

The Impact of Texting on Standard English: The Students' Perspective

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Abstract

Overindulgence in social networking, in general, and texting, in particular, is much in practice. It is cutting across various population boundaries and has almost assumed an endemic proportion. Its consequential impact on the standard language has acquired greater importance. This paper aims to determine the perceptions and attitudes of English Second Language (ESL) learners at Aligarh Muslim University towards the consequences of texting on Standard English. The data were collected through a five-point scale questionnaire from ninety students who were enrolled at Aligarh Muslim University during the academic year 2010-2011. The respondents completed a 16-item questionnaire. The students from which the data were collected were grouped according to their levels. The results indicate the negative impact of this new usage of the language in breaking the rules of English language and influencing their literacy. Moreover, the questionnaire results from respondents' point of view show that regardless of their heavy use of texting, most respondents have a negative attitude towards texting and they viewed it as a threat to Standard English.

Keywords: attitudes, consequences, negative impact, Standard English, texting

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1. Introduction

The prolific use of texting in modern life and its consequent pros and cons are assuming great importance in the contemporary world. This has also resulted in the divisions and disagreements among scholars as to its effect on the structure of language. The impact of texting on Standard English has been studied by a number of scholars. According to Drouin and Davis (2009), approximately half of their participants in the study reported that texting is making it challenging to remember Standard English and it could have a negative impact on their usage of Standard English. Texting is “a language that has swept our world like a tsunami, in less than a decade” (Swartzlander, 2010, p.vi). Texting has been perceived in different ways by different scholars. Some scholars have critiqued it on the grounds of distorting English spelling system in the name of simplification. They believe that simplification of spelling is being carried out with no consideration to history and pride associated with language. Other scholars believe that there is no problem with texting as long as one is able to communicate and understand each other through it. The advent of texting has created many variations of English language and allowed the users to break the rules of Standard English. Baron (2008) points out that we are flooding the scriptorium with an abundance of instant and text messages and, as a result, we are unable to distinguish the important from the unimportant or the great works from the so-called “vapour text”. Baron maintains “unless we learn to regulate our current language use, we will have difficulty understanding each other and the standardized forms of our written language will be lost.” (as cited in Maynard, 2009, p. 2).

The domain of this research will mainly focus on the impact of texting on Standard English from the students' points of view. The study was conducted at Aligarh Muslim University (AMU) in India, where essentially Urdu is the first language of the students while English is used as a medium of instruction and it is spoken as a second or a foreign language for most AMU students.

2. Research Questions

The present study aims to achieve some objectives that can be summarized in the following research questions:

1. What is the impact of texting on Standard English from students' point of view?
2. Are ESL students aware of the impact of texting?

3. Review of Literature

Janin-Starr (2014) states that some researchers found texting to interfere with formal writing, while other studies demonstrated just the opposite in schoolwork. Janin-Starr maintains that “the issues with texting can become complicated and confusion”. A similar predicament and anxiety have been expressed by Baron (2008) when she writes the preface of her book titled: *Language in an Online and Mobile World*. “In writing this book, I have felt comparable frustration in attempting to characterize a phenomenon in flux”(Baron, 2008, p. ix). Irish education officials reported that “Online commentary gives the impression that the court of public opinion sides with the view that texting has a poisonous influence on language and literacy” (Wolman, 2008, p.179). Prøysen (2009) argues that there seems to be some truth in the prophecy that texting English will erode children's ability to spell, punctuate and capitalize correctly, and that children will transfer these new habits into their schoolwork. Prøysen's fieldwork in the United States supported her hypothesis that high school students do not keep the language of text messaging separate from

Standard English written texts, so that text messaging language is used in school work. Prøysen's general argument is that if one is struggling with the language learning process, and one has to learn a second language in addition to one's mother tongue, it may be difficult for the weak students to keep up and texting makes things worse. The corruption of language and the degradation in spelling by students have been noticed by many teachers across the world. Textism is blamed for this and many teachers have even formally voiced their complaints of textism creeping into formal "school resister language". Teachers have found that texting has crept into formal writing such as papers, forms, tests, projects, and other forms (Ali, 2012; Vosloo, 2009; Kemp & Bushnell, 2011; Coe & Oakhill, 2011 and Leedham et al., 2009).

In exploring whether the incessant use of the language of email, SMS, chat and other electronic media damage the students' ability to use the Standard language conventions expected in examinations, Ellis, Daniels, and Jauregui (2010) suggest that the frequent use of cell phone may have a negative effect on academic performance. Harman and Sato (2011) show a negative correlation between number of SMS text messages and academic scores. Wood, Kemp, Waldron, and Hart (2014) find that the text messages of children at both primary and secondary school were rife with grammatical violations.

Psychologists use the "decay theory" to explain this phenomenon. Decay theory states that learned information will be less accessible over time, especially when they are not being activated through use. According to this theory, if individuals are using texting as their main form of communication, Standard English may deteriorate from disuse (Drouin & Davis, 2009, p. 51). There is a concern that students who frequently express themselves in abbreviations and smiley faces may lose the capacity for more nuanced, grammatically correct writing. "A considerable number of educators and children's advocates ... are concerned that the quality of writing by young Americans is being degraded by their electronic communication, with its carefree spelling, lax punctuation and grammar, and its acronym shortcuts" (Lenhart, Arafeh, Smith, and Macgill, 2008, p. i). Cingel and Sundar (2012) find a negative association between US children's performance and their use of textisms. Lee (2002) describes texting as an incessant assault of technology on formal written English. Ali et al. (2015) found out that texting creates lack of comprehension for English speakers, learners, and texters.

On the other side, Crystal (2008) believes that the widespread concern about the impact of texting on children's literacy is unfounded. The brevity of the text style, and the 160 character constraint of an SMS, require the author to write economically, inventively and playfully. Tagliamonte and Denis (2008) suggest that new media language does not interfere with standard literacy. Many other linguistic studies on texting find that texting doesn't have a negative impact on language (Al-kadi, 2017; Ahmed & Al-kadi, 2016; Grinter & Eldridge, 2001, 2003; Faulkner & Culwin, 2004 and Doring, 2002). Farina and Lyddy (2011) argue that text messaging language is not as deviant as media portrays. Furthermore, the use of textisms is found to correlate positively with word reading, vocabulary and phonological awareness in children, and some aspects of language performance in young adults. Hamzah, Ghorbani and Abdullah (2009) find that the written language is being creatively adapted, developed, and enhanced to suit the conditions of the electronic communication age. Syntactical and lexical reductions are just strategies used to reduce effort, time and space. The authors believe texting is perfectly acceptable for use in text messages, but school work, formal letters, business communication and examinations require standard language.

4. Methods

4.1. Subjects Selection

The sample of this research consisted of ninety AMU subjects from Aligarh Muslim University, India. They were grouped according to their levels of education: Plus Two, Bachelor, Master and PhD. Twenty subjects from Faculty of Commerce, 20 subjects from Faculty of Science and 20 subjects from Faculty of Arts. Faculty of Social Sciences and Faculty of Engineering and Technology did not have Plus Two level. Therefore, the subjects were 15 from Faculty of Social Sciences and 15 Faculty of Engineering and Technology. The authors selected Plus Two level which refers to a one year course between secondary school and bachelor degree. This group has been selected because they are somewhat younger.

4.2. Instrument

The instrument of this research was a questionnaire of 16 items. The alternative responses were fixed and close-ended. The responses of the close-ended questions are simple to administer and easy to analyze. The statements in the questionnaire of the study were the five-point scale and the responses were graded from 'Strongly Agree' to 'Strongly Disagree'. The sequencing of the questions/statements was achieved by taking KAP (Knowledge, Attitude and Practice) as a formula for sequence. The questionnaire was refereed by experts of designing and experts of statistical analysis before its final distribution. The completed questionnaires were transferred to a text file and then analysed by to SPSS version 16.0 for analysis.

4.3. Procedure of Data Interpretation

After analysing the data and presenting the results in tables, the results were interpreted in details. In other words, the results found were presented in a written form. The consolidation and inferring were declared throughout the statistical analysis and results interpretation section. Then the findings were stated out in conclusion.

5. Statistical Analysis and Results Interpretation

In this section, the data were statistically analysed and interpreted. The respondents' responses to the questionnaire items were presented in tables.

1. The regular use of the language of email, SMS and chat damages the learners' ability to use the Standard English.

Table1. *The statistics of the responses on item No. 1.*

Mean	3.8652
Std. Deviation	1.01344

Table 1 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "the regular use of the language of email, SMS and chat damages the learners' ability to use Standard English". The mean score of the responses was about 3.87 and the standard deviation was about 1.01, which showed that the responses were clustered around 'agree' option. Generally speaking, according to the responses of the ninety respondents, texting had a negative influence on the learners' ability to use Standard English. The level of agreement showed that texting had a negative influence on Standard English.

2. The language of email, SMS and chat affects the goodness of the pure English language.

Table 2. *The statistics of the responses on item No. 2.*

Mean	3.6180
Std. Deviation	1.20138

Table 2 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "The language of email, SMS and chat definitely abuses the goodness of the pure English language". The mean score of the responses was about 3.62 and the standard deviation was about 1.20. This showed that the responses were clustered around 'neutral' and 'agree' options. Generally speaking, according to the responses of the ninety respondents, texting had a negative influence on the goodness of Standard English. This showed that the respondents who agreed with the statement were more than the respondents who did not agree with the statement and this indicated that texting was not a good addition to Standard English.

3. There are some people who know the language of email, SMS and chat better than the standard English.

Table 3. *The statistics of the responses on item No. 3.*

Mean	3.3977
Std. Deviation	1.04540

Table 3 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "There are some learners who only know the language of email, SMS and chat". The mean score of the responses was about 3.40 and the standard deviation was about 1.05. It showed that the responses were clustered around 'neutral' option. Generally speaking, the level of agreement showed that the respondents who agreed that there were some people who knew texting chat better than the standard English more than those who disagreed with this point.

4. The appearance of the language of email, SMS and chat in writing exam's answers/assignments is an indication of a danger to English language.

Table 4. *The statistics of the responses on item No. 4.*

Mean	3.9195
Std. Deviation	.99087

Table 4 shows the statistics of the responses of the ninety respondents surveyed regarding the above statement. The mean score of the responses was about 3.92 and the standard deviation was about .99, which showed that the responses were clustered around 'agree' option. Generally speaking, according to the responses of the ninety responses, the appearance of texting in school had a negative influence on English language.

5. Email, SMS and chat are destroying English language.

Table 5. *The statistics of the responses on item No. 5.*

Mean	3.1910
Std. Deviation	1.22360

Table 5 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Email, SMS and chat are destroying English language". The mean score of the responses was about 3.20 and the standard deviation was about 1.22. It showed that the responses were clustered around 'neutral' option. Generally speaking, according to the responses of the ninety respondents, texting destroyed English language.

6. Email helps me to improve English grammar.

Table 6. *The statistics of the responses on item No. 6.*

Mean	3.5444
Std. Deviation	1.19137

Table 6 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Email helps me to improve English grammar". The mean score of the responses was about 3.54 and the standard deviation was about 1.19. It showed that the responses were clustered around 'disagree' option. Generally speaking, according to the responses of the ninety respondents, the email language did not help in improving English grammar.

7. SMS helps me to improve English grammar.

Table 7. *The statistics of the responses on item No. 7.*

Mean	3.6591
Std. Deviation	1.11300

Table 7 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "SMS helps me to improve English grammar". The mean score of the responses was about 3.66 and the standard deviation was about 1.11. It showed that the responses were clustered around 'disagree' option. Generally speaking, according to the respondents of the ninety responses, SMS did not help in improving English grammar.

8. Chat helps me to improve English grammar.

Table 8. *The statistics of the responses on item No. 8.*

Mean	3.4831
Std. Deviation	1.15908

Table 8 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Chat helps me to improve English grammar". The mean score of the responses was about 3.48 and the standard deviation was about 1.16, which showed that the responses were clustered around 'neutral' and 'disagree' options. Generally speaking, the level of disagreement showed that chat did not help students in improving English grammar.

9. Email helps me to acquire the right vocabularies.

Table 9. *The statistics of the responses on item No. 9.*

Mean	3.1149
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Std. Deviation	1.08290
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Table 9 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Email helps me to acquire the right vocabularies". The mean score of the responses was about 3.11 and the standard deviation was about 1.08. It showed that the responses were clustered around 'neutral' option. Generally speaking, the level of disagreement showed that email did not help students acquire the right vocabularies.

10. SMS helps me to acquire the right vocabularies.

Table 10. *The statistics of the responses on item No. 10.*

Mean	3.2386
Std. Deviation	1.06128

Table 10 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "SMS helps me to acquire the right vocabularies". The mean score of the responses was about 3.24 and the standard deviation was about 1.06, which showed that the responses were clustered around 'neutral' option. Generally speaking, according to most of the respondents' responses, SMS did not help the students to acquire the right vocabularies.

11. Chat helps me to acquire the right vocabularies.

Table 11. *The statistics of the responses on item No. 11.*

Mean	3.2593
Std. Deviation	1.13774

Table 11 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Chat helps me to acquire the right vocabularies". The mean score of the responses was about 3.26 and the standard deviation was about 1.14, which showed that the responses were clustered around 'neutral' option. Generally speaking, the level of disagreement with the statement showed that chat did not help the students acquire the right vocabularies.

12. When I email, SMS or chat, I do not care about grammar.

Table 12. *The statistics of the responses on item No. 12.*

Mean	3.5568
Std. Deviation	1.14328

Table 12 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "When I email, SMS or chat, I do not care about grammar". The mean score of the responses was about 3.56 and the standard deviation was about 1.14. It showed that the responses were clustered around 'agree' and 'neutral' options. Generally speaking, according to the respondents of the ninety responses, texting had a negative influence on the grammar of Standard English.

13. Sometimes I do not pay attention to choose the standard words when I email, SMS or chat.

Table 13. *The statistics of the responses on item No. 13.*

Mean	3.6250
Std. Deviation	1.02062

Table 13 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Sometimes I do not pay attention to choose the standard words when I email, SMS or chat". The mean score of the responses was about 3.63 and the standard deviation was about 1.02. It showed that the responses were clustered around 'agree' option. Generally speaking, according to the responses to the statement, Standard English was not important for texters while texting.

14. Sometimes I use the language of email, SMS and chat to hide my grammatical and spelling errors.

Table 14. *The statistics of the responses on item No. 14.*

Mean	2.9667
Std. Deviation	1.22199

Table 14 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Sometimes I use the language of email, SMS and chat to hide my grammatical and spelling errors". The mean score of the responses was about 2.97 and the standard deviation was about 1.22, which showed that the responses were clustered around 'neutral' option. Generally speaking, according to the responses, texting was sometimes used to hide the errors of texters, and this showed that texting was taken as a shelter for those who do not know Standard English.

15. Sometimes I use the language of email, SMS and chat in writing exam's answers/assignments/ papers.

Table 15. *The statistics of the responses on item No. 15.*

Mean	2.4831
Std. Deviation	1.36609

Table 15 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Sometimes I use the language of email, SMS and chat in writing exam's answers/assignments/papers". The mean score of the responses was about 2.48 and the standard deviation was about 1.37 which showed that the responses were clustered around 'disagree' and 'neutral' options. Generally speaking, this showed that texting started to be used in academics and if this happens, it is a real problem as Crystal (2008) believes.

16. When I contact others through email, SMS and chat, I use code mixing (e.g. My Purana number wz this).

Table 16. *The statistics of the responses on item No. 16.*

Mean	3.4157
Std. Deviation	1.22297

Table 16 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “When I contact others through email, SMS and chat, I use code mixing (e.g. My purana number wz this; translated as “My old number was this”)”. The mean score of the responses was about 3.42 and the standard deviation was about 1.22. It showed that the responses were clustered around ‘agree’ and ‘neutral’ options. Generally speaking, the level of agreement showed that most of the respondents use code mixing when they contacted through texting.

6. Conclusions and suggestions

After a thorough analysis of the data, it was found that the respondents had a negative attitude towards texting and they viewed it as causing a negative impact on the structure of Standard English. Lenhart, Arafeh, Smith, and Macgill (2008, p. i) state that a number of educators and children’s advocates are “concerned that the quality of writing by young Americans is being degraded by their electronic communication”. Janin-Starr (2014, p. 45) states that “As dropping consonants and vowels and poor punctuation become a habit, this may destroy one’s reading and writing skills.” Regarding the difference between the level groups in their knowledge and opinion about texting, there was no significant difference between the level groups. A significant difference between the level groups was only seen in their responses on the statement “Email, SMS and chat are destroying English language”. It was found that no respondent of Plus Two level disagreed with the statement “Email, SMS and chat are destroying English language. This shows that even the young respondents believe that texting destroys English language.

Further studies should be conducted on meta-data analysis of the researches that have earlier been carried out on texting. This proposed meta-data analysis, including qualitative and quantitative studies on texting, will provide useful insights and recommendations. These, in turn, will present a clearer picture of the effects of texting on Standard English.

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References

- Ahmed, R. A., & Al-Kadi, A. M. T. (2016). Analysis of online texting among bilingual interlocutors. *International Journal of English Language Education*, 4(2), 131-147.
- Al-Kadi, A. (2017). *Some aspects of ICT uses in the teaching of EFL at the tertiary level in Yemen* (Unpublished PhD Dissertation). University of Carthage, Tunis, Tunisia.
- Ali, J. K. M., Hasnain, S. I., & Beg, M. S. (2015). The impact of texting on comprehension. *International Journal of Applied Linguistics & English Literature*, 4(4), 108-117.
- Ali, J. K. M. (2012). *Influence of information and communication technology (ICT) on English language structure* (Unpublished PhD Thesis). Aligarh Muslim University, Uttar Pradesh, India.
- Baron, N. S. (2008). *Always on: Language in an online and mobile world*. New York: Oxford University Press.
- Cingel, D. P., & Sundar, S. S. (2012). Texting, techspeak, and tweens: The relationship between text messaging and English grammar skills. *New Media & Society*, 14(8), 1304-1320.
- Coe, J. E., & Oakhill, J. V. (2011). 'txtN is ez fu no h2 rd': the relation between reading ability and text-messaging behaviour. *Journal of Computer Assisted Learning*, 27(1), 4-17.
- Crystal, D. (2008). *Txtng: The gr8 db8*. New York: Oxford University Press.
- Drouin, M., & Davis, C. (2009). R u txtng? Is the use of text speak hurting your literacy?. *Journal of Literacy Research*, 41(1), 46-67.
- Ellis, Y., Daniels, B., & Jauregui, A. (2010). The effect of multitasking on the grade performance of business students. *Research in Higher Education Journal*, 8(1), 1-10.
- Farina, F., & Lyddy, F. (2011). The language of text messaging: "Linguistic ruin" or resource?. *Irish Psychologist*, 37(6), 145-149.
- Faulkner, X., & Culwin, F. (2004). When fingers do the talking: a study of text messaging. *Interacting with computers*, 17(2), 167-185.
- Grinter, R. E., & Eldridge, M. A. (2001). y do tngs luv 2 txt msg?. In *ECSCW 2001* (pp. 219-238). Springer, Dordrecht.
- Grinter, R., & Eldridge, M. (2003, April). Wan2tlk?: everyday text messaging. In *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 441-448).
- Hamzah, M., Gani, S., & Ghorbani, M. (2009). The Impact of Electronic Communication Technology on Written Language. *Online Submission*, 6(11), 75-79.
- Harman, B. A., & Sato, T. (2011). Cell phone use and grade point average among undergraduate university students. *College Student Journal*, 45(3), 544-550.
- Janin-Starr, L. M. (2014). *An examination of texting's impact on writing* (Doctoral dissertation, Keiser University).

- Jennifer 8. Lee. (2002, Sep 19). I think, therefore IM. *New York Times* Retrieved from <https://search.proquest.com/docview/432183431?accountid=27804>
- Kemp, N., & Bushnell, C. (2011). Children's text messaging: Abbreviations, input methods and links with literacy. *Journal of Computer Assisted Learning*, 27(1), 18-27.
- Leedham, G., Ma, Y., & Blumenstein, M. (2009). Handwritten shorthand and its future potential for fast mobile text entry. *International Journal of Pattern Recognition and Artificial Intelligence*, 23(05), 1031-1051.
- Lenhart, A., Arafeh, S., & Smith, A. (2008). Writing, technology and teens. *Pew Internet & American Life Project*.
- Maynard, M. (2009). *Always On: Language in an Online and Mobile World* by Naomi Baron, *Critical Inquiry in Language Studies*, 6:4, 345-349, DOI: 10.1080/15427580903121501
- Prøysen, S. (2009). *The Impact of text messaging on Standard English* (Master's thesis, The University of Bergen).
- Swartzlander, C. L. (2010). *The language of texting: The new language of a digital nation* (pp. 1-39). University of Southern California.
- Tagliamonte, S. A., & Denis, D. (2008). Linguistic ruin? LOL! Instant messaging and teen language. *American Speech*, 83(1), 3-34.
- Vosloo, S. (2009). The effects of texting on literacy: modern scourge or opportunity. *Shuttleworth Foundation*, 2-6.
- Wolman, D. (2008). *Righting the Mother Tongue: From Old English to Email, the Tangled Story of English Spelling*. Smithsonian Books.
- Wood, C., Kemp, N., Waldron, S., & Hart, L. (2014). Grammatical understanding, literacy and text messaging in school children and undergraduate students: A concurrent analysis. *Computers & Education*, 70, 281-290.