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Genre pedagogy in the mediation of socially-situated literacies acquisition – the experience of apprentices in a higher education community of practice

A B S T R A C T In this article, the writer explores learner experience during the scaffolding of subject-specific academic literacies using a genre pedagogical approach that views linguistic expertise as a socially-situated phenomenon. For the learners of this case study, the mastery of the descriptive report genre, in particular, was fundamental for Anatomy and Physiology which is a core subject of the B Pharm (Bachelor of Pharmacy) degree at a South African higher educational institution. To facilitate success in completing a contextualised descriptive report assigned to the learners, the English for Pharmacy course was designed to support the Anatomy and Physiology module by providing collaborative pedagogic support of apprenticeship practices and mediation of academic literacy. The data collection involved an analysis of written work samples, interviews and reflections gathered from a group of first-year South African Pharmacy degree learners by determining the language lecturer's explicit teaching practices to deconstruct the complexities of textual schemata rooted in genre.

1. Introduction

Rose (2008:13) defines textual genre as "predictable purpose in particular social contexts" such as specific academic fields that the learners of this case study are expected to access. According to genre pedagogy, the textual patterns determined by genre can be clearly explained to learners who are being trained to manipulate language patterns in accordance with acceptable stylistic criteria (Hyland, 2003b:19). In this article, the writer describes and discusses how learners registered for the first year of the Bachelor of Pharmacy degree at a South African university experience genre pedagogy through the explicit teaching of textual patterns to facilitate learner access to subject-specific texts.

The genre approach was used to support the first-year Pharmacy learners to meet the complex reading and writing requirements for Anatomy and Physiology tasks. . Many of these learners were accomplished in reading and writing fragmented notes for scientific subjects but were not used to texts composed of full sentences and paragraphs appropriate to the subject-specific purposes of particular textual genres. Therefore, the language support offered to the learners of the study was aimed at facilitating access to particular academic literacies in the context of first-year Pharmacy degree studies

The genre-based language support course also attempted to assist learners in understanding and manipulating complex patterning within written texts that housed subject-specific knowledge. In the context of an Anatomy and Physiology assignment that required expertise in the descriptive report genre, the English for Pharmacy course adopted a teaching practice that sought to make both the language features and meanings explicit to learners. The language lecturer's deconstruction and reconstruction of textual patterns was aimed at facilitating the reading and writing of subject-specific information housed in appropriate language.

For the study's data collection, the learners were requested to reflect on their experience of the genre-based intervention on completion of the pedagogically-supported academic language task. In addition, informal group interviews were conducted to gain insight into the learners' interpretation of genre-based language teaching practices. The actual written reports were also examined to assess how the language course had impacted on the learners' manipulation of language in a particular subject-specific context and access to literacies that Street (1984, 2004) views as a socially-situated phenomenon comprising various competencies such as academic reading and writing.

2. Literature background

Hyland (2003a) indicates that genre-based language pedagogy gives learners frameworks with which they can read and write texts in the light of their social purpose. Therefore, a genre-based practice enables learners to approach texts confidently, understanding whether they involve reading, writing, hearing or speaking. Generalised and systemic guidelines also help learners to cope with the purpose of the text (Hyland, 2003b: 19). As Martin and Rose (2010) maintain, these structures depend on social situations and the explicit teaching of textual patterns that give learners a tool with which to deconstruct and reconstruct contextualised texts.

Genre theorist, Rose (2006) views the language learning task as social practice that involves sets of skills. In context, spoken or written texts especially those in academic environments have different socio-cultural purposes and go through stages that differ from other texts that have other functions. Bloomer, Griffiths and Merrison (2010: 285; 469) refer to these sociolinguistic textual varieties as *genre* that Rose (2005: 143; 2008:13) defines as predictable purpose in subject-specific contexts.

The genre approach, which originated in Australia (Martin, 1986; Martin & Rothery, 1986; Cairney, 1992), attempted to develop literacy across a broad range of identifiable categories by raising the learner's awareness of the linguistic elements of socially-situated texts. The paradigm is grounded in Halliday's Systemic Functional Grammar which describes language as the creation of textual meaning in particular contexts (Halliday, 1994; Halliday & Hassan,

1976). According to Johns (1990) and Swales (1990), genre theory is a social constructionist position that views writing as a social phenomenon pointing to particular contextualised purposes that determine textual conventions to which specific communities of practice adhere.

Genre theory developed as a result of dissatisfaction with the learning theories of behaviorists like Lado (1964) who advocated the oral over-learning of language patterns that were then transferred into written form, and the pedagogy of process methodologists such as Murray (1980) who taught writing as a creative act that takes time and positive feedback. Genre theory seemed to allow for authentic negotiation of textual meaning within frameworks appropriate to socially-acceptable linguistic principles. Although genre theorists including Fiske (1987:114) view language acquisition in terms of patterns as in behaviorist theory, the frameworks are perceived as promoting independent learner construction of texts.

Chandler (1998:2) views genre in terms of textual schemata which rely on background knowledge and purpose in particular contexts. These structures should inform learners' crafting of original texts and be considered as tools that empower apprentice artisans. Bakhtin (1986) conceptualises the notion of *intertextuality* as the shaping of the meaning of a text as determined by other texts with the same social purpose. This entails the creation of genre frameworks in terms of prior experience and similar objectives that although forming a predictable group of textual events and behaviors, also provides opportunities for learners to manipulate complex intricacies embedded in social context (Swales, 1990: 46).

Firth and Wagner (2007:807) stress a socially-contextualised view of language learning that occurs in "multiplex communities of practice". Learning is considered as integrally connected to learning activities involving social interaction in concrete settings. Firth and Wagner (2007: 807) also write of learners' negotiation of "complex segments of social activities" where participants interact to create meaning in words with the linguistic tools appropriate to particular social groups. This sociolinguistic view of language manipulation highlights the need to uncover literacy acquisition as social activity and an interactional phenomenon that is context dependent. Thus, it is important that researchers attempt to understand the socially-situated complexity of the language-learning phenomenon especially in academic contexts where learners are expected to master textual genres that have particular social purposes.

The textured complexity of academically-situated literacies requires what Basil Bernstein (in Rose 2006:1) describes as "elaborated codes (that) are the media for thinking the 'unthinkable', the 'impossible". This statement reflects the paradox of the genre approach that views academic language task completion as an interrelated phenomenon involving authentic textual construction but within socially-situated constraints. According to Bernstein, the textual conventions of language in academic contexts involve "the vertically integrated discourse of academic fields" as opposed to the less intricate and "horizontally segmented discourse" of "everyday knowledge" (in Rose, 2006:3). Thus, Rose (2005, 2006) maintains that language learning is an increasingly complex task for learners as they progress through the education system which indicates a need for contextualised pedagogic support, an argument that Prinsloo and Janks (2002) apply to the South African context.

Janks (2000), May and Janks (2004) as well as Rex and McEachen (1999) recognise the importance of supporting learners when faced with the challenge of mastering the language

of learning in different contexts. As Heath (1986) maintains, this support is especially needed for learners who have little prior knowledge of effective use of codes belonging to specific academic contexts. Such support is in effect literacy-practice support and like that described by Gee (2004) and Barton and Hamilton (2000), views learner access and success in terms of particular academic contexts as well as the negotiation of subject-specific textual conventions.

Rose (2008) and Gee (2004) advocate the teacher's modelling of the deconstruction of complex contextualised textual schemes in academic settings which learners can consciously recognise and use when processing knowledge housed in the language of learning. Thus, depending on context, specific genres of English textual conventions appropriate to their purpose and suitable stages are taught to learners. Rose (2008: 13) provides examples of genres that have a predictable purpose and stages and these include, stories (recount/narrative/exemplum/anecdote/news); responses (personal/review/interpretation); arguments (exposition/discussion); factual recount (autobiographical/biographical/historical); explanations (sequential/consequential); reports (descriptive/classifying/compositional) and procedures (procedure/procedural recount

Halliday (1994), Martin (in Badger & White 2000: 155) and Rose (2005:143; 2006:11; 2008:13) conceive of a detailed sociolinguistic schematised model of the complexity of the language learning task that comprises several strata determined by socially-situated reality. In his model of socially grounded text, Rose views genre as specifying the "the stages (a text) goes through, in relation to other genres in the culture" (2006:11). Genre is the top-most layer of the model and determines subsequent language layers that involve patterns within context, the text, sentence and word (Rose, 2004:10). Although Rose stresses that all are globally-determined by context and, therefore, encode socially and culturally-situated knowledge, he views the layer of *genre* in particular as *context of culture* (2006:11).

In his model of the socially-situated language reality, Halliday (1985:12) describes the second language layer linked to that of *genre* as register. Rose (2006:11) also includes register along with genre in his category of *textual patterns within context but beyond the text*. Moreover, Halliday (1985) and Rose (2006) view textual register as *context of situation* and involving field, tenor and mode. The notion of *field* is described as "experience that (register) construes" or "its subject matter". The dimension of *tenor* is defined as "appraisals of positions ... of the reader-writer relationship"; and the concept of *mode* as the realisation of text in written or spoken form that lies on a "continuum (of) highly written and more spoken ways of meanings" (Rose, 2006: 11).

In addition to the layers of *genre* and *register* that specifically delineate textual patterns within social context, Halliday (1994: xxvi) and Rose (2006:1) identify the interconnected stratum of *discourse semantics* that they view as involving schemata within the text. Rose (2005:143) classifies this particular pattern within the text as meaning and wording in ranks in the text/paragraph/ sentence. He also refers to the discourse-semantics layer as stages of meaning in the text, phases in the paragraph and the message/ key wordings in the sentence (Rose, 2004:10).

Linguistic theorists such as Pincas (1982) view language teaching as being about mostly about knowledge of the appropriate use of vocabulary and syntax. However, genre theorists such as Rose (2005: 143) identify *lexico-grammar* as another stratum which, like the discourse-

semantics layer, lay within the text but ultimately also depends on meaning and context (Halliday 1975: 93; Rose 2005: 143). This layer of patterns within the sentence involves the organisation of meaning (wording) as groups of words or phrases as well as particular words that are determined by grammatical and lexical conventions.

At the level of graphology and phonology within individual words, Halliday (2001: 15) and Rose (2003:11) specify the textual layer of sounds and letters that are arranged according to contextual principles. As language is organized into contextualized strata of genre lexicogrammar and discourse semantic strata, the "vector" of phonological and graphological ranks provide language learners with "a round of choices and operations" (Halliday, 1994:xix).

Bhatia (2002: 16) also presents a multi-perspective genre model that is similar to Rose's representation of the complexity of the language learning task (2004:10). Although Bhatia (2002) views genre as textual knowledge dependent upon social practice (2002), he also specifies that genre knowledge is useful as a tool made explicit by the language teacher to learners to facilitate understanding of stages of a text fulfilling a specific social purpose. However, Bhatia (2002) states that genre does not determine the textual patterning within the text.

Although Bhatia (2002:6) maintains that "a discourse community determines ... its textual artifacts/ genres", he stipulates that discourse as genre should be distinguished from discourse as text that involves textual procedures and processes that are not dependent on context or generic frameworks (Bhatia, 2002:16). According to Bhatia (2002:17), the textual patterns that he terms *discourse as text* depend on universal textual conventions as opposed to generic frameworks. Nevertheless, both Bhatia's (2002) and Rose's (2004?) model involve a multiperspective view of a complex language learning situation that is driven by its social positioning and in need of pedagogic support. In the words of Bhatia (2002:3):

Genre analysis can be viewed from two different perspectives: it may be seen as a reflection of the complex world of institutionalized communication, or it may be seen as a pedagogically effective and convenient tool for the design of language teaching programs.

Rose specifies that learners need to be taught conscious awareness of the "dimensions" of the complex language task in order to "automatically process each layer of patterning within the text, sentence and word" (2006:11). Explicit explanation and modelling of how to manipulate linguistic constructs beyond and within the text would be a realisation, according to Rose (2005: 140), of the Vygotskyian model of social learning theory where apprentice learners master skills with strong support.

Vygotsky (1978) theorises on the interaction between learners and their socio-cultural context and the development of cultural tools including speech and writing that allow for the mediation of social environments. Vygotsky (1978) maintains that the internalisation of these tools leads to higher thinking skills. In the context of the case study described in this article, literacy acquisition for academic reading and writing is viewed as a socially-situated practice from two perspectives of Vygotsky's (1978) social learning theory. The first involves the academically-

contextualised apprenticeship practices in a particular textual genre, namely, the descriptive report. The second involves pedagogical practice in an interactive learning situation where the teacher gives support to Pharmacy degree learners with regard to a particular writing assignment for Anatomy and Physiology. The learning space is what Vygotsky (1978:86) terms the *zone of proximal development* where learning takes place, whilst a balance is struck between independent learning on the part of learners and strong support from the teacher.

Jacobs (2007) supports the scaffolding of subject-specific academic literacies in learners in terms of a socially-situated pedagogy. As Jacobs (2007: 75) notes, language lecturers could facilitate learner explicit knowledge of discipline-specific discourse via teaching of the textual patterns that experts in the field do not necessarily articulate in terms of language patterns. Jacobs (2007: 75) writes of the tacit knowledge of contextualised literacy practices on the part of discipline-specific specialists who belong to "academic communities of practice". Yet, as Jacobs (2007: 60) points out, learners do need to have a command of the "Discourses of specific groups of people in specific contexts" that Gee (1996) views as including reading, writing, speaking, behavior, value systems, beliefs and interactions.

Gee (2003:111) writes about the intuitive Knowledge Principle that "involves tacit knowledge built up in repeated practice and experience ... in association with an affinity group". This is the knowledge that communities of discipline-specific experts generally have and is distinguishable from the language experts' verbal and conscious knowledge of language patterns that learners need to master in completing subject specific language tasks (Jacobs 2007: 62; 75).

Gee (2003: 85-87) formulates the principle that although tacit knowledge should be promoted in a socially-situated learning situation, learners who are still apprentices in particular communities of practice also need specific and explicit information as opposed to excessive, unnecessary and general theory. Jacobs maintains that content subject lecturers need help from language lecturers in making the discourse patterns of their disciplines visible to learners (Jacobs 2007: 62; 66-67; 75-76).

Jacobs (2007:78) supports collaborative and integrative practices on the part of the language and content subject. Moreover, Jacobs (2007) maintains that the language lecturer could help the content lecturers who have the disciplinary knowledge to master the language patterns they may be tacitly aware of. Thus, with conscious understanding of the language structures, Jacobs (2007: 78) affirms that both language and content lecturers could facilitate learner mastery of discipline specific academic literacies.

By means of the genre approach, the interrelated language patterns used by particular communities of practice such as the lecturers of an academic subject such as Anatomy and Physiology could become accessible to learners via the explicit language teaching that may lead to successful negotiation of coherent textual meaning in contextually-appropriate situations (Martin, 1986:64). As Gallagher (2000) maintains, the formal structures of genre pedagogy are grounded in a breakdown of the process of contextualised meaning creation that provides learners with textual patterns that they can independently use to forge authentic texts.

TEACHING METHODOLOGY

The literature background informs a language-teaching methodology grounded in genre theory that was aimed at facilitating independent learner completion of a particular reading and writing Anatomy and Physiology assignment on the topic of infectious diseases.

The first stage of the language support involved the making of the general social purpose of the task explicit to learners in terms of genre. This involved the deconstruction of the instruction to the assignment in terms of key wordings and their synonyms. The particular instruction in the context of the Anatomy and Physiology term paper completed by the learners of the case study was:

Students are expected to write a descriptive report on the particular bacterial or viral disease allocated to them. The typical introduction, body and conclusion pattern should be followed as well as the following sections in structuring the body of the report: prevalence/statistics; causes; symptoms; prognosis; treatment; and prevention. Students must reference at least 1 book; 1 Internet reference and 1 scientific journal source and follow the referencing style in the your Anatomy and Physiology Study Manual.

Modelling of the isolation of key terms of the instruction to the assignment together with their synonyms was an attempt to make the learners conscious of the particular report genre of the assignment with the aim of inspiring confidence in the negotiation of the inter-related layers of the contextualised language learning task. The key term *descriptive report* was made explicit to the learners insofar as the genre of appropriate to their particular assignment on the Anatomy and Physiology topic entailed the classification and description of a phenomenon. Moreover, they were taught that the notion of *description* could be also unpacked in in terms of various synonymous meanings such as *to give an account, explanation and depiction of facts*. Thus, the learners were helped to understand that they would be expected to gather information on their essay topic.

The concept of *report* was also analysed for the learners in terms of its implication as the gathering of detailed and informative statements structured into an acceptable textual scheme. In other words, the data they would find in the course of their research would have to be reformulated according to the report framework that was stipulated via the instructional key words *typical introduction*, *body and conclusion pattern* and *sections in structuring the body*.

Textual conventions of referencing were explained during this stage of the teaching strategy. The need to state all the research resources of information was made explicit as part of the report genre. The Anatomy and Physiology lecturer's instruction had indicated that texts from the Internet, books and scientific journals were to be consulted for data for the assignment. Thus, the language lecturer covered the rules of in-text referencing and bibliographical referencing as stipulated by the Anatomy and Physiology Study Manual to which the instruction to the assignment also referred.

The second stage of the teaching strategy entailed the making explicit of the register of the language task in terms of *field*, *tenor* and *modality*. This was in accordance with the genre theorists' perception of the complexity of the contextualised language-learning task

that determines its genre and inter-connected strata. The aim was to facilitate learner understanding of the Anatomy and Physiology task situatedness in the field of *infectious disease* that would determine its formal interaction between reader and writer as appropriate for a written scientific text.

The next stage in the support process entailed the facilitation of learner consciousness of the textual patterns of *discourse semantics*. The teacher, thus, modelled the reading of a text on the topic of a particular bacterial/viral disease. The text was deconstructed by paraphrasing of the title; explanation of the stages of the text as a whole; and unpacking of the phases of each paragraph. The teacher gave learners the opportunity to volunteer key wordings and their meanings, although often these needed elaboration and clarification. When learners struggled to state key wordings, identification was facilitated by teacher's stating of specific meanings that allowed learners the opportunity to quote the parts of the text that encoded its essential message. These key wordings were written down by learners as a reconstruction of the text in point-form notes.

Then, the language teacher facilitated the learners' scrutinising of their notes for particular wordings that could be relevant for a descriptive report on the aspects of the disease as indicated in the Anatomy and Physiology lecturer's assignment instruction. The teacher modelled an analysis of the key wordings drawn from the point-form notes as an outline plan (point or diagrammatical) for the report. The language teacher also wrote in-text references next to each of the key wordings in the plan as well as the full bibliographical entry to highlight the need for referencing in a formal written report. Learners were asked to discuss and then share how they understood the rules demonstrated by these textual references. The language teacher reiterated the rule and the necessity for adherence to the conventions when completing their own assignments.

At the start of the subsequent stage of the teaching strategy, the language teacher mentioned that plagiarism was not only avoided by referencing sources but also by the use of original wordings when reconstructing full texts that had been read and deconstructed into point form notes. Learners were made aware that although their notes may continue the original source wordings, they were to write their final report in their own words. Different parts of the modeled outline plan were assigned to groups of learners to reformulate in original wordings in sections for a descriptive report. The reconstructed data in referenced paragraphs were shared in class time and the teacher followed up with an example of the full descriptive report. Copies of this model report were distributed amongst groups of learners to analyse in terms of genre-based textual patterns. The groups gave feedback regarding their findings and this gave the language lecturer the opportunity to reiterate the appropriate conventions.

Once the support had been given as described above, the learners were then set the task of independently finding texts on the topic of the disease assigned to them. In consultation with the language teacher, they had to then deconstruct source texts and extract salient wordings for their own descriptive report. Learners were expected to explain their plans that were to include in-text references to one another during class time. Learners were then given time to write out their planned descriptive report in full and encouraged to consult the teacher with individual problems that were addressed by explicit explanation in terms of genre based

language strata when practically appropriate. In particular, learners were assisted with issues involving lexicogrammatical structures at this final stage of the language support.

CASE STUDY

The general objective of the case study was to investigate the experience of 62 first-year Pharmacy degree learners at a South African university of language support grounded in genre theory. This was to discover whether the course had impacted on the learners' success in reading and writing subject-specific texts for an academic assignment. Moreover, the following research question for the study was formulated:

What was the experience of learners who had been given language support based on genre theory in the context of a subject-specific academic assignment?

The research approach used in the case study was phenomenological that Creswell (2005), maintains is aimed at understanding the phenomenon of learner experience in a particular socio-cultural contex. Phenomenological inquiry allows for the discovery of people's life experiences and is a paradigm of inquiry based on the principle that meaning consists of how occurrences are understood in human consciousness. The approach was appropriate since it allowed the occurrence of "language learning from a language socialisation rather than language acquisition perspective" to unfold from a learner perspective (Lazaraton, 1995: 466).

Moustakas (1994) uses phenomenology as a research methods framework that makes use of meaning making units for description. To collect data, researchers use interactive processes such as interviews as well as open-ended questions. Thus, the researcher attempts to eliminate possible bias to allow for objective understanding of the participants experience. Analysis of data begins with regarding every element as having equal value. Then, the meaning units are clustered into themes and sub-themes to describe the phenomenon (Creswell 1998: 235-237).

Kramsch (2006) refers to the usefulness of phenomenological inquiry in language socialisation research that investigates the way in which individuals collectively represent meaning in communicative community practice. Groenewald (2004:2) views the phenomenological research design as appropriate to unbiased exploration of lived experiences that the writer aimed to describe objectively and as accurately as possible. The study participants, therefore, described their experience for the researcher who in turn analysed the data provided.

The research also followed a qualitative methodology as it did not involve measurement or statistics. Qualitative data collection allows the researcher to describe and analyse the phenomenon of the learners' perceptions of the language in terms of written- and orally-communicated thoughts as well as work samples. The data sources of the case study described in this article included, written reflections; unstructured group interviews and the final written assignments. These variously sourced data were analysed and compared with a view to discovering recurring themes and subthemes regarding student experience of the language support course based on genre theory (McMillan & Schumacher, 1998: 480, 520; Tesch, 1990: 115, 139).

The written reflections enabled the gathering of first-hand, in-depth, unexpected and relevant information from learners (Kvale, 1996) as they allowed learners to freely share their experience without being unduly influenced by the lecturer or peers. The learners were also asked to write a reflection paper in response to following question about their own perception of the language support course:

What impact has the English language support course had on your Anatomy and Physiology written assignment?

As this is an open-ended question, it allowed for an unstructured, uninterrupted and private expression of perceptions (Wood & Webb, 2008: 115).

As part of the research investigation, unstructured group interviews were also conducted. Learners were asked to describe what they had learnt about assignment writing during the past term, and notes were made of the learners' remarks during the interviews.

The third part of the data-collection process involved the examination of work samples of learners' final Anatomy and Physiology term papers for language patterns as described by genre theorists.

The written samples, the reflection and the interview notes were further analysed into themes, sub-themes with substantiating examples. Thus, the analysis involved inductive deconstruction and descriptive analysis according to the steps of Tesch (in Creswell, 2005: 238), Briefly, these steps involved reading all the documents several times and making notes of themes that emerged; grouping similar themes together and breaking up themes into main themes and sub-themes. A final discussion to reach consensus was held between the writer of the article and assistant researchers to reach consensus and determine the final analysis.

DATA ANALYSIS

The data analysis revealed two basic thematic structures that described the phenomenon of the learners' experience of genre-based language teaching. The first theme involved the identification of learner tendency to make use of appropriate genre-based textual patterns whereas the second indicated their inappropriate use of genre-based textual patterns. The first theme was divided in three sub-themes: Use of appropriate genre; understanding and use of appropriate register (field); and understanding and use of patterns at text and paragraph level appropriate to the written mode. The second theme was textured into two sub-themes: Tenor errors and problems with textual conventions at word group level

Theme 1: Use of appropriate genre-based textual patterns

The first theme identified was that of learner conscious use of textual patterns within the context of a particular subject-specific academic reading and writing assignment. Most learners seemed to understand and apply the genre-based language learning model that had been explained to them by the teacher's modeling the contextualized descriptive report that determined appropriate generic stages as well as register and discourse semantics genre

Sub-theme 1: Use of appropriate genre

Learners knew and utilised the concept of *genre* as specified social purpose in the academic context of an Anatomy and Physiology descriptive report assignment. In particular, the *descriptive report genre* (classification and description of a phenomenon) was used by the participants of the case study. Most of the reports on the topic of a *bacterial/viral disease* began with a classification of the topic in terms of a general definition followed by a statement indicating the outline of the descriptive report. The following is an example of an introductory

paragraph that indicates the writer's global conceptualisation of the concept of textual genre as purpose that follows specific stages in the text:

"A bacterial disease indicates the presence of pathogenic bacteria as opposed to bacteria that are harmless and even healthy under normal conditions. The particular focus of this descriptive report, *Syphilis*, is a common sexually transmitted disease (STD) caused by the by a bacterium called *Treponema pallidum pallidum*. This particular bacterium is shaped like a spiral and spreads quickly in human bodies that provide the only as yet identified long-term hosts for it. In this report; the writer will cover the following aspects of the topic: prevalence; transmissions; symptoms; prognosis; treatment; and prevention."

The learner has identified the genre as *descriptive report* and in line with the classification and introduction stage of this particular genre has also classified and defined the topic in terms of *bacterial/sexually transmitted disease*. The stages of the description have also been outlined as *prevalence; transmissions; symptoms; prognosis; treatment; and prevention*.

A comment made by a learner reflected a conscious awareness of the purpose and stages of the disease report genre that with support from the lecturer had resulted in the application of appropriate textual conventions. For example:

"I learnt to write a descriptive report and had to first explain the disease in general, its type and root cause... This helped me to get started on the right footing. After that, it wasn't so difficult to write a description of the disease's causes etc. once I'd gathered all the information from books and the Internet on the same topic."

In an interview, another learner stated:

"I know exactly what to do for our next disease assignment. It's going to be on cancer and I will first find a general definition of my topic in descriptions of the disease in different sources. After that it's just a matter of writing paragraphs about the different causes, symptoms and so on".

It appears that this learner felt confident about knowing how to complete an assignment in the required genre of the assignment. The comment reveals an explicit grasp of the intention as well as the general design of the text to be produced in writing after reading of texts on the same topic.

Sub-theme 2: Understanding and use of appropriate register (field)

The second sub-theme agreed upon by those who analysed the data was successful understanding and use of register in terms of Pathophysiology as a field. The following example of an introductory paragraph indicates an understanding and use of appropriate and field. The learner specifically mentions the field (disease) as well as a perception of a descriptive report on a topic in a specific domain (pathophysiology) within a particular subject (Anatomy and Physiology).

"The instruction of this assignment is to elaborate in a short essay the viral disease allocated to me. I am expected to give facts in paragraphs concerning the study of disease which involves pathogenic imbalances in the body. The focus of my report is a viral disorder allocated to me. A viral disease is caused by a virus that survives by living in host cells. The main cause of the disease described in this report is the rubella virus, a pathogenic agent that leads to a mild infection called Rubella or German measles which lasts about three days."

The writer of this introductory paragraph seems to emphasise understanding of the concept of *disease* as the malfunctioning of anatomical elements or pathology as well as that of the category of the disorder in terms of the virus that instigates it. However, the use of the first person in this text is an indication of informal tenor that is not appropriate to the written mode of the text even though the learner clearly understands the field. This register problem will be discussed later.

The following remark made during an interview revealed a grasp of the meaning and practicalities of the concept of field:

"Our Anatomy lecturer set the topic for our project, but we had to find out ourselves that the topic wasn't in our normal Anatomy and Physiology text book. We had to look in other books etc. for disease information to put in our written assignment."

The learner had grasped the nuances of the study of disease as the focusing on a lack of balance in the human body that is a special learning area in itself. Moreover, there was a clear realisation that the study of Pathophysiology involves investigation into the disruption of homeostatic balance in human organs and tissues. In the Anatomy and Physiology classroom, the normal structure and function of the human body is analysed. However, impairment due to disease is the focus of the assignments given to the learners by their Anatomy and Physiology lecturers.

The following extract from a reflection shows particular insight into the significance of reading and writing texts on the topic of diseases in the context of medical studies:

"We're going to have to do more assignments on the topic of disease. This one on bacterial and viral diseases was a start and I have a lot to learn. But, I don't mind working hard to improve my marks because I need this knowledge as a pharmacist. People mostly need a pharmacist if they're sick. I know the nursing students also have to read about and write the same topics. It's a lot of theory – reading and writing so much – all those rules – referencing for example. But, we all will have to really know about diseases if we are going to be good practitioners and be able to communicate with doctors and patients about their health."

The writer of the reflection had found the task socially-relevant that in the context of studies for a Pharmacy degree. The sociolinguistic role seemed clear to the learner who understood that the reading and writing about diseases were important for successful communication of medical knowledge in a clinical setting if only in an academic language for the time being.

Sub-theme 3: Understanding and use of patterns at text and paragraph level appropriate to the written mode.

The third sub-theme was appropriate access to discourse semantics with regard to the meaningful stages of text and paragraphs. The following is an example from a concluding paragraph showing that the learner was clear about how the report had been sectioned at text level:

"In conclusion, pneumonia is both a viral and bacterial disease which affects individuals with weakened immune systems. It is an infection of one or both lungs which causes the lungs to swell up and become filled with fluid. This disease can either be caused by contact with an infected person or by the ever-present pneumonia causing bacteria already present in the throats, noses and sinuses of individuals. Symptoms of

pneumonia include persistent coughing, chest pains, loss in appetite among others. It is important to seek medical advice when experiencing any of the above mentioned symptoms because early diagnosis plays a key role in completed recovery. Owing to the various types of pneumonia treatment is not always the same. For example, bacterial pneumonia can be treated with antibiotics whereas other types of pneumonia cannot. If people were to take active steps with regard to their health and not neglect the symptoms that they experience the mortality rate for pneumonia would be much less, not only in South Africa but all around the world."

The writer of the paragraph has given a concluding overview of the descriptive report by firstly defining and situating the topic of a particular disease and then, giving a summary of the different sections of the description involving causes, symptoms, diagnosis, treatment and prevention. The learner has also combined a brief statement based on the *prevention* section of the report with a futuristic and visionary comment that adds a tone of recommendation to the conclusion without loss of the summarizing perspective of the paragraph.

At paragraph level, most learners structured their ideas into logically linked phases according to a general hierarchical framework of topic sentence, supporting ideas and details as exemplified below:

"The first symptoms and signs of typhoid fever are very slight but develop insidiously. The patient may suffer the effects of fever as well as abdominal pain and headaches. In untreated patients, signs of the disease may appear inside the human body when the bacteria multiply in the gastrointestinal tract and then may enter the intestinal lymphatic system, from which they disseminate via the blood to other areas of the body. Complications include intestinal hemorrhaging or perforation of the intestinal wall."

The writer of the paragraph on *symptoms* has written a general opening statement in an attempt to describe the general nature of the manifestations of the disease being described. Thereafter, follows statements that distinguish the difference between signs and symptoms with elaboration of the latter in particular.

The structured development of the paragraph is appropriate to a written descriptive report in the field of pathophysiology. A student showed awareness of the need to organise information in the context of academic writing in the following statement made in an interview:

"It's really important to plan and sort out ideas as we were shown in class. That's the difference between sharing information in informal oral sessions and actually getting down to writing out all the facts in an essay".

The learner understood the academic appropriateness of strict organisation of data at meaning level with regard to the sections of the written text as a whole as well as ideas grouped into paragraphs.

Another learner elaborated on how the academic paragraph writing had been experienced as explicit support in the contextualised language-learning situation, and remarked:

"It's so much easier to talk about the topic than to sit down and write it all out. Our teacher constantly reminds us about opening sentences etc."

The following extract from a reflection paper indicates that language support had helped this learner to be able to structure paragraphs:

"We had to take paragraphs in passages we read in class and make a diagram of the key words. This helped me to see how paragraphs are built. We then had to try and make our own paragraphs in the essay the same. It is important that we do this for our Anatomy and Physiology lecturer who told us to use a scientific style when we do a disease assignment and describe the disease – its causes etc."

The learner viewed academic texts as a way to communicate information to a particular academic community. The texts are addressed to the subject teacher in a clear, formal, and correct way as appropriate to the descriptive report genre in the field of pathophysiology as a part of the general academic subject of Anatomy and Physiology in the context of a particular pharmacy degree course.

THEME 2: Inappropriate use of textual conventions

Sub-theme 1: Tenor errors

Many learners would use appropriately formal tenor in their reports but then change to informal tenor. The written descriptive report should reflect the socially-applicable relationship between the writer and the reader. In the case of the disease assignment, the relationship was between the Anatomy and Physiology lecturer who would evaluate it and pharmacy degree learners who had read Pathophysiology texts that had been reconstructed into their own words with support from the language teacher. The academic interaction in the descriptive report genre is impersonal and, therefore, follows textual conventions such as the use of third person pronouns and passive voice as well as the avoidance of contractions and colloquialisms. However, learners tended to lapse into informal tenor along with the use of first/ second person pronouns and contractions, for example. The following example shows a distinct change in tenor from formal to informal:

"The virus for this type of Hepatitis is usually transmitted by some contaminated instruments such as a needle or by blood transfusion and also having unprotected sex...You can't get it by shaking hands, petting, and sitting next to an infected person."

The writer used the passive voice in the first sentence but then relaxed into the use of the second person pronouns, contractions and the colloquialism *petting*.

The problem seemed be that learners needed more explanation of the concept *tenor* and that not all the resources accessed and deconstructed by the learners had been appropriately formal even though they had communicated information in the field of the research topic. The Anatomy and Physiology lecturers had allowed the leaners to research texts that were not books or scholarly articles and this may have resulted in confusion. The language lecturer had overtly emphasised the need for formal tenor in the assignment as indicated in the example from a student's personal reflection cited below. However, the learner was not aware of the non-scholarly nature of the research resource that contrasted with the formality of academic context of the final written text that had to be submitted to the lecturer. The following remark was noted in the learner's reflection:

"Our English teacher says we must write "the researcher" not I. But, the journal

article we read in Anatomy class used "I". When I used the language of my source, my Anatomy and Physiology lecturer said I'd copied word for word and took marks off for plagiarism."

Despite, the support from the language lecturer, there was not a clear understanding of the appropriate relationship between writer and reader in the communication of subject specific information in an undergraduate academic context. Another student stated during an interview:

"Wikipedia sometimes used the word "you" and bullets. That's why I did it in my essay. My English lecturer had told us to use full sentences and not write like a recipe but I thought it'd be OK if it was there in my information."

The issue highlighted in the above statement was that of learner tendency to write fragmented sentences and use the imperative form of verb that were both used in their research resources. This had been contraindicated by both the subject and language lecturers but perhaps needed more emphasis in preparation for the assignment to facilitate learner avoidance of the inappropriate use of tenor.

Sub-theme 2: Problems with textual conventions at word group level

Within paragraphs messages were not always clear even if the phases of meaning and key wordings were present. Learners would struggle with long sentences which contained a variety of scientific terms as well as attributive adjectives and relative clauses, for example. Learners often wrote run-ons instead of well-punctuated complex or compound sentences. Linking words also were hardly ever used which might have solved the problem of garbled sentences. An example of a paragraph fraught with errors at word group level follows:

"If the infection is not treated Gonorrhea can result in damage to the reproductive tissues which is permanent, the fallopian tubes being scarred, epididymitis, infertility, pelvic inflammatory disease, prostatitis and could lead to the development of an ectopic pregnancy."

It appears that the writer pieced together the key wordings deconstructed from various sources and had difficulty in linking the facts in coherent sentences. Although compound and complex sentences are useful in academic writing in the field of Pathophysiology, the learner needed to end the sentence after the first relative clause: "which is permanent". Correct punctuation at this point, a finite verb to replace "being scarred" as well rearrangement of the key wordings would have made the information intelligible despite the difficult terminology and complexity of the sentence.

A student remark in a reflection paper also relates to the challenge experienced with formulating grammatically correct units of meaning:

"The words are there in the book and then I put them in my notes and in my mind map. But, it's hard to string them again together into proper sentences in essay. It's not so hard to just explain my notes or my mind may to others – just to write it out is a problem."

The writer of the above statement appears to be aware of the appropriateness of writing complete, grammatically correct sentences in Anatomy and Physiology descriptive reports to avoid confusing the reader of a text. The learner also appears conscious of the possibility of

clarity in oral communication without the use of word group conventions required by written communication. Articulateness may be achieved in oral communication via voice pauses and intonation as well as non-verbal cues that written communication cannot avail itself of.

In reference to the issue of negotiating meaning according to acceptable word group patterns, another learner stated during an interview:

"I know that we aren't allowed to just copy the information from the text book, but it's so tempting because then we know we won't make mistakes even though we may get penalized for plagiarism. I don't really understand how to put those key words together unless I use the words of my sources".

This remark highlights that many learners who are not used to the textual conventions of particular academic environments resort to reproducing chunks of text verbatim taken from sources read. Learners may have even deconstructed the resource text into lists and/or diagrams of key wordings but then, reverted to the original script for fear of making grammatical errors. This shows a lack of expertise in not so much at finding the right words but having access to appropriate arrangement of words in the context of the formal academic situation. Learners appear to lack confidence in applying textual conventions at sentence level. The appropriate patterns had been modeled implicitly in context via the deconstruction of texts at meaning level which gave evidence of appropriate word groups. However, the grammatical patterns had not been explicitly deconstructed in terms of grammar rules, for example.

Problems at word group level also included inappropriate citing of sources in terms of referencing conventions stipulated by the Anatomy and Physiology lecturers thereof. The language lecturer may have modeled and facilitated learner understanding of in-text and bibliographical reference structures but learners needed a great deal of individual support in restructuring these elements of their own reconstructured texts.

During interviews and in reflections several learners had remarked that they understood the concept of referencing but found it difficult. A learner stated:

"The biggest challenge for me was dealing with referencing and this is also the most important part of academic writing. There are different types of referencing e.g. Harvard style and also the manner it is used for example in-text and bibliograpy".

This comment also revealed the tendancy of students to focus on the problem of referencing more than the lexicogrammatical word group conventions. The former was explicitly elucidated in language class, but the latter was left implicit and manifested in context without the salient patterning being explained.

However, many learners did not understand the rules of referencing as the following statement taken from a reflection paper shows:

"My expectations for this year is to improve on my writing style. I also do not know how to reference in-text, but I hope to get the hang of it with a little help from my friends and lecturers".

The above comment indicates awareness that the peer group can be a valuable learning resource when support is needed in addition to that provided by the language teacher.

Learners had all submitted their drafts to the language lecturer for feedback, but many specifically requested individual facilitation of referencing. One particular learner sent her bibliography only as an email attachment together with the following message:

"Would you please have a look at my bibliography for the anatomy and physiology essay? Please show me where I have made mistakes and give suggestions on how I can improve my bibliography because I struggle a lot with referencing correctly."

As a result of scaffolding given to learners who consulted the lecturer after classroom support, final reports were generally correctly referenced. However, the reflections and interviews showed that many learners felt that they needed to learn more about referencing.

Discussion of the findings

The findings of the investigation into the learners' experience revealed that by using a genre-based approach, the language-support course succeeded in facilitating Pharmacy degree learner mastery of the textual patterns involved in writing a descriptive report in the context of Anatomy and Physiology. The learners were generally able to organise information into suitable patterns at genre, register (field) and discourse semantics level, but had problems when it came to arranging the elements of text into functional formats at tenor and word group level.

Explicit teaching of textual genre to learners appears to have provided scaffolding for their insight into the social purpose of texts in a particular academic context. Thus, the provision of overt knowledge of the genre of the writing assignment that involved reading of texts for information allowed learners to independently craft and construct subject specific texts within socially-circumscribed frameworks appropriate to a particular community of academic practice. Learner interpretation of the academic knowledge they had read and understood was successfully communicated in textual stages appropriate to the written descriptive report genre in the field of Pathophysiology.

With support, learners had effectively organised the data at paragraph level if not at sentence level where the concepts were not always clearly formulated in line with grammatical textual conventions. This inadequacy in the language course indicates that more support is required to ensure learner access to textual conventions at word group level. Moreover, these patterns that involve grammar usage appropriate to the community of practitioners in the field of Pathophysiology need to be clearly disclosed in the context of particular linguistic tasks.

The formal relationship between writer and reader was also often not realised in the written reports where learners would often adopt the informal tenor of non-scholarly texts. This deficit in the language teaching strategy points towards a need for practice in reading and writing scholarly scientific texts consistent with the expectations of the academic environment of a course like Anatomy and Physiology.

The data findings have implications for educational policy, practice and research. A paradigm shift in educational policy, practice and research towards the integration of content and language learning via language support will serve the interests of addressing learner mastery of subject-specific information housed in the language of learning of particular academic situations.

With regard to policy, the explicit teaching of subject-specific textual conventions should be specified at higher educational levels where learners such as those discussed in this article need to complete contextualised academic language tasks. In educational practice, teachers need to liaise with content subject lecturers to understand their expectations regarding the acceptable manipulation of words in the context of their academic community. This will lead to insight regarding the development of suitable contextualised language learning material and strategies.

Educational research such as that carried out by the writer of this article should seek solutions to issues of subject-specific language support. This research needs to be particularly done by educators regarding their own practice to facilitate learner access to the language used by specific communities of practice in the higher educational environment.

Conclusion

A qualitative study of first-year Pharmacy degree learner experiences of the teaching of language patterns appropriate to the academic community of Anatomy and Physiology revealed that genre-based language support promotes learner academic success. In particular, mastery of textual conventions salient to the writing of an academic assignment was shown to have been facilitated when the contextualised language learning involved learner understanding and use of relevant subject-specific textual conventions according to the genre of the assignment. However, the data provided by the case study also revealed that learners may need further support regarding the internalisation of textual patterns relating to the relationship between writer / reader and word-group conventions.

The writer argued that these problems may have been a result of insecurity with respect to the use of their own words on the part of learners as they negotiated complex textual patterns. The South African higher education learners discussed in this article were generally not accustomed to crafting complex concepts housed in subject-specific texts in particular social spaces such as the academic learning context of Anatomy and Physiology.

The case study discloses that the learners experienced the pedagogic potential of genre-based language teaching and learning that scaffolds the effective use of sets of established linguistic frameworks on the one hand but allows for dynamic processing of meaningful texts on the other. The case study also revealed that the practical application of the genre approach may well continue to evolve in contemporary and future educational situations with ongoing collaboration between content and language lecturers to ensure the literacies acquisition of apprentice learners in particular communities of practice.

BIBLIOGRAPHY

Badger, R. & White, G. 2000. A process genre approach to teaching writing. ELT Journal 54 (2): 155-160.

Bakhtin, M. M. 1986. Speech genres and other late essays. Austin, Texas: University of Texas Press.

Barton, D. & Hamilton, M. 2000. Literary practices. In D. Barton, M. Hamilton & R. Ivanic (eds.) *Situated literacies: reading and writing in context:* 1-7. London: Routledge.

Bhatia, V.J. 2002. Applied genre analysis: a multi-perspective model. *Iberica* 4: 3-19.

Bloomer, A; Griffiths, P. & Merrison, A. 2010. Introducing language in use. Great Britain: Routledge.

- Cairney, T. 1992. Mountain or molehill: the genre debate viewed from 'down under.' Reading. 26 (1): 23-29.
- Chandler, D. 1998. Semiotics for beginners. University of Aberystwyth. Online. Cited 4 August, 2011. http://www.aber.ac.uk/-dgc/sem0a./html.
- Cresswell, J.W. 1998. Research methods in education (4th ed.). London: Routledge. Creswell, J.W. 2005. Educational research: planning, conducting, and evaluating quantitative and qualitative research (2nd edition). Upper Saddle River, New Jersey: Pearson.
- Firth, A. & Wagner, J. 2007. Second foreign language learning as a social accomplishment: elaborations on reconceptualized SLA. *The modern language journal*, *91– Focus issue*: 800-819.
- Fiske, J. 1987. Television culture. London: Routledge.
- Gallagher, C. 2000. Writing across genres. The language teacher. 24: 7-14.
- Gee , J. P. 2003. What video games have to teach us about learning and literacy. New York: Palgrave Macmillan.
- Gee, J. P. 2004. Situated language and learning: A critique of traditional school. New York: Routledge.
- Groenewald, T. 2004. Phenomenological research design illustrated. *International journal of aualitative methods*, 3 (1): 1-26.
- Halliday M.A.K. 1975. Learning how to mean. London: Edward Arnold
- Halliday, M.A.K. 1985. Spoken and written language. Oxford: Oxford University Press.
- Halliday, M.A.K. 1994. An introduction to functional grammar. London: Arnold.
- Halliday, M.A.K. 2001. Towards a theory of good translation, In E. Steiner and C. Yallop (eds). *Exploring translation and multi-lingual text production: beyond content:* 13-18. Berlin: Mouton De Gruyter.
- Halliday, M.A.K. & Hasan, R. 1976. Cohesion in English. London: Longman.
- Heath. S. 1986. What no bedtime story means: Narrative skills at home and school. In B. Schiefflin & E. Ochs (eds). *Language socialization across culture*: 97-124. Cambridge: Cambridge University Press.
- Hyland, K. 2003a. Second language writing. Cambridge: Cambridge University Press.
- Hyland, K. 2003b. Genre-based pedagogies: A social response to process. *Journal of second language writing.* 12 (1): 17-29.
- Jacobs, C. 2007. Towards a critical understanding of discipline-specific academic literacies: making the tacit explicit. *Journal of education*. 41: 6 84.
- Janks, H. 2000. Domination, access, diversity and design: a synthesis for critical literacy education. *Educational review.* 52 (1): 175-186.
- Johns, A.M. 1990. L1 composition theories: implications for developing theories of L2 composition. In B. Kroll (ed.). *Second language writing:* 24-36. Cambridge: Cambridge University Press.
- Kramsch, C. 2006. Language, thought and culture. In A. Davies & C. Elder (eds.). *Handbook of applied linguistics*: 235-266. US, UK, Australia: Blackwell.
- Kvale, S. 1996. *Interviews. An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage.
- Lado, R. 1964. Language teaching: a scientific approach. New York: McGraw Hill.
- Lazaraton, A. 1995: 466. Qualitative research in applied linguistics: a progress report. *Tesol quarterly*. 29 (3): 455-472.
- Martin, J.R. & Rose, D. 2010. Learning to write/reading to learn: scaffolding democracy in literacy classrooms. London: Equinox Publishing Ltd.
- Martin, J. R. 1986. Intervening in the process of writing development. In C. Painter & J. R. Martin (eds.). *Writing to mean: teaching genres across the curriculum*. Association of Australia: occasional papers. 9: 11-43.

- Martin, J. R. & Rothery, J. 1986. What a functional approach to the writing task can show teachers about 'good writing'. In B. Couture (ed.), *Functional approaches to writing research perpectives*. London: Pinter.
- May, S. & Janks, H. 2004. Editorial: the challenge of teaching English in diverse contexts. *English teaching: practice and critique*. 3(1): 1-4.
- McMillan, J.H. & Schumacher, S. 1998. Research in education. New York: Longman.
- Moustakas, C. 1994. Phenomenological research methods. Thousand Oaks: Sage Publications.
- Murray, D. 1980. The feel of writing and teaching writing. In A. Freedman and L. Pringle(eds.). *Reinventing the rhetorical tradition.* Arkansas: L & S Books.
- Pincus, A. 1982. Teaching English writing. London: Macmillan.
- Prinsloo, J. & Janks, H. 2002. Critical literacy in South Africa: Possibilities and constraints in 2002. *English teaching: practice and critique*. 1(1): 20-38.
- Rex, L. S. & McEachen, D. 1999. "If anything is odd, inappropriate, confusing, or boring, it's probably important: The emergence of inclusive academic literacy through English classroom discussion practices. *Research in the teaching of English*. 34: 65-129.
- Rose, D. 2004. *Learning to read. Reading to learn*. Paper presented at Kenton Khulamba Conferences, KwaZulu Natal, South Africa.
- Rose, D. 2005. Democratising the classroom: A literacy pedagogy for the new generation. *Journal of education*. 37: 131-167.
- Rose, D. 2006. *Towards a reading based theory of teaching*. Plenary for the 33rd International systemic functional linguistics conference, Sao Paulo.
- Rose, D. 2008. *Reading to learn. Accelerating learning and closing the gap.* (Book 5). Online. Cited 3 March 2010. www.readingtolearn.com.au
- Street, B. 1984. Literacy in theory and practice. Cambridge: Cambridge University Press.
- Street, B. 2004. Academic literacies and the "New Orders": Implications for research and practice in student writing in H.E. *Learning and teaching in the social sciences.* 1(1): 9-32.
- Swales, J. 1990. Genre analysis. Cambridge: Cambridge University Press.
- Tesch, R. 1990. Qualitative research: Analysis types and software tools. New York: Falmer.
- Vygotsky, L.S. 1978. *Mind and society: the development of higher mental processes*. Cambridge, MA: Harvard University Press.
- Wood, L.A. & Webb, P. 2008. HIV- and AIDS-related (mis)perceptions and (non)responses of school principals in the Eastern Cape, South Africa. *African journal of AIDS research*. 7(1): 111–121.

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