Perceptions of the effectiveness of feedback: School leaders' perspectives

**Anastasiya A. Lipnevich, Leigh N. McCallen
and Jeffrey K. Smith**

Abstract

Feedback on students' written assignments has been deemed critical for improvement. Although teachers' and students' views on feedback have been examined, school leaders' perceptions of what constitutes effective feedback remain unclear. This study investigates school leaders' perceived quality of feedback that a teacher may provide, with teacher responses formulated based on Hattie and Timperley's (2007) typology of feedback. We randomly assigned school leaders ($n=103$) to five experimental conditions based on Hattie and Timperley's types of feedback (task-level, process-level, self-regulation-level, person-level/praise, and person-level/criticism), and asked them to rate the quality of the feedback. The results revealed that school leaders rated task-level feedback as most effective, followed by person-level/ criticism feedback. Person-level/praise was deemed least effective in improving the quality of students' writing. Theoretical and practical implications are discussed.

Many studies have examined differential feedback and its effects on student performance and psychosocial characteristics, such as motivation and self-efficacy (see Kluger & DeNisi, 1996; Kingston & Nash, 2011). Broadly defined, feedback is a response delivered by a teacher, peer, parent, self, or other agent to evaluate one's performance or understanding (Hattie & Timperley, 2007). Feedback responses may serve summative or formative functions, providing either a summary of the learner's performance (such as a grade), or information on how the learner can improve. Building on the work of Sadler (1989), Black and Wiliam (1998) conceptualise formative assessment as providing the learner with information about the discrepancy between the learner's

current knowledge set and the desired knowledge set. A learner's action in response to feedback depends on the nature of the message, the way in which it was received, and the contexts in which the learner's actions may be carried out. Further, effective feedback provides learners with information necessary to evaluate where they are, where they are going, and to identify strategies to get them there (Hattie & Timperley, 2007; Underwood & Tregidgo, 2006). As noted by Kluger and DeNisi (1996), learners are more likely to increase effort to attain an intended goal when the goal is clear, when a learner's commitment to a goal is high, and when the learner's belief in eventual success is high.

Various studies have investigated the relationship between formative assessment and students' ability to benefit as learners from such assessment (Lipnevich & Smith, 2009; Shute, 2008; Wiliam & Thompson, 2007). As a result, leading educators nationally and internationally are encouraged to increasingly use formative assessment in elementary (Matsumura, Patthey-Chavez, Valdes, & Garnier, 2002), secondary (Reid, Drake, & Beckett, 2011), and higher education settings (Bailey & Garner, 2010). However, little research has examined educational professionals' and school administrators' perceptions of the effectiveness of formative assessment practices as they are implemented in the classroom curriculum. In this study, we seek to merge research and practice by examining school leaders' views of the effectiveness of different types of feedback on a writing task within the formative assessment framework. In particular, we ask, what types of feedback do school leaders view as the most effective and useful? We use the feedback typology of Hattie and Timperley (2007) as a basis for presenting different types of feedback.

The typology of feedback

Hattie and Timperley (2007), in their comprehensive review of different types of feedback, propose a model that identifies the particular properties and circumstances that make feedback effective. They separate feedback into four levels that vary on many characteristics, including when and where it is most useful for the learner receiving it. The four levels are:

- task feedback
- process feedback

- self-regulation feedback
- person—or self—feedback.

Task-level feedback provides the learner with corrective feedback related to the task itself, such as how well a task is being carried out, whether the answers are correct, and direction for adding new or different information. Task-level feedback is the most common type delivered by teachers, and can be highly effective when delivered on its own and in reference to students' incorrect interpretations. This level of feedback, however, is situation-specific, as improvements gained often show little generalisability to the learner's performance on subsequent tasks (Hattie & Timperley, 2007).

Process-level feedback refers to information that facilitates the learner's understanding of both the processes and the construction of meaning underlying the task. A typical example of process-level feedback is students' use of error-detection strategies, which have been shown to facilitate the development of self-assessment and self-feedback (Carver & Scheier, 2001; Hirsh & Inzlicht, 2010). Process feedback may also serve as a cue to a learner, drawing attention to errors in hypotheses proposed in a task or the need to search for additional information or alternative strategies. Hattie and Timperley note that process-level feedback appears to be more effective than task-level feedback at facilitating deep learning, though this observed effect may be the result of an interaction between the two types of feedback: task-level feedback improves learner task confidence and efficacy, thus increasing the cognitive resources available to develop effective strategies and processes.

Self-regulation level feedback describes students' skills in monitoring, regulating, and directing action towards the learning goal. Effective self-regulation feedback is mediated by several factors, including the learner's engagement in cognitive routines and self-assessment, motivation to incorporate and accommodate feedback information, degree of confidence in succeeding on the task and reaching a learning goal, attributions about success or failure in response to the nature of feedback given, and the type of help-seeking behaviour the learner engages in.

Person-level feedback refers to evaluative statements made in reference to the learner's effort. Personal feedback is typically delivered in the form

of praise and, as noted by Hattie and Timperley, is the most common type of feedback delivered, despite research demonstrating praise has little effectiveness in improving performance (Baumeister, Hutton, & Cairns, 1990; Hyland & Hyland, 2001).

In addition to Hattie and Timperley's typology of feedback, Kluger and DeNisi's (1996) proposed a feedback hierarchy that might also be considered. Nested within their feedback intervention theory (FIT), the authors argue for three levels of feedback in a hierarchical system. At the highest level are metatask processes, followed by task-motivation processes, and task-learning processes. In FIT, each level of feedback changes the learner's locus of attention to varying degrees: task learning (aspects of the task, task details), task motivation (goals and motives needed to complete the task), and metatask processes (related to the self). Kluger and DeNisi (1996) contend that when feedback-induced attention is focused at a lower level of the hierarchy (task-level), a stronger relationship between feedback and learner performance occurs. In other words, feedback that directs a learner to aspects of the task is more beneficial than feedback that focuses the learner's attention on metatask processes, such as the self. When students are shown how to reach correct solutions (task learning), feedback improves learning and is more effective than the delivery of evaluative feedback that simply indicates a right or wrong response.

Although Kluger and DeNisi's (1996) work is in many respects groundbreaking, Hattie and Timperley's typology focuses on feedback that occurs in schools. Their taxonomy of feedback has great intuitive appeal and is useful to advance our understanding of the effectiveness and implementation of feedback practices in the classroom. Hence, it may be considered more reflective of the qualitative aspects associated with the levels of feedback teachers typically provide on student papers. We anticipate that researchers will want to investigate the usefulness of this typology and its contribution to understanding the application of formative assessment practices by teachers and school leaders; the research presented here is an effort to contribute to this growing area of work.

In their analyses, Hattie and Timperley (2007) comment on the usefulness of various levels of feedback based on the extant research literature, but

how would education professionals who work in the field respond to this typology? School leaders are in the position to guide implementation of formative assessment practices at the school level, design curriculum development and guide teacher practices. Hence, inherent in our research question is the importance of school leaders' perceptions of feedback effectiveness and whether their perceptions align with empirically derived approaches, specifically, the typology of feedback proposed by Hattie and Timperley. To address this question, we investigate the perceptions of school leaders of feedback messages representing different levels of Hattie and Timperley's model. This study is not intended as a test or validation of the model, but, rather, it employs the levels of the model to see how school leaders react to feedback that is representative of those levels. Our goal is to gain insight into how school leaders think about various types of feedback.

Teacher and school administrator perceptions of feedback

Consideration of teacher and administrators' perceptions of feedback practices is crucial when examining the efficacy of various types of feedback (Lee, 2009; Ellis, 2009). Studies show that teachers are generally interested in feedback (Black & Wiliam, 1998), value the practice of giving feedback (Hyland & Hyland, 2001), and actively use feedback as part of their teaching (Matsumura et al., 2002). The quality of this message is what determines the extent of students' improvement (Reid, Drake, & Beckett, 2011; Wiliam, Lee, Harrison, & Black, 2004; Ruiz-Primo & Furtak, 2007). Parr and Timperley (2010) state that teachers of writing must demonstrate good pedagogical content knowledge as well as the ability to articulate and communicate with students about their performance. Parr and Timperley's findings also point to the importance of teacher knowledge and training in formative assessment. But few studies have actually examined teachers' views of the efficacy and implementation of written assessment feedback. A notable exception is a study by Bailey and Garner (2010). In it, the researchers sought to address the gap between formative assessment research and pedagogical practice by studying instructors' perceptions of the role and efficacy of written feedback practices within various academic disciplines in the context

of higher education at a British university. They found a consensus on the benefits of formative assessment, a concern of time constraints in delivering such feedback, and substantial disciplinary differences.

Within the context of elementary and secondary education, Reid et al. (2011) examined both teacher and administrator perceptions of formative assessment practices. The qualitative study was conducted over a 2-year period in select Ontario schools amidst the implementation of new curriculum and assessment policies under the Canadian government, including an emphasis on an assessment for learning (AfL) framework. Common themes regarding participants' perceptions of AfL formative assessment practices as they were being implemented in schools included: concerns about the level of educators' familiarity with AfL and inconsistencies in defining AfL; feelings of conflict among educators about the time demands of formative assessment; frustration with inconsistencies in assessment implementation; and tension between summative and formative assessment. Teacher participant responses showed that teachers look to school administrators for leadership in implementing changes in assessment practices, and were discouraged when this support was lacking. Some administrators reported initially taking a leadership role in AfL, and subsequently feeling frustrated by the resistance from school personnel. Other administrators reported that AfL had positive effects, with one administrator reporting AfL principles allowed her school to focus on the core goal of improving student learning. Overall, this study revealed critical influence that administrators' have over a place of feedback in a typical classroom. Teachers seek support and encouragement from their leaders, and understanding administrators' views on feedback will help form a better idea of the factors that make written feedback most effective.

The current study

Feedback is a multifaceted concept that involves more than a simple interaction between a teacher and a student: feedback reflects teachers' pedagogical goals, students' learning needs, and institutional and governmental policies that structure and regulate the implementation of formative assessment (Bailey & Garner, 2010). As leaders within a school, educational administrators are capable of fostering learning and

teaching environments that motivate teachers to use best practices in formative assessment (McMillan, 2000; Ashwell, 2000; Frey & Schmitt, 2007). School leaders can facilitate teachers' implementation of effective formative assessment practices by addressing teacher barriers, such as lack of time to provide detailed feedback, and lack of knowledge and training in using formative assessment in the classroom. Therefore, understanding school leaders' views on feedback is critical and may provide a basis for implementation of effective professional-development activities.

The research by Reid et al. (2011) illustrates the critical nature of the relationship between administrators and teachers regarding formative assessment. Without administrator leadership and support, it is not likely that serious reforms regarding formative assessment will occur at the elementary and secondary levels. However, there is little research concerning administrators' views on feedback, and this lack of information can hinder efforts to implement formative assessment reforms. It is that lack of understanding about administrators which we seek to address. Our goal was not to determine simply whether administrators felt that feedback would be useful — the answer to that question is well-established. We wanted to look at how administrators reacted to various, specific types of feedback that might be provided to students. We used Hattie and Timperley's (2007) typology to generate different kinds of feedback that might be offered to students, and then asked school leaders to evaluate how effective they thought the feedback would be.

Focus on writing

It is not possible to generate feedback in a vacuum; it must have content. Following on from our previous work, we choose writing as a content area. Feedback to writers consisting of detailed comments, specific to an individual's work, is highly conducive to improving students' writing performance (Lipnevich & Smith, 2009; Connors & Lunsford, 1993). Lipnevich & Smith (2009) used an experimental design to test the effects of differential feedback (detailed comments, the presence of grades, and the delivery of praise) on college students' writing performance improvement. The study demonstrated that providing detailed feedback

unaccompanied by grades or praise led to the greatest improvement in performance for students of all writing ability levels across the study sample (Lipnevich and Smith, 2009).

A recent meta-analysis conducted by Kingston and Nash (2011) further examined the effects of formative assessment practices on student achievement. The authors found that these effects vary depending on the specific domain of study with the greatest mean effect size reported for English language assessment (reading, language arts, or writing). That is, writing appears to be a malleable skill that is most affected by formative feedback. The authors also noted that the quality of feedback and the way it is used matters greatly and that the implementation of feedback is often "left to the discretion of the teachers implementing formative assessment" (Kingston & Nash, 2011, p. 34). Hence, carefully constructed feedback message on students' written work can lead to enhanced performance, and educators' role in this process is critical at the very least.

Thus, the underlying research question for this study is: How do school leaders differentially react to feedback given to students that varies along the dimensions of the Hattie and Timperley (2007) typology? As the acknowledged academic leaders of their schools, the views that these individuals hold towards formative assessment and feedback are important to know, and the Hattie and Timperley typology provides a useful way of differentiating approaches to feedback into categories whose impact on learning has been rigorously investigated.

Method

Participants

The sample included 106 school leaders (47% female) from public (49%) and independent (51%) schools in the United States. Fifty-four percent of participants came from urban schools, 28.4% from small town schools, and 17.6% from rural. The size of school varied from those with 250 students to schools with 2000 students ($M = 654.3$, $SD = 378.7$). The number of teachers per school ranged from 23 to 270 ($M = 85.1$, $SD = 48.5$).

Participants were recruited initially through a university leadership class. Students in the class (all school leaders) were invited to participate and asked to invite colleagues of theirs to join in the study. Forty-nine of the participants were in the class and 57 of the participants were their colleagues. Participants were asked to fill out an online survey. Only those who reported holding an administrative position in their school were included in the study. Nineteen percent of the participants were heads of schools or principals, 25.3% reported holding a position at the dean level (e.g., dean of academics, dean of admissions), 11.0% held a position of assistant dean, 21.8% reported chairing a department, 14.3% were program directors, 8.6% reported holding an "other administrative position". Forty-four percent of the participants reported being in their current position for 1–3 years, 21.7% for 3–5 years, 24.5 for 5–10 years, 5.7% for 10–15 years, and 3.8% for 15 years or more. The participants reported their ethnicity: 68.9% identified as White, 11.1% as Asian, 10% as African American, 7.4% as Hispanic, 2.6% as Other.

Procedure and Instrumentation

Custom data-collection software was developed for the purposes of this project. The participants logged onto a website and were randomly assigned to one of the five feedback groups that were based on the typology of feedback proposed by Hattie and Timperley (2007). The administrators were asked to complete a demographic questionnaire and were presented with an essay written on theories of motivation by an 11th-grade student along with a feedback statement that came from a teacher. The participants were asked to carefully read the essay and examine the feedback statement from a teacher. They were then prompted to rate the effectiveness, helpfulness, student enjoyment and ease of administration of the feedback statement they received. The items were as follows: *How effective was this feedback? How helpful was this feedback? How much would a student enjoy it? How easy is it to deliver for the teacher?* All items were rated on a five-point Likert scale (e.g., 1 = Not at all effective, 5 = Very effective, for effectiveness; 1 = Not at all helpful, 5 = Very helpful, for helpfulness; 1 = Not enjoyable, 5 = Very enjoyable, for student enjoyment; 1 = Very difficult, 5 = Very easy, for ease of administration). The administrators were also asked to report whether they felt the

feedback would have to be altered, if used in real-life situation (*Should this feedback message be altered? Rated on a five-point Likert scale, with 1 = Strongly disagree, and 5 = Strongly agree*).

The feedback statement varied depending on the experimental condition (based on the typology).

Participation was voluntary, confidential and anonymous. The study protocol was approved by the City University of New York Institutional Review Board.

Experimental conditions. Five experimental conditions based on Hattie and Timperley's (2007) feedback typology were developed, one each based on task level, process level, and self-regulation level, and two based on the person level. We felt that it would be beneficial to differentiate person-level feedback into a praise statement and a criticism statement. Hence, we had five study conditions that varied depending on the feedback message that the participants were asked to rate. We modelled each feedback statement according to the examples that Hattie and Timperley (2007) presented in their review. The feedback statements are as follows:

1. *Task-level feedback*. You need to include more information about theories of motivation. Please explain the third component of Atkinson's theory and provide definitions for all the concepts you describe in your essay. Also, include more examples and try to center them around the theories of motivation that we discussed in class. Include details and theory-specific terminology.
2. *Process-level feedback*. You need to edit your essay by attending to the descriptors you have used so the reader is able to understand the nuances of your meaning. Your second passage may make more sense if you use the strategies we talked about earlier. Pay attention to the structure of your essay. I also suggest that you reread your theory descriptions and revise them to incorporate clear definitions.
3. *Self-regulation level feedback*. You already know the key features of the opening of an argument. Check to see whether you have incorporated them in your first paragraph. Also, please think about alternative ways to formulate your conclusion. Try and spend more time considering your reader's position. Is your argument clear? Are your definitions precise?

4. *Person-level feedback/Praise*. You did a wonderful job on this essay. It's well-written and captures the reader's attention. I am very pleased with your work. Well done!

5. *Person-level feedback/Criticism*. This is certainly not your best work. You missed a lot of very important points. Please work on improving the overall flow of your narrative. You could have done much better than this!

We checked the messages for faithfulness to the Hattie and Timperley (2007) by presenting them to four assessment experts (PhDs in assessment) who were all familiar with the typology, and asking them to place each message into one of the levels. All four experts categorised each message in the fashion in which we had intended.

Results

Descriptive statistics

Means and standard deviations of all major variables in the study are presented for purposes of reference in Table 1. No univariate or multivariate outliers were identified upon the examination of the data. Thus, all participants were retained in the analysis. There ere five dependent

Table 1: Means and standard deviations for study variables

Types of feedback

Administrators' ratings of feedback types	Task			Process			Self-regulation			Praise			Criticism		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Effectiveness	21	2.81	.98	20	2.15	.59	21	1.81	.60	21	1.57	.75	20	2.30	.80
Helpfulness	21	2.76	.70	20	2.20	.62	21	1.90	.70	21	1.48	.75	20	2.10	.55
Student enjoyment	21	1.95	.92	20	1.65	.93	21	1.62	.67	21	3.00	1.09	20	2.10	1.33
Ease of delivery	21	3.38	.97	20	3.45	.83	21	4.62	.67	21	4.62	.74	20	4.10	.85
Should feedback be altered?	21	4.05	.59	20	4.45	.69	21	4.71	.64	21	4.62	.74	20	4.60	.68

variables: effectiveness, helpfulness, enjoyment, ease of administration, and need for alteration. We analysed the first two dependent measures together in a multivariate analysis of variance (MANOVA) because we felt the concepts were closely related. The remaining three dependent measures were analysed individually through ANOVAs as we felt they were not conceptually closely related to one another.

Analyses of differences in administrators' ratings of feedback effectiveness and helpfulness

To examine differences in administrators' ratings of the effectiveness and helpfulness of feedback, a MANOVA was conducted, with levels of feedback as a factor and administrators' ratings of feedback effectiveness and helpfulness as dependent variables. Multivariate tests were significant, with the F statistic for Wilks' Lambda F $(4, 98) = 5.53, p < .001$. To test the difference for both of the dependent variables, univariate analyses were performed for administrators' ratings of helpfulness and effectiveness of feedback.

For effectiveness, the univariate results indicated significant differences in effectiveness of feedback among different levels of feedback, F $(1, 102) = 10.25, p < .001, \eta 2 = .25$. Pairwise comparisons using Tukey HSD showed that the differences were significant between task level feedback and each of the remaining four types of feedback $(p < .001)$. No differences were revealed between process-level, self-regulation-level, and person-level/praise feedback $(p > .05$, in all cases). Similarly, no differences were revealed between person-level/criticism and process-level feedback $(p > .05)$. In sum, the administrators rated task-level feedback higher than any other type of feedback $(M = 2.81, SD = .98)$, with person-level/criticism $(M = 2.30, SD = .86)$ and process level $(M = 2.15, SD = .59)$ following it. Self-regulation $(M = 1.81, SD = .78)$ and person level/praise $(M = 1.57, SD = .75)$ were rated as least effective (see Table 1 for means).

For helpfulness, the univariate results were also significant (F $(1, 102) = 8.25, p < .001, \eta 2 = .29$. To examine pairwise differences among the five types of feedback, we used Tukey HSD. The analyses revealed that the administrators rated task-level feedback $(M = 2.76, SD = .70)$ as most helpful, compared to the four types of feedback $(p < .001)$. Person level/

criticism feedback ($M=2.10$, $SD=.55$) also differed significantly from all four types of feedback ($p<.001$). There were no differences revealed among person-level/praise, self-regulation and process-level feedback ($p>.05$, in all cases). Person-level/praise feedback received low ratings ($M=1.91$, $SD=.79$) as did self-regulation level ($M=2.11$, $SD=.71$) and process-level feedback ($M=1.48$, $SD=.75$). See Table 1 for means.

Analyses of differences in administrators' ratings of feedback enjoyment

Administrators were asked to estimate the degree to which students may enjoy each type of feedback. To examine differences in these ratings, a one-way analysis or variance (ANOVA) was conducted, with levels of feedback as a factor and administrators' ratings of feedback enjoyment as a dependent variable.

ANOVA revealed significant differences ($F(4,98)=6.42$, $p<.001$, $\mu^2=.21$). Tukey HSD was used to examine differences among feedback types. Pairwise comparisons revealed that administrators rated levels of student enjoyment as highest for person-level/praise feedback ($M=3.00$, $SD=1.09$), as compared to the four other types of feedback ($p=1.09$). There were no differences among task-level ($M=1.95$, $SD=.92$), process-level ($M=1.65$, $SD=.93$), self-regulation-level ($M=1.62$, $SD=.67$) and person-level/criticism feedback ($M=1.10$, $SD=1.33$) in terms of administrators' ratings of feedback enjoyment ($p>.05$, in all cases). In sum, administrators felt that the type of feedback that students would enjoy most is person-level/praise, with no differences revealed among task, process, self-regulation or person-level/criticism types of feedback.

Analyses of differences in administrators' ratings of ease of feedback delivery

To examine differences in administrators' ratings of how easy it would be to deliver feedback, a one-way analysis or variance (ANOVA) was conducted, with levels of feedback as a factor and administrators' ratings of ease of feedback delivery as a dependent variable.

ANOVA revealed significant differences in administrators' ratings of the ease of feedback administration ($F(4, 98) = 11.29$, $p = .001$, $\mu^2 = .32$). Pairwise comparisons (Tukey HSD) were significant between task-level feedback ($M = 3.38$, $SD = .97$) and self-regulation level feedback ($M = 4.62$, $SD = .67$), and task-level and person-level/praise ($M = 4.62$, $SD = .74$). No differences were revealed between task-level, process-level ($M = 3.45$, $SD = .83$) and person level/criticism ($M = 4.10$, $SD = .85$) feedback ($p > .05$). In other words, administrators felt task-level, process-level and person-level/criticism were more difficult to deliver, as compared to self-regulation-level and person-level/praise feedback .

Analyses of differences in administrators' ratings of whether feedback needs to be altered

To examine differences in administrators' ratings of whether feedback should be altered, a one-way analysis or variance (ANOVA) was conducted, with levels of feedback as a factor and administrators' ratings of how strongly they felt about altering each form of feedback.

The ANOVA was not significant ($F(4, 98) = 2.2$, $p = .06$). Administrators felt that each of the five types of feedback should be altered to be most effective (see Table 1 for means).

Discussion

The main goal of this study was to investigate school leaders' perceptions of written feedback based on Hattie and Timperley's (2007) typology of feedback. Overall, the findings of our study provided valuable information regarding school administrators' views on the usefulness and effectiveness of written feedback. School leaders rated task-level and person-level/criticism feedback as most effective in generating writing improvement, followed by process-level feedback and self-regulation feedback. Person-level/praise was ranked as least effective in improving the quality of students' writing. Further, school administrators believed that students would enjoy receiving praise significantly more than other types of written feedback, and that task-level feedback would be the

most difficult for a teacher to deliver. When asked if feedback should be altered, participants indicated that each of the five types of feedback should be altered.

In looking more closely at the results presented in Table 1, it can be seen that the school leaders not only rate the task level of feedback highest, the differences with other levels of feedback are substantial. In comparing individual means for the category of "Effectiveness", the effect size for task level ranges from .56 (compared to person level/criticism) to 1.43 (compared to person level/ praise). Similar findings are observed for the "Helpfulness" category. The person level/praise feedback was the lowest rated of all feedback messages, and yet administrators also felt that students would enjoy it and it would be easy to deliver. It should also be noted that there is substantial variation on the ratings. So although the preferences overall are clear, school leaders are not of a single mind in looking at feedback to students' work.

In re-examining the feedback statements in light of these results, one might be tempted to argue that the task level of feedback is more specific than the other levels, and that it is the specificity that the school leaders are responding to. To a degree, we think a case can be made for this argument, but the process-level feedback statement and the self-regulation level feedback statement are also fairly specific, *given that they are describing inherently broader attributes*. That is, it may simply be the case that task-level feedback, by its very nature, lends itself to a higher degree of specificity than process-level or self-regulation feedback. In Kluger and DeNisi's (1996) approach, they argue that feedback at the task level is more effective in promoting learning in that higher levels of feedback cause individuals to focus on themselves and not on learning the material under consideration. But there are two aspects to Kluger and DeNisi's approach that may not be completely appropriate here. To begin, they are very much focused on learning the specific task, and not on more generalisable skills. Secondly, their hierarchy is focused more on affective than cognitive characteristics of learners.

And so, in considering the school leaders rating of the task level of feedback as most effective, we must ask: "Most effective at what?" As

educators, do we tend to emphasise the "here and now" rather than focus on longer-term goals? Or is it the case that without addressing the here and now first, we cannot effectively focus on longer-term goals? When one gives feedback on a written assignment, it is usually geared towards improving *that particular assignment*. But that assignment is unlikely to ever be read by anyone else, and the student may not even pay attention to the feedback as *that assignment* is "over". Is it more important to point out a particular noun–verb lack of agreement, or more important to have the student pay particular attention to noun–verb agreement in the next essay and provide a mechanism for helping the student do that? So the question remains. Hattie and Timperley's (2007) work seems to suggest the benefits of the longer perspective, while the school leaders, with some support from Kluger and DeNisi's (1996) work, seemed to be more focused on that task at hand. For us, this simply raises a very rich source of questions to be pondered and investigated. In this research, we have learned that school leaders saw the task-level feedback as the most effective and helpful to students. We know from looking at Hattie and Timperley that this issue is complex and requires thoughtful examination of alternatives and the specifics of a given situation. If we want improvement on exactly the task at hand, then task-level feedback would seem to be the most prudent. But if we are looking for improved performance on subsequent tasks, then we might have to take a broader view with regard to feedback.

Narciss and Huth (2004) suggested that function, content, and mode of feedback presentation are important components of formative assessment that should be considered in concert with learner characteristics and instructional variables. The current study focused on the latter component, investigating school leaders' views on the effectiveness of feedback messages. Instructional leaders, such as the principals and supervisors who participated in this study, help shape the assessment environment in their schools, and so their views of effective formative assessment practice are critical to understanding how instruction is delivered and received.

We strongly believe that educators should clearly specify and carefully consider their instructional goals when delivering feedback to their students. Our findings can be used for the purposes of development and implementation of professional-development practices. Educators should

be encouraged to reflect on their understanding of the main goals of formative assessment, as well as possible ways in which students may use feedback to improve their work.

Limitations and future directions

This study involved administrators' ratings of the effectiveness of feedback messages, but did not measure whether, in fact, the types of feedback rated highly by school leaders were most effective in promoting improvement. Thus, it is not a study of the efficacy of feedback based on Hattie and Timperley's typology, but rather reactions to it from those entrusted to lead schools. We see that feedback that is focused on task-level specifics gets the highest ratings from those school leaders. Might this be because they believe that students need concrete feedback that is clear in terms of what needs to be worked on, or perhaps that they are too focused on the here and now at the expense of the development of more generalisable skills? Also we note that there is wide variability in their ratings, which leads us to conclude that different leaders view this situation differently. Where do these different beliefs come from, and how do they impact what happens in the schools of these leaders? Where is the locus of control for making decisions about what kinds of feedback are provided to students? These are the questions that future researchers may tackle.

Another area of concern has to do with the typology for feedback that Hattie and Timperley have developed. Although it seems clear in distinguishing categories of feedback, whether this is the best way to go about categorising feedback is yet to be established. Might levels of specificity be a more productive way, or Kluger and DeNisi's (1996) approach which focuses more directly on affective response to feedback? Timperley believes that continued thinking about how to look at formative assessment and feedback would be productive (Timperley, personal communication, 2011), and future researchers are encouraged to do just that.

In addition, the link between student enjoyment of feedback and the effectiveness of various types of feedback should be further investigated. School administrators rated task-level feedback and person-level/criticism

feedback as most effective, but person-level/praise feedback was rated as most enjoyable. Studies should investigate whether positive emotions potentially elicited by praise may be conducive to greater improvement, when praise is presented in addition to other forms of feedback. For example, Lipnevich and Smith (2009) have found that praise appears to moderate the negative impact of receiving a grade that was low, or one that was lower than expected (Lipnevich & Smith, 2009).

Conclusion

Feedback on students' written assignments is critical for improvement (e.g., Shute, 2008; Kingston & Nash, 2011). Many studies have examined teachers' and students' views on feedback (see Lipnevich & Smith, 2009; Lee, 2009), with administrators' views of what constitutes effective feedback on writing remaining unclear. This study attempted to address this issue and presented an initial attempt to examine school leaders' views on differential feedback that is based on Hattie and Timperley's (2007) typology of feedback. The results showed that school leaders believe that task-level feedback is most effective, followed by person-level/criticism feedback. Person-level/praise was deemed least effective in improving the quality of students' writing. This study provided many answers to questions concerning school leaders' views on feedback. It also raised a flurry of important questions that we urge future researchers to tackle. One of these questions concerns whether educators tend to focus more on "here and now" at the expense of examining longer term effects of writing tasks, and if so, does it ultimately hinder student progress in the longer run? These and other questions certainly deserve our attention.

References

Ashwell, T. (2000). Patterns of teacher response to student writing in a multiple-draft composition classroom: Is content feedback followed by form feedback the best method? *Journal of Second Language Writing*, *9*, 227–257.

Bailey, R., & Garner, M. (2010). Is the feedback in higher education assessment worth the paper it is written on? Teachers' reflections on their practices. *Teaching in Higher Education*, *15*, 187–198.

Baumeister, R.F., Hutton, D.G., & Cairns, K.J. (1990). Negative effects of praise on skilled performance. *Basic and Applied Social Psychology*, *11*(2), 131–148.

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, *5,* 7–68.

Carver, C. S. & Scheier, M. F. (2001). *On the self-regulation of behavior*. Cambridge: Cambridge University Press.

Connors, R.J., & Lunsford, A.A. (1993). Teachers' rhetorical comments on student papers. *College composition and communication*, *44*, 200–223.

Ellis, R. (2009). A typology of written corrective feedback types. *ELT Journal*, *63*, 97–107.

Frey, B. B., & Schmitt, V. L. (2007). Coming to terms with classroom assessment. *Journal of Advanced Academics*, *18*, 402–423.

Hattie, J., & Timperley, H.S. (2007). The power of feedback. *Review of Educational Research*, *77*, 81–112.

Hirsh, J. B. & Inzlicht, M. (2010). Error-related negativity predicts academic performance. *Psychophysiology*, *47*(1), 192–197.

Hyland, F. & Hyland, K. (2001). Sugaring the pill: Praise and criticism in written feedback. *Journal of Second Language Writing*, *10*, 185–212.

Kingston, N., & Nash, B. (2011). Formative Assessment: A Meta-Analysis and a Call for Research. *Educational Measurement: Issues and Practice*, *30*, 28–37

Kluger, A.N., & DeNisi, A. (1996). The effects of feedback interventions on performance: Historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, *119,* 254–28.

Lee, I. (2009). Ten mismatches between teachers' beliefs and written feedback practice. *ELT Journal*, *63*, 13–22.

Lipnevich, A.A., & Smith, J. K. (2009). Effects of differential feedback on students' examination performance. *Journal of Experimental Psychology: Applied*, *15*, 319–333.

Matsumura, L.C., Patthey-Chavez, G., Valdes, R., Garnier, H. (2002). Teacher feedback, writing assignment quality, and third-grade students' revision in lower- and higher-achieving urban schools. *The Elementary School Journal*, *103*(1), 3–25.

McMillan, J.H. (2000). Basic assessment concepts for teachers and school administrators. College Park, MD: ERIC Clearinghouse on Assessment and Evaluation.

Narciss, S., & Huth, K. (2004). How to design informative tutoring feedback for multimedia learning. In H. M. Niegemann, D. Leutner, & R. Brunken (Ed.), Instructional design for multimedia learning (pp. 181–195). Munster, New York: Waxmann.

Parr, J.M., & Timperley, H.S. (2010). Feedback to writing, assessment for teaching and learning and student progress. *Assessing Writing*, *15*, 68–85.

Reid, J.L., Drake, S., & Beckett, D. (2011). Exploring teacher and administrator perceptions in the face of new assessment policies. *Canadian Perspectives: Education Coast to Coast to Coast*, *1*. Retrieved from http://canadianperspectivesjournal.ca/index.php/cpj/article/view/1/1

Ruiz-Primo, M. A., & Furtak, E. M. (2007). Exploring teachers' informal formative assessment practices and students' understanding in the context of scientific inquiry. *Journal of Research in Science Teaching*, *44,* 57–84.

Sadler, R. (1989). Formative assessment and the design of instructional systems. *Instructional Science,* 18, 119–144.

Shute, V. J. (2008). Focus on formative assessment. *Review of Educational Research*, *78*, 153–189.

Underwood, J.S. & Tregidgo, A.P. (2006). Improving student writing through effective feedback: Best practices and recommendations. *Journal of Teaching and Writing*, *22*, 73–97.

Wiliam, D., Lee, C., Harrison, C., & Black, P. (2004). Teachers developing assessment for learning: Impact on student achievement. *Assessment in Education*, *11*, 49–64.

Wiliam, D., & Thompson, M. (2007). Integrating assessment with instruction: What will it take to make it work? In C. A. Dwyer (Ed.), *The future of assessment: Shaping teaching and learning*. Mahwah, NJ: Erlbaum.

The authors

Dr Anastasiya Lipnevich is an assistant professor of educational psychology at Queens College and The Graduate Center of the City University of New York. Her research interests include assessment feedback, attitudes toward mathematics, and the role of non-cognitive characteristics in individuals' academic and life achievement.

Email: a.lipnevich@gmail.com

Leigh N. McCallen is a doctoral candidate in educational psychology at The Graduate Center, City University of New York. Her research interests include academic resilience, school-based wellness promotion, and writing improvement in higher education.

Dr Jeffrey Smith is Professor and Associate Dean, Research, in the College of Education at the University of Otago. He conducts research on the relationship between learning and assessment, and the psychology of aesthetics.