes reading and searching the literature is another demand on our time, yet it is beneficial and worthwhile to our practice. He provides a succinct overview of the theoretical scholarship related to teaching on pages 38-39 in his book *Becoming a critically reflective teacher* and includes works on:

- teachers' voices
- personal narrative
- autobiographical stories
- teacher thinking
- personal theorizing
- ethnographic studies of teachers' lives
- case studies of teachers in practice

**Table 10**  
*Exploring teaching and learning literature*

Topic or issue of Interest	Identify journal, article, book, or website to explore. Is this a potential research project for yourself?	Notes, Actions

## SCHOLARSHIP LENS: Professional development



Consider academic conferences, professional development, faculty development, workshops, and seminars as opportunities to reflect and explore teaching and learning. These opportunities often provide a mirror on how we teach, how we don't want to teach, and what our students may experience (Brookfield, 1995). Keep notes, be observant, and you "might arrive at some very provocative insights for their own teaching" (Brookfield, 1995, p. 54).

Shadiow, (2016) offers some practical advice about getting the most out of conferences – which in turn can be applied to most professional development opportunities. Table 11 can be used or adapted as a checklist to capture your learning at various professional development events.

**Table 11**

*Getting the most out of professional development conferences, workshops, and events*

<b>Preparation</b>	<ol style="list-style-type: none"><li>1. Approach the event as a personal independent study. Be explicit about what you want to learn, and who you may want to connect with.</li><li>2. Pre-plan your participation – select the sessions or workshops you want to attend.</li><li>3. Prepare to be intentional about taking notes: If you write by hand, take a dedicated notebook for the event. If you take electronic notes, create your own file ahead of time to organize your thoughts.</li></ol>
<b>During</b>	<ol style="list-style-type: none"><li>4. Start with a blank 'think about sheet'. This sheet remains separate from the notes you take in each sessions and serves as a generative source to think about later.</li></ol>
<b>Post</b>	<ol style="list-style-type: none"><li>5. Look over the 'think about sheet'. Add a question following each entry.</li><li>6. What was the most important thing you learned? What do you want to adapt, change, or use in your practice? How will you go about it?</li></ol>

Adapted from Shadiow, (May 23, 2016). How to get the most out of a professional conference. Faculty Focus: Higher Ed Teaching Strategies from Magna Publications.

## **Formative feedback: Putting it all in perspective**

Collecting, interpreting and responding to formative feedback is a practical and beneficial strategy to enhance teaching, and better understand and improve student learning. The premise of formative feedback for teaching development is clearly articulated throughout this guide as an intentional, self-reflective, evidence-based, instructor-initiated, and developmental process.

Information, strategies, and resources were selected to support and encourage instructors to engage in the formative feedback process, with the ultimate goal of better understanding and improving student learning. The activities in this guide have been included for instructors to copy, and or adapt as needed.

Brookfield's (1995) perspectives on reflective practice have been incorporated throughout this guide as lenses in which to view and explore the formative feedback process. The perspectives include one's self, students, colleagues, and scholarship.

The framework was developed to provide instructors with a formative feedback strategy. It is the hope that this guide will be used by anyone who teaches in higher education, or who is preparing to teach. The practical resources provided throughout are designed to encourage instructors to begin or enhance the process of gathering, interpreting and responding to formative feedback, in order to better understand and improve student learning.

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## Appendix 1: Strategies, techniques, and resources (online and print)

The resources in this appendix have been selected to provide instructors with a sampling of the types of activities and strategies available for formative feedback. The authors and developers have made their resources accessible, and freely available for use. If you would like to contribute to the list of resources, or add comments about how you have used or adapted formative feedback activities, you are invited to join the Taylor Institute Teaching Community: <http://www.ucalgary.ca/taylorinstitute/teaching-community/>

Critical Incident Questionnaire (CIQ):

[http://stephenbrookfield.com/Dr.\\_Stephen\\_D.\\_Brookfield/Home.html](http://stephenbrookfield.com/Dr._Stephen_D._Brookfield/Home.html)

The CIQ is designed to give an instructor immediate feedback about learning and teaching development. Students answer 5 questions in 5 minutes at the end of a class. There is additional information at this site to help the instructor understand the use and advantages of the CIQ.

Creating a Feedback Form Using the Survey Tool in D2L:

<http://ucalgary.ca/taylorinstitute/resources/formative-feedback>

A step-by-step guide, created by the Taylor Institute's instructional design team, on creating a formative feedback survey in D2L.

Feedback: Key to learning. Piccinin, S. (2003). Green guide No 4, (4<sup>th</sup> printing). London, ON: STLHE.

Piccinin's guide provides a comprehensive strategies on how to give effective feedback, how to receive feedback effectively, and how to process and act upon feedback.

Gathering Feedback from Students: <http://cft.vanderbilt.edu/guides-sub-pages/student-feedback>

Vanderbilt University. A comprehensive website with information, forms, surveys, and techniques for gathering feedback. Download resources and adapt for your needs.

Genuine Peer-Observation of Teaching. <http://www.ucd.ie/t4cms/UCDTLD0071.pdf>

The University College Dublin has created a one-page step-by-step process on how to develop and be part of the process of peer-observation. The model is intentional, developmental, structured, and occurs over a period of time.

How am I teaching: Forms and activities for acquiring instructional input.

Weimer, M., Parrett, J., Kerns, M. (2002). Madison, WI: Atwood Publishing.

This classic text includes twelve inventories to collect feedback from students and peers. All of the material is available to copy, alter, and adapt for instructional purposes.

Instructional Skills Workshop (ISW).

<http://ucalgary.ca/taylorinstitute/teachingdevelopment/instructional-skills-workshop>.

ISW is an intensive, four-day workshop that gives participants the chance to enhance their teaching skills in a small group setting. Dawson et al., (2014) report that ISW develops instructional skills in lesson planning, teaching, giving and receiving feedback, and critical reflection.

Mid-term Student Feedback. <http://fod.msu.edu/oir/mid-term-student-feedback>

Michigan State University. Office of Faculty & Organizational Development. This webpage is dedicated to formative feedback resources, questionnaires, videos, and templates.

Preparing a Teaching Philosophy Statement. Kenny, N.A., Jeffs, C., & Berenson, C. (2015). Calgary, AB: Taylor Institute for Teaching and Learning: <http://ucalgary.ca/taylorinstitute/edu/node/637>  
This resource introduces teaching philosophy statements and offers several reasons for preparing one. It also outlines the components of a philosophy statement and guiding questions to help you fill out each of the sections.

Start-Stop-Continue. Getting feedback from students. Boston University Centre for Excellence & Innovation in Teaching: <http://www.bu.edu/ceit/teaching-resources/start-stop-continue/>.  
This resources outlines the Start-Stop-Continue activity used to obtain anonymous, and quick feedback from students. An added bonus to this resource is an example summary of feedback, and guidance how to interpret the feedback.

Teaching Perspectives Inventory. <http://www.teachingperspectives.com/tpi/>  
The Teaching Perspective Inventory (TPI) is a (free) online resource designed to assess your orientation to teaching. The 45-item inventory will be automatically scored and you can print your profile. The TPI is useful to examine and reflect on your beliefs about teaching, and aids in the development of your teaching philosophy statement.

The Teaching Community: Taylor Institute for Teaching and Learning.  
<http://www.ucalgary.ca/taylorinstitute/teaching-community/>  
The Teaching Community is a place for postsecondary educators to connect, collaborate and communicate. Access resource, add resources you've discovered, share our own research or best practices and discuss topics in postsecondary education. Go to 'SHARE' to add resources or information, under 'Category', click on the drop down menu 'Formative Feedback for Teaching Development'.

The Teaching Squares Program Manual. Carol Berenson. (2016). *(in development)*  
Taylor Institute for Teaching and Learning. <http://www.ucalgary.ca/taylorinstitute/>  
Teaching Squares are designed to enhance teaching and learning and to build community through a process of reciprocal peer observation, self-reflection, and group discussion. Teaching Squares Programs facilitate the sharing of successful and innovate teaching methods, and contribute to fostering a campus culture of reflection and continuous improvement in teaching practice (Moorse & Moore, 2006, p. 54).

Using Brookfield's Four Lenses to Improve Your Own Teaching. University College Dublin.  
[http://www.ucdoer.ie/index.php?title=Using\\_Brookfield%E2%80%99s\\_Four\\_Lenses\\_to\\_Improve\\_Your\\_Own\\_Teaching](http://www.ucdoer.ie/index.php?title=Using_Brookfield%E2%80%99s_Four_Lenses_to_Improve_Your_Own_Teaching). This open education resource, using Brookfield's (1995) four lenses of reflective practice, provides step by step exercises for instructors to work through their teaching practices and experiences. The four lenses of self, peers, students, and scholarship are useful perspectives to consider for formative feedback. Example strategies are included, and you can record your own work, save and print your worksheets.