

# Critical discourse analysis of collaborative engagement in Facebook postings

## ABSTRACT

*While there is substantial research that affirms the democratization potential of computer-mediated communication (CMC), particularly Web-enabled learning environments, this claim remains under-researched in social networked contexts at universities in developing countries. More so, the patchy literature that explores the academic potential of social networking sites (SNS) (especially Facebook) has emphasised the affordances of this technology at institutional levels but not its pedagogical potential at micro levels (lecturer-student and student-peer relations) and influence on social power. Mindful of how discursive types and discourses inform understanding of the social context in which dialogic conversations unfold, this study employs Critical Discourse Analysis (SDA) and Facebook conversations to expose the hidden assumptions about social power and the educational challenges like shy, less engaging students, superficial learning and general underpreparedness. The findings of the study suggest the prevalence of formal authoritative (hierarchical) discourses, few informal liberating (horizontal) discourses, nascent peer-based collaboration culture, limited peer engagement on theory and generally less sophisticated study skills. The challenges and potential for transformative learning are explored and possibilities for effective engagement suggested.*

**Key Words:** Social Networking Sites, Facebook, discourse analysis, transformative learning, epistemic frames, pedagogical practice

## INTRODUCTION

Discourse analysis has taken centre stage as a methodological and analytical tool in the exploration of computer-mediated interaction, mobile instant messaging system, Information and Communication Technology (ICT)-enhanced socio-economic development, education and spatial policy discourses (Richardson & Jensen, 2003; Thompson, 2004; Ng'ambi, 2008; Chigona & Chigona, 2008; Rambe, 2009). The pre-occupation with discourse analysis in computer-mediated communication (CMC) is informed by the understanding that scholarly discourse[s], are inherently part of, and influenced by social structure, and produced in social interaction (Van Dijk, 1998). As such, social interaction is the seedbed of the activation of higher psychological functions in learners that foster transformative learning and development. However, the complexity of discursive practices on social networking environments lies in that they are potentially masked by manipulative tendencies of writers

aimed at influencing the psychology and social behaviour of readers /interlocutors through normalising discourses.

Mindful of social-constructivist approaches' emphases on the situated context of knowledge production, significance of the interactional history and the socio-cultural experiences communicants bring to the interaction, it stands to reason that socio-cultural approaches to the study of discursive practices are informative of how knowledge is constructed. Despite this, Duranti (1985) suggests that many of the earlier studies on discourse analysis have tended to conceive discourse from a strictly structural or psychological perspective and not from the broader sociocultural perspective. Mindful of this structural focus, it is unsurprising that researchers on ICT adoption in developing and developed countries have found it methodologically convenient to employ discourse analysis to interpret discourses inherent in public officials' speeches on ICTs (see Thompson, 2004; Roode, Speight, Pollock & Webber, 2004). It is against this background that my study adopts a macro-micro level approach (speech genres of lecturers and students in social networked environments) to discourse analysis to examine how textual interactions are informed by both immediate interactional contexts (micro level factors) and broader social structural issues (macro issues).

Regrettably, the plethora of studies that adopted a sociological stance to discourse analysis like social-cultural discourse analysis in educational contexts examine face-to-face lecture contacts (Wegerif, Mercer & Dawes, 1999; Rojas-Drummond & Mercer, 2003; Mercer, 2008; Wu, 2010), and none have examined lecturer-student interaction in social networking learning contexts. Yet a socio-cultural approach to the interrogation of these online relations is essential given the dialogic, transactional nature of these spaces and the collaborative construction of meaning that pervade them. Duranti (1985) asserts that a socio-cultural approach to the examination of discourse affords the understanding of text in relation to its context (of production) and the characterisation of speech as an instrument for changing the world. In social networked contexts, changing the world could entail transformative learning that triggers shifts in lecturer and students' epistemology and reasoning about the world of knowledge.

Studies that explored the academic potential of social networking sites (particularly Facebook) adopted an institutional perspective and have not engaged with their pedagogical potential at lecturer-student and student-peer interaction levels. They have examined multivariate aspects of social networking sites in educational environments, namely, support

for e-learning (Dron, 2007), strengthening social and academic ties and supporting pharmacy education (Cain, 2008), use and appropriateness of student information on Facebook (Peluchette & Karl, 2008), the impact of privacy concerns on users' behaviour and behavioural changes in response to privacy related information exposure (Acquisti & Gross, 2006). My work employs text-mediated discursive types and discourses to inform understanding of the pedagogical potential of Facebook, higher education challenges that Facebook text-based interaction exposes and the implications of this interaction on the lecturer-student and student peer relations of power.

My interest in Facebook technology is predicated on several factors 1). It affords the user both private and public communication with peers and lecturers within his/her network. This possibly gives latitude to shy students to communicate their academic concerns. 2). It enhances the visibility of one's online identity to his/her virtual community in ways that could entrench as well as constrain public articulation of thoughts and hence invokes questions about the site's democratic potential for users. 3). The "encroachment" for academic purposes (by academics) of this quasi-formal social nature presents possibilities for the contestation of academic power by students. 4). Unlike the university's instance of Sakai-based Learning Management System (LMS), which is provided by the institution, Facebook was already in use by most students, but not as an academic networking space for students in the course. The last point raises questions about the amount of leverage an academic could have in a space that students potentially conceive as theirs.

Despite the surging interest in the dynamics and application of Facebook within academia (Kolek & Saunders, 2008; Cain, 2008; Inside Higher Education, 2008; Shim, 2008), none of these studies have employed Critical Discourse Analysis (CDA). Few studies that have adopted a discourse analysis approach to examining computer-mediated discourses particularly student anonymous online postings (Ng'ambi, 2008), and course-based online discussions (Huang & Archer, 2008) do not explore social networking environments like Facebook. The complexity of Facebook interaction lie the flexibility that interlocutors often have with regards where to post their messages, who to engage with and the language to use during interactions.

## **RESEARCH QUESTIONS**

Because text-mediated discourse involves text messages and discursive practices (via a computer medium) among interlocutors who do not necessarily see one another facially, the effects of physical presence like ‘intimidating’ social presence and voice of the superior party are reduced or made less explicit (Jaffe, Lee, Huang & Oshagan, 1995; Kiesler, Siegel & McGuire, 1984). Mindful of these dynamics, socially networked interaction between academics and students may potentially democratise perceived asymmetrical relations of power. In the context of this study, democratising communication means, 1). subverting hierarchical authority by allowing students to become more critically engaging online participants, 2). reducing student dependence on the lecturer for academic support, 3). empowering students to generate their theoretical and personal knowledge and widening their meaningful participation in online discourses, 4). allowing students to contest power through critiquing unpopular administrative practices of departments. Besides the examination of relations of power, discursive types and the discourses of text mediated interactions are also employed as windows to infer the higher educational challenges faced by students, particularly those underprepared for university learning.

In pursuit of the above discussion, this current study employs CDA to explore the interface between discursive types, higher education challenges emergent in discourses, collaborative learning and the exercise of power in social networked environments. To unpack the modes of learning and how power is negotiated in Facebook spaces, the following questions are posed:

- 1). What discursive types are activated by lecturer-student and student-peer collaboration on Facebook?
- 2). What is the nature of discourses that emerge from this collaborative interaction and how do these inform understanding of higher education challenges?
- 3). How do peer-based academic support structures using Facebook provide insights into the problem of lecturer-student relation?
- 4). In what ways does social networking sites (SNS) interaction potentially democratise/entrench power relations in lecturer-student and student-peer interaction?

## LITERATURE REVIEW

Facebook was created by Mark Zuckerberg, a former Harvard University student, in collaboration with his colleagues in 2004. Ridgway (2010) observes that Facebook was created in response to Harvard University's lack of a student image directory and therefore served as an online social directory for college students. It is a Web-based social networking site with a CV-based online directory, which potentially supports individualised learning, collaborative engagement and the articulation of self identities via personal web pages and public interactional spaces. Facebook presents a "safe-haven" through which shy students who might not necessarily voice their academic concerns in class can articulate their thoughts. The computer-mediated nature of Facebook interaction could trigger democratic online participation by affording students the opportunity to pose even unsophisticated questions without fear of ridicule and restraint from peers.

Facebook is one of the most trafficked social networking sites with an estimated 400 million active users worldwide who share about 25 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc) (Facebook, 2010). In South Africa, a youth culture is visible in Facebook with almost a million (42% of South African Facebook users) aged 14 – 24 using the site (Moore, 2010) for social collaboration, exchange of resources and informal learning. Conscious of the fact that 99% of South African university students have access to the internet (Ibid), it is expected that many college students are already collaborating via Facebook networks as they fall within the aforementioned age group. Mindful of the predominantly contact institution based and computer-mediated access to SNS, the educational value of Facebook in leveraging collaborative learning cannot be underestimated. Text-mediated discursive practices and discourses in Facebook could be viable proxies to understanding collaborative learning and associated learning challenges experienced in higher education.

Studies on Facebook use have focused on institution-wide application of the technology and the possible educational incentives for the university that accrue from its use. Moore (2010) documents the phenomenal academic related application of SNS (Facebook, blogs, podcasts) in South African universities chiefly, sharing university related information, connecting with new and current students, distributing important news (including vacancies), sharing individual academic thought and Faculty staff reflection and communication on academic content. Though insightful of how Faculties are innovatively deploying SNS to foster

collegiality and a sense of community, Moore's (2010) reflections remain an overarching institution-wide discourse that is less informative at micro levels of text-based interaction, lecturer-student relations and online teaching and learning.

Collaborative generation of knowledge and expanded transactional networks are some of the hailed benefits of Facebook interaction in academia. Using Facebook, students can search for peers with similar interests or from similar backgrounds, track their academic and social activities, join group networks of their choice, receive updates on their peers' social and academic lives and connect with the extended academic community. Judging from the multiple communication channels and complex networks that they form and sustain, Boyd (2007) suggests that SNS have altered the underlying architecture of social interaction and information distribution bringing both moral panic for conservative academics, and compelling optimistic ones to learn from technologically adept students to help them navigate these technologies. For first year South African students with varied levels of academic underpreparedness and differential levels of exposure to ICTs in high school, students levels of technological sophistication is debatable. Therefore, the extent to which discourses on Facebook signal academic maturity and student mastery of the subject matter demand close scrutiny.

Andon's (2007) Masters thesis examined the impact of Facebook on the formation of romantic relationships. The study reports an association between heavy Facebook use and attitudinal confidence, interpersonal attraction and perceived similarity suggesting that CMC is an acceptable and appropriate means of potential relationship development. Facebook's popularity in relationship building is attributable to the easiness with which online personas are 'googleable,' online discursive community are developed including the flexibility of online personas in self presentation and managing of self identities. Articulation of self-identities in Facebook by students and Faculty staff presents opportunities for lecturer-student familiarisation in a less controlled learning environment. This online socialisation is an essential catalyst in the development of strong academic networks and articulation of discourses on academic matters. Additionally, studies on identity management on Facebook emphasise how student engagement on this site shaped their perceptions of Faculty members (Hewitt & Forte, 2006). While the majority of students affirmed that their Facebook interactions with faculty staff presented them with alternate communication channels and afforded their acquaintance with professors, some students cited privacy considerations and

identity management as key concerns in student-faculty relations. This raises critical questions on the capacity of Facebook to subvert and neutralise hierarchical relations often characteristic of traditional instruction.

Facebook also allows third parties (“friends of friends”) of the users to access information and activities of the users thus potentially bringing a multiplier effect in the development of self-presentation, collectively generated knowledge and resources. Walther et al (2008) suggests that one way Facebook differs from other online sites for self-presentation relates to the degree to which some personal information is presented by means other than disclosure by the person to whom it refers. This implies that not only do individual site owners exercises discretion in terms of disclosing personal information, rather friends within their online network are participants in the perpetuation or disruption of their self image through messages they post on public spaces. Though useful for understanding the dynamics of network formation, the above studies do not necessarily provide clues on how Facebook could be applied in ways that activate transformation learning for culturally diverse students.

## **DISCOURSE ANALYSIS**

For Slembrouck (2005) discourse analysis is pre-occupied with *language use in social contexts*, and in particular with interaction or dialogue between speakers (Slembrouck, 2005, cited in Alba-Juez, 2009, p. 9). I add to Slembrouck’s view that discourse analysis from a socio-cultural point of view encapsulates the cultural resources (communicative competence, knowledge of the ground rules of interaction, ability to reflect on intentions and ideologies of the other speakers) and critical social awareness that interlocutors bring to the interactional context over and above the social affordances presented by the interaction itself. Therefore, understanding discursive types and discourses in Facebook necessitates the exploration of the iterative, reciprocal relationship between Facebook textual productions and the broader structural forces that inform text interpretations. While literature recognises discourse analysis as involving linguistic expressions of communicative events between conversants in social contexts (Slembrouck, 2005; Candlin, 1997; Fairclough, 1995; Van Dijk 1998), my view is that interlocutors’ interpretive schemas foreground this analytical framework. My argument is that discourse analysis also mirrors the mental models/ schema of interlocutors during a communicative event, in particular, the perspectives they bring to social intercourse and how these are transformed through processes of deconstruction and reconstruction. Discursive types and discourses in Facebook messages allow us to access lecturers and

students' mental constructions of reality, which could illuminate understanding of the educational challenges that pervade their learning processes and how learning may be transformed through collaborative interaction.

Discourse analysis necessitates grasping the relationship between text and the context in which it is produced because the social, political and cultural-historical contexts frame interlocutors' interpretation of the text, communicative events over and above the semantic meaning of text. As Schiffrin (1994) proposes, text and context are essential resources constitutive of a communicative event and text, which embodies the linguistic material (e.g. what is said, assuming a verbal channel) should be distinguished from the environment in which the saying occurs (context). I contend that texts as representations of interlocutors' psychological frames and social circumstances in which interlocutors find themselves. Hence, textual properties are reproductions of contextual influences as much as social structures mirror processes of textual production and interpretation. Informed by this thinking, therefore, discourse analysis of Facebook postings employs text messages as resources and windows for understanding the mindsets of conversants and social context of text production and vice versa.

Instantiations of discursive practices are postulated by Van Dijk (1998) as similarly part or constitutive of social structure, that is, "local" and more "global" contexts are closely related, and both exercise constraints on discourse. The social conditions that inform learning relate to the different power structures, forms of socialisation, cultural experiences and socially imposed modes of reasoning that frame text production and discursive practices between communicants. As such, discourse analysis transcends the examination of the linguistic properties of text and "includes additional elements of interest—who uses the language, how, why, and when" (Mazur, n.d. p. 1074). This interest in contextual influences is predicated on the fact that people are not merely influenced, persuaded by discourse properties but also identity of speakers or writers, such as their (perceived) power, authority or credibility (Giles & Coupland, 1991). Conscious of discourse analysis' capacity to locate centres of power and where they are derived, I underscore that Facebook's potential to disrupt or entrench constructions of hidden power is central to the examination of lecturer-student and student-peer interactions. Identity markers that Giles & Coupland (1991) highlight are complemented by other situational factors Van Dijk (1998) identifies like time, place, circumstances, roles

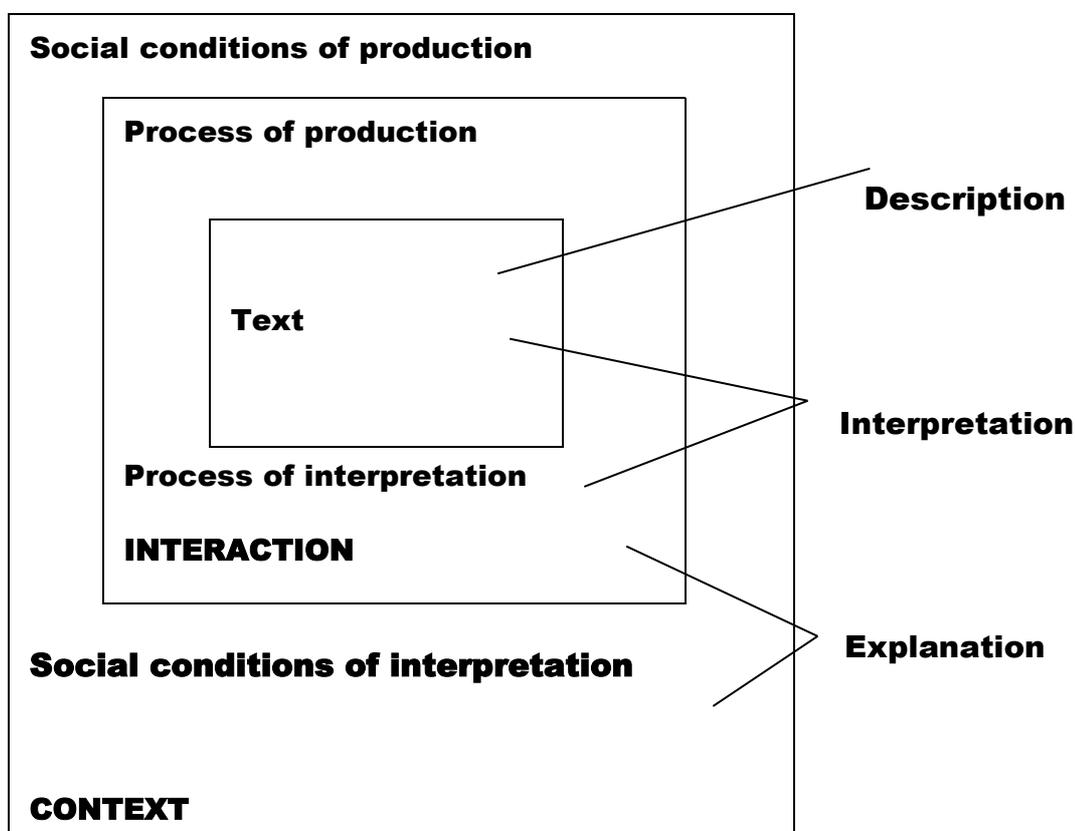
and wishes of participants that inform how communicative events control communicants' minds. In my work on lecturer-student and student peer interactions both identity signifiers and situated contexts inform representations of collaborative learning, educational challenges and related power contestations invoked in a social networked space.

### **Critical Discourse Analysis (CDA)**

This paper is informed by Fairclough's (1995, 1989) CDA. CDA is presented as an analytical framework for unravelling opaque relationships of causality and determination between (a) discursive practices, events and texts, and (b) wider social and cultural structures, relations and processes (Fairclough, 1995). I interpret a dual reciprocal relationship between the broader structure and the properties of text (what is said) and these relationships are informed by social power and ideological influences. Thus, through an examination and interpretation of discursive practices, lecturer and student texts and broader social context in which Facebook textual interaction unfolds, we can grasp the hidden manifestation of power, where that power is derived and how that power is negotiated. The central preoccupation of CDA with the examination of power is embodied in the Fairclough's (1995) view that the nexus between language use and the articulation of power is often very ambiguous to people yet on closer introspection, is central to the exercise of power.

At structural levels, Martin Rojo & Van Dijk (1997) observes, CDA emphasises how context features (such as the properties of language users of powerful groups) influence the ways members of dominated groups define the communicative situation in preferred context models. I infer that contextual forces shapes dominated groups' interpretive lens in communicative events, reproduce structures of domination and subordination between communicants with differential levels of power and influence in discursive practices. Through language use, subtle processes of manipulation and mind control are verbalised and situational context provides the affordances for their expression and perhaps, their contestation. Therefore, discourse theory proposes that every word spoken draws its meaning from the social practices of which it is a part, or, recursively, from the sediment of prior practices (Burbules & Bruce, 2001). It can be expected that student textual messages and discursive types are reflective of their experiences, appreciation and frustrations with social practices of their learning contexts (departments) and by extension, of the university. By the same vein, the broader structural forces of the university and society provide analytical framework for the interpretation of textual messages.

Figure 1: Discourse as text, interaction and context (Fairclough, 1989)



Fairclough (1989) identifies three levels of interactive discourses as: (1). *Social conditions of production and interpretation*, that is, factors in the society that have led to the production of a text and how these factors affect interpretation, (2). The *process of production and interpretation*, that is, how the text has been produced and this affects interpretation and (3). The product of the first two stages, the text. I infer that text is linguistically constitutive of itself as much as it is a reproduction of the broader discursive practices and social structures that define it and render it semantic meaning. Corresponding to the three levels of discourse above, Fairclough (1989) prescribes three stages of CDA namely:

- *Description* is the stage which is concerned with the formal properties of the text.
- *Interpretation* is concerned with the relationship between text and interaction—concerned with seeing the text as a product of a process of production, and as a resource in the process of interpretation.

- *Explanation* is concerned with the relationship between interaction and social context—with the social determination of the processes of production and interpretation, and their social effects.

It stands to reason that the context of interaction structures the flow of the interaction just as much as the interaction itself affords understanding of the context in which social interaction unfolded (recursive, mutually reciprocal exchange). Description, therefore, is about the textual analysis, interpretation constitutes examination of discursive practices of the textual interaction while explanation underscores broader social practices that frame the social interaction. For Ng'ambi (2008), text is both a medium and an outcome of mental constructs (intentions), thus an author transforms intentionality into ostensive text messages. On Facebook, students communicate their information needs to peers or academics through Facebook questions (textual expressions). The response to questions is also an expression of intentionality—desire to share information, express a sense of collegiality, academic authority, or satisfy an information need.

Discursive practices constitute the vital link between text and the broader social context of its production (the level at which discourses function). They constitute the discrete, unique utterances or combination of idioms, references, inferences or phrases within an “order of discourse” (Thompson, 1994). Fairclough (1995) distinguishes between discursive types or themes- vertically identifiable formations of discourses which are unique to a given study domain from speech genres, or linguistic devices that apply horizontally across orders of discourse (cited in Thompson, 1994).

## **CASE STUDY**

The study was conducted on first year Information Systems (IS) at a middle-sized, historically privileged English-speaking university in South Africa. The university, like the rest of South Africa, is undergoing transformation, and most importantly, is striving to increase previously disadvantaged students' enrolment and retention in university. Consistent with this vision, the IS Department is implementing multiple pedagogical strategies aimed at responding to, and accommodating the learning needs and academic priorities of students, especially who come underprepared for university learning. To be culturally responsive and to meet the educational needs of diverse students, the IS department implemented Web-enhanced courses that blended face-to-face (FtF) lecture delivery with a Sakai based instance

of a Learning Management System (LMS) for the delivery of teaching and learning resources (lecture notes, slides, course outlines, reading lists and readings). To augment collaborative learning on interactive applications (chat features, blogs, discussion forums) on the LMS, a Departmental Facebook environment was introduced by staff to leverage question-based lecturer-student consultation and peer-based knowledge sharing in a safe, ‘user friendly’ space. Ng’ambi (2004) argues that organizational communication happens through individuals acting as agents of an organization and therefore it is these individuals’ judgment of their own experiences that becomes a learning resource for an organization. Identifying with Ng’ambi (2004), I propose that questions and answers are instantiations of individuals’ experience with the complexities of knowledge production and quest for meaning making in collaborative networking environments respectively.

The first-year IS stream studied comprised about 450 students whose lessons were conducted weekly in three sessions-two of the sessions had about 200 students with fairly sophisticated ICT literacy skills while the third session comprised about 50 students with limited /no exposure and experience with computers. These three classes covered the same lecture content except that previously disadvantaged students who were on an extended Academic Development Programme (ADP) running for a year constituted the latter class (INFO 1077B)<sup>1</sup> while the former classes which accomplished the course within a semester constituted the former group (INFO1078A). Despite this heterogeneity in student backgrounds and contact duration, all the students had one main Facebook interactional environment for question-based interaction.

To activate and recruit wider sustained participation on Facebook, the IS Department required students to create personal Facebook accounts and join the Department Facebook site. The course convenor designated one of the IS lecturers as an online administrator who addressed all the theory, practical and general course administration queries students posed to peers and lecturers. The Department Facebook had three interactional spaces through which students and academics<sup>2</sup> could interact namely, the administrator’s Facebook inbox for personal lecturer-student interaction, Facebook discussion board, a special super wall feature for public discussion, and the Facebook wall, which is an easy-to-access public space for public discourse on academic matters.

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<sup>1</sup> These course codes are pseudonymous codes. They have been used to protect the identity of these courses and consistent with the anonymity rule in the code of ethics for researching human subjects.

<sup>2</sup> The course convenor also maintained a social presence and on some occasions addressed course administration queries on Facebook

## ANALYSIS OF TEXT MESSAGES

Out of a class of about 450 students, 165 participants posted 414 posts. They posted 154 wall posts, 121 discussion board posts, and 139 posts to the administrator's inbox. It is important to understand that several students' conversations with peers or the lecturer would contribute to one discursive type or several discursive types. Postings comprised theoretical questions, procedural queries on practical exercises (the majority), course administration matters, social queries and compliments. These text messages were posted over a duration of approximately one year (two semesters). The analysis of Facebook postings was informed by CDA concepts of discursive types and specific text genres (Roode, Speight, Pollock & Webber, 2004), with a view to unravel the exercise of academic power and influence, and academic challenges implicit in collaborative consultation (see Table 1). As Ng'ambi (2008) observes, identification of text genres and discursive types involves subjective judgement and their application to different sections of text. My analytical framework involved the identification of genres and discursive types that emerged from Facebook textual messages/postings. This process was accomplished using a semi-grounded approach involving the adoption of first order and second concepts (Van Maanen & Barley, 1985) from the Facebook postings. These concepts were iteratively processed until a set of refined concepts are developed.

Table 1. Text genres and discursive types (adapted from Roode et al., 2004)

<b>Text Genre</b>	<b>Discursive Type</b>
Confidence	Neutrality
Factual information	Corporation
Humour	Technological optimism
Persuasion	Pragmatism
Uncertainty	Legitimacy
	Technocracy

Neutrality discourse type adopts a middle-of-the-road approach where the text message reflects no inclination to given position or side. Mutual partnership and collaboration define

the corporation discursive type. Technological optimism discursive type stresses the affordances of technology in academic engagement, while pragmatism discursive type is located in the search for realistic or practical solutions. Legitimacy discursive type is founded on the expression of disciplinary authority and technocracy discursive type refers to “technocratic discourse” (Ng’ambi, 2008, p. 34). The text genres and discursive types all emerge from interaction of three-tier hierarchy of description, interpretation and explanation (the social conditions and the process of production and interpretation). Hence, discursive types should not be taken in isolation but as functions of the recursive interaction of the micro levels and macro levels.

## **ANALYSIS OF RESULTS**

For the sake brevity, I discuss the Facebook artefacts on theoretical, procedural and administrative matters as these were more conversational in orientation than other queries and were identified as dominant queries. Significantly, these queries related to the student-peer and academic-student collaborative engagement on academic matters and to the exercise of academic power, which constitutes the thrust of my paper.

### **Theory related queries**

The first type of questions that students posed to the lecturer and that received the attention of their peers are theoretical questions. Students were challenged by complex novel concepts they failed to define for various reasons- ranging from patchy literature available in the library on them, limited information in the study guide and general lack of clarity between these concepts and related concepts. Textual analysis 1 (see below) depicts lecturer-student collaboration on the theoretical concept of ergonomics. The other student queries whether the concept falls within the broader framework of Human Computer Interaction (HCI).

#### **Text analysis 1**

<b>Text</b>	<b>Description (Text Genre) (TG)</b>	<b>Interpretation (Discursive type) (DT)</b>	<b>Explanation (Social practice)</b>

<p>Discussion Board Post (DBP) 111. Hi Theron. I'd <b>like to request some guidance on my topic 12.6</b> (ergonomics) and <b>where I could possibly find relevant info</b>. Thank you</p>	<p><b>Persuasion</b></p> <p>Student implores the lecturer for information</p> <p>Contraction "i'd" is used instead of "i would" to reflect the informality of the conversational context. "Info" also smacks of informality</p> <p>Addressivity by first name is not honorific</p>	<p><b>Legitimacy</b></p> <p>Lecturer is the authoritative source of information</p>	<p>Although the lecturer's designation as an authoritative source is implied by reference to "guidance" the tone of the consultation process is quasi formal</p>
<p>DBP 112A. Working with your <b>computer can be productive, rewarding and a lot of fun</b>. Unfortunately, <b>prolonged postures, coupled with high levels of concentration and the occasional frustration of things going less than perfectly</b>, can lead to physical problems.</p>	<p><b>Factual information</b></p> <p>Technology enhanced productivity and disruptions of technology</p>	<p><b>Technological optimism</b></p> <p>The affordances and disincentives of technology are acknowledged</p> <p><b>Pragmatism</b></p> <p>The use of examples students easily relate to is fundamental to student understanding</p>	<p>Construction of technology as both liberating and disciplining for the users</p> <p>Explicit teaching is adopted as a pedagogical strategy to inform underprepared learners with learning difficulties</p>
<p>DBP 112B [another student] Does that relate to HCI?</p>	<p><b>Uncertainty</b></p> <p>Unsure about the discipline the concept could be located</p>	<p><b>Neutrality</b></p> <p>Rather than agree or critique the information given, the student responds to the answer with another question.</p>	<p>Reinforcement- the student seeks clarification on an issue (HCI) already addressed.</p>
<p>DBP 113. Yes. A <b>basic understanding of the way you "interface" with your computer can help prevent common health-related problems</b>. A <b>little knowledge of the principles</b> of how people should <b>interact safely and efficiently with machines and their work environment</b>, can save a lot of discomfort and maximize both productivity and enjoyment. This is ergonomics.....good luck</p>	<p><b>Factual information</b></p> <p>Lecturer gives practical information</p>	<p><b>Pragmatism</b></p> <p>Practical precautions on health related problems that emerge from HCI</p>	

In text analysis 2 below, a student bemoans the limited elaboration of theoretical concepts (systems thinking and system) in the textbook. The student also poses an application question on how these concepts can be operationalised in the discipline of IS. The lecturer provides an elaborate answer that activates another question from another student on the constituent elements of systems thinking. The online administrator/ lecturer passionately engages with

the student questions and as the conversation on theoretical concepts reaches its climax, another students renders a website with relevant information for peer access.

## Text analysis 2

Text	Description (Text Genre)(TG)	Interpretation (Discursive type) (DT)	Explanation (Social Practice)
<p><b>Facebook Inbox Posting (FIP) 112A:</b> hi Theron <b>im just a bit confused</b> as to what exactly my topic entails for the literature review. I'm doing "what is a system? System thinking". Which is 1.3! <b>In the text book 1.3 is just about systems in general and what their purpose is...the info is not even a page long!</b> [Student]</p>	<p><b>Uncertainty &amp; Humour</b> Confusion is an expression of uncertainty. Confusion is understated "a bit" as if limited amounts of it are not as delusional</p> <p><b>Factual information</b> – the content of a chapter and the number of pages is factual information</p>	<p><b>Pragmatism</b> Understanding that sufficient background information is necessarily to adequately answer a question</p>	<p>Textbook given as a prime canonical source</p>
<p>FIP 112 B: <b>Simply put, a system is</b> an organized collection of parts (or subsystems) that are highly integrated to accomplish an overall goal. <b>The system has various inputs</b>, which go through certain processes to produce certain outputs, which together, accomplish the overall desired goal for the system. <b>So a system is</b> usually made up of many smaller systems, or subsystems.[Admin response]</p>	<p><b>Factual information</b> The definition of the term is factual</p>	<p><b>Corporatism</b> Expresses her desire to elaborate concepts to leverage student understanding</p>	<p>Hierarchical discourses are reproduced as technological cognoscenti frame discursive practices in which students are functionally passive recipients</p>
<p><b>FIP 111A:</b> [student name]<b>Thanks Theron. But Im not sure</b> if im supposed to be just talking about systems generally or i must be saying what an information system is as well. <b>Please can you help me. Thanx very much</b></p>	<p><b>Persuasion</b> The information need is expressed in form of a plea for assistance. The compliments entrench the persuasive approach</p>	<p><b>Corporatism</b>  The expression of compliments on two occasions demonstrate student corporation and appreciation of the lecturer's messages</p>	<p>Passive reception with limited critical engagement could undermine student intellectual growth and self regulation</p>
<p>FIP 111B: For example, an organization is made up of many administrative and management functions, products, services, groups and individuals. If one part of the system is changed, the nature of the overall system is often changed, as well -- by definition then, the system is systemic, meaning relating to, or affecting, the entire system. <b>(This is not to be confused with systematic, which can mean merely that something is methodological. Thus, methodological thinking -- systematic thinking -- does not necessarily mean systems thinking.)</b></p>	<p><b>Confidence</b> The academic confides in the student by distinguishing organisational system from systemic thinking</p> <p>The sentence is framed by distantiatio "this is not to be confused"</p>	<p><b>Legitimacy</b> The lecturer assumes an authoritative voice by deconstructing and contrasting concepts</p>	<p>Replication of lecturer's academic status as dominant information disseminator</p> <p>"This is not to be confused with" is normalising and is negative framing of authority</p>
<p>FIP 110A: [another student] Also what does systems thinking include?</p>	<p><b>Factual information</b></p>	<p><b>Neutrality</b> Instead of contesting/acknowledging the</p>	<p>Mastering of related concepts /those in the same domain is</p>

	Definition of terms	definitions and distinctions given, the student opts to pose another question	conceived as integral to effective execution of tasks
FIP 110B: [Admin response] Systems thinking is a way of understanding reality that emphasizes the relationships among a system's parts, rather than the parts themselves. <b>We try to</b> study the whole as on contrast to the bits of the whole. For basic understanding, please <b>see this website</b> <a href="http://www.pegasus.com/aboutst.html">http://www.pegasus.com/aboutst.html</a> please <b>use the discussion board in future because other students could use this information as well.</b> hope this helps. cheers.	<p>“We” has relational significance as it demonstrates intimacy of the author with the student.</p> <p>“see this website” is a relational marker showing proximity with reader</p> <p><b>Persuasion</b></p> <p>The exhortation to see a website</p> <p>Colloquialism -“cheers”</p>	<p><b>Pragmatism</b></p> <p>Lecturer directs student to use the public discussion board (public space) rather than inbox to avoid redundant postings</p> <p>Provision of a website is pragmatic as it allows self access to information</p>	<p>Self access to online resources foundational for silo knowledge production model (student constructed as a consumer) and replicates the legitimacy of, and the construction of the lecturer as the authoritative voice. Critical engagement with content is given oversight</p>
<b>FIP 109A:</b> [another student], for extra info, look at this page <a href="http://www.12manage.com/methods_bpr.html">http://www.12manage.com/methods_bpr.html</a> ....its not incredible but it is informative.	<p><b>Persuasion</b></p> <p>Gentle persuasion by another student to consult web resources</p> <p><b>Humour</b></p> <p>“incredible...informative” playing with adjectives is meant to add an air of humour</p>	<p><b>Confidence</b></p> <p>Candid and honest reference to the value of the information – used to confide with the peer student</p>	<p>Student-peer collaboration proves vital for effective exchange of information</p>

Students seemed to overrely on books for academic survival. The collaboration among the lecturer and two students seemed to expose this academic orientation (see Textual analysis 3 below).

### Text analysis 3

Text	Description (Text genre)	Interpretation (Discursive type)	Explanation
DBP 80A: [Student]Hi [Theron], I have been assigned topic 2.6 for the literature review <b>but there is one slight problem.</b> I cannot find any information about the importance of hardware standards and <b>I have been looking for couple of days now</b>	<p><b>Humour</b></p> <p>In spite of little success in accessing information, a humorous understatement “slight problem” is employed</p>	<p><b>Legitimacy</b></p> <p>Student legitimately seeks guidance from a disciplinary authority</p>	<p>Appeal to academic authority for support</p>
DBP 80B: Hi [student name given], <b>you need to read articles on related topic...not just the textbook.</b> There is so much work covered on this	<p><b>Confidence</b></p> <p>“there is so much</p>	<p><b>Pragmatism</b></p> <p>“read articles on the</p>	<p>Provision of strategic direction on information</p>

subject in computer science and IS related journals/books. The primary considerations for any hardware configuration are: <b>ease of connectivity to a given network; ease of connectivity to external systems and organizations; consistent performance of all integrated components in our networked environment ;successful in-house experience with the chosen product and configuration; serviceability by external hardware repair providers ; maximum period of machine functionality</b> etc. [Administrator' response]	covered on..." Lecturer- confides with the student that wide readership and diversification of sources is crucial for academic survival	topic...not just the text book" The secret behind academic survival is given as the consultation of and mastering of information from diverse sources	sources is one of the mandates of an academic authority.
DBP 81A. [Student] There is also another difficulty I have no idea how am I supposed to write <b>6 pages on a topic that cover about half of A5 page.. Please help me, my time is running out..</b> Thank you	<b>Factual information</b>  6 pages ... half of an A5 page is factual information  <b>Panic (New SG)</b> "help me, my time is running out" demonstrates panic and anxiety	<b>Pragmatism</b>  Elaboration of concepts necessitates sufficient background information	Student needs to understand that diversification of sources is critical to academic success
DBP 81B: [another student's response]: You need to discuss issues such as processor , memory, operating system, etc. <b>For the basic understanding, read the article on this URL: <a href="http://www.embedded.com/columns/esdeic/26100525?_requestid=175502">http://www.embedded.com/columns/esdeic/26100525?_requestid=175502</a></b>	<b>Factual information</b> Being in possession of an authoritative source (article) is factual	<b>Legitimacy</b> A knowledgeable peer with relevant sources becomes a legitimate information giver	Facebook enhances student-peer academic collaboration by increasing the visibility of peers with similar/ generic problems to one another in ways that would not otherwise be possible in classroom instruction

In addition to theoretical questions, students also collaborated on procedural issues. The student inquires about connecting personal sites to the database and the peer provides an elaborate answer that the lecturer approves as appropriate and worthwhile (see Text analysis 4).

#### Text analysis 4.

#### Collaboration on procedural questions

Text	Description (Text Genre )	Interpretation (Discursive type)	Explanation
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<p><b>Wall Post (WP) 37:</b> [Student] Hi Theron... Just a <b>little confused</b>. Are we supposed to be able to link our site to an actual database? As well as in the search function? Or is it sufficient to just have a page to show that we did think of it? Thank you</p>	<p><b>Humour</b> Confusion is expressed in a euphemistic way, as “little” as if its meagre amount discounts its existence</p>	<p><b>Pragmatism</b> Practical questions that need realistic solutions</p>	<p>Academic inquiry on procedural questions</p>
<p><b>WP 36: [Student response]</b> You cant get the Database connection fully functional to test. This is because <b>we need to have the site published and Database on ASP enabled server</b>. So <b>i think</b> the latter option would be sufficient. The search thing you can get working without the connection to the Database. <b>I used a program called Zoom Search engine</b></p>	<p>The use of contraction “can’t” and person pronouns “you” and “we” mirror the informality of the interaction</p> <p><b>Factual information</b> Student demonstrates mastery of literature.</p>	<p><b>Pragmatism</b> Publication of the site and hosting of the database on server are practical issues</p> <p><b>Technological optimism</b> Zoom search engine is preferred as optimal technology</p>	<p>Hierarchical discourses are replicated at student-peer level as academically capable students assume vertical roles of “peer tutors” and information givers</p> <p>Performativity of academic identity embodied in solid grasp of literature and rigor</p>
<p>WP 35 : <b>[Administrator’s response]</b> <b>Jonathan is quite correct</b>, as long as you have a customer form that captures their info and a submit button. <b>Check pg 52-53 of the guide i gave you</b> ...it could help on</p>	<p><b>Factual information</b> “page 52-53 of the guide” is factual information</p> <p>“I” reinforces reference to disciplinary authority- its constructs and personifies the referent person as the “other”</p>	<p><b>Legitimacy</b> The lecturer is gatekeeper of what counts as valid and authentic knowledge</p> <p>Reference to the study guide as an authoritative source of information</p>	<p>The positive affirmation of the knowledgeable student’s response reproduces “capable students” and unconsciously constructs a discourse of “able” and “challenged/ weak” students</p>

In text analysis 5 below, the student inquires about the working of percentiles and quartiles.

The lecturer employs examples to substantiate her response to the question.

Text	Description (Text genre)	Interpretation (Discursive type)	Explanation
<p><b>FIP. 119A:</b> Hi. <b>Please tell me</b> how we should work out the PERCENTILE and QUARTILE staff.</p>	<p><b>Persuasion</b> Pleading with the expert for academic support</p>	<p><b>Pragmatism</b> Quest for a practical solution</p>	<p>Appeal to academic authority on procedural matters</p>
<p><b>FIP.119B:</b> <b>This example i am giving you below is based on the work you did in the lab on Thursday last week.</b> To calculate the</p>	<p><b>Factual information</b> Reference to a previous event-lab exercise and</p>	<p><b>Corporatism</b> The elaborate response</p>	<p>Facebook visualises student problems. Student limited</p>

percentile, the pth percentile has p% of the data below it. For example, the median is the 50 <sup>th</sup> percentile. To calculate the price at the 5th percentile you would use the following formula: =percentile (price,0.05). To calculate the price of the first quartile (the 25th Percentile) you would use = quartile(price,1) <b>Hope this helps, Cheers</b>	the procedural calculation the student relates to are all factual expressions  The use of colloquialism “cheers” demonstrates the quasi formal nature of the consultation space	demonstrates that the lecturer cooperates with the student  <b>Pragmatism</b>  The calculation is a practical solution to novel procedural concepts students struggle with	levels of understanding are exposed.
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In text analysis 6, the IF scenario (an IS procedure) is employed by two students in their inquiry on creation of tables and the reporting of queries.

### Text analysis 6

Text	Description	Interpretation	Explanation
<b>FIP.4:</b> In i/f when creating a query in access and you enter an if (if) statement and are asked to enter the parameter value what are they referring to? In your tables in access you want to create a column where you will be able to calculate the total using fields in the same table , <b>how do you go about doing this?</b> Lastly, <b>how does one in access calculate values in this total column i referred to in the above question? Thank you very much Mr X</b>	<b>Factual information</b>  “How do you go about this?” is a procedural question that demands one to detail factual information on procedures  Addressing oneself as “Mr X” is honorific	<b>Pragmatism</b> Practical questions on the IF question	Students need academic support on practical issues as they do with theoretical issues
FIP. 5: HOW DO YOU WRITE AN IF STATEMENT WHEN CREATING A QUERY IN ACCESS?	<b>Uncertainty</b>  The question is bordered by a lack of clarity hence uncertainty  Use of capital demonstrates strong emphasis and an appeal to immediate attention	<b>Pragmatism</b>  Procedural question that needs practical solution	Collective wisdom is nurtured through cumulative questions in a public consultative space
<b>FIP. 6:</b> firstly, give a name to the field that will display the result. secondly, write the if statement formulae which is as follows: IF([the particular field] condition, "do this A", "do this B") For example: the field in which the result will be displayed can be called: show. and the field we need to check for is called age therefore: show: IIF([age]<20, "Teenager", "adult"). hope this helps.	<b>Factual information</b> on the procedural of the IF statement	<b>Corporatism</b>  The elaborate response to the related queries demonstrates the lecturer’s enthusiasm to co-operate with the two students	The use of familiar examples that students can easily relate to is conceived as fundamental to procedural knowledge

		<b>Legitimacy</b> The lecturer is a legitimate information source and qualifies what counts as valid knowledge	acquisition
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Facebook also afforded students the opportunity to pose questions of an administrative nature. Students collaborated on common administrative problems that they faced and expressed their reservation about the way these were handled by the department (see table below).

### Text analysis 7: Administrative questions

Text	Description	Interpretation	Explanation
(Wall Post (WP) 46A: Hi Theron <sup>3</sup> , what was quiz 7 on? <b>because in the course outline it says chapter 11 and access, yet there was no access?</b> and half of the questions didnt come from chapter 11. <b>i know because i studied for it. i have already gotten 0 for two quizzes and these marks do count..so pls let me know?</b> [...] ) <sup>4</sup> [Student name]	<b>Factual information</b> on the content of quiz  <b>Confidence</b> “i have already gotten 0” The student confides in the lecturer about her poor performance  <b>Panic</b> (New TG)	<b>Neutrality</b>  The student confides in the lecturer about his poor performance but accept no responsibility for it as he expects to be given information (as an information	<b>Shallow student approaches to learning exposed in Facebook-</b> prior study is conceived as the sole prerequisite for passing quiz. The student is unyielding in his critique and pre-

<sup>3</sup> Theron is the pseudonym of the online administrator cum lecturer who attended to student queries. I use this pseudonym throughout this work with reference to this lecturer. Note that all names used are pseudonyms except that I used female names for female students and male names for male students.

<sup>4</sup> All citations are original extracts from the postings that are unedited.

	<p>“these marks do count” denotes fear of failure of exam if course work is failed</p> <p><b>Factual information</b> on student’s dismal performance and significance of marks in academic performance</p>	<p>seeker).</p> <p><b>Legitimacy</b> Diverts attention by laying blame on the lecturer (as a legitimate information giver) and demanding information from her (as an information seeker).</p>	<p>empt lecturer’s prospective defence by arguing that he studied it.</p>
<p>WP 46B: [Student name given ], let me find that out....<b>but does it really matter what chapter the quiz was on....if you have already done chapter 1 to 10, you should still be familiar</b> with them...not to read only that specific chapter for the quiz....especially as you prepare for your exam which is not far way. [Administrator’s response]</p>	<p><b>Persuasion</b> “does it really matter...” is persuasive and a euphemistic critique.</p> <p><b>Factual information</b> on chapters read employed in defence of position taken.</p> <p><b>Confidence</b> Confiding in the student on effective study skills.</p>	<p><b>Pragmatism</b> Lecturer furnishes practical solutions for copying with huge course loads</p>	<p>1. Lecturer academically challenges the myopic thinking of the student with unsophisticated study skills.</p> <p>2. Educator as a legitimate expert cautions the student on the need to be strategic in her study and time management</p>

<p>WP42: The quiz wasnt on any of the other chapters either.i know because i have studied the other chapters [Student name]</p>	<p><b>Persuasion</b> Candid objection to lecturer’s position</p>	<p><b>Legitimacy</b> Student has a legitimate right to contest ideas with their lecturers</p>	<p>1. Student rejects the lecturer’s advice and insists on having prepared for the quiz. The student makes no attempt to build on the lecturer’s wisdom</p>
<p><b>WP 41) UM quiz 7 was on Chapter 11. I remember the older women lecturer covering it. Theron</b>, if you guys say it will be on something please stick to it <b>as</b> we dont have just your subject to do and have alot of other things on our minds. <b>We dont have time to relearn the whole syllabus for a ten mark MCQ each week ! But thanks for sticking to the outline. It has helped me organise my life :) (</b></p>	<p><b>Persuasion</b> “Please stick to it” is normalisation veiled in legitimisation of the technocratic position of the lecturer</p> <p><b>Factual information</b> “Quiz 7 and Chapter 11” is factual information</p>	<p><b>Corporatism</b> Appeal for academic co-operation with students by committing themselves to their promises</p>	<p>Huge workload is given as a legitimate excuse for expecting quiz to be chapter dependent.</p> <p>Facebook makes higher educational challenges visible</p> <p>Normalising discourses are employed by students to inform academics of how they expect quizzes to be administered</p>

Another example of student-peer collaboration on course administration issues relates to their critique of lecture conduct and the administration of quizzes. Students learn to negotiate and articulate logical arguments that were justifiable as their peers constructively critique them.

### Text analysis 7

Text	Description	Interpretation	Social practice
DBP 21: IS in general was poorly run.	<b>Unapologetic [New TG)</b>	<b>Legitimacy</b>	Weak academic

<p>The mc [multiple choice] <b>quizzes are a good concept</b> however even after attending all of the arduous and boring lectures <b>I had to guess most questions</b>. They were <b>very vague</b> and <b>the textbook is too long</b> to bother for just a 5 minute test. <b>Lecturers put no emphasis on what is important</b> instead they rumbled on and <b>it is impossible to remember everything they said</b>. The quizzes were also a waste of valuable lab time, <b>trying to learn ms office in 2 sessions was difficult</b>, and <b>watching lecturers who know</b> what they themselves are doing <b>didn't help</b>. [Student name]</p>	<p>The student make no apology for his reliance on guess work</p> <p><b>Factual information</b> Length of textbook, and duration of the quiz and number of Microsoft Office sessions are factual expressions</p> <p><b>Critical (New TG)</b> Student critical of lecturer's perceivably superficial approaches that undercut emphasis on essential information. Critique lack of experiential learning in lectures and demonstrations</p>	<p>Student raises legitimate issues about limitations of a transmission approach</p> <p><b>Pragmatism</b> Student is more intrigued by hand-on approach to solving technical problems</p>	<p>literacies manifest with reference to superficial engagement with content, overreliance on primary texts and lack of student experimentation with technology</p>
<p>DBP 19: I will have my say there. <b>The lectures were so boring. I didn't go to them</b> and I am not prepared to study a whole chapter just for a 5min test. <b>Half of the questions were out of the syllabus, and even too hard for the tutors. Vula itself had many problems like one week it just crushed the whole time</b> and other times you got given 8 options for a MCQ (multiple choice quiz).[...]. And the MCQs were just another problem with IS. <b>No offence to anyone but yeah the quizzes sucked</b> [student name]</p>	<p><b>Unapologetic</b> Student expressed no remorse for missing lectures</p> <p><b>Factual information</b> Number of the questions out of the syllabus, number of quiz options and that the learning management systems was offline all are factual information</p> <p><b>Humour</b> That tutors struggled with the questions as a justification for underperformance is humorous and unapologetic</p> <p><b>Emotive (New TG)</b> "No offence..yeah the quizzes sucked!" sounds emotive</p>	<p><b>Pragmatism</b> Absconding quizzes was a pragmatic way of diverting attention to other academic commitments – practical but tactless strategy</p> <p><b>Legitimacy</b> Student had a right to complain about administrative problems like being offline, vague questions for quizzes</p>	<p>Under developed literacy practices manifest in poor attendance of lectures, missing quizzes, and poor information management and synthesis skills</p>
<p>DBP 20: I think it is a very good concept and definitely something for other courses to think about using. However The chapter getting tested is sometimes a bit vague. <b>What about a notice at the login screen stating the chapter being tested</b>. The <b>marking system is great</b> as a instant mark is given. Overall very good [student name]</p>	<p><b>Factual information</b> Formative testing of understanding is useful. Vague questions are less profitable</p>	<p><b>Corporatism</b> Student cooperates with the other student on the ambiguity of the concepts tested</p>	

## DISCUSSION

### Shallow approaches to learning

Lecturer-student and student-peer collaboration on Facebook exposed the limitations of surface approaches to learning, which involved some students' reliance on texts and the lecturer in university education. For instance, some students who consulted on Facebook demonstrated a limited commitment to diversify their information sources beyond what the lecturer provided. The discursive practices on Facebook for students with learning difficulties were framed by dependence on primary texts (textbook and study guides) for information and direction on the implementation of procedural tasks and addressing of theoretical questions. However, the challenge of the overreliance on books stories is that [they] are decontextualised, both the story and the illustration can be taken and manipulated but manipulating illustrations and story-lines is very difficult and not a self-evident thing to do (Macdonald, 1987; 1990) for under-prepared students.

Teaching approaches that emphasise 'rote' learning and not transformation were alluded to in the quotation: "... Lecturers **put no emphasis on what is important instead they rumbled on and it is impossible to remember everything they said**" (DBP 21). Because of limited contact time, there was often a complex trade-off between syllabus completion and meaningful engagement with students. Rote learning is embodied in the emphasis on *memorising* ("**remembering everything they said**" (DBP 21) content and this invokes the view that lecturer-student in-class contact was often less productive. As Karpov & Haywood (1998) suggest, rote skills are meaningless and non-transferable and that is why students should develop their own empirical knowledge to deal with subject domain problems. My view however, is that for first year learners developing their own knowledge could be hard and may need lecturer support to enhance their critical thinking.

Facebook collaboration exposed student weak learning strategies like unsophisticated study skills, failure to integrate content studied and memorisation. Statements "**we dont have just your subject to do and have alot of other things on our minds. We dont have time to relearn the whole syllabus for a ten mark MCQ each week !**" not only invoke student incapacity to cope with huge workloads but also suggest weak time management. Limited scope for experiential learning is vivid in the statement: "... trying to learn ms office in two sessions was difficult, and **watching lecturers who know what they themselves are doing didn't help**" (DBP 21). It suggests the lack of student practice with technology during instruction in lectures. This constraint reinforces Ng'ambi & Rambe's (2008) finding that although some university students owned electronic notebooks, one of the barriers to accessing electronic

resources was that they were often not allowed to use them in class. This limited experiential learning deprived students of what Davydov (1986) calls *theoretical learning*. Theoretical learning “is based on student’s acquisition of methods of scientific analysis of objects or events in different subject domains. Teachers teach methods of scientific analysis and students then master and internalise these methods *in the course of using them* (italics added)” (cited in Karpov & Haywood, 1998, p. 31).

## **Hierarchical discourses**

The dominance of student self-access to online resources is foundational for constructivist learning. However, the nascence of student critical engagement with content tended to reinforce the silo knowledge production model that reproduced the legitimate authority of the lecturer and her construction as the authoritative voice in knowledge transmission. Although students conceived peers as vital information givers on administrative and a handful of procedural matters, engagement with theoretical queries remained the terrain of the lecturer. Hierarchical discourses, however, were sometimes replicated at student-peer levels as academically able students were affirmed as able and competent by the lecturer. For instance, the lecturer’s statement that “Jonathan is quite correct” potentially privileges this students’ identity as more intelligible in relation to his peers. In this way, Facebook sometimes reproduced and entrenched hierarchical power relations between students. As Rose (2005) suggests, relations between learners within every classroom and school, are unequal. As a result, the learner identities that are produced and maintained by the moral order of the classroom and school are stratified as successful, average or unsuccessful. This inequality is construed at all levels of education, whether overtly or not, as differences in learning ‘ability’ (Ibid).

## **Liberating discourses**

Liberating discourses also manifested in students’ ability to engage and critique academics on matters of course administration. Facebook allowed students to openly question the department’s course administration process. The following textual conversations between the lecturer/online administrator and a student epitomises this capacity:

hi Theron, **this is an information systems course** and how **information systems**

**can make life easier for people** so why is it that all my courses have their lecture slides on vula<sup>5</sup> BEFORE the class **and us, who are doing and information systems course don't have our slides on even a week AFTER the lecture...** im trying to figure out what sense that makes? everyone is complaining about how they can't follow lectures but **how are we expected to follow lectures without something in front of us to look at or even to write on?** this has become really ridiculous especially because we have a quiz every week on the work... i would just like to know if the slides are ever going to be posted on vula? (see WP 117)

While the student logically challenges a department practice of posting lecture slides weeks after the lecture, the lecturer constructively critiqued the student's views by arguing that there are several academic arguments around posting lecture slides ahead of lectures. The premise of the student's critique is twofold: 1). That IS is a dynamic technological field and hence staffs are expected to be leading edge in technology use, 2). Student quizzes are based on lecture notes provided the previous week hence the need for alignment between content delivery and quizzes. The open critique of a department practice by a student demonstrates the capacity of SNS interaction to subvert vertical relations of power and equalise lecturer and student access to knowledge claims. This critique supports claims about the power of CMC (Facebook) to democratise communication through filtering cues that denote social hierarchies (Short et al., 1976). Students who could not otherwise criticise lecturers' academic practices in face-to face contact for fear of sanction found in Facebook a safe haven to question such practices.

### **Nascent networked learning culture**

Networked technology is reported to enable e-Learning, which gives students access to resources such as online encyclopaedia, notes, tests, projects assignments, as well as group interactions (Mlitwa & Nonyane n.d.). The embryonic traces of student networking on Facebook insinuate their realisation of the significance of learning networks for information sharing. Students discussed with peers issues ranging from course administration, procedural task execution to micro-level management of their daily lives. In these [learning] communities, learners participated actively creating and sharing activities, learning plans, resources, and experiences with peers and institutions (Koper & Sloep, 2002). Facebook therefore, presented a platform for student practice with collaborative networking- for example through exchange of procedural information (see WP 36) and exchange of important websites (see 81B). Networked interaction with peers on Facebook enhanced their access to

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<sup>5</sup> Vula is the institutional Learning Management System on which the lecturer notes, slides and related content were hosted.

collectively generated resources, academic support and background information on task accomplishment. Networked learning cultures are at the centre of the development of user-generated content characteristic of Web 2.0 technologies. As literature suggests in relation to ICTs context of use, when some [learners] are introduced to an ICT curriculum, they may already have taught themselves the skills in a non-formal setting, and furthermore they may know a great deal more than the teacher herself (MacDonald 2006, p. 67). While students acquired some ICT skills through informal interaction, my findings differ from MacDonald (2006) in that many of them proved not to be technophiles as the lecturer remained their main source of information.

### **Visibility of common problems and camaraderie**

By viewing peers' questions, students gained confidence in posting questions as they realised that they were not the only ones with problems in grasping theoretical and procedural issues of the subject. Mlitwa & Nonyane (n.d.) contends that ICT helps improve schools administration such as the registration of learners, keeping and retrieving of learner records, electronic (rather than manual) handling of marks and enables teachers and learners to gain easy access to learning and teaching materials online across time divides. Access to learning resources was improved as they engaged with peer-generated text genres and interpreted them in diverse forms to inform their understanding of IS discourses. Discursive practices on issues they could easily relate to activated and sustained a culture of camaraderie. This is because they could identify with peers' problems and with the collective space where text genres were generated, viewed, responded to and critiqued.

### **Differential participation and contingent academic empowerment**

Some of the problems of lecturer-student in-class interaction that were exposed by student-peer online interactions are: a). Differential levels of student participation and b). Racialised relations that limited collaborative engagement. While all student racial groups participated on Facebook, the quantity and quality of participation on the public spaces differed. In terms of participation rates on Facebook, white students<sup>6</sup> posted comparatively more posts on the discursive spaces than other races. For example, white students posted twice (48%) the number of posts than blacks posted (24%) on the wall. Differential participation therefore, exposed the gaps in racial participation that lecturer-student interaction in classrooms could

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<sup>6</sup> Because students used authentic names (as a department requirement) and posted their profiles (showing their racial affiliation) and photos, it was relatively easy to establish their correct identification.

mask (because of limited question and question sessions) or take for granted because of limited one-on-one lecturer-student engagement. In the absence of student developed artefacts/writings in lectures to approximate the levels of understanding of different students, it would be hard for lecturers to formatively assess student understanding. On the contrary, on Facebook, the student postings could be examined by race, gender<sup>7</sup> and differential participation became more evident. It appears students who could express themselves well had more theory-driven queries directed at the lecturer than their peers. It was inferred that the majority of these tended to be first English language speakers or students who attended English speaking schools.

On the contrary, students from PDS who were traditionally second English language speakers, though they participated in all Facebook spaces, could not fare well when compared to the previously advantaged students (PAS)<sup>8</sup>. This augurs well with the findings of previous studies. For instance, categorising blacks learners who move into richer private schools where English is the medium of communication, Macdonald (1999) notes that English as a Second Language (ESL) children seldom had sufficient mother-tongue models to support them into their sought-after medium of instruction, which is, naturally, English, the language of power. In light of these differentials in participation, psychological power was implicitly enacted through these subtle forms of exclusion and marginalisation in the scholarly discourses of the subject. This unfolded in online spaces that were supposedly ‘democratic’ given their CMC nature.

## **CONCLUSION**

Collaborative engagement on Facebook activated hierarchical and horizontal discourses that had a bearing on pedagogical instruction. Hierarchical discourses manifested in explicit teaching that took the form of lecturer elaboration of theoretical and procedural issues to students and silo knowledge production models in which some unsophisticated students emphasised textbooks research. These discourses exposed common student problems like weak study skills, challenges of synthesising and managing information, huge workloads and limited contact time. From a pragmatic instructor viewpoint, lecturer-student and student-peer

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<sup>7</sup> Determining the levels of participation by race, and gender was possible given the requirement that students sign up on Facebook using their authentic names. The Facebook personal profile and the pictures can also express personal identities as they are publicly accessible. That said however, profiles and pictures can be manipulated.

<sup>8</sup> Because of the strong relationship between race and advantage/disadvantage, the majority of whites can generally be considered as PAS while the majority of blacks and coloured as PDS.

interaction on Facebook afforded academics a reasonably panoramic view of student's mindsets, underdeveloped literacies that necessitated leveraging and complex concepts that needed unpacking and clarification to strategically align their teaching practices, students' learning strategies and demands of university tasks.

Some students saw the lecturer as the predominant authoritative source of information and authoritative discourses reproduced themselves as student discursive practices were less criticality oriented. Some "academically able" students were affirmed by the lecturers as their answers were acknowledged as useful for their peers. Horizontal discourses that were conceivably liberating emerged through student collaboration with peers on procedural tasks. These collaborative discursive practices mirror Connectivism-that is, how learners connect and collate diverse content and conversation fragments to create an integrated (through sometimes) contradictory network of information (Siemens & Tittenberger, 2009). As they reiterate:

Our learning and information acquisition is a mashup. We take pieces, add pieces, dialogue, reframe, rethink, connect, and ultimately, we end up with some type of pattern that symbolizes what's happening "out there" and what it means to us (p. 5).

In the same vein, Facebook discourses presented opportunities for student collaboration with both peer generated content and pedagogical content knowledge. Facebook potentially democratised academic relations by rendering students the agency to hold academics accountable as legitimate knowledge builders and givers and sometimes, to intermittently neutralise the exercise of authoritative power by academic agents. Yet the latitude of this disruption of asymmetrical power was circumstantial and context-dependent- students' heavy dependence on the lecturer for academic support on theoretical and practical tasks often undercut their capacity to exercise academic authority. Transcending Siemens & Tittenberger's (2009) view, it can be inferred that horizontal discourses ironically reproduced differential power structures as academics unconsciously conferred academic power to some students by affirming their answers as correct and convincing.

The two discourses mentioned above have fundamental implications for pedagogical practice in higher education.

- Academics should induct students to critically engage with, locate and interpret the philosophy and ideologies behind different discourses they and peer students

activate. This could unlock student understanding of how disciplinary knowledge is constructed rather than passive reception of lecturer-generated content.

- Lecturers should encourage student discursive practices and discourses involving higher forms of knowledge (theoretical knowledge) as much as they deliberate on procedural issues. Student learning communities created on Facebook could be employed as vehicles for deconstructing theoretical propositions and perspectives through text based interaction. As Salmon's (2000) five stage model of e-learning posits, it is the higher levels knowledge construction and development that allow for student self-regulation in on-task activities, responsibility for their knowledge construction and cognitive growth.
- Weak study skills and over dependence on the lecturer for information are addressed by developing an information sharing culture and valuing the strength student contributions during collaboration. Through this, students learn to become principal knowledge generators more than information receivers.

The adoption of CDA exposed some hidden assumptions, positioning and implicit ideologies behind the discursive practices and discourses articulated on Facebook. Through the examination of text, its discursive types and the discourses invoked, subjective interpretation were made and the connections between the text, the settings in which discourses unfolded and the broader social context in which they unfolded became more apparent. Hierarchical discourses between the experienced expert and the novice students took the form of manipulation as some students failed to critically engage with the theoretical content they consulted. Van Dijk (2006) suggests that discourses become manipulative when the recipients are unable to understand the real intentions or to see the full consequences of the beliefs or actions advocated by the manipulator. This is often the case especially when the recipients lack the specific knowledge that might be used to resist manipulation (Wodak, 1987). For first year learners, engaging with the lecturer's authoritative discourses necessitated student understanding of the IS field so that they could interpret and critique her ideas in Facebook public spaces. That said, the lecturer's pragmatic approach to discourses on procedural queries allowed students to approach her advice with an open mind. The capacity of CDA to present different representations of the discourses, the various levels of discursive practices (text genres, discursive types and discourses) offer a

compact analytical framework for IS practitioners intrigued by solving problems in IS implementation, IS strategy implementation, mobile learning, systems support and general decision making on IS applications.

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