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THE RELATIONSHIP BETWEEN EXPOSURE TO TEXTISM AND SPELLING COMPETENCY

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Abstract

The purpose of the study was to investigate the relationship between exposure to textism and spelling competency. A quasi-experimental research design was used to determine how the independent variable (exposure to textism) influenced the dependent variable (spelling competency). A purposive sampling technique was employed to select 92 Grade 10 learners for the study. A preliminary questionnaire was administered to gather information about the learners' cell phone ownership and text messaging behavior, and to further divide the sample into Experiment and Control groups. The Experiment group comprised learners who owned a smartphone and participated in text messaging, while learners who did not own a cell phone and were not actively involved in text messaging were assigned to the Control group. Data collection involved a dictation exercise and a creative writing task. The results of the dictation task showed a positive correlation between exposure to textism and spelling competency. Participants in the experiment groups, who owned a smartphone and were actively involved in text messaging, outperformed those in the control group, who did not own a cell phone or participate in text messaging. However, the results of the creative writing task presented a mixed trajectory of findings. Although the Experiment group performed better than the Control group in terms of incorrect spelling frequency, wrong word/class usage, and word omission, they also registered a higher count of punctuation-based spelling errors, word-spacing errors, and textism forms.

Keywords: *digital literacy; social media; SMS language; spelling competence; Standard English; text messaging; textism*

1. Introduction

The study aimed at investigating the relationship between exposures to textism and spelling competency. With 87% of households found to own a mobile phone (Doyle, Bandason, Dauya, McHugh, Grundy, Dringus, Dziva Chikwari, & Ferrand, 2021), and with children's increasing use of mobile phones, (van Dijk, van Witteloostuijn, Vasić, Avrutin, & Blom, 2016), the potential impact of this technology-based linguistic trend can no longer be ignored. There has been a nagging general concern that computer-mediated

communication often deviates from standard language norms, and it is feared to hurt literacy (Verheijen, Spooren, & van Kemenade, 2020). From a layman's perspective, text messaging is popularly regarded as a literary crisis that threatens the preservation of 'acceptable' Standard English writing habits and conventions. In formal educational circles, there has also been a growing concern amongst language and educational practitioners regarding the adverse effect that texting has on children's written language production. This literacy crisis is epitomised by traces of textism found in school assignments and other formal texts written by students (Memushaj, Emushaj, & Çekrezi, 2018), which emphasises the feared negative influence of text messaging on literacy. These are manifestations of moral panics and public anxiety that attempted to strengthen the view that unconventional word spellings might compromise children's conventional literacy skills, as text messaging compromises the standards of spelling, grammar, sentence structure, punctuation and capitalization are decreasing.

However, this general tendency, in both educational cycles and lay environments, to identify textism as an inhibiting factor when it comes to proper language learning and production has sparked an array of research initiatives to establish the truth regarding the matter. Results of studies around the issue represent a mixed bag of views. In the study conducted by Jafari & Rad (2016) on the influence of phonological and grammatical awareness on reading performance of university students, a positive relationship between the students' reading performance and their SMS-related phonological awareness was established. This is consistent with the study carried out by Titanji, Patience, & Ndode (2017) who found texting to have a positive effect on students' writing skills since it provides them with an extended opportunity to practise their writing skills. Equivocally, results of research by Li, Cummins, & Deng (2017), also confirmed the existence of a positive relationship between text messaging and literacy, where a texting-based intervention programme yielded positive results towards the improvement of students' vocabulary skills. Furthermore, the use of mobile learning and text messaging to enhance learners' language performance was also endorsed by Behforouz & Frumuselu's (2020) study on Iranian university students.

On a more negative side, the study conducted by Shahzad, Jabeen & Asgher (2021) on higher secondary learners in Pakistan found that the study participants violated standard English language norms by using features of SMS language, such as contractions, vowel omissions, punctuation errors and the use of symbols, when writing formal school assignments. This trajectory of results is in tandem with research findings by Omotoyimbo (2021) who investigated texting tendencies of undergraduate students in Nigeria. The results of the study revealed that students used text messaging language forms in formal academic contexts, which negatively affected their academic performance. Although these 'negative' results are a salient refutation on popular claims that no systematic empirical research to date has demonstrated that a relationship exists between the use of text speak and a decline in literacy, the seemingly overwhelming evidence to the contrary cannot be confidently overridden. It was, therefore, within the main prescripts of this study to advance the debate further by narrowing the literacy issue down to spelling to determine whether text messaging can be a useful tool in enhancing classroom language teaching practice by facilitating the teaching of spelling to English First Additional Language learners in a South African school context.

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2. Literature Review

With the ownership of devices, such as tablets and smart phones, occurring from an increasingly young age (Domingues-Montanari, 2017), the influence of technology on language use and communication patterns becomes a contentious factor amongst children and adults alike. By popular demand, increasing numbers of people are communicating with each other through various technologies such as phone-based text messaging, internet-based instant messaging, synchronous chat, asynchronous discussion forums, and e-mail. These social networking sites have become a major form of communication in today's day and age, and their language is characterised by the use of youth slang, neologism and internet slang that are not registered into dictionaries (Matsumoto, Ren, Matsuoka & Yoshida, 2019). These writing practices used in modern means of communication are mainly characterized by their abbreviated aspect, making SMS language one of the new communication technologies. The contemporary conversational writings produced by the new technologies have led to the emergence of new spellings and more informal written texts. Given the increasing amount of time spent by young people on digital platforms, compared to the little time spent reading in the traditional sense (Zebroff & Kaufman, 2017), the negative effect of social media on literacy has been an issue of great interest amongst researchers and educational practitioners. Central to this concern is the apprehension that good writing skills, more importantly spelling, would not be adhered to, and that would affect proficiency in English Language (Partey, Addo-Danquah, Bonku, & Sarfo-Adu, 2018). The current study hoped to make a conceptual and empirical contribution to the existing body of knowledge by investigating the relationship between English texting proficiency and spelling competency amongst South African high school learners.

Nisargandha & Morey (2019) identify three perspectives on the effect of texting on literacy. According to the first perspective, text messaging is potentially harmful to the learners' writing skill and is blamed for the corruption of language and the degradation in spelling of youth writing. It represents an assault on written English and amounts to a dumping down of language and a lowering of standards through the overuse of abbreviation, clippings, acronyms and other abbreviated forms that are ungrammatical and incorrect. This school of thought is fuelled by the general fear that the literacy skills of children who make substantial use of text messaging might be adversely affected because errors of spellings, punctuations, and tenses in students' academic writing can be attributed constant use of abbreviated text messaging (Akinola, Paul, & Bukola, 2022). The main line of argument is that the texting practice is nurturing a decline in literacy since users commit numerous errors, ranging from incorrect spelling to ungrammatical sentence structure. As such, learners tend to sacrifice the essential mechanics of writing, such as grammar, punctuation, and capitalization, on the altar of the quest for concision, brevity, and economy (Anaekperechi, 2020). The abbreviations used when texting are often perceived as misspellings that may crossover into children's schoolwork and replace their knowledge of conventional forms, causing a great concern for the future of written language. If this situation is left uncurbed, the English Language will either dwindle or develop into a new language to be used among those who can decode them (Partey et al., 2018).

The second perspective project text messaging is a blessing rather than a curse, since it enhances the learners' written communication skills (Titanji et al., 2017). According to this school of thought, text messaging does not really pose a threat as many fear it does, because the more students write, the more they improve upon their writing skills (Anaekperechi, 2020). The general notion is that whatever can get students to write is a positive influence,

and text messaging improves students' literacy by encouraging creativity in written expression. Substance to this perspective is provided by results of a study by McSweeney (2017), where participants who sent English messages using their mobile phones demonstrated higher academic English skills. Therefore, texting should be exploited in teaching Standard English and making the acquisition of Standard English more accessible, which makes the consequential impact of texting on the standard language to be of greater importance (Ali, Hasnain, & Beg, 2017). The main basis for this stance is that text messaging is believed to enhance the learners' writing skill as they are exposed to writing in a more relaxing and less stressful atmosphere. The belief is that texting is a way to increase the literary skills of a particular language, and also a way of practice which would ultimately increase the proficiency of a language (Suleman, Parveen, & Sadiq, 2017). To coin Titanji et al.'s (2017) phrasing, the SMS text messaging could just be seen as a necessary evil of the 21st century which could redeem the dying writing skill in students worldwide.

The third perspective holds that texting does not have any effect on the learners' writing skills. The core belief is that it is not the text messaging that is bad in itself, but its misuse, such as the inconsistent, idiosyncratic and non-standard use of abbreviations, expressions and spellings, is (Nisargandha & Morey, 2019). Moreover, SMS language is regarded as an autonomous slang language Shahzad (2021) with has its own language that has no effect on Standard English. The three schools of thought about the effect of texting on literary have served as an academic springboard for research activity to substantiate each stance.

In conclusion, it has been observed that the influence of technology on language and communication has been a driving factor in terms of what constitutes modern use of language. In particular, social media has become one of the main drivers of the evolution of language, as we know it. The rise of text messaging has been an influential game changer in both social and educational communicative environments. Zebroff & Kaufman (2017) also concur that texting has changed the way people speak, read, and write. As a result, three main schools of thought have emerged, clustering results-based research activity into the following three main categories. The first category represents the works of researchers such as van Dijk et al (2016). The results revealed by this cohort of research initiatives have confirmed an existence of a positive relationship between text messaging and literacy skills.

Secondly, the works of scholars, such as, Ashraf (2019); Ghanney, Antwi, & Agyeman (2017); Nisargandha & Morey (2019); and Suleman et al. (2017), have proven the existence of a negative impact of text messaging on literacy. The main explanation behind these results is that text messaging deteriorates the user's knowledge of standard language structures, and therefore, interferes with their literacy advancement.

The third trajectory of results has projected a zero-influence relationship between texting and literacy. Results of studies by Kraft & Monti-Nussbaum (2017); Zebroff & Kaufman (2017), suggest an existence of a neutral relationship between text messaging and literacy. The underlying reasoning for these findings is that users are consciously aware of the difference between Standard English and textism language structures and are able to make context-appropriate language choices.

The theory that was deemed relevant to the study is the Interference theory. According to McLeod (2018), interference is an explanation for forgetting in long term memory, which states that forgetting occurs because memories interfere with and disrupt one another. In other words, forgetting occurs because of interference from other memories. This interference occurs either retroactively or proactively. Proactive interference

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happens when later learning interferes with earlier learning, where new memories disrupt old memories (McLeod, 2018). Retroactive interference, on the other hand, occurs when new memories interfere with the retrieval of old memories, resulting in an individual's inability to recall old information because new information prevents its retrieval (Vinney, 2020).

In the context of the current study, the implication of the Interference theory would be that the learning of the language used during text messaging could interfere with the memory of Standard English. By implication, the use of text speak vocabulary may slow down the processing of Standard English [SE] because the other language, in this case text speak, must be inhibited before SE is processed. It is this interference-based relationship between text messaging and SE that the conducted study hoped to put to a litmus test, by determining whether the mastery of texting language diminishes or enhances the learners' competency in SE spelling.

3. Research Method

The aim of the study was to investigate the relationship between exposure to texting and spelling competency. This investigative endeavour was pedestalled upon Jafari & Rad's (2016) projected argument that to read or produce textisms, children need a good level of phonological awareness. The insinuated gist of this statement is that traces of textism language structures in children's written language are more than uniformed basic language errors, but a product of an intricate higher order linguistic and phonological process that culminates into what would intuitively be labelled as a 'non-standard' language usage. It was against this backdrop that the study at hand sought to determine whether this 'phonological awareness' could be narrowed down to spelling ability, by determining the relationship between exposure to textism and spelling competency.

Purposive sampling was used to select Mafolofolo High School as a sample for the study. The school was deemed by the researcher to be a typical sample with a combination of learners who owned a smart phone and those who either owned a basic mobile phone or did not own one at all. A pre-selection questionnaire was administered on 210 Grade 10 learners to establish their smart phone ownership and texting tendencies, out of which, a total of 92 participants were sampled to participate in the study. Based on the information gathered through the administered preliminary questionnaire, the sample was further differentiated into 46 learners who owned smart phones and were constantly engaged in text messaging on social media platforms such as whatsapp, mixit, and facebook (Experiment group), and 46 participants who did not have access to smart phones and were not actively involved in text messaging (Control group).

Accommodation	Muscle
Acquire	Neighbour
Although	Occasionally
Asthma	Occurred
Bought	Omit
Candidate	Plough
Cleavage	Principal
Conscious	Proceed
Definitely	Pronunciation
Determine	Questionnaire

Disappear	Receipt
Discipline	Recommend
Drought	Rhythm
Embarrass	Sandwich
Enough	Schedule
Exceed	Separate
Gauge	Sewerage
Government	Success
Handkerchief	Surprise
Height	Tomorrow
Honesty	Tongue
Ignorance	Torture
Imitate	Unnecessary
Maintenance	Weather
Misspell	Women

Since the research methods for the study were aimed at identifying the relationship between variables, through a purposive collection of quantitative data, a quantitative approach was adopted in conducting the study. According to Apuke (2017), quantitative research involves the utilisation and analysis of numerical data using specific statistical techniques. The research design that was used is quasi-experimental design whereby a group is tested for the influence of a variable and compared with a non-identical group with known differences (control group) which has not been subjected to a variable to determine whether there is a causal relationship between the treatment and the outcome. The key variable in this regard was the exposure to texting, and as such, the Experiment group comprised learners who had been exposed to texting, whereas learners who had not engaged in texting constituted the Control group. The quasi-experiment design was deemed suitable for the study since it enabled the researcher to establish the correlation between the study participant's texting tendencies and spelling ability through a comparative analysis of the results obtained from both the Experiment and Control groups.

To accumulate quantitative data for the study, dictation and creative writing tasks were administered on the 92 sampled learners, demarcated into 46 Control and 46 Experiment groups of learners according to their exposure to textism and smart phone ownership status. A list of 50 vocabulary items below was dictated to the participants to test their spelling ability. The voice of the learners' resident English teacher was used to articulate the dictation exercise to capitalise on the learners' familiarity with their regular teacher's speaking voice and pronunciation accent. This was a precautionary measure to level up the playing field and minimise incidents of mishearing and miscoding. Each word was read out twice, with five seconds' time intervals in between. At the end of the exercise, the teacher ran through the whole list of spelling test items for consolidation purposes, to give the learners a final opportunity to review and revise their responses as they deemed necessary. The main objective of this exercise was to determine how exposure to texting impacts the participants' spelling ability.

Learners were required to write a descriptive essay of 500 words, under supervised classroom conditions, on the following topic: "How Covid-19 has affected my life". The participants were allowed two hours to complete the task. Hard copies of the essays were

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collected for analysis to determine the correlation between spontaneous spelling ability and exposure to textism.

Because of the quantitative nature of the data collected, the data analysis processes were also quantitatively oriented. Bearing in mind that quantitative research deals with quantifying and analysing variables to get results. quantitative research methods aim at identifying the relationships between variables by measuring them, the three basic phases of quantitative research, as identified by were applied, namely, finding variables for concepts, operationalizing them in the study, and measuring them (Apuke, 2017). Although the data collected for the study were analysed as per data collection instruments as distinguished below, data from the two instruments were analytically collated and coordinated to come up with collective findings geared towards answering the guiding research questions for the study. This constitutes a data triangulation process in which the researcher uses more than one source of data to analyse the same object of study with the aim of validating the results of a study.

A comparative analysis of the learners' performance on the dictated spelling test was done between the Control and the Experiment group to get a sense of each group's overall performance. This was done by calculating the average mark for each group by dividing the sum of the scores by the number of participants. The calculated average marks for the two groups were analytically compared to determine whether there were any statistically significant disparities or similarities. Regarding the creative writing task data, creative essay scripts were marked and analysed for the following errors: wrong word forms/classes, incorrect spellings, punctuation-spelling errors, word-spacing spelling errors, word omissions, textism forms, and incomplete tasks. The number of error-free submissions for each group of participants was also documented.

4. Results and Discussion

4.1 Result

4.1.1 Dictation Task Results

The table below is a summarized representation of a comparative analysis of dictation task results obtained for the Experiment and Control groups:

	Experiment Group			**Control group**		
	Female	**Male**	**Total**	**Female**	**Male**	**Total**
Number of scores	27	19	46	26	20	46
Sum of scores	623	404	1027	501	346	847
Mean	23	21.2	22.3	19.2	17.3	18.4
Median	23	28	25.5	17	16	16.5
Mode	23	12/15/16/28/33	23	17/20	18/21	14/18
Range	36	26	31	36	29	32.5
Number of omissions	2	19	21	17	43	60
Percentage of scores above 50%	37%	42%	39.5%	26.9%	20%	23.4%

The results show statistically significant evidence according to which the participants who owned a smart phone and were actively involved in text messaging (Experiment group) outperformed those who did not own a cell phone and did not participate in text messaging (Control group). There was a total of 60-word omissions registered by the Control group as

compared to 21 words omitted on the Experiment side. The omission of words can be interpreted as an indicator of inadequate knowledge of how specific words are spelt out, and the Control group participants have demonstrated a superior vocabulary inefficiency by registering 39 omissions more than the Experiment group respondents did. Although the calculated range of scores registered by the Control group was slightly higher than what the Experiment group was able to achieve, the latter enjoyed an upper hand on measures of mean, median and mode, with a positive mean difference of 3.9, median positive difference of 9, and the highest mode value difference of 15 in favour of the Experiment group. Most notably, the percentage of scores in excess of the 50% threshold for the Experiment group exceeded what was obtained by the Control group by a statistically significant margin of 16.1%.

4.1.2 Writing task results

The table below represents a synoptic overview of the results that were obtained from the participation of both the Experiment and Control groups of respondents in the creative writing reading task.

	Experiment Group				Control group			
	Female	**Male**	**Total**	**Average**	**Female**	**Male**	**Total**	**Average**
Number of participants	27	19	46		24	15	39	
Incorrect Spelling	126	146	272	5.9	112	87	199	5.1
Wrong Word Form/Class	116	91	207	4.5	72	39	111	2.8
Punctuation-based Spelling Errors	14	12	26	0.5	16	17	33	0.8
Word-spacing Spelling Errors	11	4	15	0.3	22	15	37	0.9
Omitted words	12	4	16	0.3	0	2	2	0.1
Textism Forms	0	4	4	0.1	4	6	10	0.2
No Spelling Errors	1	0	1		1	0	1	

As reflected in the analysis, the Experiment group participants were outdone by their Control counterparts on measures of incorrect spelling frequency, wrong word form/class and word omission. The recorded Experiment group averages for these three factors were capped at 5.9, 4.5 and 0.3 respectively, demonstrating excesses of 0.8, 1.7 and 0.2 points over and above the 5.1, 2.8 and 0.1 averages registered by the Control cohort of respondents. However, the Experiment section of the sample had a slightly better showing on counts of punctuation-based spelling errors, word-spacing spelling errors and textism forms, with respective averages of 0.3, 0.6 and 0.2 below the 0.8, 0.9 and 0.2 calculated for the Control group on the three respective measures. Notably, the two sides registered 1 error-free submission each.

4.2 Discussion

The main aim of the study was to investigate the relationship between exposure to textism and spelling competency. According to the results of the dictation exercise, participants who owned a cell phone and were actively involved in text messaging

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(Experiment group) outperformed those who did not own a cell phone and were not actively involved in text messaging (Control group). Apart from the higher mean, mode and median calculated for the Experiment group's set of scores, the group registered fewer omissions of test items, which could be an indication of lack of knowledge regarding word spelling. This finding is consistent with results of studies by Behforouz & Frumusela (2020; Jafari & Rad (2016); Li et al (2017); and Titanji et al. (2017), which also confirmed an existence of a positive correlation between the knowledge or mastery of textism (and its associated use of abbreviations) and spelling ability. The frequency of text messaging was revealed to be a predictor for the participants' performance on spelling tests. Considering the participants' performance of the dictation task, an informed claim can be made about the existence of a positive correlation between exposure to textism and spelling ability. As demonstrated by the results of the study, participants who demonstrated superior textism reading skills performed better on linguistic tasks, due to the existence of a positive link between textism and phonological awareness.

However, results of the creative writing task break the unanimous pattern of results obtained in the dictation task. Although the Experiment section of the sample had a slightly better showing on counts of punctuation spelling errors, word spacing spelling errors and textism forms, the superior performance by the Control group on word spelling is noteworthy. Contrary to what has been revealed by the dictation task, the results obtained from the creative writing task show that the Control group's performance on the word spelling measure was slightly better than was recorded for the opposite side. The comparatively less frequency of spelling errors registered by the Control group participants suggest that exposure to text messaging might have a damaging effect on learners' spelling ability. As demonstrated by the results, participants who did not own a smart phone and were not involved in text messaging committed fewer spelling errors as compared to those who were actively involved in text messaging. Furthermore, the Control cohort of participants registered a lower prevalence of wrong word forms/classes and word omissions. This dimension of results is in collocation with findings by Ali (2019); Ganney et al. (2017); and Omotoyimbo (2021), which affirmed an existence of a positive relationship between text messaging and poor spelling. Exposure to social media language was discovered to have a negative language influence which manifested itself through misspellings, punctuation errors, use of symbols and short-handwriting styles (Ghanney et al. (2017). As such, frequent text messaging was proven to contribute significantly towards poor linguistic skills due to an incessant use of non-standard abbreviations and shortcuts when writing text messaging. This apparently tempered with and diminished knowledge of Standard English structures because extensive exposure textism could lead to a failure to consolidate, or recall, some conventions of standard written English.

The incongruency between results of the two administered instruments suggests that spelling ability should be further differentiated into spontaneous and non-spontaneous sub-categories. As such, a more accurate reflection of the study's findings would be that participants who were less exposed to text messaging demonstrated a superior spontaneous spelling proficiency as measured through the administered creative writing task. On the other hand, respondents with more exposure to text messaging demonstrated a more advanced non-spontaneous spelling competency as confirmed by the results of the dictation task.

5. Conclusion

The study aimed to investigate the relationship between exposure to textism and spelling competency. The findings confirmed a positive relationship between exposure to textism and spelling proficiency. Participants who owned a smartphone and were actively involved in text messaging generally demonstrated superior spelling skills compared to those who did not own a smartphone and had less exposure to text messaging. This finding was particularly valid for non-spontaneous spelling proficiency. However, when spontaneous spelling was assessed, exposure to textism partially showed a negative effect on the participants' spelling ability. This was evident through measures of incorrect spelling frequency, wrong word form/class, and word omission. The study sought to clarify the relationship between exposure to text messaging and spelling ability. The findings confirmed a positive correlation between texting proficiency and spelling ability. This study contributes to the field of language and education by providing both practical and theoretical insights into the research problem. It reveals empirical evidence that addresses concerns about the impact of SMS texts on schoolwork, including the presence of textisms in assignments and text message spelling conventions in student essays. The demonstrated positive relationship between text messaging and spelling ability suggests that text messaging should be recognized as a valuable tool in language learning. Practically, the study advocates for the inclusion of textism as an important classroom tool to enhance learners' spelling skills. This challenges the notion that students' writing skills are compromised by text messaging, arguing instead that text messaging does not corrupt Standard English but can coexist with standard language conventions such as spelling, grammar, sentence structure, and punctuation. Furthermore, incorporating textism studies into the school curriculum could significantly improve students' literacy levels.

References

Akinola, O. A., Paul, O.I., Bukola, A. F. (2022). Impact of text messaging abbreviations on the written english essays of the students of federal polytechnic ede. *International Journal of Social Science and Education Research Studies*, 2 (May): 85 – 93.

Ali, J. K. M., Hashain, S. I., Beg, M. S. (2017). The impact of texting on standard english: the student perspective. *Arab Woorld English Journal*, 5 (July): 65 – 75.

Anaekperechi, A. U. (2020). SMS language interventions on students' note-taking skills: new insights from digital literacy. *Pan-African Journal of Humanities and Social Science*, *2*(1): 127 – 142.

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Arabian J Bus Manag Review (Kuwait Chapter), 6*(10): 40 – 47.

Ashraf, F. (2019). The impact of texting (sms) on students' academic writing. *International Journal of Scientific and Research Publications*, 9 (3): 58 – 63.

Behforouz, B., & Frumuselu, A. D. (2020). The Impact of text messaging as an instructional tool to enhance learner autonomy and perception. *International Journal of Learning, Teaching and Educational Research*, 19 (11): 184-202.

Dominigues-Montanari, S. (2017). Clinical and psychological effects of excessive screen time on children. *Journal of Paediatrics and Child Health*, 53 (4): 333 – 338.

Doyle, A. M., Bandason, T., Dauya, E., McHugh, G., Grundy, C., Dringus, S., Dziva Chikwari, & C., Ferrand, R. A. (2021). Mobile phone access and implications for digital health interventions among adolescents and young adults in Zimbabwe: cross-sectional survey. *JMIR Mhealth Uhealth*, 9(1)

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DOI: 10.30743/ll.v8i1.7752

Ghanney, R. A., Antwi, T. & Agyeman, E. A. (2017). The effects of social media on literacy development among pupils in junior high schools in Ghana. *Advances in Social Sciences Research Journal,* 4 (16): 287-301.

Jafari, A.M., Rad, N.F. (2016). The Influence of phonological and grammatical awareness on efl students' reading performance. *Journal of Language Teaching and Research*, 7 (6): 1164-1173.

Kraft, M. A., & Monti-Nussbaum, M. (2017). Can schools enable parents to prevent summer learning loss? A text-messaging field experiment to promote literacy skills. *The ANNALS of the American Academy of Political and Social Science*, *674*(1), 85-112.

Li, J., Cummins, J., & Deng, Q. (2017). The effectiveness of texting to enhance academic vocabulary learning: English language learners' perspective. *Computer Assisted Language Learning,* 30:8, 816-843, DOI: 10.1080/09588221.2017.1366923

Matsumoto, K., Ren, J., Matsuoka, M., Yoshida, M., & Kita, K. (2019). Slang Feature Extraction by Analysing Topic Change on Social Media. CAAI Transactions on Intelligence Technology, 4 (1): 64 – 71.

McLeod, S. A. (2018). Proactive and retroactive interference. *Simply Psychology*. Available: https://www.simplypsychology.org/proactive-and-retroactive-interference.

McSweeney, M.A. (2017). I text english to everyone: Links between second-language texting and academic proficiency. *Language*, 2 (7): 1 – 15.

Memushaj, N., Emushaj, G., & Çekrezi, A. (2018). The impact of text messaging on high school students' literacy In English language: A case study of Mak Girls. *BJES,* 18 (1): 37 - 66

Nisargandha, A. A., & Morey, D.T. (2019). Effect of sms lingo on writing skill: An Investigation. *Language in India*, 19 (4), 14 – 21.

Omotoyinbo, D. W. (2021). East African scholars J*. Edu Humanit Lit,* 4(3): 120-128.

Partey, F. A., Addo-Danquah, R. F., Bonku, L.K., & Sarfo-Adu, K. (2018). Investigating unconventional abbreviations in sms texts. *International Journal of Applied Linguistics & English Literature,* 7 (4): 25-32.

Shahzad, A.K., Jabeen, R., & Asgher, T. (2021). Convergence of sms language in formal writing by esl learners at higher secondary level. *Psychology and Education,* 58(3): 3190-3198.

Suleman, N., Parveen, S., & Sadiq U. (2017). A comparative study about the use of sms in formal writing of the students in universities. *Journal of Managerial Sciences*, 06 (03): 122 – 135.

Titanji, L. B. K. L., Patience, M. M., & Ndode, N. S. (2017). Implications of text messaging on students' language skills: The Case of the university of Buea. *European Journal of English Language and Literature Studies,* 5 (2): 1-14.

van Dijk, C. N., van Witteloostuijn, M., Vasić, N., Avrutin, S., & Blom, E. (2016). The influence of texting language on grammar and executive functions in primary school children. *PLoS ONE,* 11 (3): 1 – 22.

Verheijen, L., Spooren, W., & van Kemenade, A. (2020). Relationships between dutch youths' social media use and school writing. *Computers and Composition*, 56 (June).

Vinney, C. (2020). *Proactive and retroactive interference: Definition and examples*. Available: thoughtco.com/proactive-and-retroactive-interference-definition-and-examples-4797969.

Zebroff, D., & Kaufman, D. (2017). Texting, reading, and other daily habits associated with adolescents' literacy levels. *Educ Inf Technol*, 22: 2197–2216.