The structure and features of the SMS language used in the written work of Communication English I students at a university in South Africa

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Employing an explanatory design, this study set out to investigate the morphosyntactic structures of the SMS language of Communication English I students, and the types of SMS language features used in their written work at a university of technology in South Africa. The study randomly sampled 90 undergraduate students (M = 40; F = 50) enrolled for a national diploma programme during the first academic semester in 2013. Their ages ranged from 19–22 years; they all spoke English as a second language, whilst having one of the five black South African languages as their home language. The study had two types of data: participants' mobile phone text messages (in two sets), and their writing samples. Two of the findings of the study are: the morphological structure of the textisms used in the participants' text messages deviated from that applicable to formal, standard English, whereas much of their syntactic structure did not; and, the frequency and proportion of textisms in participants' writing samples were lower than that reported in studies by Freudenberg (2009) and Rosen *et al.* (2010).

Introduction

Short message service (SMS) language – also known as text messaging – has become a subject of a number of studies in recent times. One of the focal areas of these studies has been on features of SMS language, especially of young or teenage users, and how such features may affect these users' writing or literacy skills, or their spelling proficiency. Amongst the studies that have investigated how SMS language affects young users' writing or literacy skills are: Aziz *et al.* (2013); Dansieh (2011); Deumert and Masinyana (2008); Drouin and Davis (2009); Durkin, Conti-Ramsden and Walker (2011); Freudenberg (2009); Geertsema, Hyman and Van Deventer (2011); Njemanze (2012); Plester and Wood (2009); Rosen *et al.* (2010); Shafie, Azida and Osman (2010); and Vosloo (2009). In a similar vein, some of the studies that have examined the relationship between young users' SMS language and spelling are: Bushnell, Kemp and Martin (2011); Farina and Lyddy (2011); Lyddy *et al.* (2013); Powell and Dixon (2011); and Varnhagen *et al.* (2010). In addition, there are emerging studies that are investigating the relationship between young users' use of SMS language and some aspects of grammar: Adebileje (2014); Kahari, Mutonga and Ndlovu (2013); Nweze (2013); Oladoye (2011); Ong'onda, Matu and Oloo (2011); Wood, Kemp and Waldron (2014); and Wood *et al.* (2014).

The current study set out to examine the morphological and syntactic (morphosyntactic) structures and features of SMS language evident in the written work of undergraduate students enrolled in a national diploma course, Communication English I, at a university of technology in Gauteng, South Africa. Its overriding contention was that, overall, students - including the ones whose texting was investigated in this study - do not use as much texting in their formal writing, or do not transfer as much texting to their formal writing, as is often reported (see, for example, Dansieh 2011; Geertsema *et al.* 2011; Yousaf & Ahmed 2013). In this instance, its four major goals were to:

- Establish whether the morphosyntactic structures used by students in their text messages conformed to, or deviated from, the Standard English syntactic elements.
- Identify the morphosyntactic structures of the SMS language used by these students in their written work.
- Identify the types of SMS language features these students used in their written work.
- Determine the frequency of textisms present in these students' writing samples.

These goals also constituted the purpose of the study. This purpose was informed by the fact that many studies on SMS language, in general, and SMS language features in student written samples, in particular, have focussed mainly on the SMS language, or the types of SMS language features present in student writing, without also focussing on the morphosyntactic structures of

such SMS language. The current study attempts to examine both the morphosyntactic structures of the SMS language used in the written samples of Communication English I students, and the types of SMS language features present in such written samples. When this study was conceptualised, it was felt that, in the South African context in particular, not much concurrent research work had been conducted into the twin areas of SMS language features in students' text messages, and the morphosyntactic structures of the SMS language observed in students' written work. The present study is of the view that there is a dearth of research in these twin areas of texting. As such, it is intended as a contribution to these two areas of students' texting and formal writing.

Relevant studies

Four of the studies that have investigated SMS language, or SMS language features, in students' written work, and whose findings are worth highlighting are: Aziz *et al*. (2013), Freudenberg (2009), Mahmoud (2013), and Odey, Essoh and Endong (2014). For example, the study by Aziz *et al*. (2013) involved 50 undergraduate students at an Institute of Information Technology in Pakistan who were enrolled in two degree programmes (Bachelor of Computer Engineering and Bachelor of Telecommunication Engineering). Forty-two of these students were males, whilst eight of them were females, and their overall ages ranged from 19–25 years. A major finding of this study pertaining to student essays is that there was no significant prevalence of SMS features (e.g., abbreviations, emoticons, and omissions of punctuation marks) in these essays – which suggests that students were able to switch to an appropriate register or style when writing formally (Aziz *et al*. 2013).

In a different, but related, context Freudenberg's (2009) study set out to investigate the impact of SMS speak on the written school work of English first language (L1) and English second language (L2) high school learners. Undertaken at an English-Afrikaans dual-medium school in the Western Cape, South Africa, the study involved 88 learners – 43 from Grade 8 and 45 from Grade 11; 51 were English L1 speakers and 37 Afrikaans L1 speakers. Two instruments, questionnaires and a written English task, were used to collect the data. Questionnaires were administered to determine the frequency and volume of participants' use of SMS speak as well as the features of their SMS speak. Similarly, participants' written English samples were intended to assess specific features of the learners' SMS speak. Two of the findings of this study are worth mentioning. All participants reported using features of SMS speak in their SMSes, and many reported using SMS speak in their written school work. But in contrast, samples of their written work did not contain a great number of instances of SMS speak features (Freudenberg 2009).

For its part, Mahmoud's (2013) study examined the effect of English SMS language on the development of 40 Foundation Year students' speaking and writing skills at a university in Saudi Arabia. The study took place over six weeks in the academic year 2012–2013. A research question the study set out to answer was: does the frequent use of SMS affect students' spoken and written communication skills? The 40 participants were randomly assigned to two groups: a control group and an experimental group, each consisting of 20 students. The control group was taught using conventional strategies, whilst the experimental group was taught using both conventional strategies and SMS messages as an additional communication means. Three instruments were employed to collect data: SMS messages written in full English words and which were free of short forms and abbreviations; an oral test consisting of two tasks; and, a written test in which participants were asked to write a well-organised paragraph about one of the two topics related to a Foundation module they were being taught. One of the findings of this study was that students who used SMS had their writing and speaking performance noticeably improved (Mahmoud 2013).

In another context, the study by Odey *et al*. (2014) explored the influence of SMS texting on the writing skills of students at a college of education in Nigeria. These students, who served as the participants for the study, were 50 third year students. Using both quantitative and qualitative approaches, the study collected its data through 250 sample SMS texts produced by the students, 50 student essay scripts, and observation. With reference to the 250 SMS messages, students were requested to forward five of the most recent SMS texts they had sent to their friends, to the researchers who undertook this study. These SMS texts were analysed by identifying the SMS language features they displayed. The 50 essay responses were written by students as part of their examination and were content-analysed to establish the extent to which the SMS language features observed in the SMS texts occurred in them. The five most dominant features of the SMS language identified in student essay responses, in an exponential order, were: vowel deletion; graphemes (letter homophones); alphanumeric homophones; punctuation errors; and, initialisation (Odey *et al*. 2014).

In relation to the morphosyntactic structure of student SMS language, Adebileje's (2014) study explored the use of various registers in the syntax of text messaging amongst young undergraduate students at a university in Nigeria. Specifically, the study investigated the internal structures of words (morphology) and how words were put together to form text messages (syntax). Its corpus consisted of 120 text messages produced by students whose ages ranged from 16–24 years. The frequency and distribution of these text messages were analysed to establish how they differed in terms of register. The study discovered that students' use of morphemes to construct syntax was mainly based on logograms, symbols (figures), phonics, Nigerian Pidgin English, and respective mother tongues.

In one more scenario, the study by Kahari *et al*. (2013) explored the syntactic structures of text messages in the English language used by 50 students in Zimbabwe. These students comprised 30 females and 20 males. They were requested to forward two messages each to the researcher.

In the end, 90 text messages were isolated, and their sentences were analysed for aspects such as omissions of pronouns, auxiliary verbs, and contractions. In addition, the study analysed the impact of sociolinguistic variables on the English sentence structure of text messages. Moreover, unstructured interviews were conducted to find out what factors triggered the syntactic elements identified in the students' text messages. The researchers point out that text messages showed that cell phone texting was affected by factors such as: channel constraints; time; linguistic pragmatic interference; common knowledge background; and, gender; and that these factors triggered the syntactic features identified in the students' text messages (Kahari *et al*. 2013).

Finally, Nweze's (2013) study explored the morphosyntactic aspects of SMS texting amongst Global System of Mobile (GSM) communication users, all of whom were students at a university in Nigeria. In all, there were 50 such users (males and females), and 75 text messages were sourced from them. Mostly, these messages comprised educational, seasonal, love, religious, and other messages that expressed good wishes. The study employed transformational and meta-pragmatic theories to mount its data analysis. It then discovered that there were morphosyntactic variations amongst texters which violated formal English. It also found that texters employed some word order (which deviated from formal English), and that morphological processes such as contractions, abbreviations, acronyms, compounding, and blends featured in varying degrees in the texters' messages (Nweze 2013).

Research methodology

The study adopted a qualitative research paradigm. Accordingly, it employed an interpretivist approach. The choice of both the research paradigm and the research approach was informed by the data types collected: text-based SMS messages and short written paragraph responses. In line with this research paradigm, the research design deemed appropriate for this study was an explanatory and case study research design (Creswell 2013; Henning, Van Rensburg & Smit 2004; Yin 2003). This is more so, since the study focused on participants at a case study level and analysed its data through a descriptive framework.

Research questions

There were four research questions for this study:

- What are the morphosyntactic structures of the SMS language used by Communication English I students?
- Do the syntactic structures used by the students in their text messages conform to, or deviate from, Standard English syntactic structures?
- What are the types of SMS language features these students use in their written work?
- What is the frequency of textisms in these students' writing samples?

Participants and sampling technique

Utilising an explanatory design (Creswell 2013; Yin 2003), this study had 90 undergraduate students enrolled in a national diploma module, Communication English I, at a university of technology in Gauteng as its participants. Communication English I is a one-year undergraduate module spanning two semesters and is offered to First Year national diploma students at this particular university of technology in Gauteng. The 90 participants were randomly selected during the first academic semester in 2013. They consisted of 50 females and 40 males with ages ranging from 19–22 years (mean age = 20.7 years). They all spoke English as a second language, whilst having one of the five black South African languages as their home language.

Materials and data collection process

Two types of data were used for this study. The first type of data was sourced from participants' mobile phone text messages. Participants were asked to *forward* two text messages they had sent to their friends in the two previous days to two research assistants' mobile phone handsets (the authors understand that this procedure could constitute a possible limitation to the conclusions to be drawn from the study findings, since the participants may have selected their most grammatically-correct SMSes, in spite of the fact they were advised beforehand that this was not an exercise in good grammar). They were requested to transcribe one text message *verbatim* and to electronically transfer the other one in its original form to the two assistant researchers' mobile phone handsets. In all, 180 text messages were collected from the participants. The first set of transcribed text messages had a total word count of 7100 words (average word count = 79 words). In contrast, the second set of electronically transferred text messages had a total word count of 5420 words (average word count = 60 words). The second type of data were writing samples sourced from the students' short written essay task. For this essay task, they were requested to write a short essay on the following topic: *What made you choose to study for a Diploma in Office Management?* Participants were informed, prior to writing this essay task, that their (hand-) written essays would be marked and graded following the conventions of Standard English. No dictionaries or spell-checkers were made available to them. They were also informed that they needed to spend only 20 minutes writing this task (a time limit was imposed to reduce the inconvenience to the participants, whilst ensuring that the authors had enough data to analyse). The total word count for the combined short written essay tasks was 8038 words (average word count = 89 words).

Data analytic procedure – Morphosyntactic analysis

The analytic procedure used to analyse the two data types for this study was a morphosyntactic analysis informed by content analysis (see Odey *et al*. 2014). This

analytic procedure entailed analysing each data type at both morphological and syntactic levels. In relation to participants' text messages especially, the analysis focused on the morphological processes at play at the lexical level within the text messages and how words were structured at the syntactic level to communicate text messages at the sentence level (see Adebileje 2014; Nweze 2013; Odey *et al*. 2014). The morphological processes that served as units of analysis were: contractions; shortenings and abbreviations; initialisms and alphabetisms; aphaeresis; phonetic approximations; G-clippings; rebus, letter and number or number and letter homophones; accent stylisations and respellings; misspellings and typos; omissions; upper and lower cases; logographs and emoticons; and, combined two words. These morphological processes are referred to here as *textisms*, following Powell and Dixon (2011), Varnhagen *et al*. (2010), and Wood, Kemp and Waldron (2014). At the syntactic level, units of analysis were: word order (e.g., the subject-verb-object [SVO] word order); full sentences; sentence fragments; run-on sentences; subject-verb agreement (SVA); punctuation marks; unconventional punctuation marks; no punctuation marks; and, colloquialisms. All of these syntactic structures of the participants' text messages were analysed in terms of whether they conformed to, or deviated from, Standard English syntactic structures.

In respect of the participants' writing samples, the analytic procedure examined which text message forms or features, if any, were incorporated into their written work (Adebileje 2014; Kahari *et al*. 2013; Nweze 2013; Oladoye 2011). No *t*-test was administered. However, two coders content-analysed each piece of data type for the presence of the units of analysis indicated above. Their intercoder percentage agreement was .90 and .92 for the morphological features (textisms) found in the two sets of text messages (see Tables 1 and 2), respectively, and .88 for the syntactic structures found in both text message types (see Table 3). With regard to textisms identified in participants' writing samples, the inter-coder percentage agreement was .92 (in this case an inter-coder agreement of 1.00 represents total agreement, whilst an inter-coder agreement of .00 represents zero agreement on the part of coders). Where necessary, different SMS language features were categorised, represented in their occurrence frequency percentages, and tabulated accordingly.

Findings

This section presents the findings related to the two data types cited above. As such, these findings are largely specific and responsive to the nature of the data types as sourced from the participants' text messages and writing samples.

Morphological processes at play in participants' text messages

Participants contributed two text messages each in response to a request to do so. These text messages were grouped into two sets: the first set consisted of text messages transcribed by the participants, whilst the second set comprised text messages electronically transferred by them and recorded on the two mobile phone handsets used in the study. Two of the transcribed instances of the first set of text messages (TM) are represented here as TMA and TMB.

TMA

1. Um havin da best I thanx u 2 hv a very gudnyt!
2. Thinking of u. hop u'r suprb, hv a gr 8 1!
3. Baby I hope u hv a gud nyte. Lv u 4eva
4. Baby I hope u'l b wel.
5. Thanx my dear luving sister 4 this msg. phone u 2moro 4 visit
6. mI am da last person 2 wish u happy birthday- HAPPY BELATED BIRTHDAY.

TMB

1. Hi ma day was gr8 l went 2 church n after I went loftus 2 watch soccer, in da campus
2. Hey I hope u had a grt day, ern nw hav a grt nyt gudnyt
3. Bby I just got home!come!
4. Frm 1yrz to 15yrz I hv a heart 4 childrens, Im doing local government
5. It ws so nyc, it ws jc a visit dat we usual pay 2 da kidz by showing luv 2 them
6. Hud it sakhile da guy hu took u number ma number r 073 847 3893
7. Karabo cn u plz sign 4 me ko APL, I wont manage 2 cum 2 skul 2day 4frm Dimakatso.
8. My sweet pumkin, how r u my love? I miss u so… much and I angry coz u forgot my bday on da 11th …. Take care, have mad love 4u. I great week ahead.
9. I at the gate plz open it
10. Hi u, I miss u & so hw ws ur week. I wl like 2 sy I luv u

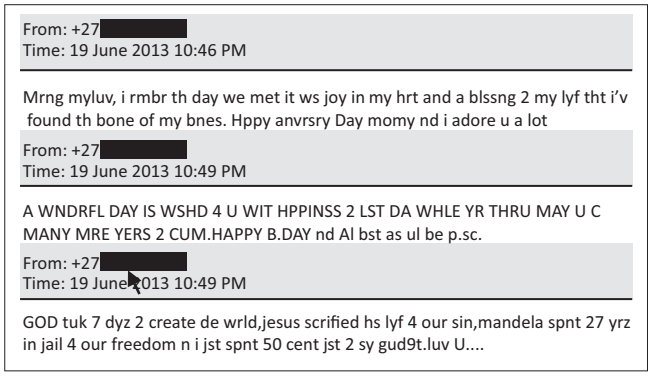
Table 1 displays participants' transcribed SMS language features and a typology reflecting the corresponding textism categories into which these features have been divided. These textism categories represent morphological processes at play within participants' text messages.

As shown in Table 1, the students' text messages contained twelve textism categories; the top five (with their corresponding occurrence frequency percentages), in a descending order of occurrence, being: initialisms and alphabetisms; rebus, letter and number or number and letter homophones; accent stylisations and respellings; phonetic approximations; and, misspellings and typos.

Likewise, instances of text messages electronically transferred by participants and recorded on the two mobile phone handsets used in the study are depicted in Figures 1 and Figure 2.

TABLE 1: Participants' transcribed SMS language features and corresponding full versions.

A typology of participants' transcribed SMS language features (textisms)	%	Examples
Initialisms/Alphabetisms	18	hv (have); Lv (love); msg (message); grt (great); nw (now); Bby (baby); Frm (from); hv (have); ws (was); jc (just); cn (can); plz (please); hw (how); wl (will)
Rebus, letter/number or number/letter homophones	18	2 (to); gr 8 1 (great one); 4eva (for ever); 4 (for); 2moro (tomorrow); gr8 (great); 2 (to); 1yrz (one years); 15yrz (fifteen years); 4 (for); 2day (today); 4frm (from); coz (because); 4u (for you)
Accent stylisations/Respellings	14	Um (I am); da (the); thanx (thanks); luving (loving); ma (my); da (the); dat (that); kidz (kids); nyc (nice); luv (love); cum (come)
Phonetic approximations	13	u (you); gudnyt/gud nyte (good night); n (and); u (you); hu (who); sy (say); skul (school); ur (your); nyc (nice); r (are)
Misspellings/Typos	8	hop (hope); wel (well); ml (I); ern (and); childrens (children); at (am)
Shortenings/Abbreviations	3.8	suprb (superb); hav (have); bday (birthday)
Upper/Lower cases	3.8	HAPPY BELATED BIRTHDAY (Happy belated birthday!)
Contractions	2.5	u'r (you are); u'l (you will)
Apostrophe omissions	2.5	Im (I'm); wont (won't)
Combined two words	2.5	gudnyt (good night); 4eva (for ever)
Aphaeresis	1.3	coz (because)
G-clippings	1.3	havin (having)
Logograms/Emoticons	0.0	-


From: +27[redacted]
Time: 19 June 2013 10:46 PM

Mrng myluv, i rmbr th day we met it ws joy in my hrt and a blssng 2 my lyf tht i'v found th bone of my bnes. Hppy anvrsry Day momy nd i adore u a lot

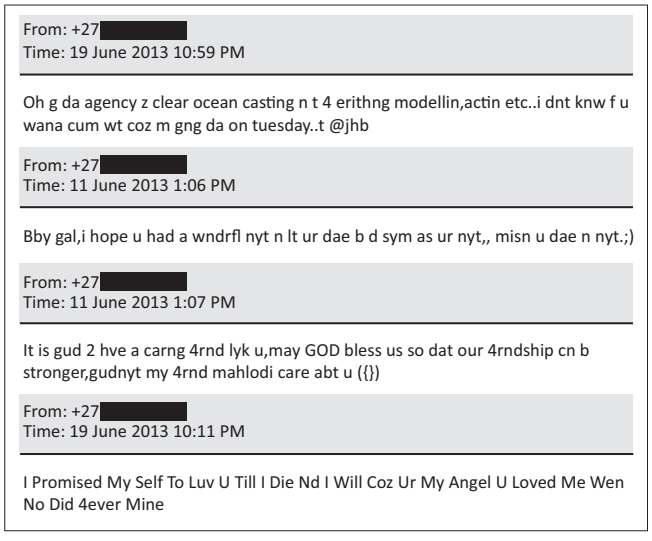
From: +27[redacted]
Time: 19 June 2013 10:49 PM

A WNDRFL DAY IS WSHD 4 U WIT HPPINSS 2 LST DA WHLE YR THRU MAY U C MANY MRE YERS 2 CUM.HAPPY B.DAY nd Al bst as ul be p.sc.

From: +27[redacted]
Time: 19 June 2013 10:49 PM

GOD tuk 7 dyz 2 create de wrld,jesus scrified hs lyf 4 our sin,mandela spnt 27 yrz in jail 4 our freedom n i jst spnt 50 cent jst 2 sy gud9t.luv U....

FIGURE 1: Sample of participants' electronically transmitted SMS language features and corresponding full versions.


From: +27[redacted]
Time: 19 June 2013 10:59 PM

Oh g da agency z clear ocean casting n t 4 erithng modellin,actin etc..i dnt knw f u wana cum wt coz m gng da on tuesday..t @jhb

From: +27[redacted]
Time: 11 June 2013 1:06 PM

Bby gal,i hope u had a wndrfl nyt n lt ur dae b d sym as ur nyt,, misn u dae n nyt.;)

From: +27[redacted]
Time: 11 June 2013 1:07 PM

It is gud 2 hve a carng 4rnd lyk u,may GOD bless us so dat our 4rndship cn b stronger,gudnyt my 4rnd mahlodi care abt u ({})

From: +27[redacted]
Time: 19 June 2013 10:11 PM

I Promised My Self To Luv U Till I Die Nd I Will Coz Ur My Angel U Loved Me Wen No Did 4ever Mine

FIGURE 2: Sample of 2nd set of participants' SMS language features and corresponding full Versions.

Table 2 (on electronically transferred SMSes) indicates 13 textism categories; the first eight in the following descending order of frequency occurrence being: initialisms and alphabetisms; phonetic approximations; misspellings and typos; accent stylisations and respellings; shortenings and abbreviations; rebus, letter and number or number and letter homophones; combining two words; and, upper and lower cases.

Syntactic processes at play in participants' text messages

Table 3 features syntactic processes found to have been at play in participants' text messages. In particular, it displays the respective categories into which these processes were divided and whether or not participants' text messages conformed to, or deviated from, these syntactic categories. For instance, in respect of the word order a majority of text messages displayed the conventional SVO word order. Similarly, in relation to full sentences, a majority of text messages were full sentences. In contrast, fewer text messages were sentence fragments.

With reference to run-on sentences, too, there were fewer text messages that were run-on sentences. Concerning the subject-verb agreement (SVA) structure, all text messages conformed to this structure. As regards punctuation marks, some text messages employed punctuation marks, such as periods (full stops) and commas properly, whilst others did not. Furthermore, a majority of text messages did not have unconventional punctuation marks, except a few that used an ampersand, *&*, in the place of *and*, whilst few used emoticons such as *;)* and *({})* at their sentence endings. Finally, one third of text messages did not have periods at sentence endings. On this score, seven text messages utilised the colloquialism, *wana* or *wanna*, for *want to*.

Type of SMS language features in participants' writing samples

As mentioned earlier on, with regard to participants' writing samples the analysis determined which text message forms or features, if any, they incorporated into their written work. Table 4 represents a typology of SMS language features (including their corresponding

TABLE 2: Participants' electronically transmitted SMS language features and corresponding full versions.

A typology of participants' electronically transferred SMS language features (textisms)	%	Examples
Initialisms/Alphabetisms	42	Mrng (Morning); rmbr (remember); ws (was); hrt (heart); blssng (blessing); tht (that); Hppy (Happy); nd (and); WNDRFL (wonderful); WISHD (wished); LST (last); YR (year); nd (and); bst (best); YRS (years); p.sc (please); wrld (world); hs (his); spnt (spent); yrz (years); jst (just); t (then?); dnt (do not); knw (know); wt (with); gng (going); wndrfl (wonderful); lt (later); cn (can); Nd (and)
Phonetic approximations	35	lyf (life); nd (and); u (you); C (see); ul (you will); tuk (took); (lyf (life); n (and); sy (say); g (got); z (is); f (if); m (am); nyt (night); ur (your); b (be); d (the); gud (good); lyk (like); gudnyt (good night); Ur (you are)
Misspellings/Typos	17	th (the); momy (mommy/mummy); WIT (with); HIPPINSS (happiness); WHILE (whole); scrified (sacrificed); erithng (everything); wana (wanna/want to); Wen (when); No (none)
Accent stylisations/Respellings	17	luv (love); DA/da (the); THRU (through); dyz (days); de (the); cum (come); gal (girl); dae (day); sym (same); dat (that)
Shortenings/Abbreviations	15	bnes (bones); anvrsry; MRE (more); B.DAY (birthday); @jhb (at Johannesburg); misn (missing); hve (have); carng (caring); abt (about)
Rebus, letter/number or number/letter homophones	12	2 (to); 4 (for); gud9t (good night); coz (because); 4rnd (friend); 4frndship (friendship); 4ever (for ever)
Combining two words	12	myluv (my love); ul (you will); gud9t (good night); gudnyt (good night); Ur (you are); 4ever (for ever); wana (wanna/want to)
Upper/Lower cases	10	'day' written in a capital 'D' in the middle of the message; A large portion of this message is in upper cases and ends with lower cases; 'God' written in upper cases, while the rest of the message is in lower cases; Except their beginning words, all of the three messages are in lower cases; The whole of this message starts each word with an upper case (initial capital)
Contractions	5	i'v (I've); ul (you will)
Aphaeresis	3.3	coz (because); Coz (because)
Logograms/Emoticons	3	@jhb (at Johannesburg); ;); ({})
G-clippings	2	modellin (modelling); actin (acting)
Apostrophe omissions	2	ul (you'll); dnt (don't)

TABLE 3: Syntactic categories and instances of participants' text messages that fit into these categories.

Syntactic categories	SMS instances
Word order (e.g., subject-verb-object [SVO] word order)	A majority of text messages display a conventional SVO word order.
Full sentences	Here, too, a majority of text messages are full sentences.
Sentence fragments	Fewer text messages are sentence fragments.
Run-on sentences	Only a few text messages are run-on sentences.
Subject-verb agreement (SVA)	All text messages have a proper SVA.
Punctuation marks	Some text messages use punctuation marks such as periods (full stops) and commas, whilst others do not.
Unconventional punctuation marks	A majority of text messages do not have unconventional punctuation marks, except a few that use an ampersand, *&*, in the place of *and*; still a few use emoticons, such as ;) and ({}) at sentence endings.
No punctuation marks	One third of text messages do not have periods at sentence endings.
Colloquialisms	Seven messages use *wana*/*wanna* for *want to*.

TABLE 4: A typology of SMS language features and corresponding examples of such features in participants' writing samples.

A typology of SMS language features (textisms)	%	Instances from writing samples
Phonetic approximations	1.7	u (you); c (see); Skul (School); bcoz (because); becoz (because); b (be); M (am); lyk (like); y (why); r (are); bcos (because); y (why); nym (name); b (be); c (see); bcoz (because) y (why); b (be); bcoz (because); m (am); bcoz (because); skul (school)
Misspellings/Typos	1.3	du (do); thrue (true); folowing (following); n (and); ma (my); ma self (myself); socilse (socialise); everybodies (everybody's); wer (was); realli (really); ansarng (answering); wat (what); al (all); chos (chose); accurat (accurate); wich (which); wen (when)
Shortenings/Abbreviations	1.2	kzn (KwaZulu Natal); immd (immediately); workplc (workplace); Tech (technology); sec (second); arnd (around); becm (become); contrl (control); myslf (myself); abv (above); managmnt (management); lookn (looking); admin (administration); acc (accounting); abt (about); jus (just)
Rebus, letter/number or number/letter homophones	1.1	4rom (from); 4 (for); 1stly (firstly); 1 (one); 4rm (from); 1 (one); 2 (to); 2 (to); @ (at); 4rm (from); & (and); (before); 1s (ones); (for now)
Accent stylisations/Respellings	0.9	de (the); dose (those); dat (that); ada (other); yrz (years); dat (that); fone (phone); da (the); de (the); dat (that); my clf (myself); dis (this)
Initialisms/Alphabetisms	0.8	ws (was); hd (had); bt (but); hvng (having); prson (person); typng (typing); wnt (want); frm (from); ppl (people); bt (but); dd (did)
Upper/Lower cases	0.8	i (I); i'm (I''m); i'd (I'd); i (I); i (I); i (I); i (I); i (I); i (I); i (I); i (I); i (I)
Contractions	0.5	Im (I'm – I am); Ill (I'll – I will); i'm (I'm – I am); i'd (I'd – I would); didn't (did not); i've (I've – I have)
Aphaeresis	0.4	cos (because); coz (because); cos (because); coz (because); coz (because)
Apostrophe omissions	0.3	Im (I'm); Ill (I'll); im (I'm); im (I'm)
Combined two words	0.2	Iam (I am); lastyr (last year)
Colloquialisms	0.1	wanna (want to)
G-clippings	0	–
Logograms/Emoticons	0	–

occurrence frequency percentages in brackets) and the accompanying examples of such features from participants' short essay writing samples. In this case, the four SMS language features that occurred mostly in participants' writing samples were, in a descending order: phonetic approximations (1.68%); misspellings and typos (1.30%);

shortenings and abbreviations (1.22%); and rebus, letter and number or number and letter homophones (1.1%).

The eight SMS language features that appeared less in participants' writing samples were, in a descending order: accent stylisations and respellings (0.92%); initialisms and alphabetisms (0.84%); upper and lower cases (0.84%); contractions (0.46%); aphaeresis (0.38%); apostrophe omissions (0.30%); combined two words (0.15%); and colloquialisms (0.1%). Two categories, G-clippings and logograms and emoticons, were not detected.

Discussion

This study set out to explore the morphosyntactic structures of the SMS language of Communication English I students, and the types of SMS language features these students used in their written work at a university of technology in South Africa. Below is a discussion of its findings as they relate to the three areas analysed in the preceding section.

Participants' text messages, and their morphological structures

As mentioned earlier on under the findings section, the morphological structures detected in the participants' text messages in the first set of data were categorised into thirteen textisms. As depicted in Table 1, the morphological structures of the textisms used in this set of participants' text messages, had, as is the case with most SMS textisms (Powell & Dixon 2011; Varnhagen *et al*. 2010; Wood *et al*. 2014) their own distinctive features which deviated from those used in formal English. Pathan (2012) makes a similar observation in his study of 200 text messages generated by Bachelor of Arts (English) students at a university in Libya.

In this regard, the two textisms with the highest occurrence frequency percentages were rebus, letter and number or number and letter homophones, and initialisms and alphabetisms. These occurrence frequency percentages seem to be slightly lower than the highest occurrence frequency percentages of textisms reported in other studies on text message features, such as those studied by Lyddy *et al*. (2013) and Thurlow and Brown (2003). In addition, the occurrence frequency percentages for the individual textisms, as depicted in Table 1, are lower than those reported by both Lyddy *et al*. (2013) and Thurlow and Brown (2003). For instance, in the study by Lyddy *et al*. (2013), textisms such as missed capital letters, accent stylisations, and omitted mid-message punctuation (mainly apostrophes) were scored as 22%, 19%, and 11%, apiece. Moreover, the proportion of non-standard spelling in their study was 19%. In contrast, as reflected in Table 1, the apostrophe omissions in the first set of text messages was 2.53%, as compared with 11% of that by Lyddy *et al*. (2013) for this textism category. Furthermore, the average textism occurrence frequency percentage (5.3%) in the first data set compares quite unfavourably with Plester, Wood and Joshi's (2009) study, in which textisms accounted for 34% of the total text message content. On the other hand, in Thurlow and Brown's (2003) study, textisms accounted for 20% of the total text message content. However, here too the morphological structures of the textisms detected in participants' text messages in the first data set deviated from those applicable to formal English – a point that Pathan (2012) notes in his study as well.

Again, as illustrated in Table 2, the morphological structures analysed in the participants' text messages in the second data set were also categorised into thirteen textisms. As is the case with textisms used in the first data set, the morphological structures of the textisms used in this set of the participants' text messages deviated from those applicable to formal English. Nonetheless, in this data set, the two textisms with the highest occurrence frequency percentages, initialisms and alphabetisms and phonetic approximations, recorded higher occurrence frequency percentages than those in the first data set. These occurrence frequency percentages seem to be higher than those reported in other studies on text message features, such as the studies by Lyddy *et al*. (2013) and Thurlow and Brown (2003). They are also marginally higher than the textism of 34% in Plester *et al*. (2009). However, the apostrophe omissions for this data set are, at 2%, lower than 11% of Lyddy *et al*. (2013) for the same textism category. Above all, as is the case with the first data set, the average textism occurrence frequency percentage (13.5%) in the second data set compares quite unfavourably with the study by Plester *et al*. (2009), in which textisms accounted for 34% of the total text message content.

Participants' text messages and their syntactic structures

There were nine syntactic categories (Table 3) that were employed to analyse the participants' text messages with a view to establishing whether such text messages conformed to, or deviated from, the syntactic categories in question. For example, as regards the SVO word order, a majority of text messages displayed conventional English SVO word order. This observation is inconsistent with Nweze's (2013) study that notes that texters' word-ordering in his study deviated from formal English. It is also incongruent with Pathan's (2012) study that found texters' messages to have been characterised by sentence subject omissions (see Chiad 2008). With reference to full sentences, a majority of text messages were full sentences. In contrast, fewer text messages were sentence fragments. Similarly, in respect of run-on sentences, there were a few text messages that were run-on sentences. Again, this observation contrasts with Pathan's (2012) study that found texters' messages to have been typified by, for example, run-on sentences.

Pertaining to the subject-verb agreement (SVA) structure, all text messages conformed to this structure. As regards punctuation marks, some text messages utilised punctuation marks, such as periods (full stops) and commas, at appropriate sentence slots, whilst others did not. Moreover, a majority of text messages did not employ unconventional

punctuation marks, except a few that used an ampersand, *&*, for *and*, whilst a few used emoticons such as *;)* and *({})* at their sentence endings. Finally, seven text messages made use of the colloquialism, *wana* or *wanna*, in lieu of *want to*.

Participants' writing samples and types of SMS language features

As shown in Table 4, the four SMS language features that had a high occurrence frequency in participants' writing samples were: phonetic approximations; misspellings and typos; shortenings and abbreviations; and rebus, letter and number or number and letter homophones. With the exception of misspellings and typos, this finding differs with Freudenberg's (2009) study of SMS language features in student writing samples. That is, in Freudenberg's study, spelling errors, over-punctuation, lack of punctuation, and omission of function words had a higher occurrence frequency. Again, as depicted in Table 4, the other SMS language features such as accent stylisations and respellings, initialisms and alphabetisms, upper and lower cases, contractions, aphaeresis, apostrophe omissions, and colloquialisms occurred less frequently. This observation, save for upper and lower cases, aphaeresis, and apostrophe omissions is in line with Freudenberg's (2009) study, in which abbreviations and acronyms, shortened words, and colloquialisms occurred less frequently in student writing samples. However, the frequency and proportion of textisms in participants' writing samples, as illustrated in Table 4, is lower than that reported in studies such as Freudenberg (2009), and in Rosen *et al*. (2010). This is consistent with the finding of Aziz *et al*. (2013) in their participants' written work.

Whilst it would be interesting to attempt explanations of why these data differ from those in the literature reviewed earlier, and how the findings could be applied to the teaching and learning of writing (English Additional Language), this study was, first and foremost, descriptive and exploratory in nature. In addition, the findings of the study satisfy the research questions the authors set out to explore.

Conclusions and recommendations for further studies

This study set out to investigate the morphosyntactic structures of the SMS language of English Communication I students and the types of SMS language features these students used in their written work at a university of technology in South Africa. With reference to the morphological structures of SMS language, it was discovered that, in one instance, the occurrence frequency percentages of certain textisms (e.g., rebus, letter and number or number and letter homophones, and initialisms and alphabetisms) in the participants' text messages, were slightly lower than the highest occurrence frequency percentages of textisms reported in other studies on text message features, such as Lyddy *et al*. (2013) and Thurlow and Brown (2003). In another instance, it was found that two textisms (e.g., initialisms and alphabetisms, and phonetic approximations) with the highest occurrence frequency percentages in the second data set, yielded higher occurrence frequency percentages than those in the first data set. It also emerged that the occurrence frequency percentages of these two textisms seemed to be higher than those reported in other studies on text message features, such as in Lyddy *et al*. (2013) and Thurlow and Brown (2003), and marginally higher than in Plester *et al*. (2009) - textism of 34%. However, it was noted that the apostrophe omissions for this data set were, at 2%, lower than that of Lyddy *et al*. (2013) of 11% for this textism category.

It also emerged that the participants' SMS language features – like those reported by Pathan (2012) – deviated from those used in Standard English. In respect of the syntactic structures of the participants' SMS language, it was observed that a majority of participants' text messages employed the conventional English SVO word order and the accepted SVA structure. The same was the case with participants' text messages in relation to full sentences: a majority of their text messages were full sentences, with only a few of such text messages being fragments, or run-on sentences. Furthermore, it was observed that the participants employed punctuation marks such as periods and commas varyingly, with some employing them appropriately, whilst others did not. Moreover, it was noted that few participants used an ampersand, *&*, for *and*, whilst a few others used emoticons such as *;)* and *({})*.

With regard to the participants' writing samples, four SMS language features occurred frequently: phonetic approximations; misspellings and typos; shortenings and abbreviations; and, rebus, letter and number or number and letter homophones. In contrast, SMS language features, such as accent stylisations and respellings, initialisms and alphabetisms, upper and lower cases, contractions, aphaeresis, apostrophe omissions, and colloquialisms occurred less frequently. Most importantly, the frequency and proportion of textisms in the participants' writing samples were lower than those reported in studies, such as Freudenberg's (2009) and that by Rosen *et al*. (2010). Finally, the findings of this study are largely specific and responsive to the nature of the data types, as sourced from the participants' text messages and writing samples. As such, there are studies that may replicate these findings, and those that may not. Moreover, cross-sectional studies involving students across study levels and involving a lot more triangulated data types are needed to better understand the morphosyntactic forms employed by students in their SMS language.

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Competing interests

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Authors' contributions

Data for this article were collected by M.L.M. (Tshwane University of Technology) from a university of technology. C.C. (Tshwane University of Technology) wrote the first draft, and C.C.M. (Tshwane University of Technology) fine-tuned the final draft.

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