

## Open and Distance Learner Engagement with Online Mediation Tools: An Activity Theory Analysis

Judy Corinne Noeline Pullenayegem , K. Radhika M. De Silva 

& Buddhini Gayathri Jayatilleke 

*The Open University of Sri Lanka (Sri Lanka)*

[jcpul@ou.ac.lk](mailto:jcpul@ou.ac.lk), [krsil@ou.ac.lk](mailto:krsil@ou.ac.lk) & [bgjay@ou.ac.lk](mailto:bgjay@ou.ac.lk)

### Abstract

This paper presents the results of a study conducted to ascertain the extent to which participants studying in an open and distance learning context utilized the mediation tools provided in an *Advanced Writing Skills* course, conducted in a blended-learning mode in Sri Lanka. Sixty-four participants engaged in the online component of the writing course using the Process Approach. The course consisted of seven sessions; four addressing the stages of the Process Approach to writing an essay, and three practice sessions. Data were gathered from log-files of the Learning Management System, questionnaires, and interviews related to five mediation tools provided to learners. The data were analyzed utilizing Engeström's activity theory framework (1987); with focus on the contradictions that emerged in the use of each tool. First, the contradictions that emerged in participants' engagement with the tools is presented, secondly, the factors that need to be taken into account to ensure greater engagement.

**Keywords:** Mediation tools, Activity Theory, Contradictions, Open and Distance learning, Advanced writing skills, Blended-learning

### Introduction

The use of technology in higher education provides learners with greater learning opportunities and flexibility. Availability of Information Technology (IT) has provided access to a wide range of online tools that give learners access to knowledge, as well as to learn through interaction with the community by utilizing given tools. Learning in the online environment is facilitated by many Learning Management Systems (LMSs) which enable instructors to create online courses, and facilitate communication between learner-learner, and learner-tutor. It enables learners to access the online learning resources provided, and to complete assignments. Studies related to online course delivery indicate that while the online tools provided to learners to facilitate learning have a positive impact on student learning, conflicts and contradictions can emerge as learners interact with the given tools, which can adversely affect learner engagement with these tools (Benson et al., 2008; Gedera, 2014). A widely used framework to analyse learner interaction, with given online mediation tools, that has helped identify areas of conflict and contradiction particularly in the online environment is Engeström's (1987) Activity theory. This paper focuses on a study conducted in the Sri Lankan, Open and Distance Learning (ODL) context, studying English academic writing in a blended-learning course, at the Open University of Sri Lanka (OUSL). The study's findings of the extent of learner engagement with the online tools provided in the online course, and the difficulties that ensued in the interaction are presented.

## Review of Literature

Mediation is a central concept of Sociocultural Theory (SCT) that draws on the ideas developed by Russian theorist Lev Vygotsky (1896-1934). Vygotsky argued that learning and cognitive development are interconnected, and that cognition develops through interaction with other members of a community; adults, peers, tutors, parents and others, and the social settings in which it takes place (Lantolf & Thorne, 2006, pp. 197-198). Thus, according to SCT human activity is purposeful and is carried out by *actions* using physical, cultural or psychological mediation tools (Vygotsky, 1978). Therefore, learning entails considering not just the individual learner, but also the learner's social interactions, the artifacts or mediation tools employed in the interactions, and through the integration of these elements there is co-construction of knowledge. Physical tools can be anything from saws, hammers, paper, and pens, to computers which are externally oriented, whereas the symbolic or psychological tools such as language, icons, and art are internally oriented, and a combination of these types of tools mediate higher mental functions and human action (Vygotsky, 1977).

In teaching and learning English language using online mediation, a widely used LMS is the Modular Object-Oriented Dynamic Learning Environment (MOODLE) platform. This platform has several features or tools to facilitate online learning such as discussion forums (DFs), quizzes, the facility to integrate a wide range of learning resources which could be text-based documents, multimedia resources such as audio and video recordings, as well as features to upload assignments and journal entries. However, the availability of these tools within the LMS of itself does not guarantee that learners will interact with them to improve their English language writing skills (Suppasetserree & Nutprapha, 2010). Many studies have been carried out in conventional universities internationally, focusing on different areas in relation to online tools utilized in English language teaching in HE institutions (Birch & Volkov, 2007; Brine & Franken, 2006; Gedera, 2014; Mason, 2011; Murphy, 2004; Seethamraju, 2014; Yukselturk, 2010). In the Sri Lankan context there is dearth of studies in the conventional universities as well as in the ODL context. Therefore, this present study adds to the literature on this topic in the ODL context in Sri Lanka. This paper focuses on the findings in relation to the following two research questions:

- To what extent do the learners interact with the online mediation tools provided in the online component of the *Advanced Writing Skills* course to complete the given activities?
- What are the difficulties encountered by the learners in interacting with the online mediation tools?

## Context of the study

This study is part of a larger project carried out with the learners in the Diploma in English Language and Literature Programme (DELL) of the OUSL in a Blended-learning mode, with both printed course material, and online mediation tools.

The sample, for this study consisted of 64 adults; learners of English as a second language (ESL) who followed the *Advanced Writing Skills* course, was made up of both females (47), and males (17). The home language of the majority was Sinhala, followed by English, and Tamil. The majority of participants were between the ages of 20 and 30 years, followed by those between 31 and 40 years, and 14 participants over the age of 41. Regarding occupation, the majority, 39 were teachers. Of these 24 were English language teachers. Those employed in administrative capacities, and students studying at other universities were 17, while 2 were homemakers and 6 were unemployed.

The *Advanced Writing Skills* course consisted of seven (7) Face-to-Face (F-2-F) sessions. Each session was for a period of three-hours, on one or two units of the *Advanced Writing Skills* Course Book pertaining to specific stages of the PA; pre-writing, drafting and revising, editing and proofreading, and sharing (publishing), and application of all the stages in writing 3 types of essay organizational patterns. Each day-school session had at least one take-home assignment that had to be submitted online within a week before the next F-2-F session. Participants were required to interact with each other online within the assigned group in order to promote peer learning through feedback and revising. The intervening period between classroom sessions also allowed participants to gain practice in aspects of writing they were instructed in at the previous classroom session/s. Participants could choose to interact with peers at any mutually convenient time throughout each 24 hour day within each intervening week. To facilitate writing practice in the online component of the course a number of online tools were provided in each session for learner interaction and engagement through the LMS (MOODLE). These tools consisted of discussion forums, quizzes, learning resources, assignments, and reflective journals.

## Methods

A mixed methods research design (quantitative and qualitative) was used drawing on data from the LMS log-reports, questionnaires and interviews. Three (3) groups were formed with; 21 participants in the first, 20 in the second, and 23 in the third group. Analysis of the data in the online environment was conducted using Engeström's (1987) Activity Theory (AT) framework with the primary focus on areas of contradiction. The term contradictions according to AT, is used to indicate a "misfit either within elements, between elements or between different activities ... and are revealed through problems, ruptures, breakdowns or clashes" (Kuuti, 1996, p. 34). Thus, the use of the principle of contradictions in the analysis of the data in this study facilitates identifying the challenges and tensions encountered by learners in the activity system of this course in order to overcome these areas of tensions, and identify any changes necessary for the improvement and refinement of the course design. Figure 1 shows the basic structure of an activity system.

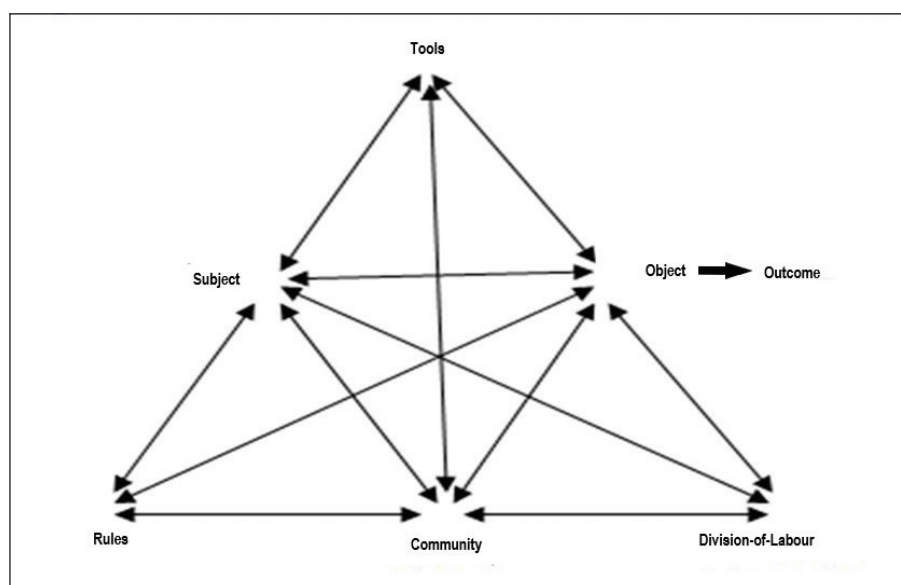


Figure 1: Engeström's (1987) model of an activity system.

This paper will focus only on the analysis of the activity triangle Subject-Tool-Object (S-T-O) of the activity system of the *Advanced Writing Skills* course shown in Figure 2.

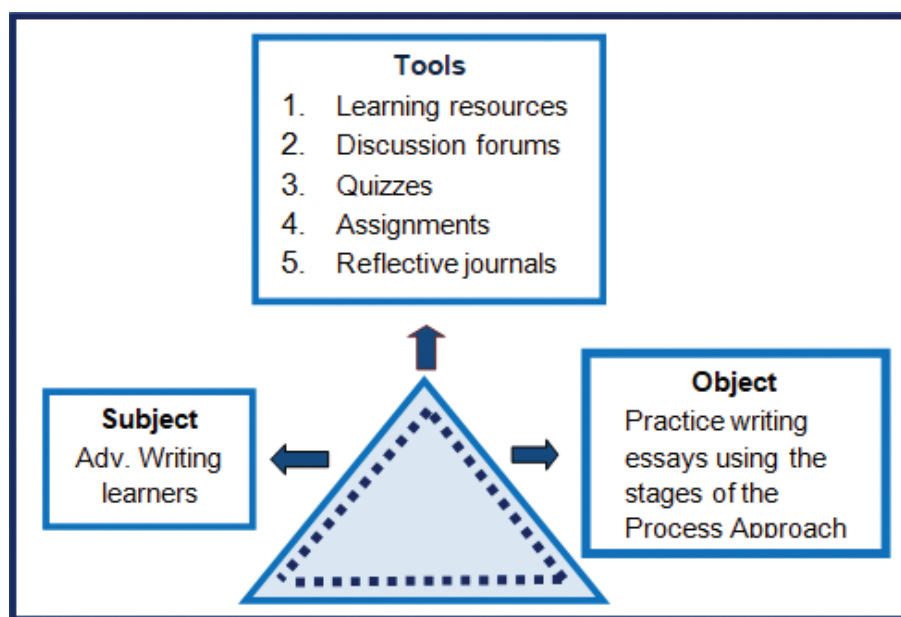


Figure 2: Activity Triangle of Subject –Tools-Object (S-T-O).

The **Subject** represents the learners of the *Advanced Writing Skills* course, who make up the sample for this study. The **Object**, the purpose of the activity, is to practice writing essays using the stages of the Process Approach (PA), to be able to achieve the desired outcome of developing competency in academic writing skills through the PA. The **Tools** are the mediation tools utilized to achieve the object of each activity outlined for each stage of the PA to essay writing. The **five tools** used were: 1) Learning Resources, 2) Discussion Forums, 3) Quizzes, 4) Assignments, and 5) Reflective Journals.

Information was extracted from viewing each participant's "Activity Report" and "Forum Posts" in the log files in the LMS of the *Advanced Writing Skills* course. The results of the Log Reports were substantiated with the results of the questionnaires, and the interview findings, and Reflective Journal entries. Quantitative data were obtained from the pre-post questionnaires, and log reports of the online activities. Qualitative data were obtained from open-ended questions in the pre and post questionnaires, online forum posts and interviews. Triangulation was done by comparing and synthesizing the quantitative and the qualitative strands of the data.

## Results

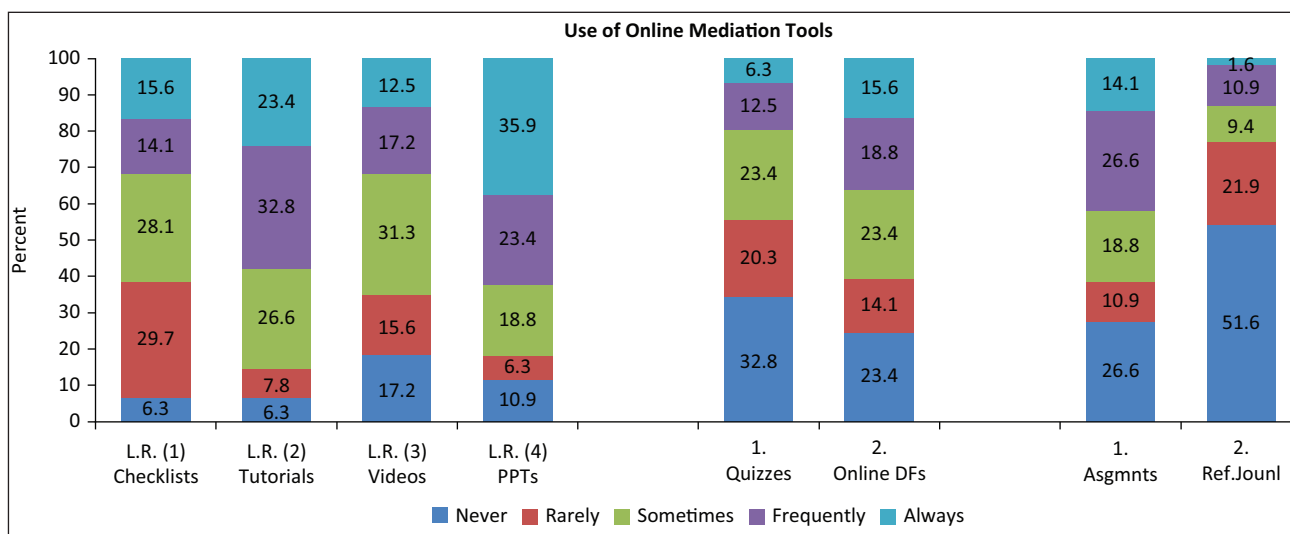
The data gathered from the Log Reports of the LMS regarding Subjects' engagement with the online tools is presented in Table 1. The highest number of participants was recorded in Session 1, with a subsequent decrease in Sessions 2 and 3. Interaction with the quizzes registered the highest number of 39 participants; more than half the sample of 64 in Session 1. The lowest level of engagement with the tools was recorded in Sessions 4 in which learners were required to edit and proofread their drafts. A slight increase above Session 4 was noted in the Sessions 5 through to Session 7 that required writing three types of essays for final submission.

Table 1: Overall results of Log Reports of interaction with mediation tools in S-T-O Activity Triangle

| Total No. of participants in study (n=64)  |                     |                                |      |           |     |           |     |                   |     |         |         |         |
|--|---------------------|--------------------------------|------|-----------|-----|-----------|-----|-------------------|-----|---------|---------|---------|
| Tools  |                     | Stages of the Process Approach |      |           |     |           |     | Application stage |     |         |         |         |
|  |                     | Stage 1                        |      | Stage 2&3 |     | Stage 4&5 |     | Stage 6           |     | Sess. 5 | Sess. 6 | Sess. 7 |
| Session 1  |                     | Act.                           | Act. | Session 2 |     | Session 3 |     | Session 4         |     | Act.    | Act.    | Act.    |
| Act.   | No.                 | 1                              | 2    | 1         | 2   | 1         | 1   | 1                 | 1   | 1       | 1       | 1       |
| No.  | No.                 | No.                            | No.  | No.       | No. | No.       | No. | No.               | No. | No.     | No.     | No.     |
| 1  | Learning Resources  | 35                             | 17   | 20        | 11  | 14        | 17  | 12                | 14  |         |         |         |
| 2  | Discussion forum    | 26                             | 25   | 24        | 19  | 19        | 5   | 9                 | 11  |         |         |         |
| 3  | Quizzes             | 39                             | 16   | 13        | 19  | 13        | 5   | 5                 | 11  |         |         |         |
| 4  | Assignments         | 20                             | 24   | 13        | 19  | 13        | 5   | 9                 | 11  |         |         |         |
| 5  | Reflective Journals | 10                             | 5    | 5         | 0   | 1         | 1   | 1                 | 1   |         |         |         |
| T. P. = Technical problem in LMS. N. R. = Not required. No. = Number of participants |                     |                                |      |           |     |           |     |                   |     |         |         |         |

To get further insight into participants' engagement with the mediation tools, the Log Reports were substantiated with results of the post questionnaire and post interviews.

Figure 3 shows the mediation tools provided to the participants, and their engagement with each tool according to the data gathered from the post questionnaire. The resource materials provided to facilitate teaching and learning in the *Learning Resources (L.R.)* tool are: *L.R. 1)* checklists, *L.R. 2)* tutorials, *L.R. 3)* videos, and *L.R. 4)* PPTs are presented. The interaction tools: Online discussion forums and Quizzes are presented separately. The Assignment tools: Assignments and Reflective Journals are also presented separately. The five (5) response variables used to determine the frequency of use of the tools are: *never*, *rarely*, *sometimes*, *frequently*, and *always*. These variables are represented in different colours with corresponding percentage results.



**Figure 3: Questionnaire results on extent of engagement with Mediation Tools.**

An analysis of the questionnaire results shows that of the tools provided, engagement with the Learning Resource tool was highest. Twenty-three (23) participants used PPTs, the next highest (15) used tutorials, which resources mostly consisted of lesson content, whilst a relatively lower number (10) used checklists, and (8) used videos. Further, these figures show that the greater number used the resources that required reading or viewing, but did not require writing.

With regard to interaction tools: Quizzes, and Online DFs; 21 (32.8%) participants never interacted with the quizzes, and 15 (23.4%) never interacted with DFs. This indicates that more than half the sample of 64 participants failed to interact with these two interaction tools. Regarding Assignment tools: Assignments, and Reflective Journals; 17 (26.6%) participants failed to submit Assignments, and more than half of the sample 33 (51.6%), did not make Reflective Journal entries. The aforementioned results enabled identifying the contradictions between and within the elements of the S-T-O.

The contradictions in the use of each of the 5 tools are next analyzed.

### *Contradictions in use of Tool-1: Learning resources*

Contradictions emerged between the *Subject* and the *Tool* elements of the S-T-O activity triangle; the learners (Subjects') and the Learning Resources (Tool). Tension arose due to the learners' view



of the items provided in the Learning Resources. Though many items were provided in the Learning Resources (Checklists, Tutorials, Videos, PPTs); the participants did not view all of these as equally important. They selected those they deemed important; PPTs and Tutorials. Another conflict identified is that some of the learners were unfamiliar with the process in using the checklists, and experienced difficulties even though the process of using the checklists was explained and demonstrated at the F-2-F day school sessions. Additionally, a contributory factor which impinged significantly on their ability to utilize the items given in the Learning Resources mediation tool was time constraints. Comments pertaining to the contradictions are indicated in Table 2.

**Table 2: Contradictions in the use of Tool – 1: Learning Resources**

| Contradiction  | Nature of contradiction                     | Comments  |
|----------------|---|---|
| Subject - Tool | Unfamiliar with process of using checklists | <i>Commenting part [using checklists] given, I use that, but then little bit difficult not used to comment like that. We are doing that simple commenting. To think and to organize ourselves and write it was a bit difficult ... [SF-6819-Interview]</i>  |
|                | Time constraints                            | <i>I felt the resource that the tutor had already put was very, very, advanced and very good; only thing was it took a long time to read because there was lot of reading information there and self-reading and ... I mean you need to have time, yeah, that was the thing which we were struggling, because to write alone for me it took one hour or one and a half hours, to construct my writing because before I type it, work on it separately in a Word document. [SF-4668-Interview]<br/>I couldn't use checklists, the challenge ... time management ... we have to arrange the time, and sit in [at] the computer... [SF-7863-Interview]<br/>`... late night, late night by that time I am also very tired so ... my work is not good at that time, I work in the morning, thing is I have to do other things in the mornings, and I can't get on at that time, so I have to get on late night sometimes it's around 11 O clock. My case it's a bit difficult. [SF-1807-Interview]</i> |

### *Contradictions in use of Tool-2: Discussion Forums*

The online DF is an important tool in the online course which facilitates peer interaction, feedback and supports learning, and sharing of knowledge as participants can view each other's work. This forum also gives opportunity for the tutor/ researcher to monitor the activities and give feedback to the learners. The contradictions that emerged in the use of this tool were between the Subject and Tool.

The most significant contradiction between the learners (Subject) and the DFs (Tool) was poor learner engagement with the Tool. Though (64) Subjects were expected to engage in the 9 DFs of the 7 sessions of the online component, less than 50% did so. The interview comments revealed that the contradiction emerged due to weak peer participation. Another conflict that emerged between the Subjects and the DF Tool was related to limited computer competency. Some experienced difficulty in using the inbuilt drawing tools in the computer to complete the given activity such as

drawing mind-maps and charts depicting narrowing down the essay topic. A further contradiction that emerged between the Subject and Tool was in editing and proofreading their work, limited English language proficiency was identified as the reason. Interview comments of participants related to the contradictions between the learners (Subject) and Discussion Forums (Tool) are presented in Table 3.

**Table 3: Contradictions in use of Tool-2: Discussion Forums**

| Contradiction  | Nature of contradiction      | Comments   |
|----------------|------------------------------|--|
| Subject - Tool | Weak peer participation      | <i>Yeah, that was a bit difficult because once I finish ... my paper then I would have to upload it, then getting someone's feedback was difficult, because sometimes people in the group would not participate at all ... that was a bit frustrating. [SF-3470-Interview]<br/>... I commented on all the member's posts at first, nobody comments on mine so I thought I won't comment also ...SF-6623-Interview]</i>   |
|                | Limited computer competency  | <i>Uploading documents was very challenging, because we didn't know. Several times I tried, I didn't know drawing and entering and sometimes I do, then the, it's, it's, not there, something has happened to it. It has gone to another page, and I found it very difficult. [SF-5719-Interview]<br/>Basically I did it [uploading mind-maps and diagrams etc], but editing and putting it in that way, the arrows and all that, I found it difficult to search those things. I wrote it on my writing book, but to upload it was a difficult task for me. That was what I, kept me, keep me without doing it further. But if someone like helped me in that, I should have participated more in that.[SF-4878-Interview]</i> |
|                | Limited language proficiency | <i>You can do the brainstorming part, you can do the writing, the hardest part comes to editing and proofreading because you will have to assess your own writing.[SM-7320-Interview]<br/>... editing] was something very hard because editing means editing our own, our own work was a little difficult because we need to realize what we have written is wrong to find that is a little difficult that was very hard [SF-4668-Interview]</i>   |

### *Contradiction in use of Tool 3- Quizzes*

Two contradictions emerged as respects the quiz feature: (1) within the mediation tool element, (2) between the Subject and Tool element.



The contradiction within the mediation tool (Quizzes) emerged due to a technical defect encountered in the inbuilt quiz design feature of the LMS. This necessitated using the “Hot Potatoes” quiz authoring program instead, as well as re-designing the quiz. The breakdown in the operation of the quiz feature revealed a further tension within the tool element. The previous quizzes only required Subjects to click on the correct button to answer a quiz and receive automated feedback. However, the re-designed quiz required written responses, which revealed a further contradiction between the Subjects and the Quiz Tool elements. Despite engagement with quizzes having the highest number of participants (39) in Session 1, when compared to all 7 Sessions, participant levels subsequently decreased significantly. The majority of Subjects manifested a noticeable reluctance to express themselves in writing, and preferred the easier task of clicking the correct button. Participants’ comments are presented in Table 4.

**Table 4: Contradiction in use of Tool 3- Quizzes**

| Contradiction | Nature of contradiction                     | Comments  |
|---------------|---|---|
| Within Tool   | Dysfunction of Quiz Feature in the LMS      | <i>I feel that I did not benefit so much, I feel that the quizzes, can err... be improved or moderated then it would be automatically corrected [SF-3673-Interview]</i>   |
| Subject-Tool  | Reluctance to express themselves in writing | <i>Quizzes, I think you can add more questions, that's easier without doing paper work there, 8 questions and radio buttons to mark the question then it's easy not very time consuming [SM-5439-Interview]</i> |

#### *Contradiction in use of Tool 4 – Assignments*

At the end of each session the participants had to upload a revised copy of their assignments, based on peer feedback, into the Assignment Drop Box to be tutor marked. Finally, on receiving tutor feedback the assignment had to be re-revised, and sent to the Final Copy Forum to be shared with peers and tutor. Contradictions emerged between (1) Subject and Object, and (2) between Subject and Tool elements of the S-T-O activity triangle in this stage.

The contradiction that emerged between (1) Subject and Object elements in the S-T-O activity triangle was due to inadequate language proficiency resulting in low participation. The highest interactions with the Assignment Tool were recorded in the activities in Session 1; the initial part of the pre-writing stage, which were less demanding. The lowest engagements were in Stage 5; that required editing and proofreading. This was also observed in Sessions 5, 6, and 7 of the Application Stage. The interview comments revealed that the contradiction emerged as a result of some participants finding it difficult to meet the assignment’s requirements, due to limited English language writing skills. The Assignment Tool required the learners to engage in all stages of the PA, which included editing and proofreading their assignments prior to sending them for tutor feedback. However, this was a challenge for some learners, and was highlighted at the interviews.

Additionally, tension was observed in the elements of (2) Subject and Tool due to a lack of rewards or marks being allocated for the assignments, resulting in a lack of motivation to engage with the Assignment Tool. This too was highlighted by the learners at the interviews.

Sample interview responses are presented in Table 5.

**Table 5: Contradiction in use of Tool 4 – Assignments**

| Contradiction   | Nature of contradiction                  | Comments  |
|-----------------|--|---|
| Subject-Tool    | Low engagement due to lack of motivation | <i>When we were doing the class, we dint take it that seriously, but after coming all the way at the very end we feel like, all are friends, we used to talk, we should have done it more, we all ways say Madam pushed us so much and you know if we had done more it would have been helpful for us, because there were lot of assignments, we were given lot of time to do so, yeah, on our part we didn't do all the assignments. I of course tried to do the most , yeah, ... but there were lot of friends, but they didn't do much if we have done that or what was given there. Would have been immensely helpful SF-6623-Interview]</i><br><i>If marks given for assignments, then of course, I have to be very honest, then of course ...if you say like: ok, if you are an active participant online, then I am going to give you the marks in the class, then of course all of us would try, that is I would say a personal influence [SF-3729-Interview]</i> |
| Subject -Object | Inadequate language skills               | <i>I try to correct, sometimes, I couldn't, I don't have idea about how to correct mistakes [SF-2643-Intevieiw]</i><br><i>Actually, the thing is editing is the most difficult part and ... very difficult that use correct academic and very correct form of the grammar, we can write, but academic form, academic form, we should I think we should do it ourself [sic], but the editing re-checking, editing rechecking, that is very important [SF-7471-Interview].</i>  |

#### *Contradictions in use of Tool 5- Reflective Journal*

The final assignment required participants to write a reflective journal entry after each session on a Word document and upload it to the Reflective Journal Forum.

The most noteworthy contradiction in the use of the Reflective Journal was between the Subject and Tool (Table 6). Engagement with this tool in the 7 sessions was low; lower than all other mediation tools. The highest number (10) participants engaged with this Tool in Session 1. Thereafter, engagement levels in journal entries decreased to 5 participants in Sessions 2 and 3, and subsequently to 1 participant in the application stage.

**Table 6: Contradictions in use of Tool 5- Reflective Journal**

| Contradiction | Nature of contradiction                  | Comments   |
|---------------|--|--|
| Subject-Tool  | Low engagement due to lack of motivation | <i>The thing is this, now we have the result, thereafter no personal encouragement to do something, the later part you mention something, now your assignment is ok!<br/>Very good! Well done! Something like that, then we have no idea to do that part [writing reflective journals] [SM-2947-Interview]<br/>I think even, I hadn't done all reflective journals online, because like I said, maybe we didn't want to sit and do that, I am just giving my opinion [SF-1620-Interview]</i> |

## Discussion

The analysis of extent of engagement with the online mediation tools reveals that learner engagement was low with all 5 mediation tools in the activity triangle of the S-T-O. The primary contradictions that emerged were evident between the Subject (Learner) and all 5 mediation Tools. In the use of Tool 4 (Assignments) contradictions emerged between the Subject (Learner) and Object. Also, contradictions were observed within the Tool element in the use of Tool 3 (Quizzes). Among the most noteworthy contributory factors for these contradictions were; lack of motivation, time constraints, as well as limited language proficiency. Other contributory factors were; technical issues and limited computer competency.

### Motivation

The quantitative and qualitative findings show that both external and internal aspects of motivation contributed to the tension in the (S-T-O) activity triangle of the activity system. External factors adversely affected both interaction and engagement in the assigned activities, as well as feedback which was ascertained from the log file reports, and confirmed by the interview responses. The interview responses reveal that the two primary reasons were the lack of incentives because no marks were allocated for engagement with the tools, and the other was that engagement was not compulsory. A similar lack of incentive was noted in other studies (Aduayi-Akue et al., 2017; Aziz, 2003; Fung, 2004; Hin, 2011). Conversely, studies conducted by Nandi et al. (2011), attributed greater participation in the DFs because marks were awarded.

In considering the internal aspects of motivation that contributed to the tension in the activity triangle, it was observed that most participants failed to recognize the intrinsic value of the tools provided. These results show that external and internal motivation is vital to ensure greater participation in course activities.

### *Time constraints*

Time constraints due to personal and institutional factors impinged on the level of engagement with the tools. This was observed within and between Subject-Tool. These results were endorsed by the interview responses. Time constraints due to personal factors were because the majority of participants were adult learners, and the majority 56 was employed with secular and domestic commitments. Balancing these multiple roles along with their studies was challenging (Quimbly & O'Brien, 2004, Topham, 2015). These commitments impinged on the level of participation because time was required to think about what to say in order to contribute meaningfully to online DFs. The results revealed that only around 50% of the total sample participated in the online DFs. The highest number of participants was in the first session because the activities in this session were less demanding of their time. Thereafter, the number who participated decreased in the subsequent sessions because more time was required to complete the given activities.

Additionally, personal circumstances of ESL learners, who are adults with secular, domestic and other commitments including studying other subjects, experience difficulty completing course work (De Silva & Devendra, 2015; Vidanapathirana, 2006; Vidanapathirana & Gamini, 2009).

### *English language proficiency*

Disparate English language proficiency contributed to contradictions in the activity triangle (S-T-O). The findings revealed a close interrelationship between interaction, feedback and motivation; one can cause a reaction in another and *vice versa*. The interview responses confirmed these results. The findings also show that there was a significant relationship between language proficiency and online interaction, as endorsed in the study conducted by Leung (2013). In the present research, participants who were less proficient in the English language engaged minimally in the assigned activities using the mediation tools. This was especially evident in the Editing and Proofreading session which required higher English proficiency. This resulted in reduced feedback on peer submissions. These results corroborate with the findings by Jayatilleke and Gunawardena (2016) in their study on online learning and cross-cultural e-mentoring, which revealed that the participants with limited linguistic proficiency participated less, and therefore suggested that this limitation of these ESL learners be taken into consideration when designing online activities.

### *Technology*

Technological issues contributed to the level of interaction between the participants (Subject) and (Tools) in the (S-T-O) activity triangle. Tensions within the (Tool) element were evident due to a breakdown in the quiz feature of the LMS. The analysis of the log reports in the LMS revealed that the tool most utilized by participants was the quiz feature. The reasons for this were provided in the interview responses which showed that it was convenient, gave them instant feedback, included a score, and did not involve much written work. However, due to dysfunction of this tool, the participation was adversely impacted. Gedera and Williams (2016) study also reported learner frustration and tension when experiencing difficulty in downloading podcasts. The results of the present research also revealed that technology plays a significant role in maintaining student interest and technological failures can de-motivate learners.

## Pedagogy

The findings show that contradictions related to pedagogy were present in the activity triangle (S-T-O). The contradiction between the participants (subjects) and the (Tool) was due to a breakdown in the quiz feature and dissatisfaction with the re-designed alternate quiz. The findings in the log reports is confirmed by the interview responses that showed that participants were dissatisfied with the alternate quiz design, which was deemed to be time consuming. This draws attention to the importance of designing learning activities and providing mediation tools such as quizzes that would sustain engagement (Jeffrey et al., 2014).

The findings of this research show that the learners used a variety of mediating artifacts (tools) that were specially designed for the course to help in their writing processes. These included the online Learning Resources tool, which had a variety of learning materials such as checklists, PPTs, Tutorials, and videos, as well as four other tools: DFs, online quizzes, assignments, and reflective journals. While the learners used these mediation tools, some did so to a greater extent than others. However, at the commencement of the course the importance of these tools and reasons for using them was not sufficiently impressed on them. Thus, facilitators and tutors could, before the commencement of future courses, make the learners aware of the importance of these resources as a means of improving their writing skills, which might also serve to increase learner engagement with these tools and thereby improve their writing skills.

Also the findings of the present research revealed that the learner engagement in the quizzes integrated into the online component was high, until the breakdown of the quiz feature of the LMS. Therefore, the online teacher could include an interesting variety of quizzes into the quiz feature of the LMS to stimulate and sustain learner interest. Quizzes that require less writing, are not time consuming, and provide instant feedback with a score, that will sustain learner interest (Aziz, 2003).

The institutional implication that surfaced in this research is related to technology and plays a significant role in learner engagement. A technological concern that surfaced in the research was related to the dysfunction in the quiz feature of the LMS, which de-motivated learners. Other researchers also confirm that this is a challenge facing DE institutions that have adopted online learning (Mahlangu, 2018; El Mansour & Mupinga, 2007). This finding shows that HE institutions which have adopted online learning will need to take into consideration learner de-motivation and set in place mechanisms to address technology related issues promptly.

## Conclusion

The results of this study reveal that although the mediation tools were provided to enhance academic writing, these tools were under-utilized by participants. The most significant contradictions emerged between the learners (Subject) and the mediation (Tools). The noteworthy contributory factors for the contradictions were time constraints, a lack of motivation, and disparate language proficiency. The personal circumstances of the ODL learners, who are adults with secular, domestic and other commitments, impinged significantly in engagement with the given tools. However, as suggested by the learners, if incentives were offered, such as the allocation of marks, it would have prompted them to greater engagement. De-motivation and technology related issues need to be given due consideration by HE institutions by setting in place appropriate mechanisms. As Foot (2001) explained, through identification of contradictions in the Activity Theory, it was possible to gain illumination into areas that need to be given attention to, and changed as well as developed in the design of the course to enable greater learner engagement.



## References

- Aduayi-Akue, J., Lotchi, K., Parveen, S., Onatsu, T. & Pehkonen-Elmi, E. (2017). Motivation of online learners. *JAMK Open Access Online Magazines, Evolving Pedagogy – Greetings from Finland*. Retrieved from <https://verkkolehdet.jamk.fi/ev-peda/2017/01/25/motivation-of-online-learners/>
- Aziz, S. M. (2003). Online quizzes for enhancing student learning in a first-year engineering course. In *Proceedings of the International Conference on Engineering Education*. July 21–25, 2003 Valencia, Spain, 1-8. Retrieved from [https://www.researchgate.net/publication/228400601\\_Online\\_Quizzes\\_for\\_Enhancing\\_Student\\_Learning\\_in\\_a\\_First\\_Year\\_Engineering\\_Course](https://www.researchgate.net/publication/228400601_Online_Quizzes_for_Enhancing_Student_Learning_in_a_First_Year_Engineering_Course)
- Benson, A., Lawler, C., Whitworth, A. (2008). Rules, roles and tools: Activity theory and the comparative study of e-learning. *British Journal of Educational Technology*, 39(3), 456-467. <https://doi.org/10.1111/j.1467-8535.2008.00838>
- Birch, D. & Volkov, M. (2007). Assessment of online reflections: Engaging English second language (ESL) students. *Australasian Journal of Educational Technology*, 23(3). Retrieved from <https://www.learntechlib.org/p/44502/>
- Brine, J. W., & Franken, M. (2006). Students' perceptions of a selected aspect of a computer mediated academic writing program: An activity theory analysis. *Australasian Journal of Educational Technology* 22(1), 21-38. <https://doi.org/10.14742/ajet.1305>
- De Silva, R., & Devendra, D. (2015). Responding to English language needs of undergraduates: Challenges and constraints. *OUSL Journal*, 7, 1–24. <http://doi.org/10.4038/ouslj.v7i0.7305>
- El Mansour, B., & Mupinga, D. M. (2007). Students' positive and negative experiences in hybrid and online classes. *College Student Journal*, 41(1), 242-248. Retrieved from <https://www.learntechlib.org/p/101004>
- Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit. Retrieved from <http://lhc.ucsd.edu/mca/Paper/Engestrom/Learning-by-Expanding.pdf>
- Fung, Y. Y. H. (2004) Collaborative online learning: Interaction patterns and limiting factors. *Open Learning*, 19, 135-149. <https://doi.org/10.1080/0268051042000224743>
- Foot, K. A. (2001). Cultural-historical activity theory as practice theory: Illuminating the development of a conflict-monitoring network. *Communication Theory*, 11(1), 56-83. <https://doi.org/10.1111/j.1468-2885.2001.tb00233.x>
- Gedera, D. S. P. (2014). Tool mediation and learner engagement: an Activity Theory perspective. In B. Hegarty, J. McDonald, & S-K. Loke (Eds.), *Rhetoric and reality: Critical perspectives on educational technology. Proceedings ASCILITE, Dunedin 2014* (pp.42-48). Retrieved from <https://www.ascilite.org/conferences/dunedin2014/files/fullpapers/57-Gedera.pdf>
- Gedera, D. S. P., & Williams, P. J. (Eds.) (2016). *Activity Theory in education research and practice*. Sense Publishers. <https://doi.org/10.1007/978-94-6300-387-2>
- Hin, L. C. B. (2011). Effect of incentivized online activities on e-learning. *Procedia –Social and Behavioral Sciences*, 28, 211-216. <https://doi.org/10.1016/j.sbspro.2011.11.040>
- Jayatilleke, B.G. & Gunawardena, C. (2016), Cultural perceptions of online learning transnational faculty perspectives, *Asian Association of Open Universities Journal*, 11(1), 50-63. <https://doi.org/10.1108/AAOUJ-07-2016-0019>
- Jeffrey, L. M., Milne, J., Suddaby, G., & Higgins, A. (2014). Blended learning: How teachers balance the blend of online and classroom components. *Journal of Information Technology Education: Research*, 13, 121-140. Retrieved from <http://www.jite.org/documents/Vol13/JITEv13ResearchP121-140Jeffrey0460.pdf>
- Kuuti, K. (1996). Activity Theory as a Potential Framework for Human-Computer Interaction Research, In B. Nardi (ed.). *Context and consciousness: Activity theory and human computer interaction*. MIT Press (pp. 17-44). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.92.5417&rep=rep1&type=pdf>



- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural Theory and The Genesis of Second Language Development*. Oxford University Press.
- Leung, S. (2013). English proficiency and participation in online discussion for learning. Paper presented at *IADIS International Conference on Cognition and Exploratory Learning in Digital Age (CELDA 2013)*. Fort Worth, TX, Oct 22-24, 2013. Retrieved from <https://files.eric.ed.gov/fulltext/ED562207.pdf>
- Mahlangu, V.P. (2018). The good, the bad, and the ugly of distance learning in higher education. *Trends in E-learning*, 17-29. <https://doi.org/10.5772/intechopen.75702>
- Mason, R. B. (2011). Student engagement with, and participation in an E-forum. *Educational Technology & Society*, 14(2), 258–268. Retrieved from <https://www.learntechlib.org/p/52346/>
- Murphy, E. (2004). Recognising and promoting collaboration in an online asynchronous discussion. *BJET British Journal of Educational Technology*, 35(4), 421-431. <https://doi.org/10.1111/j.0007-1013.2004.00401.x>
- Nandi, D., Hamilton, M., Harland, J., & Warburton, G. (2011). How active are students in online discussion forums? In J. Hamer and M. de Raadt (Eds.). *Conferences in Research and Practice in Information Technology (CRPIT)*, 114. *Proceedings in 13th Australasian Computing Education Conference (ACE2011)*, Perth, Australia: Australian Computer Society, Inc.
- Quimby, J. L., & O'Brien, K. M. (2004). Predictors of student and career decision-making self-efficacy among nontraditional college women. *The Career Development Quarterly*, 52(4), 323–339. <https://doi.org/10.1002/j.2161-0045.2004.tb00949.x>
- Seethamraju, R. (2014). Effectiveness of using online discussion forum for case study analysis. *Education Research International 2014*. <http://dx.doi.org/10.1155/2014/589860>
- Suppasetsee, S., & Nutprapha, K. D. (2010). The Use of Moodle for teaching and learning English at tertiary level in Thailand. *International Journal of the Humanities*, 8(6), 29-46. <https://doi.org/10.18848/1447-9508/CGP/v08i06/42964>
- Topham, P. (2015). *Older adults in their first year at university: Challenges, resources and support*. Bristol, UK: University of the West of England. Retrieved from <https://uwe-repository.worktribe.com/output/831416/older-adult-students-in-their-first-year-at-university-challenges-resources-and-support>
- Vidanapathirana, U. (2006). Language barrier in a multi-lingual environment: making sense of issues and problems from the perspective of students of the BA degree in Social Sciences (BASS). *Paper presented at 4th Pan Commonwealth on Achieving Development Goals: Innovation, Learning, Collaboration and Foundations*. 30 October - 3 November, 2006, Ocho Rios, Jamaica.
- Vidanapathirana, U., & Gamini, L. P. S. (2009). Medium of instruction, language proficiency and learner profiles: Impact of English proficiency on the performance of learners following the BA Degree in Social Sciences. *OUSL Journal*, 5, 41-59. <http://doi.org/10.4038/ouslj.v5i0.2142>
- Vygotsky, L. S. (1977). The development of higher psychological functions, *Soviet Psychology*, 15(3), 60-73. <https://doi.org/10.2753/RPO1061-0405150360>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Yukselturk, E. (2010). An investigation of factors affecting student participation level in an online discussion forum. *TOJET: The Turkish Online Journal of Educational Technology*, 9(2) 24-32. Retrieved from <https://files.eric.ed.gov/fulltext/EJ897999.pdf>