

Using Dynamic Assessment of Writing to Promote Technology-Enhanced Learning in Higher Education

Assoc. Prof. Eleni Meletiadou

London Metropolitan University, UK

Abstract

Responding to students' request for the use of digitally-enhanced formative assessment practices, this project used a dynamic assessment approach that has been developed within the Vygotskian sociocultural theory of learning. It aimed to: (a) develop students' professional skills, i.e., digital skills, in blended learning by promoting experiential learning, (b) improve students' writing performance and favourable attitudes towards learning, and (c) support their well-being in HEI especially in the post-Covid-19 era. Fifty final year students participated in this project as part of their module. Adopting a process approach to writing, the lecturer/researcher used three rounds of mediation. This project aimed to foster inclusion of the increasingly diverse student cohorts due to globalisation, develop students' digital, academic, and professional skills and innovate in tertiary education.

1. Introduction

Responding to students' request for the use of formative assessment practices which would involve them more actively in their own learning process and allow them to develop their academic skills, the current project used a dynamic assessment approach (DA) that has been developed within the Vygotskian sociocultural theory of learning (Vygotsky, 1978).

This project explored the value of peer mediation in the context of academic writing skills' development among undergraduate Management students in blended learning. Previous implementations of this approach in other settings I have conducted indicated that its use can include students as partners, develop their professional skills by promoting experiential learning, i.e., collaboration, improve students' writing performance and favourable attitudes

towards learning and support their well-being in HEI especially in the post-Covid-19 era (El Said, 2021).

2. Literature review

In Higher Education (HE), first year students, especially international multilingual and non-traditional students, often find it difficult to acquire disciplinary knowledge as students need to understand and use different concepts and theories from written texts in their assignments and meet differing criteria for academic excellence (Becher, 1994). Helping these students to increase their academic achievements is a major problem nowadays in HE institutions in the UK (Ivanic & Lea, 2006).

In terms of this project, a ground-breaking method, DA, was used. DA is an “approach to understanding individual differences and their implications for instruction. . . [that] embeds intervention within the assessment procedure” (Lidz & Gindis, 2003, p. 99). In DA, student skills are transformed through dialogic cooperation between the learner and the lecturer (Poehner, 2007) but also between the learner and another learner/assessor. In this intervention we combined tutor with peer mediation which refers to digital and/or text-based interaction about the assignment text between the tutor and the learner but also between learners. DA was used as a kind of alternative formative assessment geared towards learning and writing enhancement based on assessment at different times and by different assessors (lecturer and students) during a module of study (Huot, 2002). Therefore, its main aim was to support students during the different phases of process writing and help lecturers make any necessary adjustments and/or provide remedial teaching to cater for all students’ needs, tastes, and skills aiming to ‘provide feedback on performance to improve and accelerate learning’ (Sadler, 1998, p. 77).

However, despite the recognition of the value of formative assessment of writing skills in HE (Walker, 2009), the use of alternative formative writing assessment which fosters enhanced student learning is under-researched. Previous research which has explored the impact of lecturers’ feedback on students’ written assignments (Walker, 2009) revealed that lecturers’ feedback referred either to micro-level aspects of writing i.e., grammar (Stern & Solomon, 2006) or were not taken into consideration when students were asked to revise their work

(Walker, 2009). These findings indicate that lecturers should experiment with other forms of feedback possibly integrating lecturers with students' feedback to offer more feedback and engage students more actively in their own learning process increasing their engagement and overall academic performance.

This intervention study aspired to make a contribution to this area of research by exploring how DA may offer an innovative framework to support management students' academic writing performance by offering developmental feedback combining lecturers and students' comments in a unique way.

DA is based on Vygotsky's Sociocultural Theory (SCT) of Mind (1978) according to which human cognition and learning is regarded as a social and cultural – rather than a personal – process. In particular, the Vygotskian notion of the Zone of Proximal Development (ZPD) and mediation is closely related to DA. According to Vygotsky (1978, p. 86), the notion of ZPD refers to “the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers”. DA is based on process writing not focusing on the final product and enabling students to improve their performance by receiving feedback from their peers and their lecturer asking them to take small steps every time they are asked to revise their work thus developing their reflective skills. DA allows students to detect their weaknesses so that they can overcome their challenges receiving support from their peers and their lecturer until they realize their potential.

In this project, the researcher combines ideas from ZPD which is about the individual student's potential development and mediation which offers one or more chances for further development. The term mediation refers to a process that human beings use to regulate the material world, others' or their own social and mental activity by employing 'culturally constructed artifacts, concepts and activities' (Lantolf & Thorne, 2006, p. 79). Therefore, taking into consideration the Vygotskian SCT point of view, any human task (i.e., higher mental operation) is mediated by objects (e.g., laptops), psychological tools (e.g., text) or another human being (e.g., lecturer, peers) (Wertsch, 2007). In this project, mediation refers to the deliberate and reciprocal interaction between a lecturer/student (and/or written texts/digital texts) and the learner in relation to the challenges students face and the

developmental support provided by their peers and lecturers, taking into consideration their ZPDs. Therefore, mediation in terms of assessment enables the lecturer to work on a given assessment task more closely with the student and also allow other students to exchange ideas and solutions to problems they face in terms of academic writing, thereby enabling the lecturer to move them to the next level of their ZPDs with the help of their peers who may be able to more readily detect some of the challenges they face and provide valuable advice using language they understand better.

The literature indicates that very few studies -mainly in the USA- have explored the impact of mediation on student learning mainly in a face-to-face context exploring its influence on students' speaking and listening skills in a modern foreign language (e.g., Ableeva & Lantolf, 2011; Antón, 2009; Poehner, 2005). The current study tried to address this gap in the literature.

3. Method

Fifty first-year Management students were asked to participate in this project as part of their module. They were taught various management theories and were then asked to prepare and submit their draft written assignment. The aim was to help students improve their work by raising their self-awareness, scaffolding, and responding to their individual needs (Poehner, 2018). Since students have been complaining about their inability to improve their writing performance and their low motivation to engage in writing, the researcher decided to adopt a process approach to writing which involved three rounds of mediation.

- Round 1 (implicit) consisted solely of a scored and highlighted rubric, not identifying the location or nature of the erroneous parts and were provided by randomly chosen peers) via Padlet to ensure anonymity and allow students to experiment with digital platforms. All students worked in groups of 5 students and used an iPad at this first stage of the intervention. The researcher supervised the whole procedure and made amendments if necessary. She offered training and continuous support to students involved in the project.
- Round 2 (relatively explicit) consisted of narrative explanations of problems provided at the end of each participant's report provided by peers and the lecturer via Padlet. Students again worked in groups of five and used an iPad to offer their feedback. The lecturer supervised the whole procedure closely and intervened only when necessary.

- Round 3 (most explicit) consisted of comment bubbles/specific comments that showed each student the location of the most significant problems, explain the issues, and include recommendations for repair. The tutor provided this form of feedback.

Students provided anonymous feedback via Mentimeter twice during the implementation to explore their perceptions of the benefits and challenges related to this intervention. Students were also asked to write a short report before the implementation. The researcher compared students' marks in the pre-test and post-test reports (final assignments). Descriptive statistics were used for the analysis of quantitative data and thematic analysis was used for the analysis of the qualitative data.

The aim of this project was to explore the impact of DA on undergraduate Management students to address students' complaints about their low performance and lack of motivation as literature indicates that it can improve students' academic skills and attitudes towards learning.

4. Summary of findings and discussion

The quantitative findings of this study indicated that students increased their writing performance by 35% in one academic year. The qualitative findings of this study confirm that students were very positive about the DA scheme. At first, students were reluctant to devote the extra time and effort to participate in the implementation and were disappointed by the fact that they could not see drastic improvements right from the beginning. With careful guidance, they built their confidence in academic writing in a stress free environment with the support of their peers and their lecture. They had many opportunities to reflect and improve their work and receive more feedback than when involved in traditional forms of assessment. They developed valuable professional skills i.e., negotiation, metacognitive skills, collaboration as they indicated in their feedback via Mentimeter.

As Daniels (2007) points out, it therefore seems crucial to recognise this affective aspect in order to obtain a complete picture of any pedagogic practice, including assessment procedures. The learners' feedback indicate that DA adds a new dimension to assessment which may turn it into an enjoyable and rewarding experience and at the same time assist them to improve their academic (writing) performance considerably.

DA gradually developed students' self-regulation skills as they used self-assessment actively to plan what they had to do in order to improve their texts placing enjoying the process rather than being intimidated by the end product (also in Fox & Riconscente, 2008; Nicol & Macfarlane-Dick, 2006). The lecturer also confirmed a dramatic change in most students' attitudes as they felt more responsible in their attempt to make sense of their shortcoming and plan their actions in order to resolve any problems they faced in terms of their assignment offering and receiving help and guidance from their peers and lecturer. The dual feedback they received seemed to be complementary and valuable in order to improve their performance and motivation to engage in writing tasks.

5. Implications and conclusion

According to students' feedback, the current project enhances the creation of learning communities among students promoting tolerance and enhancing student collaboration. It explored the beneficial impact of dynamic assessment practices on student outcomes, overall experience, and continuous professional development catering for all learners' needs, fostering inclusion of the increasingly diverse student cohorts due to globalisation, develop students' digital, academic, and professional skills and innovate in tertiary education.

As traditional assessment methods were unable to sufficiently support these Management students, DA's focus on interactive and reflective learning and development, helped students receive the kind of individual support they needed urging them to develop their metacognitive skills to be able to improve their writing skills based on dynamic, tailored and on-going assessment feedback provided by their peers and their lecturer. As with traditional assessment methods this ongoing interaction and focus on process writing is not possible, this DA scheme offered students at least 3 opportunities to improve their writing performance and develop their self-assessment and reflective skills.

As DA is an intensive form of intervention, the researcher decided to use a combination of group DA and lecturer feedback to support students (Poehner, 2009). However, there is a need for purely experimental studies which will compare DA with non-DA students' academic writing development. It would also be interesting to explore the impact of DA on students in other fields and also conduct longitudinal studies to explore its long-term impact. In the meantime, however, while recognizing our study is specific to a particular sociocultural

context in higher education and therefore the findings cannot be generalised our study suggests that focused tutor mediation (in the form of wikis and exchanges) is an effective way of providing the kind of reflective, dynamic mediation that is able to effectively support students' academic writing development in a distance learning context.

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