Chapter 8
Dynamic Assessment of Academic Writing and Its Future in Higher Education

8.1 Introduction

Research on academic writing assessment has constantly revealed that students in higher education have not been satisfied with the assessment feedback and support they receive for a number of reasons. Equally, student engagement with assessment and formative feedback has been limited (Dawson et al., 2019; Lea & Street, 1998; Yang & Carless, 2013) and thus designing engaging academic writing assessment and formative feedback has gained more attention recently. As an academic literacy practitioner and researcher, the issue of student engagement with assessment and formative feedback has been central to my work, particularly because of the nature of the student population in The Open University (i.e., distance education, employed, non-traditional educational backgrounds and open entry). The research I discussed in this book addresses the issue in distance education context. This research was underpinned by the Vygotskian sociocultural theory of learning and Systemic Functional Linguistics (SFL). Following multiple methods including action research, the study explored the process of dynamic assessment (DA) by examining the students’ trajectory of academic writing and conceptual development.

In this concluding chapter, first, I present a summary of the key findings. Then, I describe the implications of my research on DA of academic writing for practitioners, especially those teaching academic writing and researchers in the field of academic writing assessment. I conclude this book by considering the most recent and potential developments in DA and their implications for the future of academic writing assessment research and pedagogy.
8.2 Why Dynamic Assessment for Academic Writing Assessment?

In this section, I highlight the importance of DA in academic writing assessment in higher education in a distance education context as revealed by my research. This study focussed on six undergraduate business studies students at The Open University UK over a period of six to ten months, exploring the application of interactionist DA to academic writing assessment. The focus of the study was the Vygotskian notion of microgenesis (i.e., development over a short span of time) in relation to the students’ academic writing. To examine their development, I considered their changing zones of proximal development (ZPDs) in both their independent and mediated performance. The students’ academic writing was examined in relation to their Textual (i.e., organisation of message) and Ideational (i.e., disciplinary and genre knowledge development) meanings as evidenced through their written assessment texts. The overarching research question that guided this study was the extent to which DA procedures enhance learners’ academic writing development and conceptual development in business studies.

Four of the six students participated in DA and the other two students took part in non-DA. This study had three main stages: DA1 or non-DA1, intervention (enrichment study materials) and DA2 or non-DA2 (see Chap. 4). Additionally, four of the six students (3 DA and 1 non-DA) completed a transfer assessment task (i.e., a third assessment task that was similar to but more challenging than the first two). While the DA students received semiotic mediation via emails and instant messaging during the assessment, the non-DA students were provided with one-off traditional teacher feedback on each of their assignments without much interaction.

First and foremost, the analysis of student-tutor interactions around assessment texts provides insights into the DA students’ ZPDs (i.e., their potential writing abilities) as reported in Chap. 5, thus demonstrating DA’s potential to provide academic writing teachers with an in-depth understanding of their students’ maturing writing abilities. The qualitative analysis of the mediational strategies suggests that the students benefited from support ranging from implicit mediation such as Showing affect and Asking learner to identify the problem to explicit mediation such as Providing a choice of possible solution(s) and Providing the correct solution, hence, supporting the findings of other DA studies such as Ebadi and Rahimi (2019), Poehner (2005) and Ableeva (2010). The qualitative results for the learner reciprocal moves indicate that the learners became more independent in their second assessment (DA2) than the first one (DA1). This may have been a result of the semiotic mediation they received in DA1. The quantitative analysis shows that there was a lower frequency of the more explicit mediational moves in DA2 than in DA1, thereby suggesting the learners’ increasing control (i.e., self-regulation) of academic writing. Likewise, the results for the learner reciprocal moves show that the learners made more independent moves such as Verbalising conceptual understanding and Overcoming problems in the second assessment than in the first one, an indication of the learner taking more responsibility for their learning.
The analysis also shows, however, that there is not only progression but also regression or no progress during learners’ academic writing development. From the Vygotskian perspective (Vygotsky, 1978) on development, such ‘twists and turns’ in academic writing development are not surprising as development can be both evolutionary and revolutionary. In sum, the results show that through semiotic mediation following DA principles, it is possible to gain insights into learners’ maturing academic writing abilities and nurture them further to help the learners internalise them. It also indicates that this process takes a long time and requires sustained motivation from both the teacher and the learner to take advantage of semiotic mediation offered during the DA procedures.

Secondly and more importantly, my research shows that a systematic textual/linguistic analysis of the students’ assessment texts serves as a powerful tool for tracking their academic writing and conceptual development. This is necessary to provide further evidence of the students’ changing academic writing abilities (ZPDs) and the impact of tutor mediation on their academic writing because the teacher mediation data provides only a partial picture of academic writing development. This was achieved in my research by deploying a well-established theory of language use, namely SFL, as an analytical tool for analysing the students’ assessment texts and by so doing provided linguistic evidence for the students’ changing ZPDs and the impact of teacher mediation on academic writing development. This aspect of my research is in line with previous SFL-based research on academic writing. SFL has been used extensively and usefully in teaching academic writing in higher education and researching its various aspects including genre types (e.g., Nesi & Gardner, 2012) and subject knowledge (e.g., Woodward-Kron, 2008) but not in DA research.

The findings of the SFL-based textual analysis suggest that the DA students made gains both in their control of a case study analysis genre and in their control of business studies concepts. These gains were related to those features of the case study analysis genre which were not successfully realised in the first student assessment text as identified in their unassisted performance (first draft). The students’ academic writing development was tracked by examining the development of Textual and Ideational meanings in their assessment texts. The foci of the Textual meaning were on generic structure, macroThemes (traditionally called introduction) and hyper-Themes (also commonly known as topic sentence) in the assessment texts. The analysis of Ideational meaning was mainly concerned with the application of business concepts and frameworks (e.g., STEP and SWOT) as required by the assessment tasks. Additionally, a conceptual understanding of the case study analysis genre as revealed in the assignments was also considered as evidence of conceptual development. Three of the four DA students made steady progress regarding generic stages, macroThemes, hyperThemes and the application of the relevant business concepts and frameworks to their case study analysis texts. The non-DA students’ progress over the two assignments, however, was either inconsistent or minimal. Therefore, it can possibly be argued that the DA procedures enhanced the DA students’ maturing academic writing abilities as such procedures may have been sensitive enough to help the learners internalise them. In contrast, the non-DA students’ academic writing abilities remained either the same or regressed which may be due to the lack of semiotic
mediation that could target their ZPDs. It is, of course, difficult to draw any firm conclusions given the scale of the study.

Finally, this study investigated the extent of transfer of academic writing skills and conceptual knowledge from one writing assessment task to another. The twin transfer of academic writing skills and conceptual knowledge gained in the first and the second assignments were examined by using the notions of ‘near transfer’ and ‘far transfer’ (Feuerstein et al., 2002). The analysis focussed on the same features of a case study analysis genre and aspects of conceptual development as noted in the previous paragraph to consider their transfer to the transfer assessment text. The findings indicate that the transfer of learning (i.e., the use of generic stages, macroThemes, hyperThemes and the application of business concepts and frameworks) from the previous assessment tasks to the new ones occurred, though differently for each of the four learners. However, there was a contrast between the DA and the non-DA learners. For example, the non-DA student not only transferred her ability to write an effective macroTheme but also developed her ability further to produce successful hyperThemes and application of business frameworks in her transfer assessment text. The DA students sustained their ability to write effective macroThemes and hyperThemes in their transfer assessment texts although, except for one student, they did not show the same level of transfer regarding their conceptual/disciplinary knowledge. The reason for not being able to transfer conceptual knowledge might have been due to the more complicated application of multiple business concepts and frameworks within one case study analysis in the transfer assessment task when compared with the previous two assessments (i.e., DA1 and DA2).

8.3 Implications for Academic Writing Practitioners

This research on DA has a number of implications for academic writing practitioners in higher education. As mentioned throughout the book, the current study employed an innovative approach to assessing students’ academic writing in business studies in distance education. Therefore, the findings from the study may provide academic writing practitioners with insights into how such an approach could be used to support their own learners’ academic writing and conceptual development.

8.3.1 Implicit to Explicit Mediation

A key aspect of this research was the use of implicit to explicit mediation to understand and assess business studies students’ academic writing abilities. The study identified a set of teacher mediational moves which appeared to have worked effectively in enhancing participants’ academic writing (see Table 8.1 reproduced from Chap. 5). Although these moves were identified in the context of this particular study, they can be applied to other learning contexts. For example, there were three mediational
Table 8.1  Mediational moves in dynamic assessment of academic writing

| Implicit (i.e., hints, prompts, etc.) | Explicit (e.g., examples, corrections, etc.) |
|--------------------------------------|---------------------------------------------|
| 1. Clarifying the task               | 9. Checking conceptual understanding         |
| 2. Accepting a response              | 10. Providing metalinguistic clues            |
| 3. Showing affect                    | 11. Providing content clues                  |
| 4. Asking learner to identify the problem | 12. Rejecting the response with explanation(s) |
| 5. Locating part of the text needing improvement | 13. Explaining the problem |
| 6. Asking to clarify meaning         | 14. Exemplifying or illustrating             |
| 7. Identifying the problem in the text | 15. Providing a choice of possible solution(s) |
| 8. Asking to consider a possible solution | 16. Providing the correct solution           |

moves that were frequently used in this study: Locating part of the text needing improvement, Asking to consider a possible solution and Providing metalinguistic clues. Alongside other effective teaching techniques, an academic writing teacher could employ these moves in their academic writing instruction and assessment. In fact, the mediational moves have been adapted to teaching academic writing and its assessment in a summer English for Academic Purposes programme at The University of Sheffield (Chris Smith, personal communication). The colleagues at The University of Sheffield use a mixture of online synchronous and asynchronous communication (Google docs) and a follow-up face-to-face interaction to discuss challenges faced by students in their written assignments. As I understand, this type of mediation (implicit to explicit mediation) seemed to be popular with students and help with student progression into higher level studies.

Additionally, these mediational moves found in this study also suggest that rather than focusing only on students’ sentence grammar (e.g., explicit corrections), the teacher could concentrate on higher level features of a text including the use of conceptual frameworks to frame text and so support students in developing their disciplinary writing (such as business studies as exemplified in this book). In fact, these mediational moves could be applied by any teacher in other disciplines outside academic writing such as a social care lecturer when they mark their written assignments across a course.

8.3.2  Dialogic Feedback

Related to implicit-to-explicit mediation is dialogic feedback which is a central feature of DA and this study. Vygotsky and Vygotskian researchers have long argued
that dialogue plays the fundamental role in mediation to enable learning and development (e.g., Wells, 1999). It has also emerged as a key aspect of assessment feedback in higher education (Ajjawi & Boud, 2018; Carless & Boud, 2018). My research on DA of academic writing further supports this and has implications for academic writing and other subject teachers. The DA procedure has the power to diagnose difficulties faced by students by identifying their zone of proximal development and help them overcome such difficulties through a dialogic process. Due to the nature of flexible semiotic mediation followed in this study, it was possible to diagnose different levels of the same problem. For example, Amina and Lou had similar problems regarding the use of hyperThemes in their DA1 draft 1. However, through semiotic mediation it became clear that Amina needed more support in her ability to handle hyperThemes than Lou did as shown by their second unassisted performance.

As an application of the dialogic feedback as revealed by my research, a first year course on business communication for business and management students has adapted it at The Open University. This course has four assignments in the course of eight months (one academic year). The first and the second assignments require students to read the same case study. They are asked to produce notes of key points based on their reading of the case study in the first assignment. Their teachers provide formative feedback and a score on this assignment. In the second assignment, students are required to write a SWOT case study analysis based on the same case study and use their notes for this assignment. They are also asked to apply their teacher’s feedback on the first assignment to their writing in the second assignment. The teachers then provide feedback on the second assignment, commenting on the uptake of the feedback and awarding a score. The third assignment encourages students during a ‘formative assessment week’ to write a draft of their assignment and email it to their teacher for formative feedback before they submit the final version for summative assessment. The teacher provides high level formative feedback (not too specific and detailed so as not to jeopardise summative assessment) on the draft. The same approach is taken for the fourth assignment. Although this approach is not DA, it follows a dialogic process to support students with academic writing development. The anecdotal evidence from teachers and the end of course evaluation survey results suggest that students have found this approach beneficial for their academic writing although there is a need for further research on the success of this approach. Due to the significantly high number of students on this course (over 1,400 per year), the more flexible version of DA is practically unimaginable but an adapted version like the one described here was possible. Academic writing teachers in other universities could adapt this approach to their academic writing assessment design.

8.3.3 Interpersonal Relationship with Learners

Another finding that has a pedagogical implication for academic writing teachers and other discipline teachers is the importance of the interpersonal relationship (i.e.,
8.3 Implications for Academic Writing Practitioners

affect) between the learner and the teacher which is also identified in the literature, and thus corroborating previous studies (e.g., Dawson et al., 2019; Hyland & Hyland, 2006c; Pitt & Norton, 2017). All DA participants stated that the interaction with the teacher was comfortable and relaxing. For example, during the interview, Michelle said, ‘… It was a lot more comforting for me to do the assignment [i.e., DA]. Before [i.e., traditional assessment] it was a bit stressful…’ Likewise, the mediation data included Showing affect as one of the teacher moves. These may have a positive effect on learning and learner motivation (cf. Carless, 2006). In fact, affect has long been recognised in Vygotskian sociocultural theory of learning (e.g., Daniels, 2007) and in Feuerstein’s Mediated Learning Experience as noted in Chap. 2 (Feuerstein et al., 2002). The current study suggests that the academic writing teacher and other subject teachers need to carefully use their language and any semiotic tools used (and body language in face-to-face interaction for that matter) when they interact with their learners around their academic writing performance. Such an approach is likely to help students feel emotionally supported, thus enhancing the possibility of the uptake of the formative feedback as noted by Pitt and Norton (2017).

8.4 Implications for Academic Writing Researchers

The research I have discussed in this book has importance for educational researchers as well, especially those following Vygotskian sociocultural theory. In particular, it has implications for academic writing assessment research, sociocultural theory based writing research, and DA-based writing research.

This study contributes to the growing body of sociocultural theory oriented writing research and, by the same token, genre studies in relation to student learning. In sociocultural theory, writing is seen as a social activity. This means writing is always situated in a cultural context and often collaboratively constructed through direct or indirect semiotic mediation (see, for example, Bazerman, 2013; Hasan, 1992; Prior, 2008, p. 58). This study explored academic writing situated in a discipline (i.e., business studies) ‘housed’ in an institutional context (i.e., The OU). As sociocultural theory oriented writing research, the study supports previous studies that academic writing development benefits from semiotic mediation (e.g., Coffin & Donohue, 2014; Mahboob, Dreyfus, Humphrey, & Martin, 2010; Wegner, 2004).

The most significant contribution of this study is the use of SFL as a theory of language use to analyse data which provided evidence of students’ ZPDs and the impact of teacher mediation on academic writing development over time. This is new to ZPD research and DA-based research, a response to Gardner’s (2010) call for combining DA with SFL to track students’ writing development. Despite quite a large number of DA studies within second language learning, to my knowledge, no studies have deployed SFL to analyse students’ linguistic development. My research shows the value of this powerful tool without which it might have been challenging to gain insights into the participating students’ emerging academic writing repertoire in business studies. Given that SFL is a well-established theory of language use which
is widely used in educational research, DA or sociocultural theory oriented writing researchers should keep an open mind towards the use of SFL for data analysis in their research. It is particularly so in the field of English for academic purposes including academic writing due to the influence that SFL has on it as shown by the recent special issue of *Journal of English for Academic Purposes* edited by Gardner and Donohue (2020).

DA-based research on (academic) writing has not, to date, been reported in the literature extensively apart from a few such as Antón (2009) which, however, lacks details of the DA procedures for writing assessment and my own research (Shrestha & Coffin, 2012) which reports only on the mediation process. Two later studies (i.e., Alavi & Taghzideh, 2014; Ebadi & Rahimi, 2019) have some similarities with the current study but they were conducted in a face-to-face foreign language teaching and test preparation context. My research has shown that it is possible to apply DA principles to academic writing assessment in a discipline (i.e., business studies). Additionally, it has demonstrated that DA procedures can be implemented in a distance education context. In particular, this study has extended previous DA studies such as Poehner (2005) by identifying mediational strategies for academic writing which did not seem to exist in the DA literature prior to my own publication (Shrestha & Coffin, 2012) based on some of the data used in this book, and using independent subject tutors’ comments as complementary data. DA researchers can draw on both the mediation moves and reciprocal moves when they examine their mediation data.

The research methodology used in this study can be of direct relevance to those who are involved in academic writing assessment research. Of particular importance is the combination of the two theoretical frameworks, namely, DA and SFL which allowed the researcher to examine not only the product but also the process. Given the predominance of product-oriented research on academic writing assessment, this study provides an alternative way of investigating the process of academic writing assessment.

### 8.5 Challenges in Conducting Dynamic Assessment

In this section, before discussing the future of DA of academic writing, I would like to discuss some of the potential issues future DA practitioners and researchers in the field of academic writing may need to be aware of. In the last three chapters of this book, I have argued that the findings indicate the potential power of DA. There are, nevertheless, a number of considerations to bear in mind when implementing DA in academic writing assessment.
8.5 Challenges in Conducting Dynamic Assessment

8.5.1 Expertise of the DA Practitioner

DA has its origin in Vygotsky’s sociocultural theory of mind. Likewise, the success of conducting DA depends on the quality of mediation which in turn relies on the DA practitioner in addition to the learner reciprocity. For example, an inexperienced DA practitioner may find it challenging to diagnose, identify and work with students’ ZPDs regarding their academic writing (e.g., see Davin, Herazo, & Sagre, 2016; Haywood & Lidz, 2007).

Working in the learner’s ZPD is a challenging task. In particular, DA following a flexible approach heavily relies on the mediation skill of the teacher/mediator (Haywood & Lidz, 2007). This means that a wrong judgment made by the teacher can have a negative impact on the learner’s development. Some previous DA studies have noted instances of improper mediation, leading to undermining learners’ opportunities to develop (e.g., Ableeva, 2010; Poehner, 2005). In the current study, the analysis of the tutor mediation data shows that I may have focussed on aspects of academic writing that were potentially not significant for the learner’s academic writing development. Therefore, it is essential for the DA practitioner to constantly reflect on the mediation process and its sensitivity towards the learner ZPDs.

8.5.2 Time Constraints

Time commitment is essential for the success of DA. It is even more crucial in the distance education context because most students have only a limited amount of time for study due to their full-time jobs and other personal commitments as explained in Chap. 1 (Chetwynd & Dobbyn, 2011). This means carefully planning how frequently it is necessary to interact with the learner between written drafts or assignments. In a face-to-face context, it may be possible to hold an oral (synchronous) discussion with the learner around their written text because there is a physical campus (though the pandemic such as COVID-19 can change this drastically) and the student-teacher interaction is normally spoken as several previous studies have shown. In distance education, however, synchronous communication whether written text-based or spoken (e.g., online conferencing) may not be practically possible because the time availability of both the teacher and the student may be different. In that case, finding a suitable time in sufficient amount becomes extremely challenging as shown by my research. This challenge may be encountered even in a face-to-face context as reported by some recent studies in non-DA contexts in higher education (e.g., Henderson, Ryan, & Phillips, 2019). One way to address this issue is by using asynchronous text-based communication methods such as emails and online forums which can, nevertheless, be a lengthy process, depending on how soon both the teacher and the student respond.
8.5.3 **Difficulty on Large-Scale**

Despite being valuable, implementing a DA approach on a large scale has practical constraints due to the time needed and the intensive nature of the one-on-one dialogue. As previous studies and my own research show, most of these studies were on a small scale. To follow a flexible mediation approach of DA with hundreds of students in a study programme may be almost impossible unless a less flexible approach (i.e., interventionist DA) such as that adopted in Poehner, Zhang, and Lu (2014) is employed. In the context of distance education which tends to have a large number of students within a study programme (e.g., over 500), using a flexible DA approach like the one discussed in this book may be immensely challenging. The same may apply to traditional classrooms where there are many students. It is, however, possible to adapt this approach by making it less burdensome for both the teacher and their students. The teacher could make their feedback interactive and dialogic by making links between the current assignment and the feedback on the previous assignment(s) and asking students to respond how they want the feedback in each future assignment. Alternatively, an online forum discussion could be run inviting groups of students to discuss how the formative feedback has helped or hindered their academic writing development. This helps to make the feedback dialogue continuous and sustainable.

8.5.4 **Choice of Semiotic Mediation Tools**

In this study, a range of semiotic mediation tools were deployed during the mediation process. They were all text-based (i.e., written). However, each tool had its own benefits and challenges. For example, the email communication tended to be quite limited to the teacher providing formative feedback and the students responding to the feedback via their revised written drafts. For some students this tool worked well. For others, a synchronous communication mode for mediation (e.g., instant messaging) served them better as they felt the need of immediacy for the interaction. For an academic writing teacher with a large number of students, it may not be possible to use many semiotic mediation tools and may need to limit to, for example, online forum discussion or simply a face-to-face one-on-one dialogue if the time allows. My own research suggested that, if possible, it is helpful to have a range of options for the mediation purpose, depending on student preferences and the practical constraints of the learning context.

8.5.5 **Labour-Intensiveness**

The great amount of time needed for applying DA to academic writing assessment has already been mentioned. Additionally, the DA process involves carefully identifying
the student’s emerging academic writing abilities (ZPDs) and providing ‘implicit to explicit’ mediation. This means the teacher has to spend a good amount of time going through what the student has been able to do and what they are yet to develop in their academic writing. Then, they need to craft their response which is sensitive enough to the student’s ZPD. This process is lengthy and thus labour-intensive. Given that resources are always limited in higher education (Henderson et al., 2019; Tuck, 2018), finding time for such a lengthy and labour-intensive DA process may face institutional constraints despite the power of DA to support learners with what they need.

8.6 Future Directions for Dynamic Assessment of Academic Writing

Future studies in this area can take a number of directions. First and foremost, more DA studies need to be conducted in academic writing and distance education. Despite the introduction of DA to applied linguistics in 2004 by Lantolf and Poehner (2004), only a handful of studies in writing assessment and too few in distance education exist. There are some specific directions that future studies within academic writing could pursue, which are briefly outlined below to conclude the book.

8.6.1 Group DA

The majority of DA studies have focussed on individual learners (Lantolf & Poehner, 2011; Poehner, 2009). Only recently has there been some interest in group DA (GDA) in which the focus of mediation is not limited to an individual learner but to a group of learners or even the whole class (Poehner, 2009). The lack of research in GDA may not be surprising given the individualised nature of mediation offered in DA approaches by targeting a particular learner’s ZPD. Conducting GDA requires much more carefully planned procedures for making semiotic mediation sensitive to group ZPDs which may be much more complicated and challenging than working in one individual learner’s ZPD. Therefore, there have been only a few studies on GDA reported in the literature. The earliest example appears to be one by Haywood and Lidz (2007, pp. 224–225) who mention an example from their work with the US Army. They also propose a number of GDA principles to be followed while conducting GDA. These principles include things like homogenous groups (i.e., people with the same level of ability), and standardised mediation. However, these principles have not yet been applied to educational contexts and every learner tends to have different needs although they may have similar ‘actual’ ability to others’. A recent study by Bakhoda and Shabani (2019) shows that it is possible to conduct GDA for reading comprehension in a foreign language learning context by using
computerised implicit to explicit mediation which is standardised as in Poehner et al. (2014). However, research examining group ZPD in academic writing following a GDA approach has not been conducted yet and thus merits further research although this will be more complex and requires more careful planning than in the reading comprehension context.

8.6.2 Computer-Based DA

The current study was conducted in a computer-mediated environment whereby almost all interactions (e.g., emails) took place through computers (see Chap. 4 and Shrestha & Coffin, 2012). However, the potential of using computers as an automated mediating tool was not a focus of the investigation. This area of DA research, known as computer-based DA (C-BDA), is quite new (e.g., Guthke & Beckmann, 2000; Tzuriel & Shamir, 2002). Tzuriel and his colleagues have, for instance, explored the potential application of computers for assisting mediation in DA (e.g., Shamir, Tzuriel, & Guy, 2007; Tzuriel & Shamir, 2002). Mostly they have worked with primary school children, investigating changes in their cognitive ability. In their C-BDA approach, both computers (programmed with DA procedures) and a human mediator work together so as to maximally attune mediation to individual needs.

Guthke and Beckmann (2000) report that they adapted their Leipzig Lerntest for a computerised version (i.e., automated). It provides standardised five-level assistance (i.e., mediation) to the learner. Questions are sequenced in the order of difficulty and they are provided according to the learner response. Unlike Tzuriel and Shamir’s, this C-BDA does not include a human mediator. The programme generates both the score and the learner profile for each learner regarding the number of attempts a learner makes at responding to a task and the amount of assistance they need to complete it.

More recently, a few studies have been reported in this area. These studies were, however, in a foreign language learning context rather than in academic writing in a discipline. Two of these studies are worth mentioning. First, Poehner et al. (2014) carried out a study examining the mediation effect of computerised (automated) Chinese as a foreign language reading and listening tests on a group of students (82 and 68 respectively) to diagnose their language development. Implicit to explicit prompts were provided for each multiple-choice test item which the automated computer programme used according to the accuracy of the student response to the test item. The authors argue that this type of DA helps to diagnose learners’ language abilities on a large scale and also offers information required to design subsequent curriculum. Following the same approach, a second study (Bakhoda & Shabani, 2019) reports that C-BDA of reading comprehension helped the teacher to identify group ZPDs and expand them by using implicit to explicit electronic mediation via computers in a classroom context.

Given the potential contribution of DA to academic writing development, C-BDA may be a useful direction for future research. In particular, it can be used to diagnose potential areas for students to develop in academic writing at the beginning of a
study programme. However, assessing disciplinary writing and learning is much more complex and different than other contexts such as foreign language learning because the former is conceptually very challenging, and therefore, C-BDA, without a human mediator, may not be able to respond to learners’ ZPDs effectively. For this reason, a considerable amount of planning and piloting may be needed initially which Poehner et al. (2014) have also acknowledged.

8.6.3 Online Synchronous Communication for Mediation

As explained above, computers have the potential for DA. More importantly, technological tools mediated by computers seem to play an important role in different ways for different learners as observed in my research although the focus was not on the investigation of the affordances of technological tools. For example, one of the participants (Amina) was offered mediation through synchronous communication (i.e., instant messaging) which she really liked. However, due to her personal circumstances, she could not participate in the same way in DA2 as she did in DA1. This was possibly the reason why she did not do as well on DA2 as she did on DA1. As only one participant interacted through a synchronous communication tool which was in DA1 only, this study had very limited data as to how mediation could be provided via synchronous communication such as instant messaging.

A useful future direction for this research could be investigating how DA principles work via synchronous online communication tools compared to the asynchronous medium such as emails and forums. There is only one study in this area reported in the literature (i.e., Oskoz, 2005). Oskoz’s study was on adult Spanish learners’ language development in a synchronous computer-mediated environment. To date, there has been no study of academic writing in such a context and thus investigation is needed to add to our understanding regarding the application of semiotic mediation via synchronous computer-mediated communication. This has become even more important because increasingly learners use smartphones and tablets for communication and study whether in distance education or face-to-face universities which are also forced to use online platforms to teach in a pandemic such as COVID-19. Although a significant amount of research has been conducted in other areas of language learning by using tools such as WhatsApp (e.g., Andujar, 2016 investigating grammatical, lexical and mechanical accuracy of second language learners), and Skype (e.g., Terhune, 2016 examining oral communication), there is little research on the use of online synchronous communication tools like WhastApp in academic writing assessment and mediation within DA. Future research could explore not only affordances of online synchronous communication tools for mediation but also what effects they would have on students’ academic writing development.
8.6.4 Interpersonal Aspects of Mediation and Dialogic Feedback

The interpersonal relationship between the mediator/teacher and the learner was an aspect of the findings in my research. However, it has not received a detailed treatment in this book because it is an area that deserves an extended discussion and further evidencing due to its high pedagogical importance. Indeed, in most recent studies on assessment feedback in higher education, aspects of interpersonal relationships including affect and students’ emotional experiences caused by assessment feedback have been suggested as areas for further research because there is extremely limited research in these areas which has only recently emerged (e.g., see Ajjawi & Boud, 2018; Carless & Boud, 2018; Dawson et al., 2019; Evans, 2013; Henderson et al., 2019). Within the DA literature, despite its importance in mediation and the dialectical nature of thinking/cognition and emotion as accepted in Vygotskian sociocultural theory of learning (Poehner & Swain, 2016), there is almost no research conducted on learner emotions and their impact on mediation and the ZPD activity and thus research in this area is in dire need (Poehner, 2018, pp. 262–263).

The research on various aspects of interpersonal relationships between the mediator/teacher and the learner during the mediation and feedback dialogue can also benefit from examining the use of language and other semiotic tools in them from a Systemic Functional Linguistic perspective by focusing on the Interpersonal dimension. For example, the Appraisal framework developed by Martin and White (2005) could be deployed to examine the evaluative language used by the mediator during the interaction. This framework allows us to examine mediator-learner attitudes, feelings involved (affect) and values attached to different things/sources during the mediation and the ZPD activity. This SFL perspective will certainly enable us to understand the Interpersonal dimension of mediation and dialogic feedback better in DA research.

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