

**Turning self-assessment into self-feedback**

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Recommended citation

Panadero, E., Lipnevich, A. A., & Broadbent, J. (2019). Turning self-assessment into self-feedback. In D. Boud, M. D. Henderson, R. Ajjawi, & E. Molloy (Eds.), *The Impact of Feedback in Higher Education: Improving Assessment Outcomes for Learners*: Springer.

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### **Abstract**

This chapter proposes moving our conceptualization of self-assessment to that of self-feedback, in which the final goal is for students to produce and search for feedback to close the gap between their current and desired performance. We propose six main venues to achieve self-feedback: (a) making the implicit aspects of self-assessment explicit to correct for self-bias, (b) shifting from scoring accuracy to content accuracy, (c) using a developmental approach: the power of practice/expertise, (d) connecting self-feedback and self-regulated learning, (e) exploring the role of individual characteristics and interpersonal variables, and (f) anchoring self-feedback to evaluative judgment: changing the view from task-specific to long-term learning. Additionally, the impact of self-feedback on learning is analyzed.

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Over the past few decades the field of education has accumulated extensive literature on self-assessment and its effects on educational outcomes (Boud & Falchikov, 1989; Brown & Harris, 2013; Panadero, Brown & Strijbos, 2016a; Panadero, Jonsson & Botella, 2017; Sitzmann, Ely, Brown & Bauer, 2010). In general, existing definitions of self-assessment have a common underlying idea, and it's that of learners' engagement with a process or product of their own learning to describe their perceived progress or result. However, the outcome of self-assessment can be purely summative (e.g. self-grading) to mostly formative (e.g. creating qualitative information that can be applied for a resubmission of the work). Andrade (2018), in her overview of self-assessment research, encouraged to define self-assessment through its purpose. She stated that "the purpose of self-assessment is to generate feedback that promotes learning and improvements in performance" (p. 377). In turn, the purpose of feedback is in modifying processes and products that enhance learning. Thus, we will define self-feedback as the implementation of self-assessment in ways that generate feedback information and processes for students' own purposes (e.g. achieving educational gains).

This definition emphasizes the importance of using self-assessment for formative purposes, creating space and opportunities for students to reflect upon their work and improve upon it, at the same time offering information for the teachers on how to modify their instruction. Instead of using self-assessment for purely grading purposes, as was the tendency not so long ago (e.g. Panadero et al., 2016a), it encourages students to generate feedback that could close the gap between their current performance and the expected goal. This can be construed as a change in paradigm, turning self-assessment from grade assignment into something more powerful – self-feedback.

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This conceptualization could have a strong impact on education if we consider previous research findings. For example, previous meta-analyses have revealed that self-assessment has an impact on student achievement (Brown & Harris, 2013), self-regulated learning and self-efficacy (Panadero et al., 2017), and motivation (Sitzmann et al., 2010). Interestingly, these reviews included studies from earlier years, in which the formative purposes of assessment were not as clearly defined as they are today. In other words, the majority of studies included in the aforementioned reviews discussed summative versions of self-assessment, which might have had a weaker influence on learning. Therefore, it is to be expected that in the future research will take into account multiple operationalizations of self-assessment, in particular, equating self-assessment with self-feedback and encouraging the use of it formatively (Andrade, 2018; Panadero et al., 2016a). We want to extend this argument further, incorporating new ideas while exploring implementation guidelines that should increase the occurrence of self-feedback.

### **Shifting from summative implementations of self-assessment to self-feedback**

In the early days of self-assessment, the primary purpose thereof was in students' guessing or predicting their grade in an attempt to explore its correlation to teachers' grades (Falchikov & Boud, 1989). Although this trend is currently shifting with more researchers trying to uncover intricacies of learning-oriented purposes of self-assessment, a large portion of current studies on self-assessment is still focused on student-predicted grades and their correlation with scores assigned by teachers. For example, Andrade (2018) found that out of the fifty-two articles published on self-assessment from 2013 to 2016 thirty explored students' accuracy (note: she used the term consistency). These studies are informative and further our understanding of students' ability to effectively evaluate their work, and the conditions under which this

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process is particularly effective. Yet, we would argue, that students get the most benefit through the deep reflection that can accompany self-assessment (see for example Panadero et al., 2016a). An increasing volume of research has focused on how to use self-assessment in ways that would promote direct reflection on the qualities of the performed work, not just the grade (e.g. Brown & Harris, 2013; Sitzmann et al., 2010), but the field can clearly improve.

Unfortunately, the summative tradition in self-assessment research has had a negative impact on the number and depth of formative self-assessment studies. As a consequence, there is barely any educational research focusing on the type of feedback students give to themselves. To our knowledge, one notable exception is a study by Yan and Brown (2017) who employed retrospective interviews to examine processes that students used when meaningfully engaging in self-assessment for the purposes of improving learning. They found that students usually went through three phases (1) determining the performance criteria, (2) self-directed feedback seeking that can come via inquiry from external sources or self-monitoring and (3) self-reflection based on the feedback sought. This study is interesting because it shows the behavioral, cognitive, and affective processes students actively employ when processing self-feedback, but we need to keep in mind that the data is limited as it comes from self-report.

Acknowledging that this type of research is very scarce, we will focus next on six aspects that will be key to achieving implementations that truly help to develop students' effective self-feedback.

### **a) Making the implicit explicit to correct for self-bias**

A very distinct aspect of self-feedback is that it refers to the self, wherein a student serves both as a provider and a receiver of feedback. Butler and Winne's (1995) review pointed out that learners had their own internal path to feedback that occurred

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regardless of the reception of explicit and direct external feedback from teachers or peers. Therefore, even if teachers did not actively encourage formal self-assessment, students tended to create their own internal feedback. In fact, studies show that we continuously engage in this type of self-referenced activities in all domains of our lives, and tend to dismiss information from outside sources that are inconsistent with our stable perceptions of performance and ability (Dunning, Heath & Suls, 2004). The dismissal of inconsistent information is particularly important for us because probably the strongest factor influencing self-feedback is individual bias.

There is an extensive body of research that has consistently demonstrated that human beings are imperfect at assessing themselves, especially when it comes to low academic achievers (Dunning et al., 2004). The more we help students to be mindful of their own performance and self-evaluation, the more likely they are to reflect upon those processes that are usually 'internal objects of reflection'. Boud (1999) pointed out that self-assessment is more powerful as an instructional and learning activity if it involves external sources of feedback such as teachers or peers, an aspect also pointed out by feedback models proposed by Butler & Winne (1995) and Narciss (2008). This external feedback will help students to correct biases because in educational settings they have a negative impact on academic achievement. Probably the most promising way to achieve this goal is through direct instruction and demonstration of activities leading to self-feedback because students need to be shown external reference values to achieve higher accuracy and learn to create self-feedback (Narciss, 2008).

To enhance student self-feedback occurrence in the classroom educators should use this as an instructional goal deeply embedded into the curriculum, which implies that educators need to turn an inherent internal process into an explicit external one that the educators can model (Eva & Regehr, 2008). Boud (1999) noted that self-assessment

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should not be viewed as an isolating, individualized activity. Rather, it can, and it should involve the available social circle of teachers, peers, and parents. The nature of self-assessment suggests students' seeking feedback from their social environments and then directing them to adjust their own feedback and evaluation to improve processes and products of learning. Having students engage in an effective cycle of self-feedback may be possible through the implementation of scaffolds such as modelling, formulating explicit criteria, using exemplars, and other instructional tools (Panadero, Jonsson & Strijbos, 2016b). As a result of these instructional interventions, students will be able to create their own feedback based on external reflection induced by scaffolding tools. Panadero et al. (2016b) combined recommendations from Andrade and Valcheva (2009) and Ross (2006) and came up with a list of guidelines for implementation that would increase the likelihood of self-feedback to occur (p. 318):

1. Define the criteria by which students assess their work
2. Teach students how to apply the criteria
3. Give students feedback on their self-assessments
4. Give students help in using self-assessment data to improve performance
5. Provide sufficient time for revision after self-assessment
6. Do not turn self-assessment (*exclusively*) into self-evaluation by counting it toward a grade.

As it can be seen, these guidelines emphasize the intentional shift from internal self-feedback processes into explicit moments of instruction. Receiving external feedback from teachers and peers will allow for correction (or mitigation) of bias and create more opportunities to generate meaningful self-feedback.

### **b) Shifting from scoring accuracy to content accuracy**

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There is a vast number of studies on scoring accuracy in self-assessment (Brown, Andrade & Chen, 2015), and there is empirical evidence suggesting that having students calculate their own grades on a task results in significant performance gains. Sanchez, Atkinson, Koenka, Moshontz, & Cooper (2017) synthesized the findings of 33 reports on peer and self-grading. They found that students who engaged in self-grading performed better than students who did not ( $g = .34$ ). Importantly, this meta-analysis mixed pure summative interventions with formative ones, making it hard to discern the sole impact of summative self-assessment. It is clear, however, that the act of reflecting on one's performance with the goal to generate a grade is likely to have positive effects on students' subsequent performance because self-grading makes the student reflect upon his/her performance and situate it in a scoring schema. The benefits of self-grading can also be explained from the information processing perspective. The sheer act of reflecting upon one's performance strengthens memory traces and may facilitate subsequent information retrieval (Bjork, Storm, & de Winstanley, 2010). Further, if this reflection goes beyond the grade and students focus on the task itself, they will generate more productive self-feedback (e.g. Andrade, 2018).

In order to get closer to effective self-feedback, we could move self-assessment accuracy from scoring to content accuracy. This is because "*...it may be much more educationally powerful if students are accurate when describing the qualities of their work (i.e., its strengths or weaknesses that need to be improved) in terms of subject, discipline, or course "content-matter" accuracy*" (Panadero et al., 2016a p. 812), as compared to the perfect calibration in terms of self-grading. This type of accuracy is closer to self-feedback because with that type of information the learner is more capable of answering the three critical questions (Where am I? Where am I going next? How do I get there?) as they relate to the content of the task itself, and not just the grade.

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Therefore, we need to start researching how to get our self-assessment interventions closer to content accuracy.

### c) **Developmental approach: the power of practice/expertise**

Another important aspect to consider when moving towards self-feedback is practice and expertise. Panadero et al. (2016a) proposed a developmental approach that required self-assessors to have some practice with the particular task they were supposed to assess. Without adequate familiarity with a task, it is unlikely that self-assessors can make accurate and realistic evaluations of one's performance due to lacking criteria, standards, and performance models. This idea was first outlined in regards to self-grading accuracy by the meta-analysis from Falchikov and Boud (1989): "Self-assessment may be regarded as a skill and, as such, needs to be developed. It has been suggested that good assessment practice, whether ratings be made by students or by teachers, should include training of assessors" (p. 426). Panadero and colleagues (2016a) extended this idea past summative self-assessment and grading alone and included formative self-assessment, which, in its effective form, culminates in self-feedback. The authors argued that skill development should be embraced throughout the self-feedback process: "Just as we cannot ask students to perform a novel task with the ease and fluency of an expert, so we should not expect students to conduct self-assessment with ease and accuracy, until they have mastered the relevant skills" (p. 819).

Panadero et al. (2016a) also argued that there were two reasons why prior knowledge and expertise in the task domain mattered. First, consistently with the cognitive load theory, when students are performing a task for the first time, the actual performance consumes most of the cognitive resources (Kirschner, 2002) leaving too little room for self-monitoring or strategic self-evaluation. The lacking cognitive

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schemata increases cognitive load, as practice is required to build up such schemas and automatize some of the processes that require significant cognitive investments. The second reason refers to motivational aspects. That is, if students lack experience and are not sure what to do with a novel task, it will be highly unlikely that they will find the exercise to be enjoyable and helpful. This could result in a “threat to the self and/or even encourage learned helplessness and decreased self-efficacy” (Panadero et al., 2016a p.819). This practice, particularly in high stakes assessment contexts (e.g. grades), may have a negative effect on self-assessors’ willingness and motivation to perform self-assessment in the future via negative effects on self-efficacy, emotions, and other psychosocial variables.

To circumvent these issues, Panadero and colleagues proposed four key considerations. First, practice is key for a successful self-assessment implementation culminating in self-feedback. Hence, giving students multiple opportunities to engage with the task and subsequent self-monitoring and self-assessment is required. Second, an incremental structured implementation should be exercised in order to achieve optimal results. For example, assessors should be first introduced to simpler forms of self-feedback, and tasks should gradually increase in complexity as students gain practice and expertise. Third, differential interventions might be more beneficial for different stages of expertise, which means that we need to be aware of the current stage students are in before implementing self-feedback in an appropriate manner. Fourth, the focus should be on skill development, rather than exclusively on student content knowledge. In other words, teachers should be aware that the final goal is to develop the ability to create self-feedback, not just to be accurate at the particular task the student is performing at that specific moment (e.g. mathematical equations). In conclusion, this developmental approach should help to develop self-feedback expertise for the students

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so they can more accurately answer the three key feedback questions: “where am I going, where am I, where to next?”.

### **d) Connecting self-feedback and self-regulated learning**

In order to increase students’ opportunities to generate more productive self-feedback, our interventions need to be embedded into models of how learning strategies are enacted. The theory of self-regulated learning presents such models and “*refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals*” (Zimmerman, 2000 p.14). The most prominent self-regulated learning models include the idea of self-feedback under the umbrella term of self-evaluation (Panadero et al., 2017). Beyond theoretical models, a fruitful line of empirical research has consistently shown that self-assessment interventions had a positive effect on student self-regulation and self-efficacy (Panadero et al., 2017).

Nevertheless, there seems to be tension. Within the assessment literature, especially within its formative niche, self-assessment is seen as an “instructional process used by the teacher as an educational resource” (Panadero & Alonso-Tapia, 2013 p. 554). In contrast, self-regulated learning scholars see it as a “process that pupils carry out to self-regulate” (p. 554). These differential paradigms have been translated into practice by formative assessment scholars focusing more on pedagogical and instructional aspects of self-assessment (e.g. Tan, 2012), whereas self-regulated learning scholars have focused on trying to understand the impact of self-assessment on cognitive, motivational, and emotional processes (e.g. Sitzmann et al., 2010). It seems it would be more beneficial to fuse both approaches to conceptualize how, from an instructional and learning perspectives, self-feedback can be effectively generated by learners. Butler and Winne (1995) presented initial attempts to bring together the two approaches as they anchored their work in self-regulated learning theory while

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reviewing the links between external and internal feedback. However, not much empirical research was published back in the day on this topic.

Luckily, we are reaching the point where self-assessment and self-regulated learning cross-disciplinary empirical research is gaining momentum (e.g. Andrade, 2018). One example of such a trend would be a recent meta-analysis that showed the positive effects of self-assessment interventions on self-regulated learning (Panadero et al., 2017). Another example from be Nicol and McFarlane-Dick (2006) who presented a theoretical exploration of how seven principles of good feedback practice –that reflect on the self-feedback concept presented here- influenced students’ self-regulation. Nicol and McFarlane-dick’s approach is advantageous because, by being anchored within pedagogical foundations, it is easier to bring the concept of self-feedback into real classrooms.

All in all, self-regulated learning conceptualizes students as both agentic, that is, responsible for their own learning, and strategic, i.e., capable of using different strategies to reach their goals. This type of conceptualization is needed for self-feedback where students need to be active seekers of their own feedback while resorting to self-regulated learning to obtain such information.

### **e) Individual characteristics and interpersonal variables**

Lipnevich, Berg, and Smith (2016) proposed that student’s individual characteristics (e.g., personality facets, prior achievement) affect student receptivity to feedback and their actions in response to teacher-provided feedback. It is safe to presume that individual characteristics would matter even more for self-assessment. After all, it is the person delivering feedback and evaluative judgments to him or herself, and whether or not a person views him or herself as a competent, self-efficacious, or conscientious person would affect the quality of self-feedback as well as

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subsequent actions. Hence, we need to understand how different students might variably benefit from self-assessment. Understanding these differences will be critical for our attempts to make self-assessment more productive.

For example, there is initial research examining differences between low and high achieving students' self-assessment accuracy (e.g. Boud, Lawson & Thompson, 2013). Existing literature suggests that the average student has the most to gain from the process (e.g. Boud et al., 2013) with low achievers gaining the least (Sitzmann et al., 2010). If we were to understand better how students process self-feedback, we could be more effective in helping low achievers – a category of students that are in the greatest need of most support.

Further, there has been some interest in exploring gender differences in self-assessment. A recent meta-analysis on the effects of self-assessment interventions revealed that female students' self-efficacy increased more than males', whereas self-regulatory strategies were the same for both genders (Panadero et al., 2017).

Interestingly, gender differences in the perceived value of self-assessment are observed at the teacher level and can explain, at least to a degree, the aforementioned impacts of self-assessment on self-efficacy. Lipnevich and Gjikal (2019) reported initial evidence for such differences, with female teachers viewing self-assessment as more useful and beneficial than their male counterparts. Teacher reports on instructional practices matched the above finding, with female teachers reporting a more frequent implementation of self-assessment (medium effect sizes). This finding calls for further investigations, as well as clear communication of benefits of self-assessment to both male students and teachers. Articulating benefits and providing supports for effective generation of self-feedback should be advised to all instructors.

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Also, it is not surprising there has been a number of studies showing that motivated students use more often self-assessment as a learning strategy (Ibabe & Jauregizar, 2010). Tapping into student motivation by activating their attainment, intrinsic, and utility values (e.g., Eccles & Wigfield, 2002) of self-feedback could be a boon to student achievement.

To our knowledge, self-assessment literature has not focused on individual characteristics for reasons that might seem obvious (i.e., it is one's self-evaluation). However, this gap needs to be corrected as a variety of individual factors may influence the quality of self-feedback that students generate. So, for example, future studies may explore whether students with different personality profiles would vary in their willingness to engage in self-feedback, and thus, explore opportunities for helping them to develop this important skill. Further, studies may examine student characteristics (e.g., personality, prior knowledge, gender), alone and in combination, to investigate potential differences in self-feedback delivery. After all, studies report differential responses to teacher-provided feedback depending on student characteristics (e.g., Lipnevich & Smith, 2009) and it is self to speculate that they will be pronounced in the context of self-feedback as well.

### **f) Evaluative judgment: changing the view from task-specific to long-term learning**

Lastly, it is important to situate self-feedback in a larger assessment paradigm to potentiate its implementation along with other assessment practices (e.g. peer assessment). Recently there has been a push for evaluative judgement, which is defined as "*the capability to make decisions about the quality of work of self and others*" (Tai, Ajjawi, Boud, Dawson, & Panadero, 2017). The pedagogical idea behind is that in higher education we need to help students to develop the capacity to evaluate their own

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work and that of others. Importantly, students' development of evaluative judgment can only be achieved through a shift in how assessment and feedback are conceptualized and implemented in our universities. Our courses will need to offer opportunities to develop evaluative judgement which should be enhanced through activities such as peer assessment, formative teacher's feedback and, of course, self-feedback. These allow the students to develop their capacity to evaluate work via explicit instruction of the evaluative judgment's components (e.g. assessment criteria, standards) and a dialogic approach to feedback so that students are motivated to engage in recursive loops that will enhance students' self-feedback ability (Jonsson & Panadero, 2018; Winstone et al., 2017). This way, helping students to become effective self-feedback agents should represent an instructional goal, as opposed to being a side activity, which is how self-assessment is implemented in many instances (Brown & Harris, 2013).

This idea of having self-feedback embedded in the curriculum has implications for our interventions. We are no longer asking students to self-assess for a particular task in our course; it is for a broader skill that implies developing self-feedback capabilities independently of the content task. That is, students need to know that when they approach a new task/course they need to look for assessment criteria, standards, exemplars, etc., to gain knowledge about the task. At the same time, they need to practice it before they can accurately estimate their learning and performance.

### **The impact of self-feedback in the leverage of feedback processes**

In previous sections, we have presented different ideas on how to move from self-assessment to self-feedback. This shift will have a triple impact on students' learning. First, if they turn into advanced self-feedback agents, they will be adopting an active role in the feedback process, not only with themselves but also with the teachers. This means that, for example, that students will be more likely to ask for more precise

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and helpful feedback from teachers because by creating their own feedback, they would be capable of identifying where they are in comparison to where they are supposed to be and would be more inclined to ask for advice in regards to how to get there. Second, the more advanced self-assessment strategies students employ, the higher the chances that these will turn into long-term learning for the students, transcending contexts and academic domains. And, thirdly, it is our belief that teaching students to be effective generators of self-feedback is the ultimate goal of any instructional activity. We, as educators, provide feedback to help students succeed. However, we cannot always be there, so our goal is to teach students to generate great quality self-feedback and thus, not depend on us. Hence, self-feedback may represent one of the most important outcomes of any educational setting.

### **Conclusions**

In this chapter, we focused on the concept of self-feedback proposing different areas for research and implementation and discussing its effects on student learning and performance. Self-feedback should be seen as the most formative use of self-assessment, in which the learners create their own feedback, one that is anchored in content accuracy, in the development of practice and expertise, and framed within self-regulated learning theories. We hope this chapter will encourage the field to redefine our approach to self-assessment and employ different pedagogical practices to help students to generate good quality self-feedback and thus achieve greater academic success.

### **References**

- Andrade, H. (2018). Feedback in the context of self-assessment. In A. A. Lipnevich & J. K. Smith (Eds.), *The Cambridge handbook of instructional feedback* (pp. 376-408): Cambridge University Press.

## SELF-ASSESSMENT INTO SELF-FEEDBACK

Andrade, H., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory Into Practice*, 48(1), 12-19.

doi:10.1080/00405840802577544

Bjork, E. L., Storm, B. C., & deWinstanley, P. A. (2010). *Learning from the consequences of retrieval: Another test effect*. In A. S. Benjamin, Ed., *Successful remembering and successful forgetting: A festschrift in honor of Robert A. Bjork* (First Edition). Psychology Press.

Boud, D. (1999). Avoiding the traps: Seeking good practice in the use of self-assessment and reflection in professional courses. *Social Work Education*, 18(2), 121-132. doi:10.1080/02615479911220131

Boud, D., & Falchikov, N. (1989). Quantitative studies of student self-assessment in higher-education: A critical analysis of findings. *Higher Education*, 18(5), 529-549. doi:10.1007/BF00138746

Boud, D., Lawson, R., & Thompson, D. G. (2013). Does student engagement in self-assessment calibrate their judgement over time? *Assessment & Evaluation In Higher Education*, 38(8), 941-956. doi:10.1080/02602938.2013.769198

Brown, G. T. L., Andrade, H., & Chen, F. (2015). Accuracy in student self-assessment: Directions and cautions for research. *Assessment in Education: Principles, Policy & Practice*, 1-14. doi:10.1080/0969594X.2014.996523

Brown, G. T. L., & Harris, L. R. (2013). Student self-assessment. In J. McMillan (Ed.), *The SAGE handbook of research on classroom assessment* (pp. 367-393). Thousand Oaks, CA: SAGE.

Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65(3), 245-281. doi:10.3102/00346543065003245

## SELF-ASSESSMENT INTO SELF-FEEDBACK

- Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5(3), 69-106. doi:10.1111/j.1529-1006.2004.00018.x
- Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109-132.
- Eva, K. W., & Regehr, G. (2008). "I'll never play professional football" and other fallacies of self-assessment. *Journal of Continuing Education in the Health Professions*, 28(1), 14-19. doi:10.1002/chp.150
- Falchikov, N., & Boud, D. (1989). Student self-assessment in higher education: A meta-analysis. *Review of Educational Research*, 59(4), 395-430.  
doi:10.3102/00346543059004395
- Ibabe, I., & Jauregizar, J. (2010). Online self-assessment with feedback and metacognitive knowledge. *Higher Education*, 59(2), 243-258.  
doi:10.1007/s10734-009-9245-6
- Jonsson, A., & Panadero, E. (2018). Facilitating students' active engagement with feedback. In A. A. Lipnevich & J. K. Smith (Eds.), *The Cambridge handbook of instructional feedback*: Cambridge University Press.
- Kirschner, P. A. (2002). Cognitive load theory: Implications of cognitive load theory on the design of learning. *Learning and Instruction*, 12(1), 1-10.  
doi:http://dx.doi.org/10.1016/S0959-4752(01)00014-7
- Lipnevich, A. A., Berg, D. A. G., & Smith, J. K. (2016). Toward a model of student response to feedback. In G. T. L. Brown & L. R. Harris (Eds.), *Handbook of Human and Social Conditions in Assessment* (pp. 169- 185). New York: Routledge.

## SELF-ASSESSMENT INTO SELF-FEEDBACK

- Lipnevich, A. A. & Gjikal, K. (2019, January). What we know about feedback: Teacher beliefs and practices in a nutshell. Paper presented at CUNY Graduate Student Summit, New York, NY.
- Lipnevich, A. A., & Smith, J. K. (2009). Effects of differential feedback on students' examination performance. *Journal of Experimental Psychology: Applied*, *15*(4), 319-333. doi:10.1037/a0017841
- Narciss, S. (2008). Feedback strategies for interactive learning tasks. In J. M. Spector, M. D. Merrill, J. J. G. van Merriënboer, & M. P. Driscoll (Eds.), *Handbook of research on educational communications and technology* (pp. 125-144). Mahwah, NJ: Lawrence Erlbaum.
- Nicol, D., & McFarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, *31*(2), 199-218. doi:10.1080/03075070600572090
- Panadero, E., & Alonso-Tapia, J. (2013). Self-assessment: Theoretical and practical connotations. When it happens, how is it acquired and what to do to develop it in our students. *Electronic Journal of Research in Educational Psychology*, *11*(2), 551-576. doi:http://dx.doi.org/10.14204/ejrep.30.12200
- Panadero, E., Brown, G. T. L., & Strijbos, J. W. (2016). The future of student self-assessment: A review of known unknowns and potential directions. *Educational Psychology Review*, *28*(4), 803-830. doi:10.1007/s10648-015-9350-2
- Panadero, E., Jonsson, A., & Botella, J. (2017). Effects of self-assessment on self-regulated learning and self-efficacy: Four meta-analyses. *Educational Research Review*, *22*, 74-98. doi:https://doi.org/10.1016/j.edurev.2017.08.004
- Panadero, E., Jonsson, A., & Strijbos, J. W. (2016). Scaffolding self-regulated learning through self-assessment and peer assessment: Guidelines for classroom

## SELF-ASSESSMENT INTO SELF-FEEDBACK

- implementation. In D. Laveault & L. Allal (Eds.), *Assessment for Learning: Meeting the challenge of implementation* (pp. 311-326). New York: Springer.
- Ross, J. A. (2006). The reliability, validity, and utility of self-assessment. *Practical Assessment Research & Evaluation, 11*. Retrieved from <http://pareonline.net/getvn.asp?v=11&n=10>
- Sanchez, C. E., Atkinson, K. M., Koenka, A. C., Moshontz, H., & Cooper, H. (2017). Self-grading and peer-grading for formative and summative assessments in 3rd through 12th grade classrooms: A meta-analysis. *Journal of Educational Psychology*, No Pagination Specified. doi:10.1037/edu0000190
- Sitzmann, T., Ely, K., Brown, K. G., & Bauer, K. N. (2010). Self-assessment of knowledge: A cognitive learning or affective measure? *Academy of Management Learning & Education, 9*(2), 169-191.
- Tai, J., Ajjawi, R., Boud, D., Dawson, P., & Panadero, E. (2018). Developing evaluative judgement: Enabling students to make decisions about the quality of work. *Higher Education, 76*(3), 467–481. doi:10.1007/s10734-017-0220-3
- Tan, K. H. K. (2012). *Student self-assessment. Assessment, learning and empowerment*. Singapore: Research Publishing.
- Winstone, N. E., Nash, R. A., Parker, M., & Rowntree, J. (2016). Supporting learners' agentic engagement with feedback: A systematic review and a taxonomy of recipience processes. *Educational Psychologist, 1*-21. doi:10.1080/00461520.2016.1207538
- Yan, Z., & Brown, G. T. L. (2017). A cyclical self-assessment process: Towards a model of how students engage in self-assessment. *Assessment & Evaluation In Higher Education, 42*(8), 1247-1262. doi:10.1080/02602938.2016.1260091

## SELF-ASSESSMENT INTO SELF-FEEDBACK

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-40). San Diego, California: Academic Press.