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Feedback-seeking behavior in second language writing: motivational mechanisms

Mostafa Papi[1] · **Anna Vitalyevna Bondarenko**[1] · **Brenda Wawire**[2] · **Chen Jiang**[1] · **Shiyao Zhou**[1]

Abstract

Focused on the effects of different type of feedback on learners' written products, research on written corrective feedback (WCF) has cast second language writers as passive recipients rather than proactive agents in the feedback process. Revisiting the notion of WCF, this study introduces the notion of feedback-seeking behavior (Ashford & Cummings, 1983) to the field of second language writing and examines its motivational mechanisms using Dweck's (1999) theory of mindsets and an overarching cost-value analysis framework (e.g., Ashford & Cummings, 1983; Anseel et al., 2015). Questionnaire data were collected from 128 foreign language writers from a major public university in the United States. Multiple regression and mediation analyses showed that a growth language mindset predicted the value of feedback, which, in turn, was a strong predictor of both feedback monitoring and feedback inquiry. A fixed language mindset, on the other hand, predicted the cost of feedback seeking, which, in turn, negatively predicted feedback monitoring. The findings offer new venues for second language writing research and pedagogy.

Keywords Written corrective feedback · Feedback-seeking behavior · Motivation · Mindsets · Cost-value analysis

Introduction

Written corrective feedback (WCF) has been a topic of empirical and theoretical interest in the field of second language (L2) writing over the last 2 decades (e.g., Chandler, 2003; Ferris, 1999, 2010; Krashen, 1984; Truscott, 1996). Research has

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✉ Mostafa Papi
mpapi@fsu.edu

[1] Florida State University College of Education, Tallahassee, USA

[2] The University of Kansas, College of Liberal Arts & Sciences, Lawrence, USA

provided evidence for the relative effectiveness of WCF in improving L2 writing accuracy and development (Kang & Han, 2015; Russell & Spada, 2006). Studies have generally shown that WCF is more effective when it is *explicit* (e.g., Ferris, 2006), *direct* (e.g., Bitchener & Knoch, 2010; Manchón, 2011), and *focused* on certain linguistic features (e.g., Bitchener & Knoch, 2009; Sheen, 2007). Research on WCF, however, remains inconclusive and controversies over the topic linger to date (e.g., Liu & Brown, 2015; Truscott & Hsu, 2008). This is mainly due to inconsistent findings in the literature, which researchers have attributed to methodological issues (Hyland & Hyland, 2006; Liu & Brown, 2015) or mediating factors such as L2 proficiency, the setting, or the genre of writing (Kang & Han, 2015). There is, however, another significant gap that might have contributed equally, if not more strongly, to the current state of research on WCF. This gap "is so obvious it is almost startling: the lack of careful consideration of individual learner characteristics as they perceive, process, and apply WCF" (Ferris, Liu, Sinha, & Senna, 2013, p. 308). Lack of attention to the learner's role in the feedback process in L2 writing can be attributed to researchers' preoccupation with exploring how teachers' use of different types of WCF (e.g., direct vs. indirect; explicit vs. implicit) affects the accuracy of written products. This view of WCF as a *teaching resource* has overshadowed research in this area at the expense of attention to learners' engagement in the feedback process, casting L2 writers as passive recipients of different feedback types rather than proactive agents in their learning pursuits (Bitchener, 2017; Ferris, 2010; Ferris et al., 2013; Hyland, 2011; Kormos, 2012).

To bridge this significant gap in our understanding of the feedback process, a fundamental shift in perspective is needed. Such a shift would recast feedback as a *learning resource*, the value of which is driven by its instrumentality in learners' pursuit of their goals. To this purpose, the current study draws on the work of Ashford (1986; Ashford & Cummings, 1983) from organization psychology to introduce the notion of *feedback-seeking behavior* (FSB) to the field of second language writing. Inspired by the same motivation to move beyond the conception of individuals as passive recipients of feedback in organization settings, Ashford and Cummings (1983) introduced the notion of FSB as "the conscious devotion of effort toward determining the correctness and adequacy of behaviors for attaining valued end states" (Ashford, 1986, p. 466). FSB is a key topic of research in organization and social psychology and has been found to influence individuals' job performance (e.g., Ashford & Tsui, 1991), learning (e.g., Yanagizawa, 2008), and creativity (e.g., Christensen-Salem, Kinicki, Zhang, & Walumbwa, 2018; De Stobbeleir, Ashford, & Buyens, 2011). Applied to L2 writing, FSB can be defined as learners' intentional, calculated, and strategic attempts to gather feedback information on their L2 writing performance. Shifting the attention from the quality and quantity of WCF itself to the learner's FSB can draw the long-needed attention to the learners' engagement in the feedback process, which is a key factor in the success or failure of L2 writing instruction.

Conversely, investigating FSB, or any type of learning behavior, without examining its underlying motivations, would be an overly descriptive approach that would lack a strong theoretical ground and theory-driven practical implications (Papi, 2018). As FSB scholars have argued, "the key avenue to understanding how individual differences and contextual factors affect feedback-seeking strategies is

uncovering the underlying motivational dynamics" (Anseel, Beatty, Shen, Lievens, & Sackett, 2015, p. 228). In the present study, Dweck's (1999) theory of *mindsets* (also known as implicit theories of intelligence) from the field of educational and social psychology, which has received scholarly and public attention in the recent decade, will be used to examine the motivational underpinnings of FSB. Learners' mindsets, which concern their beliefs about the malleability of their intelligence, have been found to influence learners' quality of engagement in the feedback process (e.g., Mangels, Butterfield, Lamb, Good, & Dweck, 2006), their FSB (e.g., Devloo, Anseel, & De Beuckelaer, 2011), first language (L1) writer's goal orientation, self-efficacy, and written performance (Limpo & Alves, 2017), L2 writers' motivation and feedback orientation (e.g., Waller & Papi, 2017), and FSB in L2 speaking classes (Papi, Rios, Pelt, & Ozdemir, 2019).

These motivational characteristics have been argued to exert their effects on learners' choice of feedback-seeking strategies through different meaning systems that influence individuals' perceptions of the costs and values associated with various feedback-seeking strategies. Following what is common in FSB research, in addition to the motivational antecedents of FSB, an overarching cost-value framework (e.g., Ashford & Cummings, 1983; Anseel et al., 2015) is used to examine the specific behavioral economics that mediate the relationship between the mindsets and FSB. According to this framework, learners' mindsets exert their effects on learners' choice of feedback-seeking strategies through different meaning systems that influence individuals' internal analysis of the cost and value associated with various feedback-seeking strategies. The present study is the first one to directly examine the cost-value analyses that students perform with reference to different feedback-seeking strategies. Studying these cost-value analyses can provide a deeper and more practical understanding of the motivational mechanisms underlying such learning behavior.

Feedback-seeking behavior

Ashford and Cummings (1983) proposed the theoretical model of FSB in organizational settings. Unlike earlier research which emphasized feedback as an organizational resource, their model framed feedback as a valuable resource for the individual who exists within an "information environment" in which he or she "will actively monitor and seek feedback information with respect to organizationally determined and individually held goals" (p. 380). FSB was, therefore, defined as the individuals' actions and strategies to gather such feedback information from various sources to determine the appropriateness of their behavior in relation to the goals they pursue. The individual existing in this information environment is posited to have *motivation*s, and employ an *organizing function* and a *thinking function*, whose dynamic interaction can influence the individual's choice of different feedback-seeking strategies. Based on this model, FSB can be driven by four motivations: (1) the motivation to develop and maintain a sense of competence and efficacy, (2) the motivation to evaluate one's progress in achieving the valued goals, (3) the motivation to reduce uncertainty about

appropriateness and goal-directedness of one's behavior, and (4) the motivation to correct errors in behavior. The individual's organizing function refers to the regulation of feedback-seeking efforts and strategies with reference to the goals that one pursues. For example, if one's goal is competence development, the strategy he or she chooses for feedback seeking might be different than when the goal is to improve one's image. The thinking function of the feedback seeker is based on the premise that the meaning of feedback cues is not inherent in the cues, and it is the individual who makes sense of such feedback information. "Meaning is generated within the thinking function using both the environmental cues obtained through monitoring the environment and the various goals the individual may hold as reference conditions" (Ashford & Cummings, 1983, p. 383).

The researchers proposed that FSB includes two types of strategies: *Feedback monitoring* and *feedback inquiry*. The monitoring strategy is essentially an implicit process of meaning construction through observations, interpretations, and inferences. It "involves attending to and taking in information from the environment […] through observing the situation and the behaviors of other actors for cues useful as feedback" (Ashford & Cummings, 1983, p. 383). Feedback inquiry, on the other hand, is a more explicit strategy for eliciting information about one's performance. It involves "the individual's attempt to actually increase the amount of personally relevant data in his or her information environment by directly asking actors in that environment for their perceptions and/or evaluations of the behavior in question" (p. 385). According to Ashford and Cummings, the learner's choice of each strategy depends on one's implicit or explicit perceptions of the cost and value involved in the use of these strategies. The value of feedback seeking can be derived from its contribution to the individual's competence development, uncertainty reduction, performance assessment, and error correction. Feedback seeking about one's successful performance can also be used to make a good impression on feedback source (e.g., Morrison & Bies, 1991). The cost of feedback seeking include face-loss or self-presentation cost (i.e., feeling embarrassed because of exposing oneself to others' judgements), ego cost (i.e., feeling hurt because of receiving negative feedback), effort cost (i.e., the amount of effort required in feedback seeking), and inference cost (i.e., the amount and type of inference required to comprehend the feedback).

Since the introduction of the model of FSB, many studies have been conducted to examine the effects of different motivational and contextual factors on the perceived value and cost of feedback-seeking strategies, which, in turn, affect the individual's method, frequency, timing, source, and topic of FSB (see Anseel et al., 2015; Ashford, 1986; Ashford, De Stobbeleir, & Nujella, 2016). The value of feedback is influenced by different factors such as the individual's uncertainty in the situation (e.g., Ashford, 1986; Ashford & Cummings, 1985; Hays & Williams, 2011), the amount of their experience in the environment (e.g., Ashford, 1986; Morrison, 1993; Niemann, Wisse, Rus, Van Yperen, & Sassenberg, 2015), and the credibility and trustworthiness of the source of feedback (Choi, Moon, & Nae, 2014; Fedor, Rensvold, & Adams, 1992; Hays & Williams, 2011).

Mindsets and FSB

According to Dweck (e.g., Dweck, 1999; Elliott & Dweck, 1988), learners' beliefs about the malleability of their intelligence create a meaning system that could lead to adaptive or maladaptive cognitive, affective, and behavioral patterns in their learning pursuit. Learners who have a *growth mindset* (also known as an *incremental theory of intelligence*) endorse the belief that with sufficient effort and the use of appropriate strategies one's intelligence can always grow. Given their deep-seated belief in the malleability of their abilities, learners with a growth mindset typically pursue learning goals concerned with developing or maintaining their competence and show adaptive *mastery-oriented* response patterns involving "the seeking of challenging tasks and the maintenance of effective striving under failure" (Dweck & Leggett, 1988, p. 256). Individuals with a fixed mindset, on the other hand, deeply believe that one's intelligence and abilities are fixed entities and cannot change regardless of one's quality or quantity of efforts. Due to their belief in the stability of their intelligence, such learners pursue performance goals to project a positive image and validate their abilities. They also display maladaptive *helpless* response patterns "characterized by an avoidance of challenge and a deterioration of performance in the face of obstacles" (Dweck & Leggett, 1988, p. 256). Faced with challenging tasks, individuals with a growth mindset and learning goals adapt their behavior to reach the desired development in their competence, whereas individuals with a fixed mindset and performance goals withdraw from the task and, consequently, lose interest in pursuing their desired goal.

Learners with different mindsets and/or achievement goals seem to view feedback differently. According to VandeWalle (2003), individuals with learning goals view feedback as "useful diagnostic information about how to develop competencies needed for task mastery", whereas those with performance goals view feedback "as an evaluation and judgement about the self and revealing one's competence level" (p. 583). The connection between the mindsets, goals, and responses to failure situations, which is established in the field of educational psychology, has also been confirmed in the field of SLA. In two studies in the Canadian context, Lou and Noels (2017) found that a growth mindset was associated with a learning goal and a more mastery-oriented response pattern to failure situations whereas a fixed mindset predicted a performance goal and more helpless response patterns. In a study of middle school Portuguese L1 writers, Limpo and Alves (2017) found that a growth mindset was associated with students' mastery goal orientation, self-efficacy for writing conventions, ideation, and self-regulation, and their writing performance.

Dweck's (1999) mindsets have not been explored widely in feedback-seeking studies. In one study, Devloo et al. (2011) reported that employees with a growth mindset sought more feedback when there was a mismatch between their abilities and the demands of the job. In a study related to the processing of feedback, and using electroencephalography and event-related potentials, Mangels et al. (2006) found that anticipation for performance feedback on simple tasks (correct vs. incorrect) increased brain activity regardless of participants' mindsets, whereas only participants with a growth mindset showed increased brain activity in anticipation for learning-oriented feedback (i.e., corrective information). During the

same period of anticipatory vigilance, learners with a fixed mindset, in fact, did not show any notable brain activity. In the context of L2 writing, Waller and Papi (2017) found that a growth mindset about language learning strongly predicted L2 writing motivation and a positive orientation toward feedback whereas a fixed mindset predicted only an orientation to avoid feedback. As discussed above, a growth mindset is associated with learning goals, which are concerned with competence development, whereas a fixed is related to performance goals, which are concerned with competence validation. Even though few studies have examined the relationship between mindsets and FSB, many studies have examined the relationship between achievement goals and FSB. These studies have generally shown that learning goals are associated with both higher perceived value and frequency of FSB (Gong, Wang, Huang, & Cheung, 2017; VandeWalle & Cummings, 1997; VandeWalle, Ganesan, Challagalla, & Brown, 2000) while performance goals are positively related to the cost of FSB (Park, Schmidt, Scheu, & DeShon, 2007; VandeWalle & Cummings, 1997), and the desire for ego protection and impression management (Gong et al., 2017; Tuckey, Brewer, & Williamson, 2002), and negatively related to the desire for useful information (Janssen & Prins, 2007; Tuckey et al., 2002), and the frequency of feedback inquiry (Tuckey et al., 2002).

Papi et al. (2019) examined whether mindsets and achievement goals predicted FSB in the context of L2 speaking classes. In addition to Ashford's (1986) FSB model and Dweck's (1999) mindsets, the researchers employed Korn and Elliot's (2016) recent model of achievement goals. The results of the study showed the development-approach goal (concerned with developing competence), which strongly correlated with a growth mindset, was the only achievement goal that predicted both feedback monitoring and feedback inquiry. The demonstration-approach goal (concerned with displaying competence) resulted in learners' feedback inquiry from teachers but not from others (e.g., peers, friends). Finally, the demonstration-avoidance goal (concerned with avoidance of displaying incompetence), which correlated with the fixed mindset, predicted feedback inquiry from others.

The present study is the first FSB study in the context of L2 writing. Given the more private nature of written feedback compared to feedback on L2 speaking, different types and levels of cost and value might be associated with feedback seeking in the context of L2 writing, thereby necessitating independent research in this area. In addition to mindsets and FSB, in the present study the perceived self-presentation cost and value of FSB are measured to examine whether they mediate the relationships between mindsets and different feedback-seeking strategies. Based on the theories and studies reviewed above, it is expected that a growth mindset leads to higher value of FSB and more FSB whereas a fixed mindset is expected to increase the self-presentation cost of FSB and, thereby decrease FSB. Therefore, the following research hypotheses are formulated:

Hypothesis 1 Agrowth L2 learning mindset positively predicts the value of FSB whereas a fixed language mindset positively predicts the self-presentation cost of FSB.

Hypothesis 2 The value of FSB positively predicts FSB whereas the self-presentation cost of FSB negatively predicts FSB.

Hypothesis 3 The relations between the L2 learning mindsets and FSB are mediated by the self-presentation cost and value of FSB.

Methods

Participants

One-hundred-twenty-eight students enrolled in L2 writing courses at a major university in the United States participated in the present study. The sample consisted of 122 undergraduate and six graduate students from various majors and in different years of their studies. Most of the participants (N = 112) spoke English as their first language (L1). The age of the participants ranged from 18 to 55 years old (mean = 21.83), and the length of their L2 learning ranged from one to 5 years (mean = 3.57).

Instruments

Data were collected using a questionnaire which was developed for the purpose of this study and based on the guidelines proposed by Dörnyei and Taguchi (2009). The questionnaire comprised of two parts. The first part included items measuring the participants' language mindsets, feedback-seeking strategies, and value and self-presentation cost of feedback seeking. The responses to the items were collected on a six-point Likert scale with 1 showing *Strongly Disagree* and 6 showing *Strongly Agree*.

An adapted version of Dweck's (1999) mindset scales was employed to measure language mindsets, which comprised of two scales:

Growth L2 Mindset: four items measuring learners' belief that their L2 learning intelligence is malleable and can always grow;
Fixed L2 Mindset: four items examining learners' belief that their L2 learning intelligence is fixed and can never change.

Ashford's (1986) scales for measuring both feedback monitoring and feedback inquiry were adapted to the L2 writing context:

Feedback Monitoring: seven items measuring learners' degree of attention paid to the feedback given on their L2 writing;
Feedback Inquiry: six items measuring learners' active elicitation of WCF from their teachers.

To examine participants' perceptions of the value and self-presentation cost of feedback seeking, Ashford's (1986) risk and value scales were adapted to the L2 writing context:

Value: eight items measuring the amount of value learners associated with the feedback they receive from their teachers;
Self-Presentation Cost: 10 items examining learners' perception of the risk of face-loss and embarrassment associated with seeking WCF.

The second part of the developed questionnaire examined the participants' background information including their gender, age, major of study, and native language.

Procedures

After receiving an approval from the Institutional Review Board, the researchers contacted the instructors of foreign language writing courses and asked for their cooperation. Prior to scheduling class visits to collect the data, the researchers explained to the instructors the purpose and procedures of the study. Students were also informed about the right to voluntary participation, the anonymous nature and the confidentiality of their data. The teachers were also asked to leave the classroom when students were completing the questionnaires in order to minimize potential effects on students' responses to the items. It took the participants approximately 15 min on average to complete the questionnaires.

Data analysis

Using SPSS 22 (IBM), data related to language mindsets, value/cost perceptions, and feedback-seeking strategies were submitted to four separate Exploratory Factor Analyses (EFA) with Maximum Likelihood as method of extraction, and Direct oblimin with Kaiser Normalization as the rotation method. The number of factors was determined using eigenvalues larger than 1 (Kaiser's criterion) and scree plots.

The analysis of the data related to mindsets yielded two factors (Table 1) which together explained 74.8% of the variance after deleting two items because they did not appropriately load on either of the factors. The first factor, which explained 60.2% of the variance (eigenvalue = 3.61), included four items, measuring the participants' *Growth L2 Mindset* (Cronbach's alpha = .85), and the second factor, which explained 14.6% of the variance (eigenvalue = .88), included two items measuring the participants' *Fixed L2 Mindset* (Cronbach's alpha = .70). In addition, Kaiser–Meyer–Olkin Measure of Sampling Adequacy (.85) was much larger than the minimum acceptable value of .8, and Bartlett's Test of Sphericity was statistically significant ($\chi^2(15) = 353.8$, $p < .001$), indicating good fitness of the model.

The analysis of cost and value items (Table 2) showed a clear two-factor solution after three negatively-worded items which loaded on a separate factor were dropped. Six items loaded on *Self-Presentation Cost* (Cronbach's alpha = .88) and six other items loaded on *Value* (Cronbach's alpha = .83). This model explained 62% of the variance. Additionally, the Kaiser–Meyer–Olkin figure (.83) was adequate, and Bartlett's Test of Sphericity was significant ($\chi^2(66) = 593.90$, $p < .001$).

Finally, EFA on FSB items neatly resulted in the two expected factors (Table 3) which together explained 61.6% of the variance. The first factor explained 53.7% of the variance (eigenvalue = 7.36) and included seven items measuring the

Table 1 Exploratory factor analysis results for L2 mindsets

Items	M	SD	Pattern matrix		*h*
			Growth mindset	Fixed mindset	
2. You can always improve your language learning intelligence	5.22	0.9	0.78		0.73
4. No matter how much language learning intelligence you think you have; it can always grow	5.17	0.91	0.87		0.73
6. No matter who you are, you can significantly change your language learning intelligence	4.54	1.21	0.80		0.60
8. You can change even your basic language learning intelligence considerably	4.65	1.09	0.89		0.77
1. You have a certain amount of intelligence for learning other languages, and you can't really do much to change it	2.82	1.23		0.98	0.90
3. Your language learning intelligence is something that you can't change very much	2.22	1.02		0.57	0.75
M/SD			4.89/.86	2.52/.99	
Variance: 74.8%			60.20%	14.60%	
Cronbach's alpha			0.85	0.70	

Table 2 Exploratory factor analysis results for feedback-seeking value and self-presentation cost

Items	M	SD	Pattern matrix		*h*
			Cost	Value	
55. I think my classmates would think poorly of me if I asked them for feedback on my (L2)* writing	1.86	1.06	0.87		74
51. It is embarrassing to ask my teacher for feedback on my (L2) writing	1.89	1.17	0.84		0.68
39. It is embarrassing to ask other students for feedback on my (L2) writing	2.21	1.25	0.84		0.68
47. It is not a good idea to ask my (L2) teacher for feedback on my writing; he/she might think I am incompetent	1.64	0.92	0.75		0.66
34. It is not a good idea to ask other students for feedback on my (L2) writing; they might think I am incompetent	1.90	1.04	0.78		0.6
24. My (L2) teacher would think poorly of me if I asked for feedback on my (L2) writing	1.52	0.91	0.75		0.58
2. It is important to me to receive feedback on my (L2) writing	5.41	0.87		0.85	0.71
12. I find feedback on my (L2) writing to be useful	5.27	0.89		0.82	0.65
17. It is important for me to receive feedback on different aspects of my writing (grammar, content, punctuation, etc.)	5.27	1.01		0.78	0.7
22. I would like to get more feedback on the strategies and practices I can use to become more proficient in my (L2) writing	4.70	1.17		0.7	0.51
7. I would like to get more feedback on what would help me to improve my (L2) writing	4.43	1.24		0.66	0.42
27. Feedback on my (L2) writing can help me become a better (L2) writer	5.46	0.65	− 0.31	0.61	0.55
Variance: 62.15%			39.45%	29.70%	
M/SD			1.84/.85	5.12/.73	
Cronbach's alpha			0.88	0.83	

"L2" was replaced with the respective language (e.g., Spanish, French) in the administered questionnaire. Factor loadings below .30 are not displayed

Table 3 Exploratory factor analysis results for FSB data

Items	M	SD	Pattern matrix		*h*
			Feedback monitoring	Feedback inquiry	
50. When I get my papers back, I read all of the comments carefully	4.93	1.2	0.67		0.71
54. I pay close attention when my (L2) teachers correct my writing mistakes	4.9	1.19	0.66		0.8
56. When my (L2) teachers point out mistakes in my writing, I try not to make them again	5.1	1.03	0.73		0.47
58. I try to remember my (L2) teachers' comments on my writing mistakes	5.09	1.1	0.58		0.51
60. I try to learn from my teachers' comments on my writing problems	5.09	1.05	0.83		0.78
62.R. I don't pay attention to my (L2) teachers' comments on my papers	5.08	1.22	0.91		0.71
64.R. When I receive negative comments on my (L2) writing, I just ignore them	5.32	0.97	0.70		0.47
3. When I do not understand my teacher's comments on my writing, I ask her/him to clarify	4.78	1.24		0.63	0.41
8R. When I do not understand my teacher's comments on my papers, I ignore them	4.67	1.13		0.59	0.47
13. I ask my (L2) teacher to tell me what I do wrong in my (L2) writing	4.48	1.34		0.81	0.72
28. I ask my (L2) teachers to tell me how I can improve my (L2) writing	4.48	1.37		0.90	0.69
33. I ask my (L2) teachers to point out my writing weaknesses	4.11	1.44		0.74	0.63
38. I ask my (L2) teachers to show me strategies to improve my writing	4.06	1.39		0.80	0.63
Variance: 61.6%			53.70%	7.90%	
M/SD			5.06/.92	4.43/1.06	
Cronbach's alpha			0.92	0.89	

"L2" was replaced with the respective languages (e.g., Spanish, French) in the administered questionnaire. Factor loadings below .30 are not displayed

Table 4 Inter-correlations among all the measured variables

	Fixed L2 mindset	Growth L2 mindset	Cost	Value	Feedback inquiry
Growth L2 mindset	− .56***				
Cost	.25**	− .08			
Value	− .12	.23**	− .25**		
Feedback inquiry	− .10	.17*	− .19*	.58***	
Feedback monitoring	− .08	.20*	− .40***	.70***	.65***

Note: *$p < .05$; **$p < .01$; ***$p < .001$

Table 5 Multiple regression results with the mindsets as predictor variables, and value and self-presentation cost as outcome variables

Outcome variable	Predictor variable	B	SE	Beta	t	Sig.
Value	Constant	4.13	0.57		7.21	< .001
	Growth L2 mindset	0.2	0.09	0.24	2.24	0.03
	Fixed L2 mindset	0.01	0.08	0.01	0.1	0.92
Cost	Constant	0.73	0.66		1.11	0.27
	Growth L2 mindset	0.09	0.1	0.09	0.89	0.38
	Fixed L2 mindset	0.26	0.09	0.31	2.93	.004

participants' use of *Feedback Monitoring* (Cronbach's alpha = .92); the second factor, labeled *Feedback Inquiry* (Cronbach's alpha = .89), explained 7.9% of the variance (eigenvalue = 1.40) and included six items examining the participants' frequency of directly asking their teachers for WCF. Additionally, the Kaiser–Meyer–Olkin Measure of Sampling Adequacy (.90) was acceptable, and Bartlett's Test of Sphericity was significant ($\chi^2(78) = 1218.72$, $p < .001$), indicating goodness of fit.

Results and discussion

To test Hypothesis 1 (i.e., "A growth L2 learning mindset positively predicts the value of FSB whereas a fixed L2 mindset positively predicts the self-presentation cost of FSB."), two standard multiple regression analyses were performed with the mindsets as predictor variables and Value ($F^{(2,125)} = 3.49$, $p < .05$, $R^2 = .05$) and Cost ($F^{(2,125)} = 4.73$, $p < .05$, $R^2 = .07$) as outcome variables (see Table 4 for intercorrelations). The results of the analyses, presented in Table 5, show that whereas Growth L2 Mindset ($\beta = .24$, $p = .03$) positively predicts Value, Fixed L2 Mindset positively predicts Cost ($\beta = .31$, $p = .004$), as hypothesized. These results confirm the basic assumption in this study that learners with a growth language learning mindset value WCF because they believe it to be a resource for them to develop their competence for learning how to write in a second language. Those with a fixed mindset, on the other hand, do not believe that they can grow their L2 writing competence through effort and view WCF as a sign of incompetence, which is not a positive picture they want to present to others.

Table 6 Multiple regression results with self-presentation cost and value as predictor variables and feedback-seeking strategies as outcome variables

Outcome variable	Predictor variable	B	SE	Beta	t	Sig.
Feedback monitoring	Constant	1.4	0.45		3.09	< .001
	Cost	− 0.26	0.07	− 0.24	− 3.88	< .001
	Value	0.81	0.08	0.64	10.3	< .001
Feedback inquiry	Constant	0.32	0.63		0.51	0.61
	Cost	− 0.06	0.09	− 0.04	− 0.58	0.56
	Value	0.82	0.11	0.56	7.48	< .001

To test Hypothesis 2 (i.e., "The value of FSB positively predicts FSB whereas the self-presentation cost of FSB negatively predicts FSB."), two multiple regression analyses with the standard entry method were run with Value and Self-Presentation Cost as predictor and Feedback Monitoring and Feedback Inquiry as outcome variables. The results of the analyses, displayed in Table 6, showed that when Feedback Monitoring was the outcome variable, the model was significant ($F^{(2,125)} = 75.37$, $p < .001$, $R^2 = .55$) and explained a notable 55% of the variance. In addition, both Value ($\beta = .64$, $p < .001$) and Cost ($\beta = -0.24$, $p < .001$) emerged as significant and strong predictors of Feedback Monitoring, with the former being a positive and the latter a negative predictor, as anticipated. The resulting beta values suggest that with an increase of one unit in feedback Value, there is a remarkable increase of .61 units in Feedback Monitoring; whereas, with an increase of one unit in Cost, there is a decrease of .24 units in this type of FSB. With Feedback Inquiry as the outcome variable, the model was significant ($F^{(2,125)} = 31.19$, $p < .001$, $R^2 = .33$) and explained 33% of the variance. As seen in Table 6, Value emerged as a strong predictor of Feedback Inquiry ($\beta = 0.56$, $p < .001$) whereas Cost did not emerge as a significant predictor even though there was a small negative correlation between the two variables ($r = -0.19$, $p < .05$).

These results generally support the importance of the overarching Cost-Value framework in understanding the motivational mechanisms of feedback seeking (Anseel et al., 2015; Ashford, 1986; Ashford & Cummings, 1983). The emergence of Cost as a negative correlate of Feedback Inquiry was expected as previous studies have shown that feedback cost is a negative predictor of feedback inquiry (e.g., Ashford, 1986; Fedor et al., 1992; Hays & Williams, 2011). However, in contrast to studies in employment settings (see Anseel et al., 2015), Cost emerged as a negative predictor of Feedback Monitoring in this study. This could be due to differences in the notion of feedback monitoring in employment settings versus L2 writing classrooms. Whereas in employment settings monitoring could be a more implicit strategy to improve performance, there seems to be cost associated with this method of feedback-seeking in L2 writing classes. This could relate to the learner's interpretation of feedback monitoring in the classroom context. Whereas the target of the feedback monitored in employment settings could be either the individual or the individual's coworkers and not necessarily a sign of the individual's weakness, in L2 writing settings WCF is normally given directly to the learner and on his or her

Table 7 Two stepwise regression analyses with feedback monitoring as the outcome variable

Predictor variable	B	SE	Beta	t	Sig.
Constant	3.81	0.73		5.24	< .001
Growth L2 mindset	0.24	0.11	0.22	2.09	0.04
Fixed L2 mindset	0.04	0.1	0.04	0.39	0.7
Constant	0.2	0.63		0.32	0.75
Growth L2 mindset	0.06	0.08	0.05	0.74	0.46
Fixed L2 mindset	0.03	0.07	0.03	0.44	0.66
Value	0.87	0.08	0.69	10.55	< .001
Constant	4.14	0.67		6.22	< .001
Growth L2 mindset	0.28	0.1	0.26	2.69	0.01
Fixed L2 mindset	0.16	0.09	0.17	1.71	0.09
Cost	− 0.46	0.09	− 0.43	− 5.13	< .001

own writing performance, and sometimes the comments are publicly discussed in class. Receiving a large number of comments on one's writing assignment, therefore, might be perceived as a sign of poor performance and/or competence. Feedback monitoring in L2 writing settings is, therefore, less implicit and more subject to such self-presentation cost than it is in employment settings.

Hypothesis 3 The relations between the L2 learning mindsets and FSB are mediated by the self-presentation cost and value of FSB.

To test our third hypothesis, mediation analyses were performed following the procedures outlined by Baron and Kenny (1986). Based on these procedures, Cost and Value can function as mediators if (a) they are significantly predicted by the predictor variable (i.e., Mindsets), (b) they predict the outcome variable (i.e., Feedback Monitoring and Inquiry), (c) when their effects are controlled, the predictor variables no longer significantly predict the outcome variables. In such an analysis, "a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion" (Baron & Kenny, 1986, p. 1176). To this purpose, two stepwise regression analyses were performed with Feedback Monitoring and Feedback Inquiry as outcome variables, respectively. In the first step of each analysis (the base model), mindsets were entered as predictors, and in the second step either Cost or Value was added to the base model. In addition, the Sobel test was used to verify the results.

The results of the mediation analysis with Feedback Monitoring as the outcome variable, presented in Table 7, showed that in the first step ($F^{(2,125)} = 2.64$, $p = .08$, $R^2 = .04$) only Growth Mindset was a significant predictor of Feedback Monitoring ($\beta = 0.22$, $p = .04$). When Value was added to the base model ($F^{(3,124)} = 40.40$, $p < .001$, $R^2 = .49$), it emerged as a strong predictor ($\beta = 0.69$, $p < .001$) while Growth Mindset was no longer significant ($\beta = 0.05$, $p = .46$), suggesting that the relationship between Growth Mindset and Feedback Monitoring was fully mediated by Value

Table 8 Two stepwise regression analyses with feedback inquiry as the outcome variable

Predictor variable	B	SE	Beta	t	Sig.
Constant	3.36	0.84		3.98	< .001
Growth L2 mindset	0.22	0.13	0.18	1.66	0.10
Fixed L2 mindset	0	0.11	0.00	0.04	0.97
Constant	− 0.04	0.84		− 0.05	0.96
Growth L2 mindset	0.05	0.11	0.04	0.48	0.63
Fixed L2 mindset	0	0.1	0	− 0.02	0.98
Value	0.82	0.11	0.57	7.5	< .001
Constant	3.53	0.84	–	4.22	< .001
Growth L2 mindset	0.24	0.13	0.19	1.84	0.07
Fixed L2 mindset	0.06	0.12	0.06	0.56	0.58
Cost	− 0.23	0.11	− 0.19	− 2.06	0.04

(Sobel statistic = 2.17, $p < .05$). When Cost was added to the base model, it emerged as a strong and negative predictor of Feedback Monitoring ($\beta = -0.43$, $p < .001$) and the beta value for Fixed Mindset approached statistical significance ($\beta = 0.17$, $p = .09$), suggesting mediation. The Sobel test results confirmed that Cost mediated the relationship between Fixed Mindset and Feedback Monitoring (Sobel statistic = − 2.28, $p < .05$), as anticipated.

These results confirm that learners with a growth mindset seek WCF by method of monitoring because they value feedback as a source to develop their L2 writing competence. By contrast, learners with a fixed mindset do not monitor feedback on their writing because of the low value and high cost they associate with receiving WCF. In other words, whereas learners with a growth mindset seek feedback by method of monitoring because they perceive WCF as a resource for learning, those with a fixed mindset do not perceive WCF to be useful and see it as a negative judgement of their L2 writing abilities. These results support the findings of the previous studies showing that a growth mindset is associated with more feedback seeking in both employment (Devloo et al., 2011) and L2 learning situations (Papi et al., 2019; Waller & Papi, 2017).

With Feedback Inquiry as the outcome variable ($F^{(2,125)} = 1.96$, $p = .15$, $R^2 = .03$), neither Growth ($\beta = 0.18$, $p = .10$) nor Fixed Mindset ($\beta = 0.00$, $p = .97$) were significant (Table 8), even though the former approached statistical significance. When Value was added to the model ($F^{(2,125)} = 20.63$, $p < .001$, $R^2 = .33$), both the Growth Mindset ($\beta = 0.04$, $p = .63$) and Fixed Mindset ($\beta = 0.00$, $p = .98$) remained non-significant and Value was the only and a strong predictor ($\beta = 0.57$, $p < .001$). When Cost was added to the model ($F^{(2,125)} = 2.76$, $p < .05$, $R^2 = .06$), it emerged as a negative predictor ($\beta = -0.19$, $p = .04$), and both Growth ($\beta = 0.19$, $p = .07$) and Fixed Mindset ($\beta = 0.06$, $p = .58$) remained non-significant, suggesting no mediation.

These results suggest that rather than learners' trait-like characteristics such as their mindsets, it seems that the situational factors that contribute to the value of feedback inquiry are the determining factor in students' willingness to solicit

feedback from their teachers. In other words, the value attached to this type of inquiry, therefore, does not originate from the learners' growth mindset. Rather, it might be the case that other environmental factors such as students' beliefs about teachers' competence (Choi et al., 2014; McAllister, 1995), their achievement goals (Papi et al., 2019), their emotional relationship with the teacher (Hays & Williams, 2011; Teunissen et al., 2009), how supportive the feedback environment is perceived to be (e.g., Beenen, Pichler, & Levy, 2017; Dahling, O'Malley, & Chau, 2015), and the goal structure of the class (e.g., Dweck, 1999) might have been more prominent factors influencing L2 writers' feedback-seeking behavior by method of inquiry. In addition, it seems that learners do not perceive this type of feedback-seeking behavior as a costly act. This result is not surprising given that in the previous studies this method of feedback seeking has sometimes been even used as a means to make a good impression on the source of feedback (e.g., Ashford & Northcraft, 1992; Papi et al., 2019).

In sum, the results showed that Value positively predicted both Feedback Monitoring and Inquiry whereas Cost negatively predicted Feedback Monitoring but not Feedback Inquiry. Growth Mindset positively predicted Feedback Monitoring through Value, and Fixed Mindset did not predict Feedback Monitoring because of the Self-Presentation Cost of feedback seeking. Neither Growth not Fixed Mindset predicted Feedback Inquiry, and these were not mediated by Value or Cost.

Conclusions

Not many studies have focused how individual learners orient toward or seek WCF, a gap which was described by Ferris (2010) as "one of the most surprising oversights in written CF research" (p. 196). In addition, learners have typically been cast as passive recipients of WCF rather than as active participants in their own learning process (Hyland, 2011). The present study bridged these two gaps by introducing the notion of feedback-seeking behavior from organization psychology and examining it in relation to learners' mindsets from educational psychology. The results of this study confirmed that depending on their implicit beliefs about the malleability of their intelligence, L2 learners associate different costs and values with feedback-seeking, which, in turn, influence their decision whether or not to seek feedback and by what method. In other words, L2 learners consciously, intentionally and strategically choose whether or not to engage with or solicit WCF depending on their cost-value calculations, which are highly influenced by their mindsets. These findings confirm the basic premise of this study that learners are proactive agents of learning in the feedback process and their strategic and agentic involvement in this process is influenced by both dispositional and contextual motivational mechanisms.

As a teaching resource, feedback is seen as corrective messages that are transmitted to a recipient concerning his or her linguistic knowledge or skills. Perceived as a learning resource, feedback is personally-relevant information that students seek in any information environment, inside or outside the instructional settings, to meet their valued L2 writing goals. Such feedback can include referent information about what goals are valuable and appraisal information about how learners are

progressing toward achieving those goals. This change in perspective opens a wide range of research venues and extends the attention from teachers and the type of feedback they provide to the process of feedback and learners' involvement in that process, that is their FSB. It also highlights the importance of exploring ways to promote such behavior through different personal and contextual adaptations such as goal setting, improving classroom relationships, task requirements, and evaluation standards to decrease the perceived cost of feedback seeking and increase its associated value. This view of feedback can complement the mainstream WCF research by investigating how FSB can lead to the success or failure of the feedback process.

Limitations and future research directions

In this study, data were collected using a self-report questionnaire. Employing other data collection methods such as observing students' behavioral response to WCF, scenarios, interviews, diaries, teachers' reports and even psycholinguistic methods such as eye-tracking can shed more light on L2 writers' FSB. In this study, the mindsets were examined as antecedents of the self-presentation cost and value of FSB. In future studies, other factors that influence such costs and values can be investigated. These can include students' previous experiences with feedback, and performance level, teacher–student relationships, feedback environment and attitudes, how errors are perceived in the class, classroom goals, objectives, and assessment standards, and basically any factors that might affect learners' perceptions of the cost and value associated with FSB. Learners' proficiency level was not considered in this study. It is possible that learner with different proficiency levels show different motivational and feedback-seeking patterns. Exploring the effects of proficiency in FSB might thus further our understanding of the topic.[1] In this study, only the learning value and self-presentation cost of feedback seeking were examined. Future studies can explore other costs and values such as ego and effort costs (Ashford, 1986), and image/ego-enhancement and appraisal values (Park et al., 2007) to get a more comprehensive picture of the motivational mechanisms underlying FSB. FSB could also be investigated in terms of the timing and frequency of seeking, the sign of feedback (e.g., positive vs. negative), the type of feedback (e.g., process, product, explicit, implicit, etc.), the source of feedback (e.g., teacher vs. peers), and the outcomes of FSB (e.g., accuracy, development) (see VandeWalle, 2003). Finally, examining classroom interventions to improve FSB among L2 learners can be the most valuable contribution of this line of research to the field of second language writing.

[1] An anonymous reviewer stated that years of L2 study should be included in the analyses as an indirect measure of L2 proficiency "because effects obtained here may be at least partially mediated by different perceptions of feedback among learners with different skill levels." While we acknowledge the potential role of L2 proficiency in FSB, our additional analyses showed that years of study only marginally correlated with one of our many variables, Development Approach ($r = .18$, $p = .05$), which suggests that it may not a determining factors in the current study.

Pedagogical implications

Promoting a growth L2 mindset and learning goals can increase the value and decrease the cost of feedback seeking, thereby contributing to learners' FSB. Research on mindset intervention has been prolific over the last few decades and has produced techniques that have been shown to significantly improve learners' cognitive, motivational, and behavioral patterns, and their achievement (e.g., Yeager & Dweck, 2012; Yeager et al., 2016). In addition to mindset interventions, teachers can promote learning goals in their classes through setting learning rather than performance standards of progress, make the process of writing development rather than product of writing the focal point of their teaching, treat errors as signs of development rather than symptoms of weakness, establish an atmosphere of collaborative learning, minimize the sense of competition and social comparison, and finally, assess learners based on their intra-individual rather than normative progress. Increasing FSB's value and reducing its cost can be done through different means including but not limited to establishing feedback-seeking norms and role modeling (e.g., Williams, Miller, Steelman, & Levy, 1999), improving the feedback seeker–source relationships (e.g., Levy, Cober, & Miller, 2002; VandeWalle et al., 2000), and creating a FSB-friendly environment through promoting intellectual stimulation, critical thinking, and problem-solving skills among students (Anseel et al., 2015).

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