Thy word is a lamp unto my feet: A study via metaphoric perceptions on how online feedback benefited Chinese learners

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Abstract

Theoretical claims about the benefits of online feedback suggest it can facilitate language learning. However, despite the calls for new digital literacies on language education, atti-tudes of educators have not been encouraging. To delve further into this issue, the present study addresses the following research concerns: (1) learners' metaphoric perceptions of online feedback, (2) how metaphoric perceptions show the impact of online feedback on language learning, and (3) the messages educators can glean through these metaphoric per-ceptions. A subsequent question would be what new insights we can gain by asking stu-dents to reflect on online feedback via metaphors not unearthed by previous research using more traditional means. We argue that different methods should be used based on student differences and the contextual realities of the learning setting. Participants are introverted Chinese novice learners who are not accustomed to technology-enhanced teaching/learning and are restrained in the open expression of their feelings and thoughts. Given participants' backgrounds, the use of metaphors enables them to express their reflective thinking in a more profound manner. Therefore, the findings of the present study, i.e., learners' meta-phoric thoughts, are considered timely and can be used in academic training to address the necessity of applying different approaches to different types of students. They can also showcase the impact of online feedback on introverted learners. Together, these find-ings can encourage educators to consider changing their attitudes regarding educational technology.

Keywords   Online feedback · Perception · Metaphor · Chinese learners · Introverted learners

Introduction

Feedback has been a central topic in instructed language learning as well as Second Language Acquisition research. It is usually identified as an important means of help-ing learners improve and accelerate learning (Ellis and Sheen 2006; Goo and Mackey 2013; Lyster and Ranta 2013; Lyster et al. 2013 ; Yang and Meng 2013). Feedback also provides learners a future-focused feed -forward opportunity (Price et al. 2010). In gen-eral, the research on feedback related to language learning has been both descriptive and experimental (Nassaji 2016). Previous studies have examined how learners perceive feedback, whether such feedback affects learners' subsequent language acquisition, and the extent of such an effect. Though most research reveals feedback as among the major influences on learning and achievement, the type of feedback and the way it is given can be differentially effective

(Hattie and Timperley 2007). We identify this as an important question to be addressed. Thus, this study draws attention to technology-enhanced lan-guage learning, in line with the increasing number of studies (e.g., Chew et al. 2015; Davis and Carroll 2009; Rolfe 2011) suggesting online feedback may benefit learn-ers, particularly in institutions of higher education. In attempting to delve further into this issue, the present study focused more on the learners' perceptions, i.e., their ideas, beliefs, or thoughts about online feedback instead of focusing on the feedback itself. The latter was the case in Mackey et al. (2000) who studied whether learners perceive the feedback provided as feedback and whether they recognize 'the target of that feed-back' (p. 478). In other words, we aim to determine the importance of online feedback from the perspective of learners, not how online feedback improves the end products but how learners perceive online feedback either favorably or negatively.

According to Zlatovic et al. (2015), the integration of online assessment in language learning, particularly the essay form, can facilitate deep- learning strategies to achieve learning objectives. In fact, technology-assisted feedback has been found to be one of the main pedagogical approaches for providing students with feedback to correct their mistakes in writing (AbuSeileek and Abualsha 2014; Chew et al. 2015). It also improves students' reading and writing proficiencies (Truscott 2007 ; Yoon and Jo 2014). Studies of feedback conducted in laboratory settings have reported more success than classroom studies (Mackey and Philp 1998; McDonough and Mackey 2006). This finding is prob-ably due to the impact of delayed feedback (Clariana et al. 2000) on learners, to the fact that learners usually receive individualized attention in laboratory contexts, and because they are provided with more time to process the feedback than during face -to-face inter-action. Similarly, studies show that online feedback, regardless of type, is considered more e ective than feedback received during face-to-face interaction (Yilmaz 2012), and it leads to better learning performance and proficiency (Yang and Meng 2013). In addition, the benefits of using educational technologies are obvious to all educators (Zou et al. 2013). Technology accelerates the assessment process and reduces educa-tors' workloads (Lavolette et al. 2015). However, the question remains whether the mas-sive technologies available in language learning create positive or negative impacts due to the unpredictable and evolving nature of technologies for language learning (Bridge 2015; Stockwell 2012). Tour (2015) claims that although important calls have been made for new digital literacies to become an integral part of language education, 'tra-ditional approaches to technology continue to persist in many contexts' (p. 124). Zou et al. (2013) argue further academic training on how to use educational technologies for language learning is required to bring about a positive change in educators' attitudes.

Thus, the following pertinent questions arise: How can we engage educators and learners with online educational technologies? How is online feedback beneficial? How can we promote this 'technology-enhanced feedback' to educators in a concise and effective manner?

To address the above questions, this study was designed to use metaphor as a means of showing how online feedback is beneficial to students, thus promoting online feed-back as a useful educational tool to educators. However, what is 'metaphor'?

Metaphor

The metaphor, likes analogies, is often used to refer to nonliteral similarity comparisons (Gentner and Asmuth 2017; Gentner et al. 2001; Gentner et al. 1988). Comparisons are important in the matching process of the topic (or tenor) and the vehicle as it 'looks for features and relations common to the topic

and vehicle' (Gernsbacher et al. 2001, p. 434). Moreover, a metaphor 'enables people to make mental leaps across distinct con-ceptual domains' (Chiappe and Chiappe 2007, p. 172). As analogical mapping is often used to connect a familiar situation with an unfamiliar or abstract situation (Gentner and Maravilla 2018), metaphors make possible further concrete and familiar realms of learning experience from an ambiguous, abstract or unfamiliar domain (Gentner and Bowdle 2001; Jamrozik et al. 2016; Lako 1990). For instance, in the case of the bibli-cal metaphor, 'Thy Word is a lamp unto my feet' (King James' Version), 'a lamp unto my feet' is the concrete realm from the abstract domain 'Thy Word'.

In the context of the present study, we view metaphor analysis as a significant tool for capturing the conceptually indispensable thoughts of learners with regard to online feedback. Furthermore, metaphors may open a new direction in experiencing educa-tional technologies. This speculation is grounded on the construct that people's mental imagery and use of words in metaphorical contexts are strongly guided by their embod-ied understandings of actual events (Falck and Gibbs 2012). Students' imagery of online feedback and their metaphorical expressions of online feedback are closely related to their actual experiences of online feedback. The use of metaphoric expressions indi-cates a result of perceptions; it is projected from a more abstract or uncertain domain (i.e., online feedback) to the clear and familiar concrete experience (e.g., light bulb). Although asking students for responses through questionnaires and interviews is more straightforward, we believe it would be more compelling to also ask students to capture and present their thoughts through carefully chosen visual images: metaphors. While other forms of reflection, such as asking students to provide essay- type feedback may also reflect learning experiences, doing so is more time-consuming and may not be as precise, concise, innovative or awareness-cultivating as the metaphor.

On the one hand, we intend to use the claim of metaphoric perception in this study to refer to increasing awareness of or changes in students' ideas, beliefs, and thoughts about educational technology. On the other hand, this paper reports formal research about online feedback to set an example for gaining educators attention. Specifically, we show technology-enhanced language teaching as a means through which educators could develop an in-depth understanding about the relationship between their feedback and their learners' responses, thereby creating a context for effective teaching and better learning.

Research on learner response to feedback

Educators often find it difficult to evaluate the effectiveness of their feedback (Price et al. 2010) . Studies on feedback have used various measures to identify how learn-ers react to such feedback. One example has been termed the 'uptake'; a concept that has been defined as 'immediate learner responses that occur after feedback' (Nassaji 2016, p. 539) . In Lyster and Ranta's (1997) study, uptake is specified as 'a student's utterance that immediately follows the teacher's feedback… [it] constitutes a reaction in some way to the teacher's intention to draw attention to some aspect of the student's initial utterance' (p. 49). Although studies have indicated the importance of uptake in learning in view of its connection to the correction or modification of output following feedback (Mackey and Philp 1998; Nassaji 2011a), many researchers contend uptake does not provide direct evidence for language acquisition (Ellis et al. 2001; Loewen and Philp 2006; Mackey and Philp 1998; Nassaji 2011b) . Research also indicates computer mediated-communication leads to fewer instances of successful uptake than face-to-face communication (Nassaji 2016).

While these studies contribute greatly to the literature on feedback, the present study draws attention

to another aspect of uptake: a different way of getting more personal and focused feedback from learners. These 'delayed' responses were gathered from stu-dents after they had been given asynchronous feedback through an online assessment and feedback tool, i.e., GradeMark. Their supposedly immediate uptakes, which relate to their perceptions about online feedback, are described or portrayed only later in the form of metaphors. We term these types of student delayed or 'soon after responses' of reflective thoughts following online feedback 'delayed-uptake'. The process allows stu-dents further time to form thoughts and present appropriate reactions.

Research methodology and analysis framework

Research questions

We are concerned with three research questions:

RQ1: What are students' metaphoric perceptions of online feedback?
  RQ2: How do students' metaphoric perceptions show the impact of online feedback on their language learning, specifically on their writing?

RQ3: What messages to educators can be gleaned through students' metaphoric perceptions?

To address the above questions, we conducted a case study using a qualitative approach. A group of ethnic Chinese undergraduates pursuing an advanced language proficiency course in a public university in Malaysia were provided online feedback by their instructor. Then, they were asked to introspect and express their responses to this first-time experience with educational technology. In addition to responding to direct questions about how the online feedback benefited them, they were also asked to describe their perceptions of online feedback using metaphors.

Thus, the subsequent question arises: What new insights can we gain by asking stu-dents to reflect on their online feedback via metaphors? We would like to draw attention to the context of this study, specifically in relation to the participants.

Participants

Students' differences and the contextual realities of the learning setting are important con-siderations in this study. First, the participants of this study have no prior experience with online feedback. They consist of second year cohorts of Chinese students pursuing a three-year language proficiency course in a public university in Malaysia. Although respondents had undergone one year of proficiency and academic courses, none of them had received written or online feedback on their writing.

The second contextual factor concerns the background of the participants. They are all of Chinese descent and have been educated via the Chinese language. Previous studies have documented silence/reticence among East Asian students (Zhou et al. 2005). Active-learning approaches involving activities such as discussion or debate are often considered likely to fail in an East Asian context (Shin and Crookes 2005). Impacted by a tendency toward teacher-centered lessons and group-oriented cultural values (Kim 2012; Ramos 2014), students with a Confucian-influenced cultural and educational background (such as those from China, Taiwan, South Korea, and Hong Kong, as well as the

Chinese-educated Malaysians of Chinese descent) tend to be generally uncomfortable with communicative tasks, for example, speaking or spontaneous interaction (Choi and Rhee 2013; Ramos 2014). Such students have different learning preferences than their western counterparts or students with a western education in an online environment (Charlesworth 2008; Chew and Ding 2014).

These different learning preferences among students of Confucian-influenced back-ground could have been due to cultural differences. An example might be that it would be considered disrespectful or even confrontational to ask teachers direct questions. However, the traits described above are also associated with introversion. In this study, the partici-pants may feel restrained to express feelings and thoughts openly or directly. Participants may appear to be 'slow', because they need a moment's reflection (Jones 1999). Hence, a different approach was needed to elicit their perceptions.

In terms of the sample, data were collected from 52 participants over a 4-year period, as each cohort was rather small (an average of 13 students per year). The age of the partici-pants ranged from 21 to 22, and all were on the same academic level.

Methodology

The educational technology chosen for this study was GradeMark. It is a feature of the Turnitin platform enabling language educators to assess students' written work online and to provide feedback with a rubric. The strength of GradeMark lies in the quality of the feedback provided (Hope 2011) and the facility for direct annotation with quick marking (Burrows and Shortis 2011).

For four consecutive years, online feedback using GradeMark was given to the respond-ents for their writing assignments. Three types of feedback comments were given to each student: in-text and overall (written feedback) as well as voice (audio feedback). Figures 1 and 2 below present examples of these comments

Fig..1   Examples of in-text comments

Feedback was posted online within 2 weeks after the assignments had been submit-ted, and students were given 1–2 days to read and listen to the comments. After the stu-dents' consent to participate in the study had been obtained, they were asked to respond to the feedback given to them by completing an open-ended questionnaire comprising four questions:

1.\   What are your experiences with online feedback (i.e., using GradeMark)?

2.\   Did you experience any difference in your learning before and after using GradeMark?

3.\   Do you think GradeMark enhanced your learning experience overall? If so, how?

4.\   Use a metaphor to describe your perception toward the online feedback you received.

5.\ Please explain why you chose that particular metaphor.

To refresh participants' memories, an example of a metaphor was provided and discussed verbally before they started completing the questionnaire. Of the 52 students who responded, responses from 9

had to be discarded due to the ambiguity associated with their metaphoric expressions. The responses of 43 respondents, amounting to 48 metaphors (and their rationale), formed the data for analysis. Finally, for the purpose of triangulation, a

Fig..2   Examples of overall comment (text comment) and voice comment

structured interview was conducted with 6 of the respondents who volunteered. Two ques-tions similar to those asked in the questionnaire were posed: 'Did you experience any dif-ference in your learning before and after using GradeMark?' and 'Do you think Grade-Mark enhanced your learning experience? If so, how?' Mandarin was used for both the questionnaire and the interview, and responses were translated later into English. While we were cognizant of the fact that translation can reduce originality, we felt the metaphoric method of collecting data could only be obtained effectively via the native language of the respondents.

Metaphor analysis

Gentner et al. (1988) posited analogy as 'a mapping of knowledge from one domain (the base) into another (the target) which conveys a system of relations holding among the base objects also holds among the target objects' (p. 172). Analogies thus capture paral-lels across different situations (Gentner and Maravilla 2018). This theory is similar to the domain-interaction approach proposed by Tourangeau and Sternberg (1982) whereby a metaphor often asserts a resemblance not only between the topic/tenor and the vehicle but also between the two domains from which they are derived. Based on these theories, we conclude that metaphor aligns or matches analogous phenomena within the two domains of the topic/tenor and the vehicle. For example, the common features between 'Police Car-Ambulance' are, 'They both have a siren. They can be used for emergencies. They both get priority when they're flashing their lights and sirens…' (Gentner and Markman 1995, p. 127). After the alignment has occurred, an ideal concept is found, consisting of the set of those features within the domain of the vehicle (e.g., Police Car-Ambulance). Thereby cor-responding to the features of the topic/tenor.

Echoing this view, we conducted a comparison not only between the tenor (online feed-back) and the vehicle (e.g., light bulb) but also between the two domains. Examples such as 'online feedback is a light bulb' and 'online feedback is the Polaris' involve the process of aligning the characteristics applying to the 'light bulb' and the 'Polaris' domain, e.g., 'leading the way', as analogous to characteristics in the 'online feedback' domain.

To list the analogous characteristics, we analyzed all 48 metaphors and categorized them according to the similarities of the vehicles based on the reasoning given by students for each metaphor. For example, Student D13 portrayed online feedback as 'a book'. The reason given was, 'It is a book that we refer to after the exam to check if our answers are correct'. We found this vehicle shared similar characteristics with another vehicle, i.e., 'shadow under sunlight', which Student C13 explained as follows: 'Any error/deficiency will be noticeable [if placed under light]'. Based on such similarities, we identified the analogous characteristic categorized as 'indicate errors'.

We made careful considerations during the coding process. Some vehicles do not have the same characteristics, though they may seem alike. For example, 'email' and 'mail from pen pal' both may look similar but the former stresses a personal relationship between the sender and the receiver, while the latter suggests how a deficiency can be improved. Thus, these vehicles must be coded under different

analogous characteristics. For the purpose of triangulation, the coding was done separately by both researchers. The results were later discussed, differences sorted out, and six analogous characteristics finally derived.

Findings and discussion

What are students' metaphoric perceptions of online feedback?

Our data show most of the respondents knew very little about online feedback prior to their participation in this study. Generally, their past experiences with feedback followed a common pattern: The assignment was submitted manually, and detailed feedback was not expected, assuming any feedback was given. Hence, according to Student N, they 'knew neither how well nor how bad their work was'. This seemed to be a perception echoed by another interviewees:

In the past, we used to print out our assignment, submit it to our lecturer manually, and we would receive a final grade. We did not have any opportunity to make any improvement to our writing as we received neither positive nor constructive feedback on our work (Student T).

Even when feedback was occasionally given, it was usually oral, which was delivered overtly in class and not on a one-to-one basis. Consequently, students were potentially exposed to embarrassment, as many students might not feel comfortable about getting feedback in public. These students were given an opportunity to have their first experience with online feedback. Despite some initial technical obstacles, all the participants revealed a positive attitude toward online feedback as observed from the responses to the question-naires. However as mentioned earlier, Chinese students are generally more introverted and tend to give brief answers. In response to the question 'Do you think GradeMark enhanced your learning experience overall? If so, how?' the common answer was, 'The feedback helps me to correct my mistakes'. Overall, their responses were terse and to the point, with-out elaboration or in-depth explanation. However, their responses 'changed'—more pro-found thoughts and feelings were revealed—when they were asked to illustrate their expe-rience with feedback by using metaphors.

Participants' perceptions expressed in the form of metaphoric thoughts suggest feed-back is perceived from different perspectives, which we coded into six types (see Fig. 3). In short, the 'vehicles' listed in Fig. 3 show how online feedback was perceived by the learn-ers. The 'analogous characteristics' illustrate the e ects of online feedback on learners' experiences, and the ways online feedback benefited them.

How do students' metaphoric perceptions show the impact of online feedback on their language learning, specifcally on their writing?

Among the six characteristics, the most common benefit of online feedback recognized by learners seems to be its role in improving deficiency or bettering learner performance. Four respondents used the same metaphor, i.e., 'mirror'—a conventional metaphor in Chi-nese culture which carries the feature of differentiating pros and cons, gains and losses— to depict how online feedback can improve their work. The other repeated metaphor was 'light bulb', expressing how online feedback can guide their way.

In the analogy 'to indicate errors', online feedback is likened to a 'stick':

The lecturer's comments are a stick that hits one on the head (a shocking blow) (Stu-dent C2).

The 'stick' metaphor is familiar to students brought up in an Asian culture in which teachers and parents frequently use the stick but rarely use the carrot approach for education.

Feedback is also seen as a 'needle' 'to improve the deficiency' or the weaknesses in stu-dents' work almost instantaneously:

It [online feedback] allows me to see comments that 'shed blood with just one injec-tion' (needle, a direct translation from Chinese)' [getting to the exact point imme-diately]. It helps me to realize my strong and weak points and parts that need to be improved (Student C6).

Hence, the experience is seen as both painful yet beneficial. It forces learners (rather painfully) to reflect on their weaknesses, which can then be corrected. The following meta-phor echoes a similar perspective but with an additional consideration:

I see online feedback as a butcher dissecting an ox. The biggest fault in my assign-ment was that I went o the point, or even missed the focal point. To me, the com-ments from the lecturer 'dissected' the text—from the structure, content, flow of the writing to the title—all of which were given comments and suggestions (Student B1).

Interestingly, online feedback is also likened to a double-edged sword.

Fig..3   Categorization of metaphoric expressions: Vehicles (how learners perceive online feedback) and Analogous characteristics (how online feedback benefitted them)

Some indications are clear and distinct, thus managing to lead you in the correct direction; however, a road sign can be misleading sometimes and therefore you need to explore by yourself (Student B9).

In the local context, not all road signboards are accurate, and many times, they can be misleading. Similarly, a 'rose' is beautiful 'but with thorns' (Student B13); thus, it is dificult to understand and gain from it. Both the 'road sign' and 'rose' metaphors are exclusive

In terms of the double-edged sword view—a clear indicator to educators that there is room for improvement with regards to the feedback given. The opportunity this study a ords for delayed-uptake shows us that given the time for reflecting on feedback received, learners are able to voice disagreement with the feedback as illustrated through the double-edged sword viewpoint.

The feedback provided via the online tool apparently also plays a significant role in guiding students in their learning, as shown in the excerpts below:

Polaris: When a traveler loses his way in the hazy forest, he looks up for it and it leads him to the right path (Student B10).

GradeMark is a fame in the dark forest, leading me through darkness and unsettling worries to light (Student D12).

In addition, the experience of getting online feedback to improve their writing is equated to a 'seed sprouting':

It's like a seed sprouting—the deeper the root grows, the more flourishing the green leaves will be (i.e., the more you look at the feedback for the assignment, the more you will be inspired by the lecturer's comments) (Student B5).

The following remarks further explain the benefit of online feedback for developing learners' learning. It not only provides answers but also highlights the uncertainties and nourishes their abilities toward good writing.

I find online feedback is a small light bulb, one that displays the answer I require when it is lit up. It illuminates my uncertainty and gives me a more certain answer (Student A5).

Online feedback is planting a tree. The comments given are nourishment. These will allow the student to know his weaknesses and write better assignments, which are the sweet fruits (Student D10).

Moreover, to another participant, online feedback is truly 'a novel and new experience':

It's like in the course of childbirth—the baby is my writing, and the comments from the lecturer are like the delivery of the baby. First is the head of the baby; next is his body (Student A2).

The process of feedback is perceived as a process similar to childbirth, whereby the new-born baby (the writing) is the outcome of excessive hard and painful work. Although the pain may be great, the outcomes are amazing and worth celebrating. The participant perceives the obtaining of feedback to complete an assignment as an analogue to strug-gle and excitement. The caution and procedure in the process of childbirth not only shows the impact but also changes our perception of online feedback and perhaps of educational technology.

What messages to educators can be gleaned through students' metaphoric perceptions?

Many interesting metaphors have been used by the participants from which we can glean the messages they wish to convey to educators. The excerpt below indicates how online feedback leads the student to reflect, and how he eventually finds online feedback benefi-cial for both the present and the future.

The comments leave footprints on the heart, like the footprints on the beach. When the billows of wind come, you would think that the footprints would disappear, but they do not. They are just covered by the billows temporarily…. In our daily

life, we may not remember those comments [the feedback], but once we start to do our assignments, those comments, no matter good or bad, will come back. We will improve our current assignment due to these past corrections (Student B3).

Hence, these metaphoric perceptions show the impact of online feedback or the impact of the educator's comments on learners' experiences. Those experiences are not about how the feedback has caused measurable direct benefits to their learning or has overwhelmed them with new information but about how the feedback has been comprehended and appre-ciated. More importantly, it appears to

have inspired and moved learners to constructive learning and development at a later stage. Perhaps this discussion will help convey the sig-nificance of online feedback, in general, to educators.

Consider the following expression labeled 'personal relationship', whereby the student likens educational technology to a 'mother':

When I do something wrong, GradeMark is like a mother. She will tell me where I went wrong and correct me in time (Student C10).

Another student explains the online tool as follows:

An invisible microphone: I think this is a kind of heart to heart exchange. There are things that cannot be said through the mouth but can be expressed through writing. This is also a sincere heart to heart talk to further develop the mind (Student B12).

All three metaphors above depict profound insights regarding online feedback. It is more than a mere tool of educational technology.

Online feedback is also perceived as a 'message' delivered covertly on a one-to-one basis:

Online feedback is an email. Once you receive it, only you can read it; others can't.

(Student D5).

As such, feedback is not limited to its directive or referential functions on content or lan-guage structure. It is also valued for its relational and expressive role in providing praise, encouragement and positive opinions. It allows for a personal relationship, which works particularly well for more introverted students, such as Chinese and East Asians.

Implications for teaching

In general, higher education institutions in western countries such as the United States and the United Kingdom have a good record of research in and practice with integrating tech-nology to enhance learning and teaching (Sharpe et al. 2006; Conole et al. 2008; Gwella 2011; Vásquez and Harvey 2010). However, Malaysia's experience with technology in education is quite limited. The so-called 'e-learning' initiative has only been promoted in recent years in line with the Ministry of Higher Education's policy (Mohamed 2011). The National e-Learning Policy (DePAN) was launched in 2011 as a guiding principle among higher education institutions (HEIs). The main focus of DePAN is for Malaysian HEIs to use Information and Communications Technology as an enabler to enhance the quality of teaching and learning (Ministry of Education Malaysia 2014).

The findings of the present study show almost all the participants had no prior experi-ence with educational technology. However, they indicated very positive experiences with online feedback. The fact that they had time to reflect on the feedback received, termed delayed-uptake, seems to show the impact of online feedback on their learning. 'New' perceptions appeared to have been formed. By 'new' perceptions we do not mean partic-ipants' initial ideas about feedback were replaced with a completely

new set of percep-tions. Rather, we draw attention to the fact that participants' responses as expressed via metaphors suggest that they seem to have expanded their vision. Additionally, they seem to have begun to pay attention to other dimensions of feedback about which they were either unaware or had not previously experienced. An example of this would be the gap between what is understood and done and what aims to be understood and done (Hattie and Timper-ley 2007).

Nonetheless, despite data collection being stretched over 4 years, the sample size is small. This limitation unfortunately is a reflection of the limited size of the population. Second the ethno-cultural educational background of the respondents, i.e., their 'Confu-cian-influenced background', could imply the findings may not be applicable to others from a di erent background. This contention requires further exploration. Nevertheless, the find-ings need not be applicable to only Chinese-educated learners but would also be relevant to nonextroverted or introverted students, irrespective of background. This study shows us the need to be context-sensitive in applying different modes of feedback in dealing with learners from different cultural and educational backgrounds. Strategies need to be adapted for different learners in various learning situations. Therefore, educators need to build their skills and be more flexible and open-minded as no one strategy is applicable to all learners, an idea educators and classroom practitioners may wish to consider.

Regarding pedagogical implications, first our findings suggest students have begun to consider online feedback from a different dimension. They have become aware of the ben-efits of feedback through their own new-found experiences. Awareness has been shown to be related to language-learning outcomes, as seen from previous studies in which greater levels of attention and awareness led to greater learning (Robinson 1996)—since attention is necessary for learning (Schmidt 1990, 1993, 1995). Additionally, we consider the quote from Schmidt's (1994) study: 'more noticing leads to more learning' (p. 18). Although direct evidence about the role of attention is difficult to demonstrate, Mackey et al.'s (2000) study assumes that some aspect of learners' attention may become focused through interaction. The fact that this attention or input has been consciously noticed by the learner (Schmidt and Frota 1986) is a step toward eventual production. Our findings are in line with these studies. Students' new experiences with regard to online feedback have provoked their attention or awareness. We contend that students' perceptions toward feed-back, which have been shown clearly through their delayed-uptakes in the form of meta-phors, demonstrate how feedback has impacted and motivated their learning. Meanwhile, their perceptions focused by explicit instruction through online feedback and awareness of rule were developed. Their explicit knowledge also increased (Polio 2012); thus, assist-ing learners when revising their original text (Shintani and Ellis 2013). The production of metaphoric thoughts may well be a predictor of students' attention to or awareness of further improvement in language learning. This may signify that learners have somewhat benefited from the feedback not just at the time of feedback but as a continuing process. Specifically, while technology-assisted online feedback may seemingly lead to fewer (or no) immediate uptakes, our findings show a different perspective. We argue online feed-back creates a more profound delayed-uptake. This delayed-uptake is deemed an indicator of the learning developmental process, which could contribute to the eventual production of better learning, including writing.

Second, as learners have many problems, no one instructional method or feedback strat-egy can address all of them. GradeMark seems to be a suitable tool through which learners may receive feedback appropriate to their linguistic level and individualized needs. At the same time, GradeMark allows students to avoid the risk of being face-threatened, a situa-tion which could arise if educators were to overtly correct learners' error in front of their peers. GradeMark is not merely applying an educational tool, but 'a new and novel experi-ence' enhancing the 'personal relationship' between

educators and learners by 'leading' the learning journey, 'indicating errors' in assignments, 'improving students' deficiency' in language skills, and acting as 'a two-edged sword' with room for both learners and teachers to improve, as suggested by the study's respondents through their delayed-uptakes. While academic training is clearly required on how to use educational technologies for language learning to create a positive change in educators' attitudes, as Zou et al. (2013) argued, the focus of the training should not be restricted to the use of the tool. It should also pay atten-tion to student differences, learning outcomes, and the contextual realities of the learning setting. Therefore, the findings of the present study, i.e., learners' metaphoric thoughts, are considered timely and can be used in academic training to address the necessity of apply-ing different approaches to di erent types of students. They can also showcase the impact of online feedback on introverted learners, thereby encouraging educators to consider changing their attitudes in using educational technology.

A word of caution is necessary. While the study has demonstrated that adopting online tools in the classroom would be beneficial, it is far from sufficient to claim the 'effective-ness' of online tools in the broader sense of contributing to conclusive outcomes for lan-guage learning. Metaphors are usually culturally based, and metaphoric analysis is not free of critics (Gibbs 2017). Therefore, future research concerning online feedback and meta-phoric thoughts together would be enlightening. It may even encourage adoption of this approach in other cultural settings as a strategy for encouraging learners' feedback and reflection.

Third, the challenge to engage language educators in using innovative technology has always been present. Educators are important proxies for shaping technology-enhanced learning or disrupting the learning process; the differences in perception and practice between educators may impact learners' experiences and future suggested changes to the curriculum (Barnes and Kennewell 2017). For this reason, perhaps one of the most profound impacts of the present study is in creating the conditions under which learners' responses expressed through their metaphors about an online tool can help educators reflect deeply on their current practices, offer them new ways of looking at the issue of educa-tional technology, or even alert them to possibilities for changes. Cheng (2000) argues East Asian students' seemingly passivity and reticence are derived from situational factors, for example, teachers' unsuitable methodologies. Simple strategies can be employed to foster the learning of the quieter, less capable, or more reflective type of learners, and online teaching is one modality in which introverts may flourish (Davidson et al. 2015).

In light of these findings, the present study could have immense implications for lan-guage teaching in general and second-language teaching in particular. Characterizing stu-dents' metaphoric feedback enables educators to understand their students and to reassess whether the taught material has been acquired. The profound messages developed by the students may also help, or even force, educators to rethink existing curriculum designs, the teaching content, approaches to teaching and assessment, and the achievement of learning outcomes.

Therefore, we suggest noticing certain dynamics about which educators were previously unaware is very important because doing so may contribute to shifts in awareness, which serves as a necessary first step prior to changes (Vásquez and Harvey 2010). Taking this first step will help educators to be well-informed of a potentially more relevant, alternative feedback tool. Doing so could eventually prompt them to consider modifying their teaching strategies that would create potential or actual changes to their existing practices.

Conclusion

The present study demonstrates that the transition from feedback on a familiar domain (manual feedback) to a less familiar target domain (online feedback) may assist in raising educators and learners' awareness, a response to promote the self-directed use of technol-ogy, noted by Lai (2013, 2015). We believe the findings provide insight through students' metaphors as to how online feedback is likely to significantly impact both educators and learners, thus allowing effective teaching and learning to take place. Thus, we hope the present research will spark useful language learning through engagement with technology. We also hope this study will spur potential or actual changes in teaching practices and fos-ter learning among the quieter, more introverted, or more reflective type of learner.

To sum up, a metaphoric thought on online feedback would be as follows:

Thy word via technology is a lamp unto my feet in language learning.

Compliance with ethical standards

Confict of interest   No conflict of interest.

References

AbuSeileek, A., & Abualsha, A. (2014). Using peer computer-mediated corrective feedback to support EFL learners' writing. Language Learning & Technology, 18(1), 76–95.

Barnes, J., & Kennewell, S. (2017). Investigating teacher perceptions of teaching ICT in Wales. Education and Information Technologies, 22(5), 2485–2497.

Bridge, J. C. (2015). Review of computer-assisted language learning: Diversity in research and practice. Language Learning & Technology, 19(2), 40–43.

Burrows, S., & Shortis, M. (2011). An evaluation of semi-automated, collaborative marking and feed-back systems: Academic sta perspectives. Australasian Journal of Educational Technology, 27(7), 1135–1154.

Charlesworth, Z. M. (2008). Learning styles across cultures: Suggestions for educators. Education and Training, 50(2), 115–127.

Cheng, X. (2000). Asian students' reticence revisited. System, 28(3), 435–446.

Chew, E., & Ding, S. L. (2014). The zone of proximal and distal development of the Chinese language stud-ies with the use of Wikis. Australasian Journal of Educational Technology, 30(2), 184–201.

Chew, E., Ding, S. L., Rowell, G., et al. (2015). Changing attitudes in learning and assessment: Cast-o 'plagiarism detection' and cast-on self-service assessment for learning. Innovations in Education and Teaching International, 52(5), 454–463.

Chiappe, D. L., & Chiappe, P. (2007). The role of working memory in production and comprehension. Journal of Memory and Language, 56(2), 172–188.

Choi, B. K., & Rhee, B. S. (2013). The influences of student engagement, institutional mission, and cooperative learning climate on the generic competency development of Korean undergraduate stu-dents. Higher Education, 67(1), 1–18.

Clariana, R., Wagner, D., & Murphy, L. (2000) . Applying a connectionist description of feedback tim-ing. Educational Technology Research and Development, 48(3), 5–21.

Conole, G., De Laat, M., Dillon, T., Darby, J., et al. (2008). 'Disruptive technologies', 'pedagogical innovation': What's new? Findings from an in-depth study of students' use and perception of tech-nology. Computers & Education, 50(2), 511–524.

Davidson, B., Gillies, R. A., Pelletier, A. L., et al. (2015). Introversion and medical student education: Challenges for both students and educators. Teaching and Learning in Medicine, 27(1), 99–104.

Davis, M., & Carroll, J. (2009). Formative feedback within plagiarism education: Is there a role for text-matching software? International Journal for Educational Integrity, 5(2), 58–70.

Ellis, R., Basturkmen, H., Loewen, S., et al. (2001). Learner uptake in communicative ESL lessons. Lan-guage Learning, 51(2), 281–318.

Ellis, R., & Sheen, Y. (2006). Reexamining the role of recasts in second language acquisition. Studies in Second Language Acquisition, 28(4), 575–600.

Falck, M. J., & Gibbs, R. W. (2012). Embodied motivations for metaphorical meanings. Cognitive Lin-guistics, 23(2), 251–272.

Gentner, D., & Asmuth, J. (2017). Metaphoric extension, relational categories, and abstraction. Lan-guage, Cognition and Neuroscience. https://doi.org/10.1080/23273798.2017.1410560.

Gentner, D., & Bowdle, B. (2001). Convention, form, and figurative language processing. Metaphor and Symbol, 16(3–4), 223–247.

Gentner, D., Bowdle, B., Wol , P., Boronat, C., et al. (2001). Metaphor is like analogy. In D. Gentner, K.

J. Holyoak, & B. N. Kokinov (Eds.), The analogical mind: Perspectives from cognitive science (pp.199–253). Cambridge: MIT Press.

Gentner, D., Falkenhainer, B., Skorstand, J., et al. (1988). Viewing metaphor as analogy. In D. H. Hel-man (Ed.), Analogical reasoning: Perspectives of artifcial intelligence, cognitive science, and phi-losophy (pp. 171–177). Dordrecht: Kluwer Academic.

Gentner, D., & Maravilla, F. (2018) . Analogical reasoning. In L. J. Ball & V. A. Thompson (Eds.), Inter-national handbook of thinking & reasoning (pp. 186–203). New York: Psychology Press.

Gentner, D., & Markman, A. B. (1995). Similarity is like analogy: Structural alignment in compari-son. In C. Cacciari (Ed.), Similarity in language, thought and perception (pp. 111–147). Brussels: BREPOLS.

Gernsbacher, M. N., Keysar, B., Robertson, R. R. W., Durgin, N. K. W., et al. (2001) . The role of suppression and enhancement in understanding metaphors. Journal of Memory and Language, 45(3), 433–450.

Gibbs, R. W., Jr. (2017). Metaphor wars: Conceptual metaphors in human life. New York: Cambridge University Press.

Goo, J., & Mackey, A. (2013). The case against the case against recasts. Studies in Second Language Acquisition, 35(1), 127–165.

Gwella. (2011). Enhancing learning and teaching through technology in Wales. Gwella Programme Final Report. https://www.hefcw.ac.uk/documents/policy_areas/learning_and_teaching/GwellaFinalReportPublic.pdf. Accessed Sep 12, 2017.

Hattie, J., & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77(1), 81–112.

Hope, S. A. (2011). Making movies: The next big thing in feedback? Bioscience Education, 18(1), 1–14.

Jamrozik, A., McQuire, M., Cardillo, E. R., Chatterjee, A., et al. (2016). Metaphor: Bridging embodiment to abstraction. Psychonomic Bulletin & Review, 23, 1080–1089.

Jones, J. F. (1999). From silence to talk: Cross-cultural ideas on students' participation in academic group discussion. English for Specifc Purposes, 18(3), 243–259.

Kim, S. J. (2012). Critical literacy in East Asian literacy classrooms. Perspectives on Global Develop-ment and Technology, 11(1), 131–144.

Lai, C. (2013). A framework for developing self-directed technology use for language learning. Lan-guage Learning & Technology, 17(2), 100–122.

Lai, C. (2015). Modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom. Computers & Education, 82, 74–83.

Lako , G. (1990). The invariance hypothesis: Is abstract reason based on image-schemas? Cognitive

Lin-guistics, 1(1), 39–74.

Lavolette, E., Polio, C., Kahng, J., et al. (2015). The accuracy of computer assisted feedback and students' responses to it. Language Learning & Technology, 19(2), 50–68.

Loewen, S., & Philp, J. (2006). Recasts in adults English L2 classrooms: Characteristics, explicitness, and e ectiveness. Modern Language Journal, 90(4), 536–556.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communica-tive classrooms. Studies in Second Language Acquisition, 19(1), 37–66.

Lyster, R., & Ranta, L. (2013). Counterpoint piece: The case for variety in corrective feedback research. Studies in Second Language Acquisition, 35(1), 167–184.

Lyster, R., Saito, K., Sato, M., et al. (2013). Oral corrective feedback in second language classrooms. Lan-guage Teaching, 46(1), 1–40.

Mackey, A., Gass, S., McDonough, K., et al. (2000). How do learners perceive interactional feedback? Stud-ies in Second Language Acquisition, 22(4), 471–497.

Mackey, A., & Philp, J. (1998). Conversational interaction and second language development: Recasts, responses, and red herrings? Modern Language Journal, 82(3), 338–356.

McDonough, K., & Mackey, A. (2006). Responses to recasts: Repetitions, primed production, and linguistic development. Language Learning, 56(4), 693–720.

Ministry of Education Malaysia. (2014). e-Learning guidelines for Malaysian HEIs. W.P. Putrajaya: Higher Education Department. https://www.moe.gov.my/images/Terbitan/Buku-Panduan/e-Learning-Guide lines-for-Malaysian-HEIs/e-Learning%20Guidelines%20for%20Malaysian%20HEIs.pdf Accessed 13 January 2019.

Mohamed, A. E. (2011). e-Learning in Malaysian higher education institutions: Status, trends and chal-lenges. Putrajaya: Ministry of Higher Education. http://www.moe.gov.my/images/Terbitan/Rujukan-Akademik/e-Learning%20in%20Malaysia%20Higher %20Education%20Instituttions%20Status%20Trends%20&%20Challenges.pdf Accessed 12 September 2017.

Nassaji, H. (2011a). Correcting students' written grammatical errors: The e ects of negotiated versus non-negotiated feedback. Studies in Second Language Learning and Teaching, 1(3), 315–334.

Nassaji, H. (2011b). Immediate learner repair and its relationship with learning targeted forms in dyadic interaction. System, 39(1), 17–29.

Nassaji, H. (2016). Interactional feedback in second language teaching and learning: A synthesis and analy-sis of current research. Language Teaching Research, 20(4), 535–562.

Polio, C. (2012). The relevance of second language acquisition theory to the written error correction debate. Journal of Second Language Writing, 21(4), 375–389.

Price, M., Handley, K., Millar, J., & O'Donovan, B. (2010). Feedback: all that e ort, but what is the e ect? Assessment & Evaluation in Higher Education, 35(3), 277–289.

Ramos, I. D. (2014). Communicative activities: Issues on pre, during, and post challenges in South Korea's English education. International Journal of Education Learning and Development, 2(1), 1–16.

Robinson, P. (1996). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. Studies in Second Language Acquisition, 18(1), 27–67.

Rolfe, V. (2011). Can Turnitin be used to provide instant formative feedback? British Journal of Educa-tional Technology, 42, 701–710.

Schmidt, R. W. (1990). The role of consciousness in second language learning. Applied Linguistics, 11(2), 129–158.

Schmidt, R. W. (1993). Awareness and second language acquisition. Annual Review of Applied Linguistics, 13, 206–226.

Schmidt, R. W. (1994). Deconstructing consciousness in search of useful definitions for applied linguis-tics. In J.H. Hulstijn, & R. Schmidt (Eds.), Consciousness and second language learning: Concep-tual, methodological and practical issues in language learning and teaching. Thematic issue of AILA Review—Revue de l'AILA, 11, 11–26.

Schmidt, R. W. (1995). Consciousness and foreign language learning: A tutorial on the role of attention and awareness in learning. In R. Schmidt (Ed.), Attention and awareness in foreign language learning (pp. 1–63). Honolulu: University of Hawai'i Press.

Schmidt, R. W., & Frota, S. (1986). Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R. R. Day (Ed.), Talking to learn: Conversation in second language acquisition (pp. 237–326). Rowley: Newbury House.

Sharpe, R., Benfield, G., Roberts, G., & Francis, R., et al. (2006). The undergraduate experience of blended e-learning: A review of UK literature and practice (pp. 1–103). UK: The Higher Education Academy. https://www.heacademy.ac.uk/system/files/sharpe_benfield_roberts_francis_0.pdf. Accessed Septem-ber 12, 2017.

Shin, H., & Crookes, G. (2005). Exploring the possibilities for EFL critical pedagogy in Korea—A two-part case study. Critical Inquiry in Language Studies: An International Journal, 2(2), 113–138.

Shintani, N., & Ellis, R. (2013). The comparative e ect of direct written corrective feedback and metalin-guistic explanation on learners' explicit and implicit knowledge of the English indefinite article. Jour-nal of Second Language Writing, 22, 286–306.

Stockwell, G. (2012). Computer-assisted language learning: Diversity in research and practice. Cambridge: Cambridge University Press.

Tour, E. (2015). Digital mindsets: Teachers' technology use in personal life and teaching. Language

Learn-ing & Technology, 19(3), 124–139.

Tourangeau, R., & Sternberg, R. J. (1982). Understanding and appreciating metaphors. Cognition, 11(3), 203–244.

Truscott, J. (2007). The e ect of error correction on learners' ability to write accurately. Journal of Second Language Writing, 16(4), 255–272.

Vásquez, C., & Harvey, J. (2010). Raising teachers' awareness about corrective feedback through research replication. Language Teaching Research, 14(4), 421–443.

Yang, Y. F., & Meng, W. T. (2013). The e ects of online feedback training on students' text revision. Lan-guage Learning & Technology, 17(2), 220–238.

Yilmaz, Y. (2012). The relative e ects of explicit correction and recasts on two target structures via two communication modes. Language Learning, 62(4), 1134–1169.

Yoon, H., & Jo, J. W. (2014). Direct and indirect access to corpora: An exploratory case study comparing students' error correction and learning strategy use in L2 writing. Language Learning & Technology, 18(1), 96–117.

Zhou, Y. R., Knoke, D., Sakamoto, I., et al. (2005). Rethinking silence in the classroom: Chinese students' experiences of sharing indigenous knowledge. International Journal of Inclusive Education, 9(3), 287–311.

Zlatovic, M., Balaban, I., Kermek, D., et al. (2015). Using online assessments to stimulate learning strate-gies and achievement of learning goals. Computers & Education, 91, 32–45.

Zou, B., Xing, M., Wang, Y. P., Sun, M., Xiang, C. H., et al. (Eds.). (2013). Computer-assisted foreign language teaching and learning: Technological advances. Hershey: IGI Global Information Science Reference.