

# Watch Your Language: A Corpus Linguistics Analysis and Systematic Review of Feedback

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## Abstract

*The purpose of this systematic review was to examine language surrounding a primary role associated with supervision: feedback. Feedback is both powerful and foundational to the ongoing professional and personal development of teacher candidates, yet the meaning of the word on its own is often taken for granted, undefined, and for the reader to interpret. This review utilized corpus linguistics, a methodological approach analyzing large collections of textual data, to explore relationships of words associated with feedback in literature. This method provided clarity on the diverse representations and meanings of feedback. Clear language facilitates precise research methods and future directions for practitioners. The examination of feedback's usage also revealed insights into the agency of those involved and the implications of differing viewpoints. Based on these findings, recommendations are offered to strengthen and unify the field, emphasizing the nuanced impact of feedback in terms of information, process, or event.*

## Introduction

School-based agricultural education (SBAE) teachers desire feedback (Disbeger et al., 2022b), and their supervisors are the primary agents for fulfilling this important role (Fritz & Miller, 2004; Sikula, 1996). Recommendations for research in *The Journal of Agricultural Education* loosely suggest increasing the quantity of feedback teacher candidates receive from their supervisors without much guidance on effective routines (Bell & Gitomer, 2016), how feedback processes happen (Hattie & Timperley, 2007) or if the time invested in feedback is valued (Nolan & Hoover, 2004) or wasted (Carreiro, 2020). The resounding conclusion about feedback is that it is powerful (Hattie & Timperley, 2007), and has the potential to either positively or negatively alter the trajectories of the recipient. Frieberg and Waxman challenged the field of teacher education to explore feedback processes because they are a core experience of teacher growth, and further argued “increasing the quantity of feedback is not a substitute for quality” (1988, p. 8). Therefore, there is a need for scholarship that more clearly articulates the meaning of feedback and explores the characteristics of feedback practices for supervisors of school-based agricultural education (SBAE). A common theme observed in agricultural education literature regarding teacher development is that feedback is demanded and highly valued (Coleman et al., 2021; Disberger et al., 2022a; Joerger & Boettcher, 2000; Paulsen et al., 2016; Rubenstein & Thoron, 2013; Shoulders et al., 2016; Wolf et al., 2010), with the concluding remarks of studies often including recommendations for research or practice involving feedback. Feedback is not only valued, but it is “influential on the quality of field experience” all teacher candidates must complete before entering the profession (Shoulders et al., 2016, p. 161).

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While the purpose, and contexts of feedback are clear, the array of representations of feedback in agricultural education are unclear. When the concept of feedback is used without clarity, shared understanding, or contextualization, the word itself becomes taken for granted and complicates considerations for research and practice. Conceptualizing feedback is challenging; across predominant education journals, the term feedback is represented in a multitude of ways (Winstone et al., 2021). Given the importance of the role of a supervisor, the influence of feedback on teacher candidate growth (Nolan & Hoover, 2004), self-efficacy (Gall & Acheson, 2010), and instructional performance (Hattie & Timperley, 2007), it is all the more confounding this process has received limited attention in teacher education (Darling-Hammond & Bransford, 2007), and agricultural education scholarship (Fritz & Miller, 2004; Rubenstein & Thoron, 2013). Prior to the year 2001, only three out of 803 articles published in the *Journal of Agricultural Education* focused on supervision (Fritz & Miller, 2003).

This systematic review worked in tandem with a corpus linguistics analysis to understand the representations of feedback across contemporary literature in agricultural education. Advancing research and practice related to feedback will not be nearly as influential if conceptualizations of feedback are incongruent. Hence, there is a need to examine and establish a shared language of *what* is meant by feedback as well as *how* the word is used to guide recommendations more effectively for research and practice. In this manuscript, feedback will be used as a word on its own, without a clear indication of definition to reinforce the possible implications of doing so in scholarship.

### Theoretical Framework

Feedback is powerful, and equally impactful is how language represents it (Winstone et al., 2021). Generating a theoretical framework to analyze the language and representations of feedback was central to how this systematic review was conducted. Corpus linguistics is an analytical tool for exploring scholarly works (Brezina, 2018). A corpus is a “large, principled collection of naturally occurring examples of language”, and from careful examination of the sequence of words, not simply a single word, meaning can be made (Bennett, 2010, p. 2). Within corpus linguistics, a keyword is typically identified for interest, and then possibilities for its meaning are derived from the associated collocates (Biber et al., 1998). Collocates (or collocations) refer to the relationship between particular words, the context in which they are used, and the strength of that association based on the given context (Brezina, 2018). Corpus linguistics involves computer-generated analysis of written texts to gain deeper insights into language usage, especially in extensive and exhaustive texts (Biber et al., 1998). Examples of text used in corpus linguistic analysis include handbooks, textbooks, journal articles, and glossaries. Corpus linguistics should be used as a complementary approach with research methodologies to understand meaning (Biber et al., 1998). For this study, corpus linguistics accompanied the guidelines of conducting a systematic review of literature. Winstone and colleagues (2021) conducted a review of major education journals using a similar approach. This study employed corpus linguistics analysis within a systematic review to clarify and derive meaning from the representations of feedback in agricultural education literature.

### Purpose and Research Questions

The purpose of this systematic review was to examine conceptualizations of *feedback* in agricultural education and explore how these conceptualizations could inform future research and practice. Using corpus linguistics, this study analyzed the grammatical structure of feedback to uncover usage patterns and suggest improvements in communicating feedback within scholarly literature. This systematic literature review sought to answer the following research questions:

1. What contemporary literature exists regarding feedback in agricultural education, and what are the central methods used to research feedback?
2. How is feedback in agricultural education represented in contemporary literature and when analyzed through corpus linguistics?

3. What opportunities exist for future inquiry related to feedback in agricultural education to better unify research and practice?

### Methodology

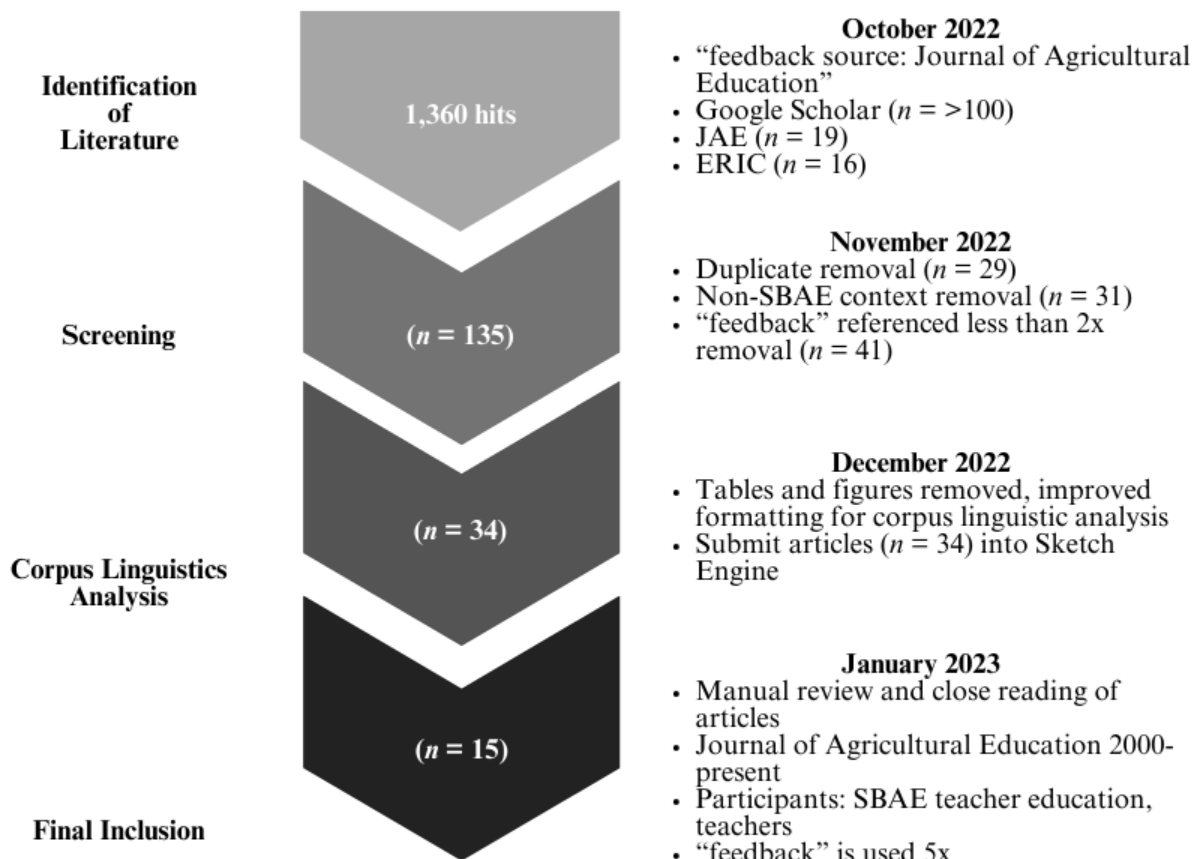
A systematic literature review is a tool to synthesize and formulate understanding from existing literature in response to a research question (Page et al., 2021). Such reviews are important in suggesting new directions for research (Newman & Gough, 2019). To ensure rigor and clarity, this review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021), as well as practices specifically for educational reviews (Newman & Gough, 2019). The PRISMA 2020 framework was the primary source of consultation and guided the review process from initial database searches and screening of results to determining eligibility and final inclusion criteria (Page et al., 2021). The PRISMA 2020 approach enhances the reliability replicability of the findings (Page et al., 2021), while allowing for flexibility in exploratory education research protocols as suggested by Newman and Gough (2019).

### Identification, Screening and Inclusion of Literature

Identifying relevant literature should be informed by the research questions shaping the systematic review (Newman & Gough, 2019). Articles regarding feedback and supervision were scarce prior to the twenty-first century, thus contemporary articles between 2000-present were included (Fritz & Miller, 2003). *Feedback* was the keyword of interest and the only term used when investigating the primary database of interest, the *Journal of Agricultural Education (JAE)*. An initial search yielded 19 articles, and more databases were utilized to mitigate potential limitations of a single database (Page et al., 2021), including Google Scholar and Education Resources Resource Center (ERIC). Search criteria including “feedback source: Journal of Agricultural Education” produced 1,360 findings in October 2022. Duplicate and irrelevant articles were removed, resulting in 34 articles retained for corpus linguistic analysis. Figure 1 (below) summarizes the inclusion process.

Figure 1.

Flow Diagram of System Literature Review Protocol



The final inclusion criteria for the systematic review were as follows: contemporary publications in the *JAE* between 2000 and the present, involving participants in agricultural education teacher education (e.g., supervisors, mentors, cooperating teachers, teachers, and teacher candidates), and requiring the term “feedback” to be used at least five times within the context of participants. This selection process was rigorous and mentally taxing due to the manual task of reviewing each paper to verify the appropriate use of feedback in the context of teacher education. Physical copies of all articles identified through corpus linguistic analysis ( $n = 34$ ) were printed and closely read. From this collection, 15 articles met the inclusion criteria and were utilized for the synthesis related to the research questions guiding this review.

### Corpus Linguistic Analysis

Sketch Engine is widely recognized as the premier software for corpus analysis (Kilgariff et al., 2014). All screened literature from the *JAE* for this systematic review was uploaded to the program to quantitatively analyze the representations of feedback. One feature of Sketch Engine software that aids in analysis is Word Sketch (Kilgariff et al., 2014), which generates a one-page summary of a particular keyword or phrase in terms of the “grammatical and collocational behavior” (Kilgariff et al., 2014, p. 9). Collocations refer to the relationship between specific words, the context in which they are used, and the strength of their association based on the given context (Brezina, 2018). Each collocation consists of a node, or keyword (Brezina, 2018). The additional words surrounding the node, known as the “collocation window” (Brezina, 2018, p. 67) help to identify the context that shapes the grammatical and collocational

behavior of the keyword. Selecting a keyword and collocation window are highly important to the process of corpus linguistic analysis (Brezina, 2018). In the context of this study, the keyword was *feedback*, which provided focused insights for understanding its frequency and how the word is situated from a grammatical and collocational point of view.

After the entire data corpus of selected literature was uploaded to Sketch Engine, the keyword *feedback* was entered into Word Sketch to initiate the analysis of its representation. Word Sketch yields a comprehensive set of quantitative data summarizing how the keyword relates to various grammatical features such as objects, subjects, verbs, modifiers, and prepositions (Kilgariff et al., 2014; Winstone et al., 2021). This study echoes the approach of Winstone et al. (2021), by focusing on noun modifiers, verbs, possessors, and prepositions interconnected to the keyword *feedback*. Winstone and colleagues' (2021) structure for utilizing Word Sketch was led by the goal of understanding how the keyword was taken to be (e.g., noun modifiers and nouns modified by keyword), what individuals were involved with the keyword (e.g. verbs with keyword as the object, and possessors of the keyword), and what about the keyword was significant (e.g. prepositions representing an action or concept with the keyword). Together, both the systematic review and corpus linguistic approach were foundational for gaining a deeper understanding of the current representations of feedback in the field of agricultural education. These insights are key for informing and strengthening future research and practice in the field.

### Findings

After a rigorous review of literature, the following findings were gathered to answer each research question. The collection of contemporary literature (2000-present) consisted of 15 articles which met the criteria for inclusion, and specifically mentioned feedback more than five times. Most of the studies utilized qualitative methods ( $n = 10$ ), specifically as observational case studies. A few studies collected quantitative data ( $n = 5$ ). Additionally, in the majority of studies ( $n = 10$ ), the primary participants were individuals preparing to become agricultural teachers, such as preservice, teacher candidates, or student teachers. In total, this review of literature reflects the perspectives of 976 individuals involved with the phenomenon of feedback including preservice teachers, cooperating teachers, university supervisors and beginning teachers. The keyword *feedback* appeared 268 times in this data corpus, and the ten highest frequency collocates are shown in Table 1.

**Table 1**

*Collocates of the Keyword 'Feedback' from Data Corpus (n = 34)*

Rank	Position	Collocate	Stat (logDice)	Frequency of collocate	Frequency in corpus
1	Left	provide	11.07	27	144
2	Right	from	10.93	55	656
3	Middle	received	10.85	18	51
4	Left	receive	10.74	16	38
5	Right	provided	10.53	19	152
6	Left	providing	10.47	14	56
7	Right	supervisors	10.46	20	199
8	Right	university	10.28	25	393
9	Left	peer	10.11	16	206
10	Left	verbal	10.09	10	33

*Note.* 10 collocates of *feedback* have been displayed within a collocation window of 5. Collocates with logDice > 10.0 are displayed.

The following were identified as the top ten collocates for the keyword *feedback* in the data corpus using logDice statistics (LogDice (9.5), L5-R-5): *provide*, *from*, *received*, *receive*, *provided*, *providing*, *supervisors*, *university*, *peer*, and *verbal*. logDice is the preferred statistical measure for co-occurrences of two items appearing together, especially the frequency of collocates (Brezina, 2018). As an example, *provide* co-occurs with *feedback* at the highest degree of significance from this data set, and commonly is positioned to the left of the keyword, or before it. The top 10 collocates of *feedback* in the data corpus identified using the logDice (09 - LogDice (9.5), L5-R5, C: 5.0-NC: 5.0).

### Feedback Representations

The goal of research question two was to understand how the word feedback is represented in contemporary literature. Feedback was represented in a wide variety of ways across the literature and differentiated in meaning within each article. As often as the word feedback was used in abstracts, research questions, findings, and recommendations, few authors operationalized or clearly defined what they meant by the word. According to Edgar et al. (2009), feedback is part of a communication model and is specifically the “receiver’s reaction” to information communicated (p. 35), such as the self-efficacy of the teacher candidate. Frost and Rayfield (2020) conceptualized feedback in the realm of “social persuasion”, which fits within the theoretical framework of scholarship on self-efficacy (p. 249). Shoulders et al. (2016) represented feedback as a “process”, or negative feedback loop where an individual aspires to close the gap between their current performance and a standard (p. 163). All three of these studies focused on preservice teachers, yet there is not a clear, or agreed upon definition of feedback among them. Furthermore, the representations of feedback within each article are inconsistent, which further complicates the meaning. The theoretical framework guiding this systematic review became even more important to begin uncovering the predominant representations of feedback as either information (Hattie & Timperley, 2007), an event (Kurtoglu-Hooton, 2016), or a process (Henderson et al., 2019).

### Feedback as Information

The most common representation of feedback from this literature review was in alignment with Hattie and Timperley’s (2007) definition of feedback, which suggested information transmission from one agent to another. Most researchers in this systematic review clearly used feedback in language which indicated a unidirectional pathway of information from a more knowledgeable agent (e.g., supervisor or cooperating teacher) to the preservice teacher. When the authors used language to suggest feedback is *given*, *provided* by the supervisor, and then *received* by the teacher candidate, these were key indicators of feedback as information. These are the highest occurring uses of the word feedback to indicate a transmission of information, but this is not the only way to characterize information. Feedback as information includes contextual features such as *positive*, *constructive*, *critical*, *written*, or what Disberger et al. (2022a) generally described as a variety of information sources to be interpreted, like compliments, or community support. All together, these indicate feedback information is directed toward the recipient (e.g., preservice teacher) from an external source (e.g., supervisor).

### Feedback as an Event

Within supervision and teacher education, formal evaluations, and post-observation conferences are often scheduled events to document teacher performance. When feedback is represented as an event, the practices are focused on the meeting, time frequencies, or structured phases occurring during a post-observation conference (Kurtoglu-Hooton, 2016). While less frequently mentioned, feedback was represented as a *session*, or *conference* and often accompanied by *formal evaluation*, *structure*, or differentiation of *format*. Where the presence of feedback as an event became even more clear is when scholars made recommendations for feedback to occur at a higher frequency (Coleman et al., 2021), under a regular schedule (Disberger et al., 2022a), and across different observation formats (Shoulders et al., 2016).

### Feedback as a Process

At times, scholars chose language to indicate feedback was occurring as discourse (Kurtoglu-Hooton, 2016). Instances referring to a *verbal conversation*, *feedback conversation*, *reflection process* or *dialogue* signaled evidence of how representations were more closely aligned with the process described by Kurtoglu-Hooton (2016). Paulsen et al. (2016) argue that feedback through peer evaluation should be “conceptualized as dialogue” (p. 19). Henderson et al. (2019) expanded the definition of feedback as a process, suggesting that it need not involve an external or more knowledgeable agent. Instead, they positioned the learner, such as a teacher candidate, as the primary agent responsible for sourcing and processing feedback. Although less common, some studies show instances where the teacher candidates were self-directing or generating self-feedback as the main drivers for their improvement (Lambert et al., 2014; Stephens & Waters, 2009).

These studies often did not include a university supervisor and focused on the experiences of teacher candidates (Lambert et al., 2014; Paulsen et al., 2016; Stephens & Waters, 2009). This absence might suggest that teacher candidates were either seen as capable of generating their own feedback or, conversely, that they were not given a voice in the feedback process (Stephens & Waters, 2009).

### What is Feedback?

The collocates for the keyword *feedback* from the data corpus ( $n = 34$ ) are indicative of what is meant by feedback, the nature of it, and who is involved with it. The collocates with the highest, unique occurrence were all verbs apart from the preposition *from*. The predominant collocates of feedback were *receive* and *provide*, as well as their according verb tenses (e.g., *provided*, *providing*). These collocates support the prior finding of categorizing feedback as information, as they are evidence of the subtle indication feedback is a product, something that can be transmitted, given from one person to another, or even possessed. Grammatically, this positions feedback as the object of a sentence. For example, both statements “university supervisors *provided* additional feedback that would prove useful to their development as a teacher” (Paulsen & Schmidt-Crawford, 2017, p. 172) and “*giving* feedback to the teacher is one aspect of supervision that makes a difference” (Thobega & Miller, 2003, p. 58), reveal a subtle truth about what feedback is taken to be. Disberger et al. (2022a) described feedback as something sought, craved and, when in scarcity, “held on tightly to” (p. 137), and recommendations have been made for increasing the quantity of feedback to satisfy this desire (Disberger et al., 2022b). Similarly, feedback grammatically positioned as the subject of the sentence yields an interpretation as information, such as the statement, “Student teachers acknowledged that feedback *provided* varied by university supervisor” (Shoulders et al., 2016, p. 167). Certainly, the utility, variation, and role of feedback information in development is clear in each of these examples. Perhaps the most compelling instance is to consider that the message conveyed about the important elements of a student teaching experience should include “a preservice teacher willing to be monitored and *receive* feedback” (Coleman et al., 2021, p. 258). Corpus linguistics analysis revealed the action verbs position feedback as the object of the sentence, which suggests it is information handed over unidirectionally from an individual in a supervisory position and is passively received by the teacher candidate.

From the selected literature, feedback is also taken to be characterized by distinct features related to how it is given, when it is given, and features of the feedback. The main modifier of the keyword feedback was *verbal*, which indicates feedback is produced through a spoken communication channel. For example, “The researchers recommend more verbal feedback from cooperating teachers during the student teaching internship” (Wolf et al., 2010, p. 46), and “...it is recommended that face-to-face verbal feedback conversations continue to occur during the formal evaluation process to discuss scores and performance” (Coleman et al., 2021, p. 271). These recommendations draw attention to the mode of feedback which is verbal. A contrast exists between both statements. The description of *verbal feedback conversations* from Coleman et al. (2021) suggests dialogue occurring, which is indicative of feedback as a process; both the supervisor and teacher candidate are engaged to discuss, and a one-way communication pathway is not clear. On the other hand, the example from Wolf et al. (2010) subtly indicates the direction of the verbal

feedback is *from* a cooperating teacher, and not sourced from the teacher candidate or elsewhere. Both are prime examples of how feedback exists as a verbal communication channel, but in two different ways to either transmit feedback information or engage in a more dialogic feedback process. Table 2 summarizes the three highest frequency collocations and their grammatical use.

**Table 2**

*High Frequency Collocations for each Linguistic Category (n =34)*

Source	Rank	Linguistic Category			
		Modifiers of the 'feedback' as the word 'feedback' (score)	Verbs with Modifiers of the 'feedback' as the object (score)	Possessors of 'feedback' (score)	Feedback' and/or (score)
Journal of Agricultural Education	1	Verbal (10.6)	Receive (12.1)	Supervisor (11.6)	Evaluation (10.8)
	2	Immediate (10.6)	Provide (11.6)	N/A	Encouragement (10.6)
	3	Constructive (10.5)	Give (10.5)	N/A	Observation (10.5)

Other modifiers of the keyword *feedback* included *immediate* and *constructive*. Each has separate meanings yet are revealing of what is most associated with feedback, and what it can be taken to be. It is commonly believed the timing of feedback is important, and this is conveyed in the literature as the high association with *immediate* because of both the desire to know by the teacher candidate following observation (Stephens & Waters, 2009) as well as how "... *immediate* feedback would be a starting place for the student teachers when they met for a follow-up conference with their supervisors" (Paulsen & Schmidt-Crawford, 2017, p. 172). Feedback immediacy supports the retention of memory and facilitates the possibility of acting more quickly to adjust or modify teaching practices. Feedback that is *constructive* also influences the actions of the recipient. When feedback is *constructive*, there can be a delayed response by the teacher candidate as, "...towards the end of the post conference, the preservice teacher began to accept the constructive feedback" (Rubenstein & Thoron, 2013, p. 141) The delay however, may not prevent the candidate from finding value in the critique (Meder et al., 2018). It is particularly interesting to consider both the immediacy of feedback in tandem with the content; perhaps more critical or constructive information should be communicated later on during the post-observation conference as opposed to immediately.

### Who is Involved with Feedback?

The primary finding of *feedback* as the object signals curiosity of who possesses or is involved in the transmission. The only indicator that reached a high frequency statistic greater than 10.5 was *supervisor*. Supervisors (e.g., university supervisors, cooperating teachers, administrators) were positioned as the main possessor, and thus transmitter or giver of feedback. This notion is supported by the primary role and responsibility of supervisors to include feedback (Fritz & Miller, 2004; Nolan & Hoover, 2004; Thobega & Miller, 2003; Wolfe et al., 2008). The action is derived from these agents, and they are the source of feedback. As an example, teacher candidates value "the variability in feedback supplied by multiple

supervisors” (Shoulders et al., 2016, p. 161). This word choice of *supply* reinforces the building argument for how feedback is information transmitted through a primary agent: the supervisor. Supply is meant to support a demand, and according to Disberger and colleagues (2022b), teachers are in high demand of feedback. In their closing recommendations, Edgar et al. (2009) suggested “educating cooperating teachers on proper methods of feedback towards student teachers in the field experience” (p. 42). Located in this recommendation are two interesting notions about both the possession of feedback and what it is meant to be. First, cooperating teachers are indicated as the primary agent of feedback, and the feedback is directed *towards* the student teacher. Secondly, the use of the word *method* suggests something besides information, such as a possible approach that might indicate a process, like structured communication (Edgar et al., 2009). More interestingly, immediately following this recommendation is a direct quote from Tschannen-Moran et al. (1998) “Specific performance feedback from supervisors, other teachers, even students, can be a potent source of information” (p. 20). Placed together, both the recommendation about feedback methods and accompanying call to action about feedback information are confusing, depending on what the reader believes feedback is meant to be.

At times, there were instances in the literature that suggested the possession of feedback is beyond the supervisor, but these findings did not achieve a high enough frequency to be considered significant from a statistical point of view. Some authors suggested peers are an additional source of feedback (Clark & Paulsen, 2016; Paulsen et al., 2016; Roberts et al., 2008), which is suggestive evidence that teacher candidates can generate their own feedback, and be more actively engaged in a process.

### What is Significant about Feedback?

Feedback is associated with other words to reveal a higher degree of significance and meaning. When placed with prepositional phrases such as *and* or *or*, the author reveals what they believe accompanies feedback. The highest frequency words connected to feedback in this way were *evaluation*, *encouragement*, and *observation*. For those most familiar with teacher education these are unsurprising findings as both formal and informal evaluations accompany the responsibility of a supervisor, and they collect additional information for evaluation through observation (Nolan & Hoover, 2004). Teacher candidates are “...receiving critical feedback and observations” (Meder et al., 2018, p. 296) from their supervisors, and it is important they learn how to, “interact with and receive timely feedback and evaluation” (Joerger & Boettcher, 2000, p. 113) from their respective supervisors. Beyond evaluation and observation, feedback was also referenced in connection to encouragement. This dimension of feedback points towards the emotional and motivational component, which could be linked to building the self-efficacy of teacher candidates (Frost & Rayfield, 2020; Edgar et al., 2009; Wolf et al., 2010).

## Conclusion

### Limitations

This study exclusively utilized articles from the Journal of Agricultural Education published between 2000 and 2022, and omitted grey literature such as conference proceedings, dissertations, and publications from other agricultural and Career and Technical Education (CTE) journals. The focus on feedback may have introduced selection bias, as studies not explicitly using the term “feedback” were excluded, potentially missing relevant insights. Additionally, the study examined feedback within teacher education and supervision contexts, excluding instances where feedback terminology was used for instrument validation, course evaluation, agricultural leadership, extension, and assessments within colleges of agriculture. While the findings provide insightful perspectives on feedback within agricultural education, they may not be generalizable beyond this specific context.

### Discussion

The findings of the systematic review and corpus linguistic analysis support the notion that providing feedback is a primary role associated with supervision and teacher education, and this component

is highly valued, sought after, and impactful. There were many cases where the definition of feedback was left to the reader to determine its meaning, and this responsibility can lead to disagreement and confusion. Defining feedback is often taken for granted by the authors themselves, as many represent the word as information, process, or event, all within the same article. The main representation of feedback is that feedback is information to be transmitted from the supervisor to the teacher candidate. Although never explicitly cited, this information transfer representation is aligned with the more popular definitions and scholarship about what feedback should be taken as (Hattie & Timperley, 2007; Wisniewski et al., 2020). There are some indications feedback is conceptualized as an event, which is evidenced by how it is framed in conjunction with a structured boundary such as time, or a scheduled conference or session. Other scholars have moved away from using this terminology, and elected language like *post-observation conferences* (Fritz & Miller, 2003; Rubenstein & Thoron, 2013). Feedback as a process is not as clearly observed in the literature, but there are some indications to suggest a bi-directional process that includes dialogue or conversation (Coleman et al., 2021; Paulsen & Martin, 2014). Additional evidence of a feedback process is found in the sense that feedback is something that is learner-centered (Henderson et al., 2019), and the teacher candidate is capable of identifying growth on their own (Lambert et al., 2014; Meder et al., 2018), self-directing (Stephens & Waters, 2009), or generating plans for growth and improvement in community with peers (Paulsen et al., 2016), less the agentic role of a supervisor.

Altogether, the literature representing feedback in agricultural education is unclear on the role of the teacher candidate regarding feedback. Emphasis is placed on teacher candidates' willingness to receive feedback, and most scholarship focuses on the role of the supervisor as the source. At the same time, reflection on feedback is viewed as an important competency for teacher candidates to build, not only during their field experiences but across the entirety of their teacher education program (Lambert et al., 2014; Meder et al., 2018; Paulsen et al., 2016; Stephens & Waters, 2009). These authors specifically position the important role of the teacher candidate as the primary agent, and an active contributor to the process of growth and development. On the other hand, most of the scholarship focuses on the role of the supervisor, and they reinforce this role as a source, supplier or provider of feedback, and the teacher as the recipient (Coleman et al., 2021; Edgar et al., 2009; Paulsen & Martin 2014; Paulsen & Schmidt-Crawford, 2017; Thobega & Miller, 2003; Shoulders et al., 2016). A more structured and clinical approach to supervision is commonly observed in agricultural education teacher preparation programs (Fritz & Miller, 2004).

### Implications and Recommendations

It is vital for future research and practice in agricultural education to determine a clearer representation of feedback. Language is powerful, and when a coexistence of meaning is not clearly communicated it can result in conflicting interpretations, implications for practice, or development of research questions (Winstone et al., 2021). In the context of agricultural education and teacher development, the agentic roles of both supervisors and teacher candidates are crucial in understanding the concept of feedback. Without a clear definition of feedback, a myriad of practices and misunderstandings emerge, affecting conceptual frameworks, research questions, and recommendations related to supervision and teacher development. Differentiating feedback as a process, event or information may seem subtle, yet leaving these distinctions open to individual interpretation carries significant implications.

Take for example the following outcome from a study related to different supervision formats: "Student teachers also desired a combination of variability in feedback and continuity in the focus of feedback over time" (Shoulders et al., 2016, p.169). In this context, feedback is framed as a desire based on both its variability and focus across time. How might this recommendation lead to different outcomes for practice if specific language was added to clarify how feedback is meant? How might a teacher educator adapt their practice if they evaluated the variability of their feedback processes, feedback events, or feedback information? Different outcomes would surface, just as they would if they analyzed the continuity in the focus of feedback information, or feedback processes. Rewritten with a higher degree of clarity, what

direction might a practitioner take if they knew student teachers would benefit from *a combination of variability in feedback processes and continuity in the focus of feedback information over time*? By precisely writing “variability in the feedback process”, this more clearly describes the research completed by Shoulders et al. (2016) to understand the differences in a format with either one or two different supervisors. Essentially, *how* each supervisor processes the feedback will be different. Moreover, Shoulders et al. (2016) suggested the importance of supervisors communicating with each other prior to future visits so the content of the feedback would be consistent, and not potentially contradictory or disempowering for the student teacher. Here, representing the focus of feedback information is all about *what* is being said. What this boils down to is a difference between *what* is occurring, and *how* it is occurring. Both can and should exist, but without a clearer representation, they coexist in a way only the reader can make an interpretation of. Clarity of representation in this case, would yield stronger and more unified actions for practitioners.

A secondary implication surrounding the language and grammatical framing of feedback is suggesting it originates from the supervisor, and they are the purveyor of feedback information. Part of this might be a by-product of the lack of reflective practices built into existing teacher education programs, and may suggest that teacher candidates are unprepared to generate their own feedback information or engage in feedback processes with a high degree of self-direction (Meder et al., 2018). In fact, adopting a supervisory practice which places the role of reflection, critical thinking and directing the feedback process on the teacher candidate is seen to be risky (Fritz & Miller, 2003). Supervisors in agricultural education have been observed to give less voice to their teacher candidates during feedback processes (Stephens & Waters, 2009). This dominance of voice taken up by supervisors is also reflected in the grammatical choices made by the authors in this literature review. The heavy emphasis on unidirectional transmission of feedback information from the supervisor to the teacher candidate, is akin to the traditional practices of teacher-centered instruction (Garrett, 2008). The traditional, teacher-centered approach has been noted in agricultural education scholarship, and practitioners have been encouraged to grant more autonomy and agency to preservice teachers as a result (Lambert et al., 2014). According to current literature, the theme of existing language in our field suggests we are mostly operating on a supervisor-centered approach to feedback information and feedback processes. While existing practices might be more learner, or teacher candidate-centered, the language in our scholarship does not yet clearly, or consistently, communicate this. Without a more critical look at our language, writings, and recommendations, we may strengthen traditional approaches to supervision, and skirt the possibility for more imaginative learner-centered approaches which emphasize the engagement, reflection, and agentic role of the teacher candidate in their own growth and development. Scholars have suggested we generate a paradigm shift by carefully looking at our supervisory practices, differentiating them, and ultimately working in a more collaborative way with teacher candidates to grant them power and agency (Fritz & Miller, 2004; Lambert et al., 2014; Stephens & Waters, 2009).

If we want to change the pathway forward regarding supervision, feedback, and teacher education then we cannot simply make alterations to our research questions, practices, or recommendations; we must begin with our language (Winstone et al., 2021). Scholars must resist oversimplified language calling for more feedback, or improvements in feedback without clearly indicating either *what* or *how*. Situating feedback in a context matters, such as an *event* (e.g., post-observation conference) occurring traditionally between a supervisor and teacher candidate (Kurtoglu-Hooton, 2016). When situated this way, feedback holds a more useful and clearer meaning because the reader is primed to think about feedback as an *event* as opposed to a *process* or *information*. Awareness includes carefully analyzing the extent to which our existing research and practice reflects a traditional approach to teaching, whereas the supervisor is the dominant voice who provides feedback information, and the learner simply receives or rejects it (Garret, 2008). A more learner-centered approach will elevate the role of the teacher candidate and promote active engagement in the processes of information (Henderson et al., 2019).

Suggesting we need more feedback has little utility (Paulsen et al., 2016). What does this mean? More time, occurrences, or quantity of descriptive information? Or, does *more* mean a shift in the process?

Such a recommendation does not even touch on the quality or effectiveness of feedback. Furthermore, what does *more feedback* mean in terms of the role of either supervisor or teacher candidate? For purposes of clarity and understanding, we recommend research and practice move away from the single term feedback, and advance toward a vocabulary more appropriately representing the intention. Leveraging definitions of existing scholars related to feedback in practice, and consistently using them in journal publications will promote alignment across both research and practice. We believe this confusion can be clarified with a more expansive, and clear phrasing in three primary representations:

1. *Feedback information*: Focuses on the content, information, or cues used to inform changes in practice or performance relative to a standard or goal. Feedback information can be acquired by the learner, or it can be supplied by an external source or agent such as a supervisor, cooperating teacher, peer, or data.
2. *Feedback process*: Emphasizes how dialogue, discussion, reflection, and relationships drive changes in practice or performance relative to a standard or goal. Feedback processes can be internally or externally derived and involve actively formulating outcomes and actions based on the available feedback information.
3. *Feedback event*: Refers to occurrences where feedback information or feedback processes take place, such as in a post-observation conference.

Future research can explore these clarified terms –information, process, or event –in various contexts beyond teacher education, including SBAE classrooms, leadership development, and agricultural communications. Research could also investigate how the supervisor-teacher candidate relationship is influenced by the characteristics, delivery or reception of feedback information. Is it possible to define and establish a uniform feedback process across disciplines, or is there already evidence suggesting a successful approach? Additionally, strategies do teachers use to generate and self-direct their own feedback processes, and how do these evolve or improve beyond their field experience as teacher candidates? How might we define best practices or optimum timing for feedback events like post-observation conferences? These research directions extend beyond the scope of this article, but we hope that the clarity provided here will inspire new investigations and insights into feedback as information, a process, and event.

This systematic review represents an initial effort to redefine discourse around feedback in agricultural education. It underscores the critical need for clarity and precision in the language used across the profession. By examining the multifaceted roles of supervisors and teacher candidates and describing the varied perspectives on feedback, we illuminate the potential for transformative practices. To move from traditional, supervisor-centered approaches to more learner-centered methodologies that grant teacher candidates greater autonomy and agency over their growth, a paradigm shift is necessary. This shift requires a nuanced vocabulary that distinguishes between feedback as information, process, and event, fostering a deeper understanding and more unified approach in both research and practice. Future scholarship should adopt and consistently applies these definitions, paving the way for more effective research and practice in agricultural education.

## References

- Bell, C., & Gitomer, D. (Eds.). (2016). *Handbook of Research on Teaching* (5th ed.). American Educational Research Association.
- Bennett, G. (2010). Using Corpora in the Language Learning Classroom.  
<https://doi.org/10.3998/mpub.371534>
- Biber, D., Conrad, S., & Reppen, R. (1998). *Corpus linguistics investigating language structure and use*. Cambridge University Press.

- Brezina. (2018). *Statistics in corpus linguistics: A practical guide*. Cambridge University Press.
- Carreiro, D. (2020). Making a shift in teacher evaluation. *Journal of Educational Supervision*, 3(2), 97–104. <https://doi.org/10.31045/jes.3.2.6>
- Coleman, B. M., Ferand, N. K., Bunch, J. C., & Isreal, G. D. (2021). Examining preservice teachers' performance during a 14-week student teaching experience: A longitudinal study. *Journal of Agricultural Education*, 62(3), 258–274. <https://doi.org/10.5032/jae.2021.03258>
- Clark, T. K., & Paulsen, T. H. (2016). Student teacher dialogue in an electronic community of practice: Cognition level related to the InTASC standards. *Journal of Agricultural Education*, 57(3), 1-17. <https://doi.org/10.5032/jae.2016.03001>
- Darling-Hammond, L., & Bransford, J. (2007). *Preparing teachers for a changing world: What teachers should learn and be able to do* (1st ed.). Jossey-Bass.
- Disberger, B., Washburn, S., Hock, G., & Ulmer, J. (2022a). Accomplishments and challenges experienced by beginning agriculture teachers in their first three years: A collective case study. *Journal of Agricultural Education*, 63(1), 115–131. <https://doi.org/10.5032/jae.2022.01115>
- Disberger, B., Washburn, S., Hock, G., & Ulmer, J. (2022b). Induction programs for beginning agriculture teachers: Research-based recommendations on program structure and content. *Journal of Agricultural Education*, 63(1), 132–148. <https://doi.org/10.5032/jae.2022.01132>
- Edgar, D., Roberts, G., & Murphy, T. (2009). Structured communication: Effects on teaching efficacy of student teachers. *Journal of Agricultural Education*, 50(1), 33–44. <https://doi.org/10.5032/jae.2009.01033>
- Freiberg, H. J., & Waxman, H. C. (1988). Alternative feedback approaches for improving student teachers' classroom instruction. *Journal of Teacher Education*, 39(4), 8–14. <https://doi.org/10.1177/002248718803900403>
- Fritz, C. A., & Miller, G. (2003). Supervisory practices used by teacher educators in agriculture. *Journal of Agricultural Education*, 44(3), 34–46. <https://doi.org/10.5032/jae.2003.03034>
- Fritz, C., & Miller, G. (2004). Supervisory practices used by teacher educators in agriculture: A comparison of doctoral/research extensive and research non-extensive institutions. *Journal of Agricultural Education*, 45(4), 46–56. <https://doi.org/10.5032/jae.2004.04046>
- Frost, K. J., & Rayfield, J. (2020). Decision to enter the classroom as an agriculture teacher: An exploratory qualitative investigation. *Journal of Agricultural Education*, 61(1), 247-261. doi: 10.5032/jae.2020.01247

- Gall, M. D., & Acheson, K. A. (2010). *Clinical supervision and teacher development* (6th ed.). Wiley.
- Garrett, T. (2008). Student-centered and teacher-centered classroom management: A case study of three elementary teachers. *Journal of Classroom Interaction*, 43(1), 34–47.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>
- Henderson, M., Ajjawi, R., Boud, D., & Molloy, E. (2019). Identifying feedback that has impact. *The Impact of Feedback in Higher Education*, 15–34. [https://doi.org/10.1007/978-3-030-25112-3\\_2](https://doi.org/10.1007/978-3-030-25112-3_2)
- Joerger, R., & Boettcher, G. (2000). A description of the nature and impact of teaching events and forms of beginning teacher assistance as experimented by Minnesota Agricultural Education Teachers. *Journal of Agricultural Education*, 41(4), 104–115. <https://doi.org/10.5032/jae.2000.04104>
- Kilgariff, A., Baisa, V., Bušta, J., Jakubiček, M., Kovář, V., Michelfeit, J., Rychlý, P., & Suchomel, V. (2014). The Sketch Engine: Ten Years on. *Lexicography*, 1(1), 7–36. <https://doi.org/10.1007/s40607-014-0009-9>
- Kurtoglu-Hooton, N. (2016). *Confirmatory feedback in teacher education*. Palgrave Macmillan.
- Lambert, M. D., Sorensen, T. J., & Elliott, K. M. (2014). A comparison and analysis of preservice teachers' oral and written reflections. *Journal of Agricultural Education*, 55(4), 85–99. <https://doi.org/10.5032/jae.2014.04085>
- Meder, A., Smalley, S., & Retallick, M. (2018). Evaluating first year agriculture teachers' use of reflection. *Journal of Agricultural Education*, 59(2), 289–304. <https://doi.org/10.5032/jae.2018.02289>
- Newman, M., & Gough, D. (2019). Systematic reviews in educational research: Methodology, perspectives, and application. *Systematic Reviews in Educational Research*, 3–22. [https://doi.org/10.1007/978-3-658-27602-7\\_1](https://doi.org/10.1007/978-3-658-27602-7_1)
- Nolan, J., & Hoover, L. A. (2004). *Teacher supervision and evaluation: Theory into practice*, Update edition (2nd ed.). John Wiley & Sons.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., Moher, D. (2021). The Prisma 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. <https://doi.org/10.1136/bmj.n71>

- Paulsen, T. H., & Martin, R. A. (2014). Supervision of agricultural educators in secondary schools: What do teachers want from their principals? *Journal of Agricultural Education*, 55(2), 136–153. <https://doi.org/10.5032/jae.2014.02136>
- Paulsen, T., & Schmidt-Crawford, D. (2017). Enhancing student teacher supervision through hybridization: Adding e-supervision to the mix. *Journal of Agricultural Education*, 58(2), 166–179. <https://doi.org/10.5032/jae.2017.02166>
- Paulsen, T., Clark, T., & Anderson, R. (2016). Using the tuning protocol to generate peer feedback during student teaching lesson plan development. *Journal of Agricultural Education*, 57(3), 18–32. <https://doi.org/10.5032/jae.2016.03018>
- Roberts, G., Harlin, J., & Briers, G. (2008). Peer modeling and teaching efficacy: The influence of two student teachers at the same time. *Journal of Agricultural Education*, 49(2), 13–26. <https://doi.org/10.5032/jae.2008.02013>
- Rubenstein, E., & Thoron, A. (2013). An observational analysis of agricultural education faculty during on-site supervisory visits with Preservice Teachers. *Journal of Agricultural Education*, 134–148. <https://doi.org/10.5032/jae.2013.04134>
- Shoulders, C., Edgar, D., & Bolton, A. (2016). Variability versus continuity: Student teachers' perceptions of two university supervision formats. *Journal of Agricultural Education*, 57(2), 161–171. <https://doi.org/10.5032/jae.2016.02161>
- Sikula, J. (1996). *Handbook of Research on teacher education: A project of the Association of teacher educators* (2nd ed.). Macmillan.
- Stephens, C., & Waters, R. (2009). The process of supervision with student teacher choice: A qualitative study. *Journal of Agricultural Education*, 50(3), 89–99. <https://doi.org/10.5032/jae.2009.03089>
- Thobega, M., & Miller, G. (2003). Relationship of instructional supervision with agriculture teachers' job satisfaction and their intention to remain in the teaching profession. *Journal of Agricultural Education*, 44(4), 57–66. <https://doi.org/10.5032/jae.2003.04057>
- Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202–248. <https://doi.org/10.3102/00346543068002202>
- Winstone, N., Boud, D., Dawson, P., & Heron, M. (2021). From feedback-as-information to feedback-as-process: A linguistic analysis of the feedback literature. *Assessment & Evaluation in Higher Education*, 47(2), 213–230. <https://doi.org/10.1080/02602938.2021.1902467>

- Wisniewski, B., Zierer, K., & Hattie, J. (2020). The power of feedback revisited: A meta-analysis of educational feedback research. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.03087>
- Wolf, K., Foster, D., & Birkenholz, R. (2010). The relationship between teacher self-efficacy and the professional development experiences of agricultural education teacher candidates. *Journal of Agricultural Education*, 51(4), 38–48. <https://doi.org/10.5032/jae.2010.04038>
- Wolfe, A., Retallick, M., Martin, R., & Steiner, C. (2008). Mentoring functions practiced by undergraduate faculty in agriculture. *Journal of Agricultural Education*, 49(3), 99–108. <https://doi.org/10.5032/jae.2008.03099>