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The Value of Post-Entry Language Assessment (PELA): Outcomes from a First Semester Undergraduate Subject

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This paper reports on the use of a post-entry language assessment (PELA), the Bond English Language Assessment (BELA), in a core first-year subject at Bond University. The aim was to identify undergraduate students with below satisfactory written communication skills at commencement of their university studies and provide intervention strategies at an early stage. Students considered to be displaying below satisfactory levels of academic writing on an online homework task were required to attend a meeting with a Learning Advisor to receive the 2% allocated to completing the task. At the end of the semester, students were invited to take the task again with a different question and a comparative analysis of performance was conducted. It was hypothesised that early intervention would contribute to students' development of academic writing and their chances of success in the subject's written assessment task, the Major Essay. It was also hypothesised that students who scored low on BELA would be at a higher risk of failing the Major Essay. Finally, it was hypothesised that students who did not participate in BELA 1, for reasons unknown, would be more inclined to fail or withdraw from the subject compared to students who completed the PELA. Although claims concerning the predictive validity of any language assessment are difficult to make due to the myriad factors at play (Murray, 2007; Read, 2008), partial support was determined for each hypothesis. More data, however, are needed to confirm these preliminary findings, particularly from the second BELA and to control for a range of possible confounding factors.

Key Words: Post-entry language assessment (PELA), academic writing, communication skills, first semester students.

1. Introduction

Tertiary institutions in Australia, like most English speaking nations around the world, have experienced a significant influx of international students in the past few decades (Knoch, 2012). With most international students coming from non-English speaking backgrounds (NESBs), both students and universities have been faced with significant challenges. Such challenges have been documented in higher education literature with a major concern being that NESB students have "considerable difficulty" in their subjects (e.g. Oliver, Vanderford, & Grote, 2012, p. 541). Even for those who do successfully complete their studies, questions remain regarding whether their English Language Proficiency (ELP) is sufficient for the workforce in English speaking countries. Strong support for such concerns came from a 2006 paper by Professor Bob Birrell which highlighted that a significant number of students who had graduated from Australian institutions, and thus could rightfully apply for permanent residence in Australia, could not meet the language

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proficiency visa requirement (i.e. achieve an overall International English Language Testing System [IELTS] band of 6.0). Ransom (2009, p. A13) appropriately described the findings presented in the 'Birrell report' as "disturbing". Consequently, the Australian Universities Quality Agency (AUQA), now replaced by the Tertiary Education Quality and Standards Agency (TEQSA), created the Good Practice Principles (GPP) for English Language Proficiency for International Students in Australian Universities seeking to enhance university students' ELP (AUQA, 2009).

However, ELP is not solely an 'international student problem'. As Oliver et al. (2012) demonstrated, NESB students also commence their degree programmes via domestic pathways, with the number of local students who identify as using English as a second or additional language increasing. Additionally, students in Australia and New Zealand are being recruited domestically from linguistic minority groups, including migrants and refugees, that "have been traditionally unrepresented in tertiary education" (Read, 2008, p. 181). As noted in much of the literature, differing paths of entry may have differing measures of competency, even within an institute. Thus, as suggested by Murray and Hicks (2014), despite meeting the entry requirements, many students may still have difficulties with their studies as a result of weak ELP and, therefore, require further support. Overall, researchers including Read argue that a much broader group of students exist, including native speakers of English, requiring development in both communication skills and academic literacies. Consequently, the focus of the current paper is on all rather than just NESB students' communication skills, a term that frequently appears in institutions' graduate attributes (Arkoudis & Doughney, 2014) and is consistently sought by employers (Kinash & Crane, 2015; Murray & Arkoudis, 2013).

As posited by Murray and Arkoudis (2013) though, it is imperative that tertiary institutions not only comprehend the idea that ELP is a relevant issue for all students, but, more importantly, act on it. However, good data on the issues are needed to inform effective policy making, and The Good Practice Report – English Language Proficiency, developed by Arkoudis and Doughney (2014), illustrated that there is limited Australian research on the ELP of both domestic students and international students for whom English is their first language. In particular, as argued by Murray and Arkoudis (2013), Australian universities must better assess, monitor and evaluate outcomes of communicative skills development. Further to this, once admitted, students frequently 'fly under the radar' unless they are considered at risk of failure (Arkoudis, Baik, & Richardson, 2012), resulting in students achieving less than what they may be capable of. Therefore, as suggested by Dunworth (2013b), an assessment of the language development needs of all students is necessary to provide appropriate assistance. This idea echoes the call of the GPPs for diagnosis of students' ELP needs early on in their tertiary studies (AUQA, 2009). In order to fulfil such an obligation, universities are required to implement measures to identify students whose communications skills are lacking and, imperatively, provide support that allows these students to flourish (Murray, 2010).

In identifying effective ways to measure and monitor students' ELP, it is important to note that entrance test scores, such as IELTS, are insufficient as they only indicate how prepared students are for commencing their studies, as opposed to how successful they will be (e.g. Murray, 2010; Murray & Arkoudis, 2013). Test scores are considered simply to be the "starting point rather than a static state of competence" (International Education Association of Australia [IEAA], 2013, p. 11). Additionally, such tests are primarily targeted towards non-native speakers of English only, and the increase in university entry pathways means tertiary institutions can no longer assume that entry qualifications offer an indicator of English competency upon entry. This is particularly true given various systemic issues, including the increased competition amongst institutions to attract and retain students (Baik & Greig, 2009), have led to the admission of students whose incoming English competencies are wide ranging. Consequently, universities need to respond to this situation if they wish to retain the increasingly diverse range of students seeking entry into higher education.

One common approach to addressing the above-identified issues utilised by Australian and New Zealand universities to evaluate and monitor the communicative competencies of enrolling students is a post-entry language assessment (PELA) (Read & von Randow, 2013). PELAs, though ranging in design, content, mode, and target (Dunworth, 2013b), are defined as tools which allow

university stakeholders to assess their students' communication skills at an early stage of their tertiary studies, identify areas in which there are deficits, and implement support as appropriate (Knoch, 2012). As of 2013, some form of PELA was used by 27 out of 39 Australian universities (Barthel, 2013). However, Read (2015b, p. 219) emphasised the idea that a PELA "is not an end in itself"; that is, a PELA will not develop students' language proficiency, rather it must be connected to language enhancement initiatives (Dunworth, 2013a) to overcome the contemporary challenges English-medium universities face.

2. The situation at Bond University

Like many Australian universities, Bond University embraces a diverse student body which has entered the university through numerous pathways in addition to traditional entry routes. Thus, the communicative competencies of the students, as well as their levels of academic literacy, vary.

2.1. Early PELA in use at Bond University

Following the introduction of the GPPs, Bond University initiated a programme of support for its international students, introducing an early version of a PELA in the form of ACER's online English Language Skills Assessment (ELSA) test to address Principle 7, "Students' English language development needs are diagnosed early in their studies and addressed, with ongoing opportunities for self-assessment" (AUQA, 2009). In addition, support was embedded within two compulsory undergraduate core subjects: 'Communication Skills' and 'Cultural and Ethical Values' to address Principle 6, "Development of English language proficiency is integrated with curriculum design, assessment practices and course delivery through a variety of methods" (AUQA, 2009). This early ELP development strategy gained recognition for its effectiveness by AUQA and was subsequently listed on AUQA's Good Practice Database (Dunworth, 2013b). Despite this recognition, the use of ELSA was eventually discontinued because its validity was questioned in two areas: it did not seem to effectively identify students struggling with English language and did not seem to adequately assess necessary academic skills (Harris, 2013). A further issue was that the test was designed for NESB students, which limited its usefulness in identifying language proficiency needs amongst ESB students. Consequently, it became imperative to find an alternative option for use as a PELA which could more accurately evaluate students' academic writing abilities, but which could also be applied to all students.

2.2. Student Learning Support (SLS)

Student Learning Support (SLS) is a centralised unit of the university which aims to assist students in developing their academic literacies, thus obtaining higher grades (Student Learning Support, 2016). At the time of the current study, SLS comprised 2.7 full-time equivalent Learning Advisors (LAs) and two casuals, including a Maths Advisor. Students can book an appointment via an online booking system for one 30-minute consultation per week and may book two weeks in advance. Students may discuss anything related to their academic language and learning; typically, students discuss their assignments, at any stage of the writing process, and LAs provide feedback on both the strengths and weaknesses of their work. Instruction on how weaknesses can be overcome is then provided to students. LAs encourage students to attend multiple consultations for one assignment in order to receive multiple opportunities for feedback. SLS also embeds several academic skills workshops within subjects from undergraduate to higher degree research level and facilitate a suite of generic skills workshops during the semester which have also been developed into online resources.

3. The challenge of measuring the efficacy of support mechanisms and the predictive validity of language assessments

Learning Advisors are in unique positions to assist in student development as they can mediate between the complex situations faced by individual students, then, based on such experience, teach groups of students and offer insight for appropriate course design initiatives (Chanock, 2007; Huijser et al., 2008). However, it is acknowledged that the efficacy of the support provided

by Academic Language and Learning (ALL) centres, such as SLS, is difficult to measure (Chanock 2007; Stevenson & Kokkinn, 2009) because of the plethora of factors at play when it comes to the development of a student's academic literacies, including written communication skills. This issue is seen as being akin to that faced when attempting to report on the predictive validity of high stakes gate-keeping assessments (Read, 2008). Nevertheless, studies such as those conducted by Clerehan (1997), Huijser, Kimmins, and Galligan (2008), O'Mahony, Verezub, Dalrymple, and Bertone (2013), and Woodward-Kron (2007), have demonstrated the important role played by such units in the individual consultations they provide, particularly for developing written communication skills at various degree levels. Additionally, evidence has been determined for the efficacy of embedded academic workshops facilitated by ALL units (Salamonson, Koch, Weaver, Everett, & Jackson, 2010).

One of the key areas typically focused on in the work LAs do with individuals and groups is to work on the development of ELP as this is thought to have a significant impact on student academic performance. However, while several studies have examined the academic performance of NESB students based on their ELP as determined by language assessment, overall the literature is somewhat divided as to whether language proficiency scores can predict such performance. In relation to high stakes, pre-enrolment tests such as IELTS for instance, Bellingham (1993) found that there were higher rates of students performing poorly in their studies who had low admission scores on IELTS, and Feast (2009) presented similar findings and recommended that institutions consider raising the bar concerning ELP requirements for admission into university. Furthermore, Humphreys et al. (2012) found that the receptive skills of reading and listening were strongly correlated with Grade Point Average (GPA) in the first two semesters of study, but not in the third. In contrast, studies including Cotton and Conrow's (1998) and Dooey and Oliver's (2002) have found minimal or no correlation between pre-enrolment language test scores and academic performance. More recently, studies such as Cloate's (2016) have investigated the predictive validity of PELAs. Cloate found that higher scores on the grammar and vocabulary based PELA used at the University of Bedfordshire in the UK, correlated with higher subject grades. At the other end of the spectrum, Read (2015b) noted that comparisons made internally between the Diagnostic English Language Needs Assessment (DELNA) results and GPA at the University of Auckland indicated that students performing poorly on DELNA were much more inclined to fail, obtain low passing grades in their subjects, or, worse still, discontinue their studies whilst in their first year. However, as PELAs vary in terms of their design, what skills they assess and who they are targeted towards (Dunworth, 2013b), it is important to more widely investigate the possible links between student performance on various PELAs and their subsequent academic performance.

A further gap in the literature exists regarding the academic performance of students who elect not to participate in the PELA process. Non-participation is likely an important issue as Read and van Randow (2013) noted that most students who avoided participating in the follow up stage of DELNA had low GPAs. In addition, compliance rates of PELAs at Australian and New Zealand universities vary considerably, particularly when the participation is not compulsory (Ransom, 2009), and it is argued by Murray (2012) and Podorova (2016) that the students who do not engage with skill development initiatives, such as PELAs, for whatever reason, are often the ones who require it the most. However, apart from Read and van Randow's aforementioned finding, there is a paucity of literature providing empirical evidence to support this claim and thus it is important to independently verify it.

4. The Bond English Language Assessment (BELA)

4.1. Background to BELA

In 2013, the first iteration of the university's new PELA called the Bond English Language Assessment (BELA) was implemented by SLS. BELA takes the form of an online written response to a simple essay question akin to IELTS writing Task 2, and is to be produced within a 60 minute timeframe via the university's learning management system (LMS), iLearn/Blackboard (see Appendix A for an indicative question). BELA, being a single task, was designed for simplicity so as not to overwhelm students who have recently commenced their degree programmes. Consistent

with Storch's (1992) rationale that good writers can revise and plan essays when given an appropriate time limit, it was believed that one task, under timed conditions, could more clearly illustrate a student's academic writing ability than multiple tasks.

Since 2014, BELA has been embedded as a compulsory homework task to be completed by week 2 in the core subject, Critical Thinking and Communication, which all first semester undergraduate students enrol in, apart from Bachelor of Medical Science students. While the main aim of BELA is to target students potentially at risk of poor academic performance due to weak ELP, it also provides a tool through which all students may seek opportunities to analyse their academic writing abilities and develop their writing skills (Dunworth, 2013b). Thus, it has the positive purpose of enhancing the academic outcomes of students, as opposed to being a high stakes gatekeeping test (Read, 2015a).

Although the basic format of BELA has remained consistent, changes have been made since its implementation. In the second semester of it being embedded in the core subject, the time allowed to complete the task was extended from 45 to 60 minutes, based on focus group feedback from students and to lessen the anxiety related to a timed test. Extending the time limit from 45 to 60 minutes may not have resulted in students gaining higher scores on BELA, but it has potentially reduced anxiety and perhaps allowed students to produce better quality essays as per the findings of Elder, Knoch, and Zhang (2009) and Knoch and Elder (2010). Additionally, it was decided to provide some scaffolding by adding a "Top Tips" screencast to the introductory BELA page covering basic academic writing advice such as avoiding the use of personal pronouns, the need to include a thesis statement and so on. It was believed that this would eliminate students obtaining low scores in BELA due to merely "forgetting" some of the basics of academic writing, particularly if they had been out of the education system for extended periods of time, or were from overseas where some writing conventions may be different. These changes were implemented based on feedback gained from focus groups conducted after the first semester of BELA being embedded in the core subject as well as responses to questions included in the SLS semester feedback surveys created via Survey Monkey. Thus, feedback is gained from test-takers on an ongoing basis to routinely determine if the task is functioning as required, as recommended by Bachman and Palmer (1996).

4.2. The design of BELA

BELA was designed by LAs at SLS based on their experience, both in English language institutes and at the tertiary level, in assessing English for Academic Purposes. Academic essay writing was chosen as the construct to be assessed over other macro skills due to its prevalence within tertiary education. In addition, it was believed that an essay task would prove to be predictive of subsequent academic performance as Green (2007, p. 48) described academic writing as "the pre-eminent means for assessment of student learning outcomes in Higher Education." Read (2015) similarly argued that grades in higher education are determined based on written tasks, whether it be in the form of an exam essay, research report or thesis, and that weaknesses in a student's writing are "the most visible manifestations of 'language problems'" (p. 181). Studies examining the authenticity of the IELTS Writing Task 2 (e.g. Moore & Morton, 2007), which is not dissimilar to BELA, found broad similarities between IELTS Writing Task 2 and the academic essay at university. The argument essay, which requires the writer to express a perspective on a controversial topic and then defend it (Read, 2015a), was chosen as the most appropriate task for BELA as it is the same essay type as the core subject's main written task, the Major Essay, worth 30% of students' overall grades. It was anticipated that a writing task of BELA's nature would highlight students' issues with academic writing and identify those who may be at risk of failing either due to poor writing skills or inadequate language abilities.

Briefly, it is believed that BELA satisfies to an appropriate level, the minimal requirements of construct validity set out by Cushing Weigle (2002) in that it: (1) elicits the type of writing that is desired (i.e. an academic essay); (2) the marking rubric (see Appendix B) accounts for the components of written discourse included in the definition of the construct (i.e. organisation, linking and flow, and grammar and vocabulary); and (3) raters adhere to the criteria when assessing

students' writing. However, a thorough validation study of the entire BELA process is yet to be conducted.

Regarding the design of the marking scheme (see Appendix B), scales used in high stakes English language tests were referred to including the publicly available IELTS writing band descriptors. The marking scheme was also developed in consultation with the convenor and lecturer on the core subject. As posited by Hamp-Lyons (1991), input from those involved in the programme or subject for which a rating scheme is used is necessary to ensure that it is a reflection of the needs, context and purposes identified by instructors as being imperative. The simple rubric consists of three, equally weighted categories: organisation, linking and flow, and grammar and vocabulary. On each criterion, students' essays are assessed as being either satisfactory or below satisfactory. Students who are rated as satisfactory on all three criteria are given an overall band score of 9, while students who received one, two or three below satisfactory ratings receive overall band scores of 7, 5 and 3 respectively. The rationale behind having a limited scale was to force raters to decide whether the student's writing was below satisfactory or satisfactory as quickly as possible due to financial constraints. This is in contrast to many tests of written communication skills which include mid-points to provide raters with flexibility across wide ranging scales. An assessment as to whether such a limited scale presents any problems for the validity of the assessment will be the focus of a future study.

In terms of measures taken to ensure the task's reliability, marking was standardised among the subject's tutors, convenor and SLS LAs during a meeting in week 1 of the first semester of the current study. Standardisation involved detailing the format of the test as well as the process (as shown in Appendix C) and scoring procedures. During this standardisation meeting, samples of students' writing prior to when the task was embedded in the subject were used to standardise ratings. LAs demonstrated how one paper was assessed, including providing a rationale for each individual criterion's rating. Following this, tutors assessed two texts considered to be borderline between bands 3 and 5 and 5 and 7 respectively, and then reflected on their own rationales for rating the texts as they did. In the second semester of the current study, a new tutor was employed and the same standardisation process was carried out. As yet, no analyses of inter-rater or intra-rater reliability, considered to be the norm when assessing scoring reliability (Storch, 1992), have been undertaken due to the low-stakes nature of the task. As noted by Bachman and Palmer (1996), low stakes decisions made based on the result of tests have minor impact on students and subjects, with errors in such decision-making processes having less dire consequences.

4.3. The BELA process

Students are introduced to BELA in the first week when the lecturer explains what it is and its purposes. The task's criteria are available to students when they commence the task; neither content nor critical thinking are assessed. Students' attempts are marked by the tutors in Core 1 following the simple rubric as previously discussed. Based on the tutors' assessment of performance in each category, students receive a mark of 3, 5, 7 or 9 as explained above. Students receive feedback via the university's LMS, and the feedback and marks are recorded within the LMS accessible by academic staff on the subject and SLS LAs. The writing of those receiving a mark of 3 or 5 is categorised as "below satisfactory". These students are consequently deemed to be at risk of struggling academically.

Students deemed "at risk" at university are sent an email from the subject lecturer stating they must attend an appointment at SLS to receive feedback on their BELA and the 2% homework mark. As students tend to take the advice of their lecturers and tutors concerning their academic skills and needs (Arkoudis & Doughney, 2014), and are more likely to seek support when it is perceived to be connected to an assessment task (Harris, 2009), it was expected that the likelihood of those identified as having low level writing skills attending a consultation at SLS would be increased when recommended by their lecturer. It is believed that the preliminary meeting with LAs will alert students to issues in their writing and provide an opportunity for awareness-raising about the learning resources and support available. Following this initial consultation, students scoring 3 or 5 on BELA are offered ongoing support by LAs to improve their academic skills

through a variety of methods including further appointments at SLS and online resources, as recommended in GPPs 6 and 7 (AUQA, 2009). Students receiving a score of 7 or 9 automatically receive the 2% homework mark; however, those scoring 7 are also invited to attend SLS to go through their BELA if they wish to and those in the 9 category are able to attend SLS if they seek to do so, although they are not formally invited to do so. Non-compliant students, that is students who choose to not participate in the BELA process, are sent a follow up email and given another chance to complete the task. Although the task is a compulsory homework task, apart from missing out on 2% towards the subject, there are no real consequences of non-compliance. An investigation into why students do not comply has not yet been undertaken.

At the end of the semester, all students enrolled in the core subject are then invited to complete BELA 2, another writing task with a different question, to compare their level of writing with their original attempt. Students who complete BELA 2 are once again invited to attend SLS to review progress in their writing. To ensure consistency of marking, both the BELA 1 and 2 attempts of these students are cross-marked by LAs. As a final step, students are invited to attend a focus group to reflect on their perceptions of the BELA and the learning they have achieved during this process.

5. The research study

In consideration of the increasingly complex need to assess, monitor and evaluate outcomes of communicative skills development, as summarised by Murray and Arkoudis (2013), an investigation was undertaken into the outcomes of the BELA process, including the impact of the consequent support from SLS on those students perceived as having below satisfactory academic writing skills. This study thus aimed to examine the outcomes by:

- Comparing students' BELA 1s and 2s and their use of SLS
- Comparing the results of students' BELAs and their marks on the subject's Major Essay (the major writing task in the subject).

An additional aim was to investigate the overall performance in the subject of students who did not complete BELA 1 to determine if non-compliance could be a warning sign that such students were, perhaps, disengaged from their studies and, therefore, at risk of not successfully completing the subject. Successful completion was defined as completing the subject and obtaining an overall grade of 50% or higher. The current study did not, however, investigate reasons for students not completing BELA 1, nor reasons for why they were unable to successfully complete the subject.

Based on the discussion in Section 3 and the research aims mentioned above, it was hypothesised that:

H1: As demonstrated in BELA 2, improvement would be seen in the written communication skills of a greater proportion of students who attended SLS compared to a sample of students who did not utilise SLS matched by BELA 1 score.

H2: Students in each BELA category who attended at least one appointment at SLS would, on average, perform better in their Core 1 Major Essays than their counterparts who did not.

H3: The risk of failing the subject's Major Essay would be higher for students in the "below satisfactory" category (score of either 3 or 5) than for the "satisfactory" category (i.e. score of 7 or 9).

H4: Students who did not complete BELA 1 were less likely to successfully complete the subject than those who completed the task.

6. Method

Data, including BELA 1 and 2 scores, Major Essay grades and attendance at SLS, were collected via the university's LMS, iLearn (Blackboard). Overall grades in the subject were obtained through the university's central database, StudentOne. Once collected, data were input into Microsoft Excel for analysis. All statistical analyses were calculated using Excel.

The method used to test the first two hypotheses was a comparative analysis. For Hypothesis 1, this was achieved by observation of the scores in BELA 1 and BELA 2 of students who had completed both tasks. Specifically, the scores of students in BELA 2 for each band (i.e. 3, 5, 7, and 9) for those who had attended consultations at SLS were compared to those who had not, to gauge the proportion of students who improved by at least one band in BELA 2.

For the second hypothesis, comparison was made between mean Major Essay grades in each band between students who had attended SLS and those who had not. One-tailed t-tests assuming equal variances were used to test for statistically significant differences. Data of students who obtained a grade of zero on the Major Essay were excluded from the analysis as this indicated that they had not submitted the assignment and hence no judgement as to the impact of their ELP or attendance at SLS sessions could be determined.

The comparisons for hypotheses 1 and 2 were made on a band by band basis as the potential size of any improvement depends on each student's starting point, and the likelihood of an improvement may also depend on the students' starting points (i.e. it may be easier to make a significant improvement from a low base than from a higher base). The goal of the comparison between SLS attendees and non-attendees was to distinguish the possible impact of SLS sessions from the general learning gains that might be expected from other sources across a semester of university studies. Unfortunately, as students self-selected attendance or non-attendance at SLS sessions, it is always possible that some important characteristics which determined who decided to attend versus those who did not, such as differences in hours of employment, attitudes towards help seeking, or determination to put in the work needed to succeed, might also have had a systematic impact on learning gains in addition to the impact of SLS sessions.[1]

The third hypothesis was tested by calculating, firstly, the absolute risk of students in each BELA 1 band failing the Major Essay and, secondly, the relative risk of failure with each BELA 1 band being compared to the highest band score of 9. A histogram of the results distribution for the students in each BELA 1 band was also used to determine the possible relationship between initial ELP as measured by the BELA and performance on the Major Essay.

Finally, hypothesis 4 was tested by comparing the overall grades in the subject obtained by students who had completed BELA 1 (group 1), regardless of their score, and the overall grades achieved by students who did not complete the task (group 2). A comparison was then made to determine the number and percentage of students who did not successfully complete the subject (i.e. achieved an overall grade of below 50%) in groups 1 and 2.

7. Results

7.1. Distribution of BELA 1 scores

Over three semesters between September 2014 and August 2015, 848 students commenced Core 1: Critical Thinking and Communication. 757 students completed BELA 1; 91 did not. Table 1 below demonstrates the results of the 757 who completed BELA 1. Note that just over a quarter of the students scored "below satisfactory" (i.e. scored a 3 or a 5) on the BELA and hence were presumed to be at risk academically because of their weak academic writing. The extent to which this assumption proved to be true is investigated with Tables 4 and 5.

Table 1. Breakdown of scores on BELA 1 over three semesters (scores of 3 and 5 were deemed to indicate "below satisfactory" written communication skills, while scores of 7 and 9 were deemed to be "satisfactory").

BELA 1 Score	Number of students	Number as a percentage
3	59	7.8%
5	137	18.1%
7	218	28.8%
9	343	45.0%

[1] In addition, those who chose to attend SLS sessions chose to attend different numbers of sessions, thus leading to the possibility of a "dose effect" which was not explored in this study.

7.2. Were students who attended SLS sessions more likely to improve in BELA 2 than those who did not? (Hypothesis 1)

This part of the study aimed to assess the impact of SLS sessions on students' BELA performance by comparing BELA 1 and 2 scores of attenders with non-attenders, controlling for their initial BELA score as gains could be expected to depend on starting proficiency. In relation to this aim, in total, 33 students completed the non-compulsory BELA 2. Of the 33 students, one student had not completed BELA 1 and was, therefore, removed from the analysis. It was also discovered that one student had plagiarised 22% of BELA 2 from an online essay and so this student's data was also excluded, reducing the number for the analysis to 31. The results of students' BELA 2s are illustrated in Table 2 below.

Table 2. Breakdown of scores on BELA 2 over three semesters.

BELA 2 Score	Number of students	Number as a percentage
3[a]	4	12.9%
5[a]	13	41.9%
7[b]	8	25.8%
9[b]	6	19.4%

[a] Below satisfactory written communication skills.

[b] Satisfactory written communication skills.

Eighteen students completed BELA 1 and 2 and attended at least one appointment at SLS. As illustrated in Table 3, in comparing these students' BELA 1s and BELA 2s, 11 out of 14 students in the "below satisfactory" group (BELA 3s and 5s) who attended at least one consultation at SLS improved in BELA 2. One of the two students who scored a 7 on BELA 1, improved in BELA 2. Thirteen students, who had completed both versions of BELA but had not attended consultations at SLS, were used as a matched sample.[2] In comparing these students' BELAs, zero out of the three in the "below satisfactory" category improved in BELA 2, while two out of the six in the "satisfactory" category improved in BELA 2 (see Table 3). Although these results suggest support for the hypothesis that students attending SLS sessions would be more likely to improve their BELA scores than those who did not, there is unfortunately not enough data to draw conclusions with any confidence. In particular, it would be of interest with more data to determine how many SLS sessions might be needed to achieve a given improvement in BELA performance. More data is also needed to establish the test-retest reliability and inter-rater reliability of the BELA so as to improve the confidence that can be had that a change in BELA score is likely to indicate a real change in student performance as opposed to a random fluctuation arising from natural variability in students' performance on the BELA and/or measurement error.

Table 3. Proportion of students in each BELA category who improved in BELA 2.

	Number of students who improved by at least 1 band in their BELA 2 result.	
BELA 1 Score	Attended 1 or more consultations at SLS	Did not attend consultations at SLS
3	4 out of 4	–
5	7[a] out of 10	0 out of 3
7	1 out of 2	2 out of 6
9[b]	0 out of 2	0 out of 4

[a] Two of these students improved by two bands (i.e. achieving 9 on BELA 2).
[b] As BELA 9 is the highest score achievable, none of these students could demonstrate improvement with this assessment.

[2] Matched in terms of initial ELP. There may of course be other variables, such as level of commitment to their studies, on which the two groups may not have been equivalent.

7.3. Did students attending SLS sessions perform better on average on their Major Essay controlling for initial BELA score? (Hypothesis 2)

Regarding the Major Essay for the subject, 767 students completed the task whilst 81 did not. Of the 767 students who did complete the task, 706 also completed BELA 1. Of these 706, 163 students who completed BELA 1 and the Major Essay utilised SLS, whilst 543 did not. As demonstrated in Table 4 below, students in each BELA category who utilised SLS, on average, scored higher on their Major Essays than those students who did not. However, students scoring 3 on BELA 1 was the only group for which the results were statistically significant (p = 0.006). The effect size for the difference for this group, Cohen's d = 0.83,[3] suggests SLS sessions had a "large" impact on these students' performance. Notably, it was the students who had the weakest initial scores who seem to have gained the most from SLS sessions, but perhaps this is because having the greatest gains to make means it was easiest to make those gains with these students.

Table 4. Comparison of mean Major Essay grades for students in each BELA category between students who attended SLS consultations and students who did not. Only students who submitted an essay are included in this analysis.

	Visited SLS		Did not visit SLS			Percentage
BELA 1 score	*n*	*M* (*SD*)	*n*	*M* (*SD*)	p^a	Visited SLS
3	34	53.9 (15.2)	14	40.83 (17.1)	0.006	70.8%
5	85	57.7 (14.9)	44	56.3 (14.4)	0.31	65.9%
7	33	66.6 (17.2)	168	64.9 (13.3)	0.27	16.4%
9	11	71.4 (9.4)	317	67.6 (13.4)	0.18	3.4%
p^b		0.000		0.000		

[a] One-tailed *t*-test assuming equal variances. [b] ANOVA.

It is important to acknowledge that although matching on BELA 1 result controls for differences in academic essay writing ability at the commencement of a student's degree programme, there could be systematic differences between those students who attended SLS and those who did not which explains the observed differences to some extent. These differences may have included such factors as employment load, level of determination, number of SLS consultations attended, how long before the Major Essay was due it was started, and whether students sought the assistance of a proof-reader on the Major Essay task to name but a few. Further investigation into such mediating factors will be conducted in a future study.

7.4. To what extent is BELA 1 performance predictive of performance on the Major Essay task? (Hypothesis 3)

The next question addressed was to determine to what extent BELA 1 results could predict performance on the Major Essay task, and in particular, to what extent students scoring "below satisfactory" on BELA 1 were at risk of failing the Major Essay. In relation to the risk of failing the Major Essay, regardless of attendance at SLS, of the 706 students who completed both BELA 1 and the Major Essay, a total of 112 students failed the Major Essay, while 594 passed. Table 5 below displays the ratios of pass to fail for each BELA 1 score. Table 5 also illustrates the absolute and relative risks of failing the Major Essay for each BELA score. Overall, the lower a student's score on BELA 1, the higher the absolute and relative risk the student would fail the Major Essay. For instance, for students who scored 3 on BELA 1, 43.8% failed the Major Essay. In terms of risk relative to students who scored 9 on BELA 1, students who scored 3 were 4.78 times more likely to fail the Major Essay.

[3] The formula used to calculate the effect size was $d = (M_1 - M_2)/\sqrt{[(n_1 - 1)SD_1^2 + (n_2 - 2)SD_2^2]/(n_1 + n_2 - 2)}$ (see Eq. (1) in Lakens (2013)), where the subscripts 1 and 2 refer to students who did and did not attend SLS sessions respectively.

Table 5. Absolute and relative risk of students failing the Major Essay based on BELA 1 scores. Only students who submitted an essay are included in this analysis.

BELA 1	Failed essay (*n*)	Passed essay (*n*)	Absolute Risk [95% CI][a]	Relative Risk[a]
3	21	27	0.438 [0.298, 0.578]	4.78
5	35	94	0.271 [0.194, 0.348]	2.97
7	26	175	0.129 [0.083, 0.175]	1.41
9	30	298	0.091 [0.060, 0.122]	1.00

[a] The 95% confidence intervals (CIs) were estimated using the formula for proportions of a single category variable (i.e. with the formula $\hat{p} \pm 1.96\sqrt{\hat{p}(1-\hat{p})/n}$, where $\hat{p}$ is the sample estimate of the population proportion and n is the sample size (Skane, 1985, p. 227).

[b] Relative to students who scored a 9 on BELA 1.

The question of how well a student's BELA 1 result could predict performance on the Major Essay is explored in Figure 1, which shows the relative distribution of Major Essay percentages obtained by students who submitted an essay as a function of BELA 1 score. Note first the wide variation in results for each BELA, indicating that for any individual student, his or her BELA 1 score was only a weak predictor of essay result. However, it also appears clear from Figure 1 that the balance of grades for students with a BELA 1 score of 7 or 9 was much higher than the balance of grades for those with a BELA 1 score of 3 or 5, and this is even despite the fact that Table 4 suggests that many of the BELA 1 = 3 students appear to have had their results significantly improved by attending SLS sessions (i.e. without the SLS intervention, the results distribution for the BELA 1 = 3 students is likely to have been even worse than what is shown). In particular, the proportion of fail grades for students with a BELA 1 of 3 or 5 is much higher than it is for students with a BELA 1 of 7 or 9, thus providing more detail to the results reported in Table 5. That this apparent variation in results is extremely unlikely to be due to chance was confirmed with a Mann-Whitney test of significance,[4] which revealed that the difference between all students scoring a BELA 1 of 3 or 5 ($M(SD) = 55.3(15.6)$) and those scoring a 7 or 9 ($M(SD) = 66.8(13.6)$), was very highly statistically significant, $p < 0.001$. Thus, while a BELA 1 score is a weak predictor of any given student's performance on the Major Essay, it seems to have value in predicting the potential risk of underperforming and indeed failing the essay.

7.5. Were students who did not complete BELA 1 less likely to successfully complete the subject than those who completed the task? (Hypothesis 4)

In relation to H4, 91 students did not complete BELA 1. Of these, 49 (53.8%) did not successfully complete the subject (i.e. they either failed or withdrew from the subject). In contrast, of the 757 who did complete BELA 1, 98 (12.9%) did not successfully complete the subject. A contingency table chi-squared test indicates that such a large difference in fail or withdraw proportions is unlikely to be due to chance ($\chi^2(1, N = 848) = 94.8,\ p < 0.001$). Consequently, this data suggests that students not completing BELA 1 were around four times more likely to fail or withdraw from the subject than those students who did complete BELA 1. This result indicates that non-completion of BELA 1 could have value as an early warning signal of the need for an intervention.

[4] A Mann-Whitney test was used rather than a *t*-test as the distributions do not appear to be normal.

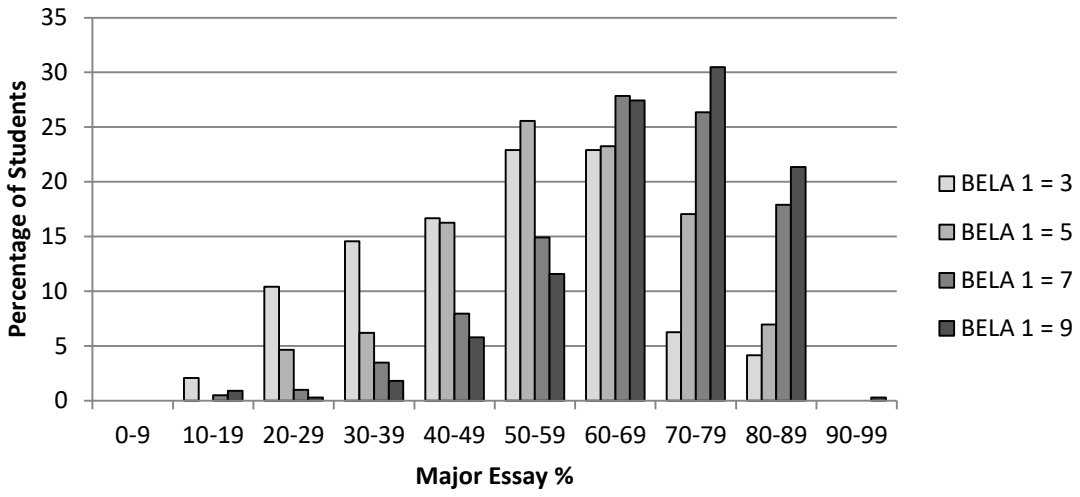

Figure 1. Relative distribution of grades for the Major Essay of students in each BELA category. Only students who completed both BELA 1 and the essay are included in this graph. The number of students in each category were 48, 129, 201 and 328 for BELA 1 = 3, 5, 7 and 9 respectively.

8. Discussion

The aim of the present study was to examine the outcomes of the BELA process including the support mechanisms set in place at Bond University. Consequently, it was firstly hypothesised that students with the same initial level of communication skills as measured by BELA 1 who attended consultations at SLS would score higher on BELA 2 compared to students who did not attend SLS. Some support for this hypothesis was found, though as the number of students completing both BELA 1 and BELA 2 was so low, more data will be needed to confirm this result with any certainty.

The second hypothesis was that students who attended at least one SLS consultation would perform better in their Core 1 Major Essays in terms of their average grade than their counterparts with the same BELA 1 score who did not. Partial support for this hypothesis was found, as it was only the Major Essay grade comparison of students scoring 3 (the lowest grade) on BELA 1 that was statistically significant.

Thirdly, it was predicted that students in the "below satisfactory" category (i.e. scores of 3 or 5) would be at higher risk of failing the Major Essay in comparison to students in the "satisfactory" category. This hypothesis was strongly supported.

Finally, it was hypothesised that students who did not complete BELA 1, for whatever reason, would be less likely to successfully complete the subject compared to their counterparts who did. Support for this hypothesis was also found.

Findings for the first and second hypotheses are encouraging from all stakeholders' perspectives, regardless of the second hypothesis only being partially supported. These findings are consistent with research into the effectiveness of one-on-one consultations in terms of students developing their writing (Clerehen, 1996; Woodward-Kron, 2007). It is believed the provision of individual consultations during the BELA process allowed LAs to discover students' "good reasons for bad writing" (Chanock, 2007, p. A1) and comprehend the complexities of the needs of students (Huijser et al., 2008). What LAs discovered during individual consultations informed what was included in the embedded "Writing Masterclass" in the subject. The current study's finding regarding lower BELA scores being associated with lower grades on the Major Essay was consistent with what Read (2015b) alluded to.

Regarding H1 and H2, it is acknowledged that there may be a possible confounds issue at play as improvement or lack of improvement in academic essay writing may be attributed to many other factors including employment load, level of determination and utilising proof-reading services for instance. The support provided by LAs at SLS is only one of myriad factors at play. Thus, the finding that students who performed better in BELA 2 compared to BELA 1 without any support from SLS may indicate, among other things, that instruction regarding written communications skills has been successfully integrated into the subject and/or other first semester subjects, or that students already equipped with sufficient written communication skills have the capacity to succeed as demonstrated by Glew et al. (2015). It could be argued that the main aim of any PELA is to ensure those at risk of failing are provided sufficient support to succeed in university tasks. Thus, the statistically significant finding that students scoring 3 on BELA 1 who attended SLS were able to perform better on the Major Essay than their peers in the same BELA band who did not utilise SLS, makes some contribution to providing evidence for the value of ALL services, such as SLS.

Regarding the possible predictive validity of a BELA score, the result of a PELA is insufficient in predicting a student's performance in the Major Essay as a wide range of scores on the essay were obtained by students scoring each of the BELA scores. In addition, in the same way that an IELTS band 6.0 does not necessarily guarantee a student is ready to undertake tertiary studies (Murray & Arkoudis, 2013), gaining a BELA 9 does not necessarily equate to success in a first semester subject. Nevertheless, this study has demonstrated that students who score low on BELA 1 are considerably more likely to fail the Major Essay task than those who score high. In fact, the results of the study showed that students whose writing was categorised as "below satisfactory" in BELA 1 (i.e. scoring 3 or 5) were at a higher risk of failing the subject's Major Essay compared to those in the "satisfactory" category. Specifically, those scoring a 3 were almost five times more likely to fail the Major Essay compared to their counterparts who scored 9, while those who scored a 5 were almost three times more likely to fail the task. In absolute terms, the rates of failure in the Major Essay for students who scored 3 or 5 on BELA 1 were approximately 44% and 27% respectively. Thus, while a PELA score cannot be used to predict accurately an individual student's academic results, it does appear able to predict which groups are at high risk of failing writing tasks. Akin to Glew et al.'s (2015) study, these findings make some contribution to the predictive validity of a PELA, and are notable due to the apparent dearth of literature demonstrating students who score "low" on a PELA are indeed at risk of failing an assessed task or subject. Thus, it is imperative that these students are afforded as many support mechanisms as possible.

The BELA process was also found to have an indirect ability to identify a group at high risk of failing or withdrawing from the core subject. Notably, the current study found that students who did not complete BELA 1 were much more likely to fail or withdraw from the core subject than those who did. This is consistent with Read and von Randow's (2013) finding that the majority of 'avoiders' have low GPAs. Consequently, non-completion of BELA may be considered a warning sign that, due to one or more of a possible plethora of reasons, a student may be disengaged from their studies and/or may not successfully complete the subject as a result. It is, therefore, a goal of SLS to further investigate ways of promptly getting to the group of students who elect not to complete the task.

One of the main benefits of implementing BELA at Bond University lies in the "consequential validity" referred to by Read (2013, p. 232) "in the form of a positive impact on student learning", due to its ability to raise awareness to all stakeholders (students, academic and professional staff, decision-makers) of potential issues early in a student's academic career and thus enabling the process of support to be targeted at the outset. As has been previously shown in much of the literature, students experiencing difficulties often go unnoticed for a considerable period of time before problems with written communication are identified. Regardless of the reasons behind these problems, it is frequently too late to provide students with the support necessary to enable them to pass their subjects. However, once a student's writing has been identified as "below satisfactory" in BELA, the chain of support can begin with a consultation at SLS in which issues with writing can be clearly identified and suitable courses of action recommended. The co-operation between Core 1 academic staff and LAs through the BELA process goes some way towards

achieving the scaffolding of first year student learning referred to by Kift, Nelson, and Clarke (2010). This took the form of targeted resources such as the "Top Tips" screencast produced by LAs and incorporated into the introductory BELA page in the second semester of the trial, as well as the Writing Masterclass workshop which was delivered by LAs during the class lecture as a "just in time" resource to Core 1 students at the beginning of the week in which their major writing assignment was due. Such coordinated input implemented through the cooperation of academics and LAs was beneficial in promoting a supported, positive learning experience in the first semester of study

A strength of Bond University's BELA process is the approximately 90% uptake rate of BELA 1. This is considered a result of the task being embedded in the core curriculum and worth 2% towards students' overall grade for the subject. PELAs that are not mandatory often result in far lower uptake. For instance, according to Barrett-Lennard, Dunworth, and Harris (2011), despite 66% of first year students at Curtin University accessing its PELA, UniEnglish, only 14% completed the test. However, it must also be acknowledged that there is room for improvement in terms of the completion rate of BELA, especially considering it is labelled a "compulsory homework task". Edith Cowan University's PELA, which was embedded in a first-year engineering subject, reached "close to 100% participation" (Barret-Lenard et al., 2011, p. A101) and this is a goal worth aiming for.

Despite the primarily positive outcomes of the BELA, limitations were identified. Firstly, the marking scheme is limited in its scale and has a very broad set of items contained within each category as well as a considerable amount of meta-language which students might not be familiar with. While the overall result appeared to be reflective of the students' writing ability, the marking criteria themselves may not have been very helpful to students in identifying particular areas of weakness. This was especially pertinent to those who were not required to attend a consultation at SLS and were thus relying on the feedback presented in the online marking criteria. Further, the broad-based approach also meant that reliable statistical information was more difficult to achieve. In the coming semesters, this issue will be addressed with a more refined and clarified marking criteria that will clearly break down the areas on which students are being marked into simple language which will be easier for students to comprehend and yield a more comprehensive snapshot of the students' academic writing abilities. A further limitation was that no inter- nor intra-rater reliability analyses have been carried out. Reliability, along with construct validity, are essential for a test's usefulness (Bachman & Palmer, 1996); therefore, it is imperative that evidence be obtained to ensure the reliability of the task. It is believed that conducting a thorough validation study based on a framework, such as Knoch and Elder's (2013), would offer great benefit as to how the task's validity, including reliability, can be enhanced.

Another issue arising with the BELA study itself relates to the difficulty of obtaining sufficient data, particularly regarding BELA 2. The difficulty here centres on the three semester format at Bond University and the very short break between semesters. Once exams are over and assignments are completed, students are reluctant to undertake another written task which has no weighting with regard to their studies during their break. To address this, it is proposed to embed BELA 2 into a subject later in the degree programmes of undergraduate students.

9. Conclusion

This paper aimed to analyse outcomes of the implementation of BELA at Bond University. The findings from this research are positive in that they provide: (1) insight into the outcomes of "avoiders", that is those who do not complete BELA 1; and (2) evidence that a PELA can be used not only to identify students who may be in need of support regarding their written communication skills, but, importantly, that its use plays a role in contributing to such development. As has been discussed, a wide range of factors may impact the development of students' academic literacies, including writing, which means further research, particularly of a quantitative nature, is necessary to fill the gaps identified in the literature.

Embedding a PELA as early as possible into students' degree programmes targeting all students whilst being linked to various support mechanisms has been demonstrated to be effective (Harris,

2009). It is believed that the current paper adds to such demonstration. Barret-Lennard et al. (2011) recommended that tertiary institutions need to find what "best fits" their situation(s), and it would appear that BELA and the various support mechanisms in place, for now, are suitable in the context at Bond University.

Acknowledgements

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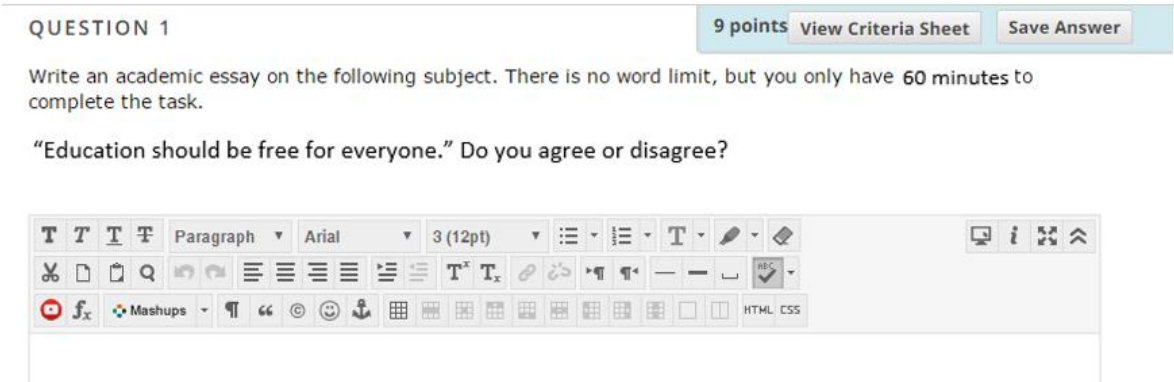
Appendix A. Indicative BELA question

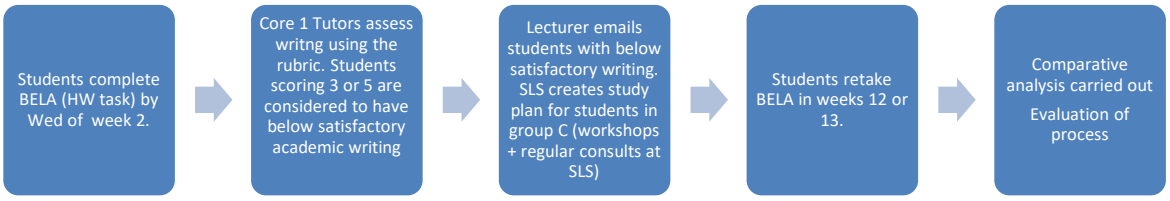


Appendix B. BELA marking scheme

Grid View | List View

	Below satisfactory	Satisfactory
Organisation	Limited / No introduction or background information given. No clear thesis statement. Limited / no topic sentences. Not logically organised. No conclusion. Poor use of paragraphs.	Introduction provides background. Contains clear thesis statement. Contains satisfactory topic sentences. Logically organised. Contains adequate conclusion. Contains logical paragraphs.
Linking and flow	Inadequate or inaccurate use of cohesive devices. Poor punctuation. Longer sentences tend to be incoherent. Reader has difficulty following the ideas.	Satisfactory use of cohesive devices. Punctuation generally correct, although there may be some omissions or misuse. Longer sentences generally coherent. Reader can follow the ideas without strain.
Grammar & vocabulary	Frequent grammatical errors. Limited range of vocabulary, with frequent errors in word choice or word formation. Mixture of formal and informal styles. Errors cause strain on the reader.	A variety of complex structures. The majority of sentences are error free. Wide range of vocabulary, despite the occasional error in word choice, spelling or word formation. The occasional slip in terms of formal style.

Appendix C. The BELA process



1. In week 1 and 2, Core 1 lecturer/tutors explain the homework task and that it is being used to determine which students may benefit from additional written communication skills support.
2. Students complete BELA through iLearn as a compulsory homework task (see Appendix A). This should not take longer than 60 minutes.
3. Tutors assess the BELAs using the rubric on iLearn (see Appendix B). SLS can assist with marking.
4. Students receive 2% homework mark towards their final grade for completing the task if their writing received a score of 7 or 9 (out of 9).
5. Core 1 lecturer emails students scoring 3, 5 or 7.
6. Students in 'Below satisfactory' category (i.e. scoring 3 or 5) will be required to meet with SLS in week 3 or 4 in order to receive 2% homework mark. In the initial SLS consultation, detailed feedback on student writing will be given.
7. Students scoring 7 will be recommended to make an appointment at SLS, but are not required to.
8. All students will be able to view the completed rubric for their writing via iLearn.
9. All students in Core 1 will be encouraged to retake the BELA (responding to a different essay question) at the end of the semester.

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