

Peer Critique Using the Discussion Forum: A Case of Two Honours Students

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ABSTRACT This paper is an interpretive case study of two honours students' critique of a research proposal using the discussion forum. Purposive sampling, document analysis and observation were used for data generation while the findings were presented through guided analysis. Whereas, the DF facilitated active student engagement evidenced by the participation of all the students, the two students exhibited different levels of critique. It emerged that the students engaged at the lower and middle levels of Blooms taxonomy that is, the theoretical framework of the study rather than at the higher level, which speaks directly to the student's learning outcomes (as honours students). For online resources, hardware and software were used consciously whilst ideological-ware seemed to have been used coincidentally. This paper recommends research training that privileges peer critiquing and training for educators that emphasises technology of education or ideological-ware over technology in education or hardware and software tempered with teaching presence.

INTRODUCTION

Learning management sites (LMS) are now ubiquitously used in higher education institutions. According to Govender and Khoza (2017: 70) these platforms support online interaction facilitating an array of multimedia activities ranging from organising, managing, tracking, uploading and accessing messages and discussions but most importantly 'stimulating creativity in teaching and learning'. However, as much as these facilities are available to educators and students, their efficient and effective use has not been established. There is, therefore, a need to observe the use of these LMS by educators and students. Educators need to empower the students to attain their full creative potential through interaction. Similarly, students' learning profiles differ which means their uptake of the LMS and its accompanying learning opportunities may vary. It is for this reason that this paper aims to explore the manner in which two honours' students critique a proposal using the discussion forum (DF).

Burns and Grove (2005: 26) define critique as "systematic, unbiased, careful, examination of all aspects of a study to judge the merits, limitations, meanings and significance based on pre-

vious research experience and knowledge of the topic." Critique is at the heart of any well written research and students at higher education institutions are expected to possess a good grasp of it to enable them carry out research which is at the core of higher education learning.

Khoza (2015b: 102) posits that critique is very crucial, and for its effectiveness there is need for it to occur at three levels: technical critique (taught by the lecturers - following a certain theory as it is), practical critique (reflect about their practice – what they were given by their lecturers – applicability) and critical critique (that will enable the students handle different situations in their careers and daily lives drawing from their experience as well as a need for social justice). According to Gay and Kirkland (2003), self-reflection leads to critical thinking which in essence, is critical critique.

Critique is key in any university student's arsenal as it is the cornerstone to deeper learning. Honours students are novice researchers and just getting inducted into academic practice where knowledge development involves, among other activities, developing students' writing skills (Wellington 2010). The challenge then lies in the fact that students are not using critical critique in their academic writing, most

remain at the level of technical critique and practical critique, yet critical critique is the cornerstone of deeper learning. Peer critiquing provides the students with practice in critiquing, therefore enhancing their writing skills as well as their level of critique. Students' engagement is generally at the level of applying, understanding and remembering (Anderson and Krathwohl 2001). However, for students to effectively critique they need to be able to operate at all the three levels of Bloom's taxonomy (lower order, middle order and higher order).

Higher education institutions tend to expect postgraduate students to write academic papers for funding purposes without the requisite support and/or training in acquiring relevant critiquing skills (Khoza and Manik 2015). It is assumed that students at this level already possess these skills. Wellington (2010: 147) opines that writing is a complex process that cannot be left to metamorphose on its own but rather "students' writing can and should be developed as part of their (sic) academic journey." He further states that various stakeholders should get involved such as "the supervisor(s) in giving formative feedback on writing throughout the programme; sessions and workshops run by the faculty, or the graduate school, some of the onus should be placed on the student to make a conscious effort to improve their writing skills and finally, the language teaching centre, or similar setup."

Khoza (2015b: 103) asserts that when students use "conscious minds" then they can engage in critical critique but when they use "habit or the sub-conscious mind" then they operate at the level of technical and practical critique which answers the 'what' question and does not go deeper into the 'how and why' questions. Shulman and Shulman (2007: 219) advocate experience, meaning that students should come together as "members of a professional community ready, willing and able to teach and learn from [this] experience." This suggests that peer critiquing may be important in providing this much needed experience.

Bloom et al. (1956) formulated a taxonomy of the cognitive domain that comprised a hierarchy of lower order (technical- remembering and understanding), middle order (practical - applying and analyzing) and higher order (critical-evaluating and creating) thinking that is significant in writing and has been used as the theoretical framework of this paper. The aim of this

paper is to enable educators to identify areas to assist their students in the learning process as educators have the task of getting the students' thought processes to the higher order thinking levels of synthesis/creating and evaluation (levels 5 and 6) and to enable students to recognise the level they are at and by so doing to improve their writing.

Literature Review

Critique

Richards and Schmidt (2013) as well as Burns and Grove's (2005) define critique as evaluation. Evaluation is the fifth level of Bloom's cognitive domain and falls among the higher order thinking process or what has been referred to earlier as critical critique. Honours students are at level four of their undergraduate degree and are expected to operate within the higher order thinking processes within the taxonomy. Garrison (2007) identifies cognitive presence, social presence and teaching presence as essential elements to an educational transaction. Teaching presence is by way of lecture guide/notes posted on the discussion forum and other teaching resources found on the learning management system as well as the direct instructions given by the lecturer before and during the assignment. The observation will look for discussion threads which reflect the presence of either/or all of these three elements. Garrison (2007) defines teaching presence (TP) as organizing cognitive and social processes to enable the realization of worthwhile educational learning outcomes. Social presence (SP) is defined as the social and emotional interaction of learners and cognitive presence (CP) as the way meaning construction occurs among students. Teaching presence entails designing the educational experience and learning activities, facilitation and assessments. SP supports CP indirectly facilitating the process of critical thinking while TP supports and enhances SP and CP to realise learning outcomes.

Caffarella and Barnett (2000) in a study of postgraduate students, stressed the importance of students engaging in receiving and giving critiques on writing. Peer critique using critical partners is also supported by Wellington (2010) when he recommends the importance of receiving and giving feedback as a solution to solving students' affective writing problems. He sug-

gests “formative, sympathetic peer critique of writing in its earlier drafts built into programmes. Students could be guided to look at their peers’ work in a structured way by encouraging them to examine and critique, in a civil way, aspects of writing other than the content, that is the structure, the signposting, the ‘introducing and concluding’, the clarity of sentences, the exegesis of the literature, the criticality, the cogency of arguments, and the claims and recommendations made” (Wellington 2010: 148). This suggests that students may be used to critique the form of writing such as on ‘technical errors’ in the writing as well as content related critique and by so doing they can build their repertoire of writing skills.

Online Resources

Online resources comprise tangible aspects of teaching and learning (Hardware [HW] and Software [SW]) as well as intangible aspects (Ideological-ware [IW]). HW constitutes teaching tools/machines (computers) whereas SW comprises materials used in conjunction with the teaching tools (computer CD/DVD). IW consists of teaching/learning strategies and experiences (Khoza 2015a). Percival and Ellington (1988) categorize HW and SW, as Technology in Education (TIE) and IW, as Technology of Education (TOE). The use of the discussion forum falls within HW and SW whereas critique falls within the IW. This paper seeks to understand how the participants use the aforementioned online resources.

Discussion Forum

Modular object – oriented dynamic learning environment (MOODLE) is a Learning Management systems (LMS) that enables synchronous interaction (chats) and asynchronous interaction (discussion forums). Govender and Khoza (2017) contend that LMSs (e-learning platforms) are a teaching and learning intervention that support online interaction ranging from organising, managing, tracking, uploading and accessing messages as well as enhancing creativity thereby stimulating students’ critical thinking and problem solving abilities. The discussion forum enables asynchronous learning which is based on constructivism and privileges collaborative learning via peer to peer interaction as

well as self-study allowing flexibility thus making it more commonly used than the chats (synchronous/real time).

Hew et al. (2010: 572) define a discussion forum as “a text based computer mediated communication environment that allows individuals to interact with one another without the constraint of time and place.” Communication within a discussion forum is asynchronous and data stored within it is saved on the virtual space and can be revisited several times enabling adequate time for reflection on the content before a response can be made. A discussion forum allows a wide readership and lecturers/peers can address students’ concerns at any place/time. Shy students who are overpowered by the more active students in the face to face environment can get a voice (Khoza 2012). A DF primarily enables students to exchange ideas, share multiple perspectives and clarify understanding drawing on a learner-centered approach to learning. The section that follows will address research on discussion forums.

Related Studies

Most studies on discussion forums have been done in Asia and Europe with Singapore, Taiwan and U.S.A leading (Loncar et al. 2014). There has been a paucity of research on the same topic from the African continent. Hou (2011) examined 32 students’ behavior and content in actual discussions using situated learning. In one case, students were assigned roles, and in the other no roles were assigned. Data were generated quantitatively and qualitatively using Blooms revised cognitive domain as an analytical tool. Findings suggest that students’ cognition levels lacked depth and mainly used level two (understanding) and level four (analysis). They recommend the use of roleplay in situated learning as it elicited more focused and better quality discussion. Most of their data were generated and discussed quantitatively however, their sample size of 32 participants was too small to facilitate generalization and thirty-four percent of their sample were peripheral participants meaning only 10 participants actively participated in the study.

A study by Khoza and Manik (2015) on post-graduate students experiences of using digital technology in undertaking research noted that higher education institutions have prioritized

research output and productivity units at the expense of teaching, however, the digital needs of the postgraduate students were not adequately addressed hence leading to challenges in the students' smooth undertaking of their studies. They recommend the training of postgraduate students as well as putting digital support structures in place to ensure the effective throughput of postgraduate students. The study discusses the postgraduate students' experiences, however, they do not identify the sample size of the students, and they only mention students pursuing curriculum studies and geography so it is left to the reader to guess how many students these could be. The recommendations of this study may ensure the students move from technical critique and practical critique to critical critique as they will have been trained on proper writing skills and thus be confident to critique any academic work. It will also enable the students to move away from general knowledge and focus on scientific knowledge. Hoadley and Jansen (2012) assert that general knowledge as opposed to scientific knowledge is learnt anywhere in a manner that is unplanned and emanates from social conversations based on people's opinions similar to social presence.

Hew et al. (2010) used 50 empirical studies to identify factors that limit student contribution in DFs. Use of grades, number of postings and instructor facilitation were outlined as potential guideline dilemmas. Case studies with students acting as facilitators were carried out. Results indicate students took control of their learning through facilitation and they recommend it as a way to address the instructor facilitation dilemma. The participants in this study however, were students drawn from a technological field and as such were tech savvy whereas the majority of students aren't necessarily in a technology field and may not be confident using the DF. Their recommendation was limited to only one of the three potential dilemmas identified.

Mokoena (2013) examined factors that encouraged postgraduate certificate in education student engagement and participation in an online DF. His sample comprised students pursuing teacher education via open and distance learning. A qualitative case study was the main approach though percentages were drawn using quantitative methods. Data sets consisted of students' forum posts. Results indicate that participation does not lead to effective use and

enhanced student learning. He recommends social presence by the lecturer through technical support, constructive feedback and setting clear goals and organization of the task. The research design used in this study made it difficult to authenticate the findings of this study as in identifying the themes, the researcher refers to substantive posts that imply serious thought process, but does not state what these are thus leaving it to the readers' imagination. Quantitative methods are used to present the findings of a qualitative study. The sample size, number of posts viewed (data set) and the forum task the students were posting/commenting on is not identified. Research shows that authentic tasks enhance student engagement and participation (Amory 2014).

Wellington (2010) explored affective writing problems of postgraduate students and their possible solutions, he found that students feelings and attitudes played a crucial role in their writing and he recommends developing students writing skills, providing positive critique through receiving and giving feedback, promoting a 'knowledge development' attitude to writing, recognising and addressing the affective domain. The first recommendation resounds with Khoza and Manik (2015) view that postgraduate students should be trained, promoting peer critique enables the student have a good grasp of academic writing dos and don'ts. The researcher concurs with Wellington's view on recognising the role of attitudes and feelings in the writing process, as based on his own experience as a postgraduate student, writing can be a very daunting task and is both draining and exciting and so cognition and affective aspects are of equal importance.

According to Ekahitanond (2014), in a study to investigate the impact of critical inquiry model through peer feedback activities in an online environment, found that the application of critical inquiry model and peer feedback strategy can promote critical thinking skills despite some studies indicating that online discussion forums often foster lower level critique (technical and practical) especially when students are permitted to engage at a level of sharing and comparing views. However, when educators take charge of the discussion through teaching presence and stimulate debate it encourages higher level critique (critical) and knowledge construction. This suggests that educators should be visible on-

line and actively engage in the discussions to foster critical critique. There is need to train educators so that they can be available to assist students who are in need rather than referring students to technicians (Francis and Roux 2011). Use of e-mails is a good starting point for students to familiarize themselves with online discussion environments as e-mails function in a similar way to the online discussion. This process may occur at the onset of the students' course and all through to the project/proposal level.

Yulselturk (2010) in a study to identify factors that affect students' participation in a DF found that achievement, internet use hours and gender affected participation. The gender aspect augments Thomas (2002) argument that the non-linear branching structure of the online DF may be insufficient in the realization of truly conversational modes of learning. He further states that students viewed the online discussion forum as being disjointed, stilted, less spontaneous, less immediate, time consuming and difficult to use, promoting individualistic rather than interactive learning. The conversational element of a discussion is lost as writing is transactional whereas speaking is interactional. This suggests that online DFs and LMSs continue to generate debate and further research on the topic needs to be done to address strategies that will promote active, meaningful student engagement and knowledge creation in this learning space.

Blooms Taxonomy

Blooms taxonomy, the theoretical framework used in this paper, has dominated the field of education since its development in the 1950s (Bloom et al. 1956.), it has however been revised over the years to adapt to the current teaching and learning needs. Bloom et al. (1956) developed domains in learning aimed at providing a classification of the goals of an education system on which teachers could build a curriculum and use to assess learning outcomes. They believed teachers should design lessons and tasks to help students meet stated learning objectives, which had to be measurable and specific in terms of what students could accomplish at the end of the learning process. The taxonomy had 3 domains – cognitive, affective and psycho-motor – and within each of these domains they recognised that there was an ascending order of complexity.

The psychomotor domain mainly emphasises physical skills involving co-ordination of the brain and muscular activity. The affective domain deals with “attitudes”, “feelings”, “values” (Bloom et al. 1964). This domain is concerned with issues relating to the emotional component of learning and ranges from basic willingness to receive information to the integration of beliefs, ideas and attitudes. Wellington (2010) argues that it is a crucial component in developing post-graduate students writing skills as it involves strong feelings and emotions. He however acknowledges that writing is part of the thinking process and requires a lot of “cognition energy” Wellington (2010: 148).

The cognitive domain, the lens used in this paper, is the component of Bloom's taxonomy of educational objectives that involves thinking/cognition process (thought, reasoning, understanding, intellect). The domain encompasses six successive levels arranged in a hierarchy from the lowest to the highest: 1. Knowledge; 2. Comprehension; 3. Application; 4. Analysis; 5. Synthesis; 6. Evaluation. The cognitive domain provides a framework in which educators can assess thinking behaviours from the simple recall of facts up to the process of analysis and evaluation building upon prior learning to develop more complex levels of understanding (Kennedy et al. 2006). The domain was their attempt to situate the various thinking processes in a hierarchy with mastery of one level leading to ascension to the next level for example, for a student to use application of knowledge (level 3), they should be able to have the requisite information (level 1) and the comprehension/understanding of it (level 2).

Research Purpose/Research Questions

This paper explores two honours students' critique of two research proposals using the discussion forum, the writers' specific focus is on the manner in which the critique was carried out using online resources. This paper may help the students and lecturer enhance the educational experience and to better achieve the learning outcomes of the module by engaging in critical critique. The data generation is aligned along the following research questions:

- ♦ How do students critique their proposals using the DF?

- ♦ What levels of critique do students engage in on the DF?

RESEARCH DESIGN AND METHODOLOGY

Critique was explored through the interpretive paradigm. Interpretivism enables in-depth understanding of people's lived experiences (Creswell 2014). Honours students represent a cohort of learners who from this perspective are a unit of analysis and thus comprise the case. The two participants were drawn from an initial group of eighteen honours students however, the two students were selected to give an in-depth perspective of the phenomenon (peer critique). The two participants also exhibit two extreme ends of critique and would, therefore, make an interesting analysis. The case study method while not allowing for statistical generalization, can allow for analytical generalisation (Yin 2009). An interpretive case study is suitable for this study as it enables a detailed exploration of the phenomenon, is open-ended and occurs in the participants' natural settings (Jwan and Ong'ondo 2011).

Sampling Techniques

Convenience and purposive sampling of eighteen honours students comprised the study population/participants. In this paper, the focus is on two participants who exhibited two extreme ends of critique. Cohen et al. (2014: 156) define purposive sampling as "a feature of qualitative research, [where] researchers hand – pick the cases to be included in the sample on the basis of their judgment of their typicality or possession of the particular characteristics being sought." Convenience sampling facilitated the selection of two students, and was ideal for this study as they met the researchers' specific needs (different levels of critique). Document analysis of a specific task given and virtual observation of the interaction of the same, on the learning space by the participants enabled the writer to address the research question. Anonymity and confidentiality were ensured through coding of the data using D1 and D2. All necessary ethical considerations were observed.

Data Generation and Analysis

Virtual observation and document analysis were used to generate data. Virtual observation

of the LMS occurred daily for six weeks (duration of the specified task). Activities the researchers engaged in included: reading, posting, commenting and scrolling through previous posts in order to get a first-hand experience of the phenomenon. Observation was used to identify common patterns in the students' critiques. Document analysis entailed a review of the learning guide, lecture notes, links to YouTube on research proposal writing and other relevant materials to guide the students in the task. The critiqued proposals (note here that each student was expected to critique at least two proposals, the unit of analysis was the individual proposal not number of critiques) constituted the main source of data. This kind of review is advantageous as it is unobtrusive and the data can be subject to re-analysis. The data presented in this paper is restricted to the posts of the two participants D1 and D2, they were both expected to critique at least two proposals of their colleagues and post them onto the learning site. Observation revealed that while D1 critiqued as many proposals as were posted on the learning site (a total of 15), D2's critique was restricted to the two required by the class task. The selection of the two students was based on their participation on the learning site as well as the nature of their critique, this was viewed against their overall mark in their own proposal submission. However, to generate evidence of critique all the eighteen student's posts were observed via the learning site and Blooms cognitive domain guided the observation.

Authenticity and trustworthiness of data collected was ensured through credibility, transferability, dependability, and conformability (a step by step description of the data generation process to eliminate personal bias) (Yin 2009). Eisenhart (2006: 573) refers to it as "having been there". He further suggests that the use of concepts from the literature, excerpts and direct quotes from the data sources can increase credibility of a study. Jwan and Ong'ondo (2011: 136) concur saying credibility can be assured by establishing 'a chain of evidence'.

Guided Analysis was used to analyse the data. Samuel (2009: 12) describes it "as involving categories apriori (categories determined in advance of data generation and analysis proceeds in relation to the prescribed categories) and Grounded approach (where categories emerge from the data)." Three themes: Techni-

cal critique/Lower order, Practical critique/Middle order and Critical critique/Higher Order were generated. Findings are presented by means of discussion, direct quotations and explanation using relevant literature.

FINDINGS AND DISCUSSION

Anderson and Krathwohl (2001) revised Blooms taxonomy to remembering, understanding, applying, analysing, evaluating and creating to fit an outcome-based education objective; long established research has confirmed these levels as a hierarchy and mastery of one level enables acquisition of the next level (See Table 1).

Table 1: A table depicting the levels and expected cognition

<i>Levels</i>	<i>Original taxonomy</i>	<i>Revised taxonomy</i>
One	Knowledge	Remembering
Two	Comprehension	Understanding
Three	Application	Applying
Four	Analysis	Analysing
Five	Synthesis	Evaluation
Six	Evaluation	Creation

Table 2 is a virtual depiction of the thinking processes the first column indicates the order, the second the domains and the third the critique level. The lower order (technical critique) is at the bottom comprising remembering and understanding, the middle order (practical critique) comprises applying and analysing whilst the higher order (critical critique) comprises evaluating and creating. Some researchers contend that the top three levels are of equal complexity (Huitt 2011). Huitt likens these levels to creative and critical thinking which if omitted during a problem solving process, compromises effectiveness as they are of equal value and superiority.

Table 2: A table depicting the thinking processes, the level of cognition and critique

<i>Thinking processes</i>	<i>Domains/ cognition level</i>	<i>Critique level</i>
Higher Order	Evaluating and Creating	Critical Critique
Middle Order	Applying and Analysing	Practical Critique
Lower Order	Remembering and Understanding	Technical Critique

The students' critiques (posts) generated three themes along Blooms' hierarchy (see Table 2). The posts were observed over the period when students were participating in the task. The writer took part in the critique, familiarizing herself with the context as well as developing a rapport with the participants online. The themes are derived commensurate with the levels within the hierarchy with the first two levels representing theme one lower order/technical critique, the next two levels representing the middle order/practical critique and the two top levels representing higher order/critical critique (see Table 2). Direct quotes/excerpts have been used to enable theorizing on the level of critique employed by the participants and discussed along the lines of teaching presence, cognitive presence and social presence (Garrison 2007).

The Task

All participants developed their proposals and posted them on the learning site, they then critiqued a minimum of two proposals—(not their own)—and re-posted them back on the DF. The task was directly related to their studies and would be assessed, thus ensuring active participation by all. The students had had several face to face interactions and therefore knew each other well and had developed some sort of rapport (social presence). All the students were at the proposal development phase of their studies that would culminate in their independent research projects, a prerequisite to the awarding of their honours degree. The proposals were labelled P.1 to P.18. All the proposals were in the field of Education—the profession of the participants – (full-time teachers, taking curriculum studies). This resonates with the view that a problem is generated from everyday environments/natural settings in keeping with an interpretive qualitative case study. The task, assessment criteria and rules of submission were posted on the DF. Students who were not clear on the instruction further voiced their concerns and got feedback from the lecturer or their peers. See excerpt below:

Q: "Hi guys please help, is it important to write the number of your participants in the research proposal? I am lost!"

R: "Even though I don't get your question but I think it is vital to indicate how many participants you will use in your study as well as

the type of sampling you are using including the reason of using that sample."

The data on the two participants that will comprise this paper will now be presented and some excerpts from their critiques will be highlighted and discussed in relation to the task. All the comments from D1 will first be teased out and discussed followed by D2. The posts will be observed for indicators of social and cognitive presence. The cognitive domain was selected as a lens to view students' critique as cognitive presence is a vital component in gauging the efficacy of MOODLE as a teaching and learning intervention. The following excerpts are drawn from the students' critiques.

Excerpts from D1:

D1. Kindly receive my comments regarding your assignment. I will like you to pay attention to the following. Dependability, Conformability, Transferability and credibility. I suggest that pick one that is related to your study for example generalisation does not work if a researcher is collecting data using a case study in one school.

D1. I think it is vital to indicate how many participant you will use in your study as well as the type of sampling including the reason of using that sampling.

D1. Check your objectives and questions and align them to your research design and methodology also correct all the technical errors (Commas, full stops, brackets and spaces between paragraphs and words.

D1. Congratulations on completing the task, I did not seem to identify your problem statement in your introduction this made it difficult for me to link it to your research questions. Kindly firm up on this.

D1. Remember to bring out the three levels in your writing - the ones lecturers taught us during the coursework- , "the what, the how, and the why" otherwise I think you have done a good job.

The data yielded three levels of critique: technical-lower order (*remembering, understanding*), practical-middle order (*applying, analysing*) and critical-higher order, (*evaluating and creating*). Participant D1s critique was closely aligned to the assessment criteria. The excerpts address content related issues and display evidence of engaging at all the levels of Blooms taxonomy. The 3rd excerpt that mentions 'technical errors' – commas, full stops etc. indi-

cate that the participant is aware of level one (technical – Lower order critique). The other comments touch on content issues as well as writing form for example in the 1st excerpt issues of trustworthiness which is an important aspect of research ethics are raised, D1 further gives suggestions which the recipient of the critique may use to improve their proposal. This suggests that the participant was assuming the role of teaching presence which is level three critical – higher order critique. The 2nd and the last excerpts look at the justification for the sample size, through reference to the 'what, how and why' questions. D1 also displays knowledge and understanding of the centrality of the research question through the suggestion that the objectives and research questions should be aligned to the research design and linked to the problem statement. From the above excerpts it is clear that participant D1 was conversant with the stages of proposal development and displayed it through comments on the various proposals critiqued. This could be a learning curve for this participant as a novice researcher who may one day be a supervisor. D1's comments bordered on Critical-Higher order critique and Practical-Middle order critique (*creating and evaluating; applying and analysing*) and that enabled the recipients to critically evaluate and synthesis their writing. D1's own proposal was reworked in tune with this which was evidenced by the overall performance of his/her final proposal.

Excerpts from D2:

D2. Hi, please find the attached reviewed proposal of yours. Attend to technical errors all those underlined with red. Congratulations!!!

D2. Kindly receive my comments on your assignment. Please pay attention to line spacing as well as spelling errors over and above your assignment look very good to me congratulations!!!

D2. Congratulation for completing ass 2 ...Under rationale next page first line, I think it should be one sentence.

D2. Pls put percentage behind the number on the table of average percentage acknowledge the Doe for giving you the statistics of the results. Congratulations and Take care.

Participant D2's comments on the other hand were restricted to only two proposals and from the above excerpts we can see that the com-

ments tended to focus on the writing form rather than on content. In the 1st excerpt technical errors are referred to without specifying what these are, D2 indicates the comments are highlighted in red on the proposal draft. In the 2nd and 3rd excerpt focus is on the line spacing and spelling errors which can be corrected with a computer. The 4th excerpt suggests the inclusion of percentage and mentions that the Department of Education (DoE) should be acknowledged as the source of the data presented. A point to note is that all D2's comments exhibit social presence through endearments (such as Congratulations; please; take care). These posts exhibited technical-lower order critique (remembering and understanding).

Both participants were aware of technical errors and raised it in their critique, whereas, for D2 that was the only aspects raised, D1 attempted to balance the comments and had most comments dealing with aspects of cognitive presence and teaching presence. D1's comments relied a lot on content knowledge to carry out the critique. According to Hoadley and Jansen (2012), scientific knowledge is a search for what is missing (absence) in order to move to the next level or improve the situation. This is very similar to Blooms hierarchy notion where mastery of one leads to acquisition of the next. Students learn by moving vertically and challenging the next level of doing things all the time (Hoadley and Jansen 2012). D1 also engaged in a lot of practise by carrying out a total of 15 critiques out of the 18 proposals posted thus building a strong knowledge base and deeper learning that enabled him/her to excel in the overall performance. D2 seemed to shy away from content related critique that relied on ideological-ware though the assessment criteria had been clearly stated. D2's comments were restricted to mundane issues such as "*visit the library for help with the referencing*", or "*pay attention to technical errors*". D2 employed personal expediency to get the task done and submit his/her work thus not exposing himself/herself to thorough engagement with the activities by only critiquing the 2 stipulated proposals. This reflected in his/her overall performance as there was no major change in results. Though this isn't wrong it did not exhibit middle and higher order thinking expected of university honours students. It can however, be argued that an awareness of the

basic details is vital as this could impede the overall outcome of the proposal.

Critique Levels in Discussion Forum

Level One: Technical – Lower Order Critique

Kennedy et al. (2006) suggest that the knowledge/remembering level entails exhibiting memory of learned materials by recalling facts, basic concepts and answers and retrieving previous learned information (rote learning). This can be done out of habit and is similar to cognitive presence that relies on unique personal identity (Garrison 2007; Khoza 2015b). Comprehension/understanding involves explaining, describing, and reasoning. Both participants seemed to have a good grasp of this level evidenced by the presentation of their proposals using the stipulated template and correct format, as well as the ability to identify technical errors occurring in the proposal such as spelling mistakes, punctuation, line spacing, poor referencing, which had to do with the form of the proposal rather than the content. The participants' ability to properly align the aforementioned and deal with technical errors was crucial in completing the task and enabled those participants who took heed of these aspects improve the content of their proposals scoring a high final mark (Hou 2011).

Level Two: Practical – Middle Order Critique

The act of applying entailed participants using their content knowledge, constructing, solving and selecting relevant aspects of the proposal to critique. Kennedy et al. (2006: 10) refer to it as putting ideas and concepts to work in problem solving. Analysing involved breaking down, comparing, connecting what they have learnt against what the proposals present, to enable them give a just and fair critique. Using the stipulated assessment criteria, critique should have focused on how individual proposals presented arguments. Participant D1 identified some of these concerns through the comments on the problem statement, the objectives and research questions and the sample size, as well as the suggestions that the recipients of the critique could use to improve their overall proposal. This is in line with Wellington (2010) view on peer critique which he suggested must be incorporated in research training at the onset

of research, this concurred with the Caffarella and Barnett (2000) study that recommends a critical partner/friend/reader. Participant D1's critique was aligned to the assessment criteria and his understanding of the task (See D1's 5 excerpts above).

Level Three: Critical – Higher Order Critique

Evaluating/synthesis entailed participants exhibiting a mastery of all the first five levels by applying their content knowledge in designing, arguing, categorizing, assembling their proposals and critique to reflect a deeper understanding of their subject learning area, while creating/evaluation involved an in-depth understanding of the task by assessing, judging, grading and relating it to the current situation. Creating required participants to list components; compare and contrast; differentiate between; evaluate; give arguments for and criticize. However, D2 did not post comments that indicated engagement with this level. D1 attempted to engage at this level but to a very limited extent.

Some researchers such as Huitt (2011) argue that analysing, evaluating and creating are in fact of equal import and not hierarchical as commonly used and fall within the higher order thinking processes (Critical critique). Similarly, Hou (2011) study found that cognition aspects of application, evaluation and innovation were lacking. This suggests that participants' failure to engage adequately with evaluation could emanate from the use of the DF (Thomas 2002) or their level of knowledge thus requiring greater teaching presence (Mokoena 2013). The participants seemed more concerned with correct form in writing which if not addressed, could hamper the grasping of the content.

Similarly, the participants did not equitably combine the online resources. Hardware and software represented by the effective use of the DF occurred smoothly but ideological-ware represented by critique was poorly addressed. Ideological-ware draws on critical-higher order thinking processes and required participants to employ teaching/learning strategies, theories and knowledge in their critique (Khoza 2012). Nevertheless, the levels they engaged in are equally important as they are the foundation on which good writing/research skills are built that is by dealing with technical errors. Social presence emerged as crucial (Hew et al. 2010). Well-

ton (2010: 136) concurs with the view of many researchers that writing requires much cognitive energy. He, however, insists that the affective domain is important as "writing is an experience that involves strong feelings and emotions: pain, pleasure, frustration, enjoyment, angst, annoyance, relief and stress."

Participant D1 seemed to have benefitted from the interaction by heeding the critique received and improved in her/his overall grades whereas D2 showed no marked improvement in his/her overall grade. This suggests that ideological-ware represented by critical – higher order critique should guide the student's engagement. This finding concurs with Amory (2014) perspective of "learning with" as opposed to "learning from" technology. Learner needs, rather than technology, should always drive the learning process, the instructor's role (teaching presence) influences interaction (Mokoena 2013), assessment spurred interaction (Thomas 2002) and authentic tasks motivate the students (Amory 2014).

CONCLUSION

The study provides evidence that the DF is a useful and powerful resource to enhance student engagement. The levels of critique that the participants engaged in were both critical as D2's technical critique enables students to do away with technical errors that impede good writing skills and D1's technical and practical critique were important in enabling students attain favorable academic outcomes. However, a deeper interrogation is required to understand :

- a) Why critical- higher order critique is not well utilised by students.
- b) Why students seem to prefer technical – lower order and practical – middle order critique in their engagement.
- c) To examine what can be done to ameliorate this at an early stage in the students' research careers (honors level).

RECOMMENDATIONS

The researcher's view is that research training should incorporate students' peer critiquing thus providing a wider audience for the students other than just the educator. It would also be a formative way to build a student's critical critiquing skills. Educators through teaching pres-

ence should facilitate cognitive and social presence by appropriating technology judiciously and foregrounding ideological-ware as paramount in the learning process. Switching from F-2-F to L.M.S should be gradual as there is still a high dependence on educators by students. Educators should gauge each student's level and help them take more control of their learning by designing online discussion activities to stimulate engagement and knowledge creation that draws on the higher level thinking processes.

This study proposes that:

- ❖ Research training that focuses on developing writing skills be offered to post-graduates.
- ❖ Peer critiquing be embedded in modules offered and active students be encouraged to mentor their less active colleagues.
- ❖ Educators be trained on use of the DF to enhance their engagement with students via the same and offer them support through teaching presence.
- ❖ Students be encouraged to form communities of practice with colleagues in their cohorts both locally and internationally via online resources thus fostering social presence.

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