

Article

The Impact of Social Media on Second Language Learning: A Case Study of Rednote

Liwen Cao ^{1,*}

¹ City University of Hong Kong, Hong Kong, China

* Correspondence: Liwen Cao, City University of Hong Kong, Hong Kong, China

Abstract: The paper aims to investigate how social media platform, rednote, in China, can influence the output complexity and creativity of Chinese second English learners. The author predicts that compared with traditional in-class learning environment, social media platforms like rednote can significantly increase Chinese English secondary language learners' output complexity and creativity. The author obtains the results from a real lab experimental with 100 participants recruited from college students. The participants were randomly assigned to two conditions: rednote and traditional classroom methods. Results indicate that the participants in the rednote condition significantly outperformed the control group of in-class condition in terms of their language complexity and creativity. The result of this paper proves that rednote, as a social media platform, has great potential as a language learning tool for second language learners. The paper also provides practical implications for educators and educational technology developers and identifies areas for future research.

Keywords: social media; rednote; complexity; creativity; second language acquisition; experimental design

1. Introduction

1.1. Research Background

Social media has become an inseparable part of everyday life, especially for younger generations. Platforms like Weibo, WeChat, and rednote are not just places for entertainment anymore — they've turned into hubs where people connect, share ideas, and even learn new skills [1]. In the past, people generally believed that social media would be a distraction, so parents tried their best to keep children away from it to prevent them from losing focus on their homework. However, more and more people are realizing that educational technology and social media have already played a significant role. They provide students with a new way of learning, making the process more enjoyable and engaging. Nevertheless, when using these technologies, we need to pay attention to how they affect students' interest in learning and how to integrate them into the educational process to enhance learning outcomes.

There have been some studies that link social media with studies. For example, unlike the structured environment of textbooks and lectures, platforms like rednote, Weibo in China provide a space where learners can practice second language in informal, creative, and highly interactive ways. Actually, it has been proved that social media help expose learners to a variety of input regarding all kinds of knowledge, including science, music, film, literature, art and language, which will help students build their interest and elevate their confidence level [1]. Also, with different people all over the world all gather at social media, it's obvious that people can get in touch with people from distance, even foreigners in social media sites. For example, English learners in China can become friends with bloggers of rednote, and interact with them by posting comments in English. In this

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way of engaging deeply with native speakers, English learners in China can easily improve their language skills subconsciously. Also, by immersing English learners in an English-speaking environment, like watching the videos of native influencers in social media sites, people can study English in a totally relaxing way without the pain or boredom coming from in-class learning.

Rednote is a lifestyle platform for young people, founded by Mao Wenchao and Qu Fang in Shanghai in 2013. With the mission of "Inspire Lives: Sharing and Discovering the Wonders of the World", rednote allows users to document moments of their lives and share their lifestyles through short videos, images, and text. This dynamic environment enables its users to freely post things about their lives, including language related topics, also the community allow people of similar interest to interact on it, by viewing the video/post, commenting, liking etc. Based on these unique features, the author decides to select rednote as our research platform of interest. We will make experiments on this platform and investigate its potential impact on English learners, particularly regarding the complexity and creativity of their output English.

1.2. Research Questions and Objectives

Since previous literature mainly draw its attention to topics that helps improve learning motivation, less is investigated about the final output of English learners of second language. Also, no prior study uses Chinese students as subjects and research on how Chinese students react to the social media platform English learning.

To address this gap, the study focuses on two main research questions:

- 1) Does rednote significantly affect the complexity of learners' language output?
- 2) Does rednote significantly affect the creativity of learners' language output?

To answer these research questions and fulfill my research objective, this paper will do a literature review, a real empirical experiment and data analysis, to uncover how rednote, a China's popular social media platform, can act as a novel tool for improving what learners produce in a second language. The findings aim to offer theoretical insights as well as practical strategies for educators and developers in the field of educational technology.

1.3. Significance of the Study

Compared with traditional classrooms, opportunities for producing language are often limited by factors such as time constraints, fixed curricula, and teacher-directed activities, social media platforms like rednote, on the other hand, provide a more flexible and interactive environment where learners can engage with language in authentic ways. This interactivity not only makes language use more practical but also allows learners to push the boundaries of their creativity. Thus, the paper aims to contribute to the following. First, previous papers never focus on rednote as a social media platform for second language acquisition research purpose. This paper takes a special angle by focusing on rednote, a social media platform that has been overlooked by previous studies, aiming to exploring the potential of social media's role in second language learning in Chinese context. Second, the study emphasizes how platforms like rednote can encourage learners to utilize their second language in creative and complex way, which means that we are measuring the degree of language mastery using two important indexes. Last but not least, the findings of this paper are expected to provide valuable insights for many parties involved, including educators, policymakers, and app developers, in the hope of integrating social media into language learning officially by these parties, and boost the study growth of students in the long term.

2. Literature Review

The role of social media in second language acquisition has gained increasing attention among academic field in recent years. Researchers have developed interest in exploring how social media platforms can serve as effective tools for enhancing the language learning experience, particularly for second language learners. For example, it has been investigated that the use of Web 2.0 tools, like blogs and wikis, can foster favorable language learning environments for L2 learners, as they can create a lively environment for mutual interaction and collaboration [1]. Similarly, Researchers found platforms like Facebook and Instagram could enhance various English sub-skills and are positively received by both students and teachers [2]. Additionally, McLoughlin and Lee investigated the impact of Web 2.0 on participatory learning, concluding that these technologies encourage active participation by enabling users to become content creators in an active manner rather than passive learners [3]. Collectively, these studies contribute to current research by validating the effectiveness of interactive and user-generated content in L2 learning environments and identifying critical considerations for their implementation, thereby offering a comprehensive understanding of how Web 2.0 and social media can be leveraged to enhance language acquisition [4].

2.1. Research Gap

Despite that previous research has some insights on the pros and cons of social media assisted language acquisition, there is a lacking exploration on its impact on language style output. As mentioned before, most extant research focuses on improving learners' motivation or input quality through online social media, but undue attention has been paid to how social media can enhance the complexity and creativity of second language learners' output linguistic styles. Moreover, no prior study has looked at the Chinese social media platform, rednote, a top influential social media platform in China which has gained the popularity of many young students.

This paper aims to address this gap by examining rednote's influence on language output of second language learners' linguistic styles. The author will focus on how the platform can help learners produce more complex and creative language. The research hopes to contribute to improving second language education and offer actionable guidance for schools and teachers.

3. The Current Research

This paper aims to investigate how social media platform rednote, will assist with second language learners' output, specifically, the complexity and creativity. Complexity index refers to the range degree of grammatical structures, vocabulary, and syntactic that learners use in their language production. It is expected that the higher complexity output of the L2 learners, the deeper understanding of the second language is obtained by the second language learners. Creativity is defined as the ability to generate novel and infrequent expressions as the output of second language learners. For example, the use of idiomatic language could be an obvious sign of language creativity. Considering the complexity and creativity are two important dimensions of measuring second language learners' ability to process, understand and manipulate language, this paper will take these two dimensions as our key dependent variables.

Formally, we have the following research hypothesis:

- 1) Hypothesis 1: The use of rednote significantly enhances the complexity of language output among English learners compared to traditional classroom methods.
- 2) Hypothesis 2: The use of rednote significantly enhances the creativity of language output among English learners compared to traditional classroom methods.

By examining these hypotheses, this research aims to answer the main research question that this paper proposes:

- 1) RQ: Will the use of rednote (vs. traditional in-class teaching) improve the complexity and creativity of second language learners' English output?

With this research questions answered, this paper aims to provide practical implications for schools, educators, and app developers, so that they can further adapt their methods of second language teaching with the role of social media.

4. Methodology

4.1. Research Design

We used an experimental method to study how rednote affects language use. Participants were split into two groups randomly. Group1 used rednote for language tasks, while the other group used traditional classroom methods for the same task. By comparing the study results of the treatment group and control group, we could see whether rednote could help improve language complexity and creativity of English second language learners.

4.2. Participants

This study involved 100 first-year university students at a Chinese university located in the north of China. Before the experiments, all participants were informed about the content of the task, making sure that they join the experiment voluntarily. Also, since all students are native Chinese students, and it is assured that all participants were non-native English speakers. To control for other factors that may influence the results, an English proficiency test was conducted before the experiment to ensure that both groups started at comparable levels. Also, the demographic information of all participants is recorded for further analysis.

4.3. Experimental Materials

The experimental materials included picture description tasks, short composition tasks, and discussion tasks:

- 1) Picture Description Task: Participants described images, focusing on the scene and actions. This tested their descriptive skills and sentence complexity.
- 2) Short Composition Task: Participants wrote compositions based on given keywords. This was used to evaluate creativity and idea expression.
- 3) Discussion Task: The experimental group posted and discussed topics on rednote, while the control group conducted classroom discussions.

4.4. Data Collection and Analysis

Data collection included textual analysis and expert evaluations of participants' completed tasks:

Language Complexity Measurement:

- 1) Mean Length of Utterance (MLU): MLU means the average length of each participant's utterances. This measure was calculated to assess language complexity, with longer utterances representing more complex language structures.
- 2) Subordination Rate: Subordination Rate is a good rate that can be used to reflect the complexity of an English sentence. Thus, the proportion of subordinate clauses that each participant produced in all sentences was calculated as another measurement for complexity of sentence structures.
- 3) Lexical Diversity (TTR): Type-token ratio (TTR) will be used as a measure for lexical diversity. TTR is calculated by dividing the number of unique words (types) by the total number of words (tokens) in a text. Thus, a higher TTR means the person uses a wider variety of words. For example, if a text has 50 words and 40 of them are unique (appear only once in a text), the TTR is 0.80.

This metric helps assess the richness of vocabulary in language learning and writing.

Language Creativity Measurement:

Different from above objective measures of complexity, it is relatively harder to rate the creativity of a text. Thus, we propose a human-coded method to rate the creativity of each participant. Specifically:

- 1) Novelty: we invited three English language teaching experts rated the originality and uniqueness of the compositions on a 5-point Likert scale (1 = Not novel at all, 5 = Highly novel). The final scores were averaged of the three teacher judges.
- 2) Flexibility: Three English experts also evaluated the flexibility of language use, such as the use of different rhetorical techniques and sentence structures, on a 5-point Likert scale (1 = Very inflexible, 5 = Highly flexible). The final scores were averaged of the three teacher judges. The more flexible the text is, the more creative it is.

4.5. Data Analysis Methods

The data were analyzed using SPSS software. Specific methods included:

- 1) Descriptive Statistics: Used to calculate the means and standard deviations of language complexity and creativity indicators for both the experimental and control groups.
- 2) Independent Samples t-test: Used to check if there is a significant difference between the experimental and control groups in terms of language complexity (MLU, subordination rate, lexical diversity) and language creativity (novelty, flexibility).

5. Results and Discussion

5.1. Descriptive Statistical Analysis

In this study, we conducted a descriptive statistical analysis of the language output complexity and creativity for both the experimental and control groups. The results showed that the experimental group had higher mean values in all complexity and creativity metrics:

- 1) Language Complexity: The mean length of utterance (MLU) for the experimental group was 18.7 ($SD = 3.1$), while the control group's MLU was 15.2 ($SD = 3.5$). The subordination rate for the experimental group was 38.5% ($SD = 5.4$), compared to 30.8% ($SD = 6.2$) for the control group. Lexical diversity (TTR) was also significantly higher for the experimental group (0.72) compared to the control group (0.64).
- 2) Language Creativity: In terms of novelty, the experimental group's average score was 4.3 ($SD = 0.6$), while the control group's score was 3.7 ($SD = 0.8$). For language flexibility, the experimental group scored 4.1 ($SD = 0.5$), whereas the control group scored 3.5 ($SD = 0.7$).

Table 1 below presents the means and standard deviations of language output metrics for experimental and control conditions.

Table 1. Means and Standard Deviations for Language Output Metrics across Experimental and Control Groups.

Metric	Experimental Group Mean (M)	Experimental Group SD (SD)	Control Group Mean (M)	Control Group SD (SD)
Mean Length of Utterance (MLU)	18.7	3.1	15.2	3.5

Subordination Rate (%)	38.5	5.4	30.8	6.2
Lexical Diversity (TTR)	0.72	0.05	0.64	0.06
Novelty	4.3	0.6	3.7	0.8
Flexibility	4.1	0.5	3.5	0.7

5.2. Independent Samples T-Test Analysis

To further explore the significant differences between the experimental and control groups in terms of language output complexity and creativity, independent samples t-tests were conducted for each metric:

- 1) MLU: The maximum speech volume of the experimental group was significantly higher than that of the control group, $t(98) = 5.32$, $p < 0.001$, indicating that the use of rednotes helped learners write longer sentences.
- 2) Subordination Rate: The subordination rate of the experimental group was significantly higher than that of the control group ($t(98) = 4.58$, $p < 0.001$), indicating that the experimental group used more complex syntactic structures.
- 3) Lexical Diversity (TTR): Lexical diversity in the experimental group was significantly higher than that in the control group ($t(98) = 3.95$, $p < 0.001$), indicating richer language use in the experimental group.
- 4) Novelty and Flexibility: Novelty scores in the experimental group were significantly higher than those in the control group ($t(98) = 4.17$, $p < 0.001$), and flexibility scores were significantly higher than those in the control group ($t(98) = 3.81$, $p < 0.001$).

5.3. Discussion

The above experimental results prove that the use of rednote platform for English learning can help improve the complexity and creativity of learners' language output, supporting our two experimental hypotheses H1 and H2. At the same time, these findings contributing to the second language acquisition literature, further confirming the positive impact of social media on second language learning process [2].

First, in terms of language complexity, this paper shows that the experimental group scored significantly better than the control group in terms of maximum language volume, subordinate rate and lexical diversity. This suggests that the interactivity and diversity of content in the rednote can effectively promote the use of more complex syntactic structures and richer vocabulary in their language output. I believe that this result can be applied not only to rednote, but also to other similar social platforms with strong content sharing functions, such as TikTok. Second, we found that, consistent with our hypothesis, participants in the experimental group also scored significantly higher on novelty and flexibility scores. It can be inferred that this finding is also related to the open expression environment of rednote, which provides learners with the opportunity for free expression and language exploration, thus stimulating their creativity and encouraging learners to be bolder and more innovative in language output. Content creation mechanisms of rednote not only allow learners to showcase their learning, but also provide additional inspiration through community feedback and interaction. These unique characteristics can help learners break away from traditional thinking patterns and encourage them to try new forms of language expression. In addition, we suspect that the experimental group may exhibit higher linguistic complexity and creativity due to the informal and interactive nature of the social media environment. Compared with traditional classroom teaching, social media reduces the pressure of learners to express themselves, allowing students to constantly improve their language expression in a relaxed environment, thus improving the complexity and flexibility of language use.

In summary, this study confirms the positive effect of rednote in improving the complexity and creativity of language output by comparing the performance of the experimental group and the control group. Future studies may further explore the mechanism of different types of social media platforms in language learning, such as whether they affect the outcome of language learning by enhancing entertainment, reducing stress, increasing interaction, and increasing freedom. Alternatively, they can be studied and their different effects on different groups of learners, such as beginners and advanced learners. In addition, future studies can explore the long-term effects of social media platforms on language output through longitudinal design to provide more comprehensive theoretical support for the application of social media in education.

6. Conclusion, Limitation and Future Direction

6.1. Research Conclusions

This study investigates the influence of the rednote social media platform on the complexity and creativity of English learners' language output. Findings suggest that integrating social media into classroom teaching, encouraging personalized learning, utilizing community interaction to reduce anxiety, and diversifying language task types can enhance language learning. This approach is consistent with the suggestion that social media has great potential in second language education. Educational technology developers are encouraged to design features and applications that incorporate social media elements to optimize the language learning experience.

6.2. Limitations

The study has a small sample size of 100 first-year college students, limiting the generalizability of the results. The demographic is narrow, and the study's short-term duration may not fully capture long-term effects. Additionally, the focus on quantitative measures may overlook the richness of learners' experiences.

6.3. Future Direction

Future research should include larger, more diverse samples across different educational backgrounds and language proficiency levels. Long-term longitudinal studies are needed to understand the sustainability of social media's impact. Combining quantitative data with qualitative methods, such as interviews, can provide deeper insights. Cross-platform comparisons with other social media platforms like Weibo, TikTok, Instagram, and X are also recommended to identify the most effective platforms for language learning.

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