

*The Literacy Practices of Adolescents in a Digital World*

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Abstract

This paper examines adolescents' language and script choice employed in digital literacy, with a particular focus on grammatical functions and further scrutinises how these functions affect their digital writing in online environments. Based on McLellan's (2005) study related to grammatical classification of word classes in discussion forums, this paper is to examine how diverse multimodal affordances of digital texts are employed by adolescents in a digital environment. The results demonstrate that although digital texts are multimodal with a mixture of visual images, onomatopoeic sounds and scripts, grammatical functions influence digital literacy practices in some respects. Adolescents produce digital texts mingling with grammatical features and make use of the affordances to establish a link between others.

**Keywords:** digital literacy, language choice, grammatical functions, multimodal

## **1. Introduction**

### **1.1 Aim of the study**

In a multilingual society, a wide variety of language choices and writing systems is relatively fertile. As computer-mediated communication technology has increasingly entered one's life, to exchange information or to communicate with others by mixing languages or scripts in online environments becomes ubiquitous. Language choice indeed has a social function, both as a means of communication and as the identification of membership of social groups. Therefore, the study of language choice not only interprets linguistic features, but also is affected by social values assigned to communities (Carter and Fung, 2007). How people adopt and adapt language choice to interact in a context with spatiotemporal limits for maintaining social contact and establishing their identity through language choice becomes an important issue to discuss.

Research on digital texts is of relevance as computer-mediated communication, hereafter CMC, has become a mainstream medium in modern society. In CMC, linguistic features of informality and written stylisations of speech occur significantly more in CMC than they did in traditional, printed texts (Hinrichs, 2005). However, studies on CMC languages or scripts remain relatively few, leaving this area generally unexplored and under-researched. The existing theoretical approaches in the analysis of language choice in spoken discourse may not apply to the ones in online written texts. Therefore, in this study, the researcher explores this territory by analysing digital literacy practices on message boards with a focus on the switches of languages or scripts, differing from previous studies which have mostly studied code switches in informal conversations.

### **1.2 Overview**

The aim of this study to contribute new insights in digital literacy practices in terms of grammatical functions by focusing on language choices and writing scripts manifested in online written texts composed by adolescents, age twenty to twenty-four. As a primary focus, the researcher explained the dominant language and writing scripts employed on Mandarin-based message boards. Concurrently, the researcher explored grammatical functions of the texts collected in the study in terms of McLellan's (2005) categorisation in word classes.

The research questions the researcher plans to address are:

- (1) *What grammatical functions characterise adolescents' digital literacy practices on Mandarin-based message boards?*

(2) *Are there any specific grammatical patterns that determine participants' language choice and writing scripts?*

This paper aims to break new ground by exploring language or script choice in CMC, in contrast to previous works which have mostly focused on informal spoken conversations. In the following section, a brief introduction to research background including languages and writing scripts in Taiwan is provided.

## **2. Research Background**

### **2.1 Language in Taiwan**

Taiwan is a multilingual community where Mandarin Chinese and Taiwanese (Tai-gi) are mainly used in day-to-day interaction. There are twenty other native languages in Taiwan, including Hakka, and other indigenous languages (Grimes, 1996). According to Grimes (1996), the number of languages listed for Taiwan is twenty-nine. Of those, twenty-two are living languages and seven are extinct.

### **2.2 Writing and Word Processing in Taiwan**

Section 2.2 explains the dominant writing system and word processing in Taiwan. Mandarin Chinese writing system is morphosyllabic. Each character has its meaning with a single syllable pronunciation (DeFrancis, 1984). Since Mandarin Chinese characters are completely different from the Roman alphabets, the keyboard used in word-processing contrasts as well. There are a variety of methods of entering Mandarin Chinese text into the computer. Some special software is required. According to Huang (2004), there are mainly three types of methods to enter Mandarin Chinese texts: by encoding (Cangjie), by pronunciation (Zhuyin), or by the structure of the characters (Bushou). Su (2003) further points out that there are two mainstream methods for computer users to enter texts in Taiwan. One is called *Bushou*, input by the structure of characters, *Zhuyin*, input by sound, which is probably the most accessible to the public, especially to adolescents in Taiwanese communities.

The figure below (Figure 2.1) represents thirty-seven symbols, each of which is part of a Mandarin Chinese character. The thirty-seven phonetic symbols are similar to English phonetic sounds in general.

**Figure 2.1 Comparison of phonetic symbols and English phonetic sounds**

ウ <sub>B</sub>	文 <sub>P</sub>	ㄇ <sub>M</sub>	ㄟ <sub>F</sub>
ㄉ <sub>D</sub>	ㄊ <sub>T</sub>	ㄋ <sub>N</sub>	ㄌ <sub>L</sub>
ㄍ <sub>G</sub>	ㄎ <sub>K</sub>	ㄏ <sub>H</sub>	
ㄐ <sub>J</sub>	ㄑ <sub>Q</sub>	ㄒ <sub>X</sub>	
ㄓ <sub>ZH</sub>	ㄔ <sub>CH</sub>	ㄕ <sub>SH</sub>	ㄖ <sub>R</sub>
ㄗ <sub>Z</sub>	ㄘ <sub>C</sub>	ㄣ <sub>S</sub>	
ㄨ <sub>I, YI</sub>	ㄨ <sub>U, W...</sub>	ㄩ <sub>Ū, YŪ</sub>	
ㄚ <sub>A</sub>	ㄛ <sub>O</sub>	ㄜ <sub>E</sub>	ㄝ <sub>E, YE</sub>
ㄞ <sub>AI</sub>	ㄟ <sub>EI</sub>	ㄠ <sub>AO</sub>	ㄡ <sub>OU</sub>
ㄢ <sub>AN</sub>	ㄣ <sub>EN, N</sub>	ㄤ <sub>ANG</sub>	ㄥ <sub>..NG</sub>
ㄨㄟ <sub>ER</sub>			

An understanding of the language background and the general use of word inputting in computer processing in Taiwanese communities enables the reader to understand why this research inquiry into literacy practices focuses on the mixture and switches of languages and scripts. Having outlined the research background, I now proceed to the relevant literature in Section 3.

### 3. Literature Review

#### 3.1 CMC and Language Choice

Herring (1996) explains that CMC is a highly interactive genre of writing – an insight reflected in the early use of the term, ‘interactive written discourse’ by Ferrara et al. (1991). In this ‘interactive online writing’, individual identity is constantly performed; identity construction thus becomes dynamic. The interactive online literacy practices of adolescents such as code-switching or code-mixing, reveal the constructed identity of each Internet user.

When people use a particular and creative language, code or symbol, they indicate both their view of themselves and their relationship with other participants in the community (Myers-Scotton, 2006). In this study, participants represent themselves by using particular codes or symbols to ‘index’ themselves. Language choices are regarded as an ‘indexical sign’, which can be verbal or non-verbal (Myers-Scotton, 2006).

### **3.2 Code Switches**

Although the aim of the study is to explore written electronic texts, it is significant to review the notion of code switches in spoken discourse in general. As a code-switching theoretical forerunner, Gumperz (1982) defined code switching as, “juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems.” Blom and Gumperz (1972) proposed two types of practices in code switches. The first one is *situational switching*, caused by a change in the situation or social setting such as topic, setting, and relationship between participants, community norms and values. In this particular situation, only one language was appropriate, and people needed to change their choice of language to keep up with the changes in situational factors in order to maintain that appropriateness.

The other one is *metaphorical switching*, referred to speakers switching the language when the situation remained the same. In some situations, speakers switched from one language to another in order to complete particular communicative results without the change of setting. Gumperz regarded metaphorical code-switching as symbolic of alternative interpersonal relationships and is of relevance as the sociolinguistic focus. Myers-Scotton (1983) further developed the theory by proposing the ‘Markedness Model (MM)’ of language choice. In the theory, people used language choice to negotiate interpersonal relationships. MM focused on the idea that participants switched languages or choices because of their own goals. Having reviewed language choices and switches in CMC, Section 4 outlines the methodology adopted for this present study.

## **4. Methodology**

### **4.1 Qualitative Research**

This research adopted a qualitative approach, text analysis, in electronic written texts. Despite time-consuming transcription required in researching spoken discourse, the use of the computer-mediated communicative written texts minimizes transcribing tasks and allows researchers to analyze the texts directly as people posted in the discussion forums (McLellan, 2005). However, in written discourse, peripheral symbols or codes should be considered as well as language itself.

### **4.2 Data Collection**

All the posts (around 100 posts) collected randomly on message boards are drawn from the category of campus life on PTT, which is the largest message board and the first Mandarin Chinese-based one. During peak hours, Internet users on PTT exceed

over ten thousand people. The majority of the participants chat or post messages related to their day-to-day lives on the message boards. In this system, the messages are posted chronologically. In most cases, participants will not use their real name on the board. Instead, they will register on the system with pseudonyms or anonymously. Those who have not registered yet, so called 'guests,' can also read messages without making any comments or thread-up response.

Following the review of the research methodology and the rationale for the choice of analytical method in this study, the findings of the study are presented in the fifth section.

## **5. Findings**

### **5.1 Overview of Language/ Script Choice**

This section presents the findings from an analysis of grammatical functions in language choices on message boards. Before moving the focus to grammatical functions, the researcher explained the language or codes possibly found in Mandarin Chinese-based CMC. In Chen's (2011) taxonomy, there are mainly six writing scripts in Mandarin Chinese-based message boards: 1. *Mandarin Chinese (MC)*, 2. *Standard English (SE)*, 3. *MC English (MCE)*: the practice of using MC to convey English, 4. *MC Taiwanese (MCT)*: the practice of using MC to convey Taiwanese, since there is no official writing system in Taiwanese, 5. *English Taiwanese (ET)*: the practice of using English to convey Taiwanese, 6. *Martian Language (ML)* so-called Zhuyin Wen: referring to thirty-seven Phonetic symbols is coined as *Martian Language*, means words beyond common knowledge in the Chinese speaking cyberspace in Taiwan.

### **5.2 Grammatical Functions**

The 'interactive written discourses' in online environments are differentiated from formal academic writing in institutional contexts (Benwell and Stokoe, 2006). The grammatical analysis in this study is therefore characterised by looser regulation, such as subject, pronoun or preposition deletion. In terms of grammatical functions in the context, the researcher examined word classes in particular, and focused on the switches between Mandarin Chinese and Standard English, since these two writing systems are the most common languages with formal and systematic grammatical rules. Taiwanese is not included in this section. ML is also excluded since it is a non-standardised writing system. In this part, the researcher foregrounded grammatical functions with formal language systems, i.e. MC and SE.

The subsequent categories of the grammatical function in the word classes adapted are in terms of McLellan's (2005) classification of online message boards. Six categories of word classes from McLellan's classification of online message boards are listed below:

- 5.1 Nouns
- 5.2 Discourse markers
- 5.3 Conjunctions
- 5.4 Verbs
- 5.5 Prepositions
- 5.6 Adjectives

### 5.1 Nouns

Analysis of this study showed that nouns switched for the most part from Mandarin Chinese to English. One possible reason was that adolescents could switch between the two different systems without violating the grammatical rules in either language. MC is a monosyllabic writing system. Each character represents both the meaning and pronunciation of a word or morpheme. However, this depends on the relationship between the languages in question. In this category, the nouns being switched originate to English and cannot be easily translated into a Mandarin Chinese equivalent.

In all the following examples, the original posts are presented on the first line and followed by Pinyin, i.e. a phonological translation on the second line. The third line is a gloss interpretation with no relation to the meaning. The fourth line is the pragmatic meaning. English translation is provided in parentheses. The last line is a note (optional) with an asterisk at the beginning of the sentence which indicates that an explanatory note is required for those without knowledge of Taiwanese culture. In Example 1, the poster expresses the meaning of 'CHEN SHAN' (T-shirt) in English. He chose to express his intended meaning in English rather than in MC to refer to - CHEN SHAN (T-shirt).

#### Example 1 *T-shirt*

- (1) 猴子圖樣的 T Shirt
- (2) HOU ZI TU YANG DE T Shirt
- (3) (Monkey) (picture) (shape) (CL) T Shirt
- (4) "T-Shirt with a monkey figure"
- (5) \* 'CL' refers to a noun classifier, a noun may or may not be accompanied by a noun classifier which shows a conceptual classification of the referent of a noun and is commonly used when counting.

In MC, it is possible to have a high percentage of switches between nouns. As stated above, in MC, a character is used for an individual syllable, as Example 1 suggests.

### 5.2 Discourse markers

Switches of discourse markers to English function as textual signals indicating a change in a discourse or a change of tone (McLellan, 2005). Li (2000) expands the study of code-switching discourse markers from spoken discourse to written language and terms them orientational mixing. Few common English discourse markers appear in this study. However, the discourse marker ‘by the way’ is used in the dataset in switches from MC to SE as Examples 2 demonstrate:

#### Example 2 *btw*

- (1) btw 那天有帶相機的學弟妹 傳照片啊~~
- (2) btw NA TIAN YOU DAI XIANG JI DE XUE DE MEI CHUAN ZHAO PIAN A~~
- (3) btw (that) (day) (have) (carry) (camera) (CL) (school) (brother) (sister) (send) (photos) (a)
- (4) “By the way, for those who brought a camera on that day, send everyone photos~~”
- (5) \* ‘CL’ refers to a noun classifier, a noun may or may not be accompanied by a noun classifier which shows a conceptual classification of the referent of a noun and is commonly used when counting.

Discourse markers can be abbreviated, such as ‘btw’ (by the way) in Example 2. Examples of ‘btw’ are found commonly in the dataset. This example is also categorised as an ‘acronym’ (Chen, 2011). It illustrates that on MC-based message boards, frequent use of discourse is not only to display the interlocutor’s social identity in literacy practices, but also to attract the attention of other browsers.

### 5.3 Conjunctions

Conjunctions are defined as one type of discourse markers, called ‘discourse connectives’ by McLellan (2005). In the dataset, the most frequent conjunctions being switched to English are ‘and’, ‘or’ and ‘so’, as the examples below demonstrate:

#### Example 3 *or*

- (1) 不知道你是學弟 or 學妹
- (2) BU ZHI DAO NI SHI XUE DE or XUE MEI
- (3) (Not) (know) (you) (are) (school) (brother) or (school) (sister)
- (4) “I don’t know whether you are a male or female first year student.”

#### Example 4 *and*

- (1) 不得已這禮拜日打算在體育館舉行的五打五籃球賽 and 羽球賽臨時取消
- (2) SUO YI BU DE YI ZHE LI BAI DA SUAN ZAI TI YU GUAN JU XING DE WU DA WU LAN QIU SAI and YU QIU SAI LIN SHI QU XIAO

- (3) (Not) (help but) (this) (Sunday) (plan) (in) (gymnasium) (held) (CL) (five) (to) (five) (basketball) (match) and (badminton match) (temporary) (get) (eliminate)
- (4) “I have no alternative but have to cancel the five-a-side basketball and badminton matches held in the gymnasium this Sunday.”

In Example 3, ‘or’ is used to show alternatives. In Example 4, ‘and’ is a coordinator of ideas which has a pragmatic function as a marker for continuation. There are other examples, such as ‘but’, which marks a contrasting action and ‘or’, which marks an option or a choice in the discourse. ‘So’ has a grammatical function showing cause or result. In the dataset, the conjunctions ‘and’ and ‘or’ are easily found, which become the common switches in CMC.

#### 5.4 Verbs

Analysis of the data shows that the verbs being switched are divided into two groups. The first group contains verbs with meanings related to emotion such as ‘love’, ‘like’ or ‘hate’. MC verbs being code-switched to English often connote appeal or gratitude in English. The second group of verbs switched to English possibly relate to terms used in speaking. It means the choices of verbs being switched are similar to those in spoken discourse, as seen in Example 5:

##### Example 5 *check in*

- (1) 關廟休息站 check in
- (2) GUAN MIAO XIU XI ZHAN check in
- (3) (Guan) (temple) (rest) (cease) (station) check in
- (4) “Coffee break and check in.”

Examples of this are ‘check in’ at the hotel or ‘book’ the room. The fifth example shows that participants are deeply influenced by their dialogic interlocution in everyday communication.

#### 5.5 Prepositions

‘By’ occurs frequently in the dataset, and usually occurs at the end of postings to indicate that messages are being posted by specific senders. The researcher suggests that the grammatical rule for the passive voice in MC differs from the one in English. In the English grammatical rule, ‘by’ is attached to the end of sentences in order to signify authorship. In contrast, in the MC grammatical rule, the passive voice, BEI ‘by’ is located in the middle of the sentence as Example 6 shows.

##### Example 6 *by*

- (1) 別忘了明天的比賽 by 助教
- (2) BEI WANG LE MING TIAN DE BI SAI by ZHU JIAO.

- (3) (leave) (forget) (tomorrow) (CL) (compare) (competition) by (assistant) (teach)
- (4) “Don’t forget the competition tomorrow by TA”.

The interpretation is that in order to emphasise that ‘somebody’ does something, the use of ‘by’ at the very end of a posting can attract readers’ attention. ‘By’ here is not simply a passive voice in the verb tense sense, but a preposition to emphasise ‘somebody does something’.

### 5.6 Adjectives

An interesting finding is that some specific nouns are ‘adjectivised’ into adjectives to describe a person. For example,

#### Example 7 *man*

- (1) 太 man 了 @@
- (2) TAI man LE @@
- (3) (Too) (man) (lo) @@
- (4) “Too masculine and manlike @@”
- (5) \*‘@@’ is an emotive icon and refers to a puzzled facial expression

In the above example, ‘man’ refers to ‘masculine’ or ‘manlike’ rather than a male person. It is an example of ‘adjectivisation’ where participants ‘adjectivise’ ‘man’ to convey the masculinity in an MC-based posting.

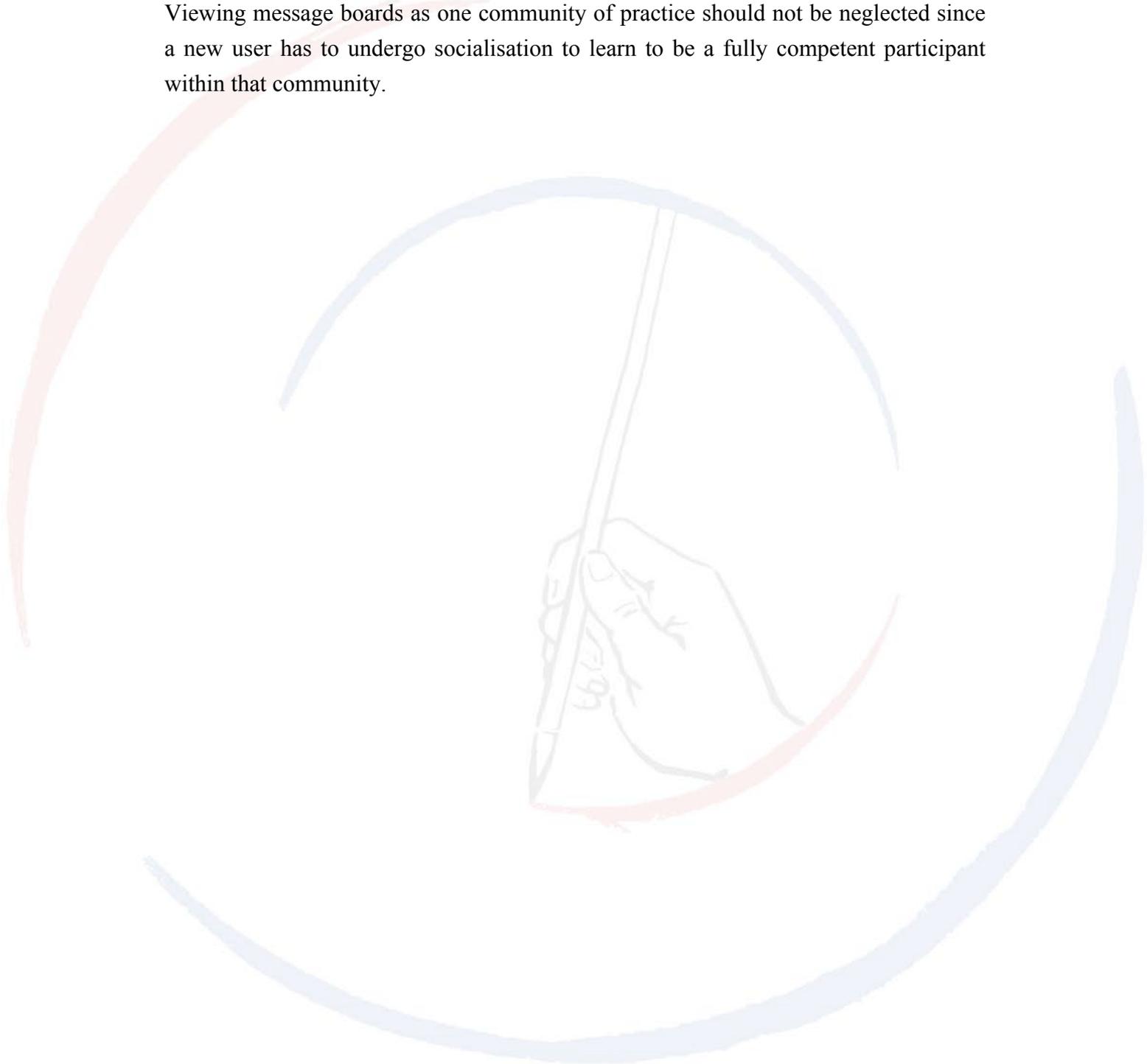
## 6. Conclusion

In this study, the researcher categorised grammatical functions of language choice between MC and SE on Mandarin-based message boards. The word classes of grammatical function influence how adolescents produce digital text in online environments. For example, in the category of discourse marker, the switched words demonstrate the difference between spoken and written discourse. In spoken discourse, ‘you know,’ ‘I mean’ or ‘well’ accounts for higher percentage of all switches. On the contrary, in written electronic discourse, most words to be switches are ‘and,’ ‘or,’ ‘so,’ and ‘because’ belonging to coordinator connectives. The usage of ‘well,’ ‘you know,’ or ‘I mean’ is rarely found in written electronic texts.

After conducting the study on Mandarin-based message boards, the researcher found that adolescents regarded message boards as a form of online communication to where they could discuss matters relating to their day-to-day lives by switching words in terms of its grammatical functions in the context, rather than as a tool for academic purposes. Through analysing CMC data, studies of whether members on message boards seek to construct gender identities in online environments or of focusing on

choice of pseudonyms and nicknames, along with the biographical details furnished by online users become potential areas of future researches in online environments.

To a certain extent, the styles of postings indicate the identities of the posters. Viewing message boards as one community of practice should not be neglected since a new user has to undergo socialisation to learn to be a fully competent participant within that community.



## Reference

- Benwell, B. and Stokoe, E. (2006). *Discourse and Identity*. Edinburgh: Edinburgh University Press Ltd.
- Blom, J. P. and Gumperz, J. J. (1972). Social Meaning in Linguistic Structure: Code-Switching in Norway. In J. J. Gumperz and D. Hymes (Eds.), *Directions in Sociolinguistics: the Ethnography of Communication*. New York: Holt, Rinehart and Winston.
- Carter, R. and Fung, L. (2007). Cantonese e-discourse: A new hybrid variety of English. *Multilingua*, 26: 35-66.
- Chen, Szu-Yu Ruby (2011). The Creativity of Adolescents' Digital Literacy Practices. *The Journal: Journal of the Faculty of Liberal Arts*, 7(1): 69-84.
- DeFrancis, J. (1984). *The Chinese Language: Fact and Fantasy*. Honolulu: University of Hawaii Press.
- Ferrara, K., Brunner, H., and Whittemore, G. (1991). Interactive written discourse as an emergent register. *Written Communication*, 8(1): 8-34.
- Grimes, B. F. (Ed.) (1996). *Ethnologue. Languages of the World (13<sup>th</sup> ed.)*, Dallas (Summer Institute of Linguistics).
- Gumperz, J. J. (1982). *Discourse Strategies*. Cambridge: Cambridge University Press.
- Herring, S. C. (Ed.). (1996). *Computer-mediated Communication: Linguistic, Social and Cross-cultural Perspectives*. Amsterdam: John Benjamins.
- Hinrichs, L. (2005). Jamaican Creole on the Internet: Forms and Functions of an Oral Language in Computer-mediated Communication.
- Huang, Daphne L.J. (2004). Language choice and language use in emails. In P. Nelde (ed.) *Multilingualism, Minorities and Language*. St. Augustin: Asgard, pp.49-57.
- Li, D. C. S. (2000). Cantonese-English Code-switching Research in Hong Kong: a Y2K Review. *World Englishes* 19(3): 305-322.
- McLellan, J. A. H. (2005). Malay-English language alternation in two Brunei Darussalam on-line discussion forums. *Department of Language and Intercultural Education, Curtin University of Technology CRICOS*.
- Myers-Scotton, C. (1983). The negotiation of identities in conversation: a theory of markedness and code choice. *International Journal of the Sociology of Language*, 44: 115-136.
- Myers-Scotton, C. (2006). *Multiple Voices: An Introduction to Bilingualism*. Oxford: Blackwell Publishing.
- Su, Hsi-Yao. (2003). The Multilingual and Multi-Orthographic Taiwan-Based Internet: Creative Uses of Writing Systems on College-Affiliated BBSs. *Journal of Computer-Mediated Communication* 9 (1).

