Danyang Zhang* and Yang Wu

Becoming smart "digital natives": cultivating Chinese English majors' new media literacy via *Journalism English Reading and Listening*

Abstract: In the current era, digital technologies, including multimedia and communication technologies, have penetrated almost every aspect of our lives. English majors are responsible for learning English languages and western cultures and serve as interlocutors between the East and the West. Therefore, such students need to be new media literate to retrieve, understand and evaluate information from multimedia sources and actively and critically participate in the digital environment. Nevertheless, very few studies have explored this group of students' new media literacy (NML) level or their NML development via instructed training. This mixed methods study explores a group of Chinese English majors' current NML level. It attempts to cultivate their NML via a course named *Journalism English Reading and Listening.* In total, by applying purposive sampling, 70 Chinese English majors were invited to participate in the study. The participants completed a pre- and post-course questionnaire based on Lin et al.'s (2013). Understanding new media literacy: An explorative theoretical framework. *Journal of Educational Technology & Society*, 16(4), 160–170) NML framework to quantitatively self-evaluate their NML. Results demonstrate that the participants' consuming media literacy significantly improved. Regarding the participants' prosuming media literacy, three constructs, including *prosuming skill, production,* and *creation,* exhibited significant improvements, but no significant differences were found in *distribution* and *participation*. This paper also introduces examples of the students' group work to qualitatively showcase their NML development. Finally, the study offers insights into Chinese English majors' professional training and development.

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1 Introduction

New media is a form of information technology that provides information and services for users through digital interactive multimedia devices. The spatial, integrated, and interactive nature of new media helps to overcome the barriers imposed on interpersonal interaction by space and time and promotes the spread of knowledge, values and ideologies. As Chen et al. (2011, p.84) highlighted, new media literacy (NML) refers to "a combination of information skills, conventional literacy skills, and social skills". Moreover, according to Kara et al. (2018), NML requires individuals to become more active when consuming and producing media content. Compared with traditional media literacy, if people are to make successful use of new media, they must be equipped with critical thinking, creative abilities, ethical awareness and active participation (Hobbs, 2010; Luan et al., 2020b). In recent decades, some countries have incorporated new media literacy into their educational curricula. For instance, the United Kingdom first did so in 1988, and in the 1990s, the United States began to add media literacy education to English education programmes (Hobbs, 2005). In September 2004, Shanghai Jiaotong University began a media literacy course, but China's media literacy education development lags behind many Western countries. In particular, few schools have included it in their curriculum, and relatively few teachers possess high media literacy (Liu & Huang, 2019).

   According to Dingli and Seychell (2015, p. 9), "digital natives are today's young people who were born into the digital era and are growing up exposed to the continuous flow of digital generation." Contemporary university students belong to this group as they are surrounded and continually impacted by digital technologies. Foreign language majors are interlocutors between the East and the West and need to improve their NML. This will enable them to select, understand, use, evaluate, analyse and create various new media content. Thus, developing NML has become a significant new requirement when cultivating foreign language talent. Previous studies have shown that foreign language majors in China encounter difficulties when choosing, interpreting and critically thinking about media information and that the NML level of Chinese university students tends to be low (Luan et al., 2020a). In particular, their functional consuming literacy (i.e., the ability to access and literally understand media

content) is relatively strong. In contrast, their critical prosuming literacy (i.e., the ability to critically create media content and actively participate in media-rich environments) is weak. According to Wang (2016), the main reasons for this may be the students' ignorance of the importance of media literacy and the infancy of NML education in China. The current curriculum also lacks training and guidance to develop students' NML. Therefore, this study aimed to use a "media + language learning" course called *Journalism English Reading and Listening* to cultivate Chinese university English majors' NML so that they become smart "digital natives".

2 The conceptualisation of NML

Chen et al. (2011) highlighted that new media have technical and sociocultural features. They defined NML as "a combination of information skills, conventional literacy skills, and social skills" (p. 84). Moreover, they proposed a framework that conceptualises NML from (1) the consuming–prosuming literacy continuum and (2) the functional–critical literacy continuum. In terms of the first aspect of their conceptual framework, consuming literacy is defined as learners' ability to access media resources and make use of those resources at different (i.e., literal, analytical, critical) levels. In contrast, prosuming literacy, which is more demanding, requires learners to produce media content and artefacts. Concerning the second aspect of the framework, functional literacy, which serves as an essential basis at the textual level, refers to how learners understand and use media tools and content. In contrast, critical literacy requires learners to be able to analyse, evaluate and criticise media with a relatively high degree of sophistication.

This framework informs four types of NML. These are (1) functional consuming (FC); (2) critical consuming (CC); (3) functional prosuming (FP); and (4) critical prosuming (CP). However, as Lin et al. (2013) pointed out, the framework's keywords and concepts were not clearly defined, which means the boundaries of the four types of NML lack clarity. Moreover, they criticised the original framework for not differentiating between Web 1.0 and Web 2.0. Specifically, they highlighted that while Web 1.0 allows learners to create media content, Web 2.0 provides learners with the opportunity to actively participate in an interactive learning environment and to share ideas and collaborate with others.

To address these limitations, Lin et al. (2013) proposed their own well-known NML framework. This framework acknowledges the two continua and four types of NML in the original framework, but it conceptualises 10 indicators to explain the different types of NML. Specifically, there are five indicators relating to consuming literacy which underscore what learners need to be equipped with as media consumers. In their framework, FC comprises *consuming skill* and *understanding*.

Specifically, *consuming skill* relates to a set of technical skills that learners need to consume media messages, while *understanding* refers to their ability to decode the meaning of media content at a literal level. Furthermore, from a critical level, CC includes *analysis*, *synthesis* and *evaluation*. *Analysis* is an indicator that requires learners to deconstruct media messages; *synthesis* refers to the ability to remix media content, integrate one's opinions into the content, and then reconstruct the content; and *evaluation* represents higher-order critical thinking abilities, including questioning, criticising and challenging media content.

Lin et al.'s (2013) framework also comprises five indicators of prosuming literacy. FP includes *prosuming skill*, *distribution* and *production*. *Prosuming skill* pertains to a series of technical skills to produce and create media messages; *distribution* refers to how learners can disseminate the information they know, and *production* requires learners to partly or entirely duplicate or mix media information. CP, which more strongly emphasises criticality, comprises *participation* and *creation*. Specifically, *participation* is the ability to actively, interactively and critically participate in new media activities, while *creation*, which keeps sociocultural and ideological values in mind, requires learners to create media content with a relatively high degree of criticality.

3 University students' media literacy development

The internet has profoundly embedded itself into the daily and academic life of university students who rely on it for general and academic purposes. For instance, they frequently use the internet for entertainment, non-academic research, reading the news, learning about events, and conducting business transactions (Metzger et al., 2003). Moreover, university students are provided opportunities for more effective learning than before because of current information and communication technologies (Nouri, 2019). In terms of new media, it provides university students with various digital platforms to express ideas, acquire knowledge, and support interactive, collaborative and social learning in higher education (Gleason & Manca, 2020; Xu et al., 2022). Numerous online resources (e.g., electronic magazines) are available on the internet, which could enhance university students' self-learning awareness and assist them in obtaining helpful information (Xu et al., 2022).

Given the growth of the internet and the proliferation of new media, many studies have emerged that probe university students' media literacy development. For example, Syam and Nurrahmi (2020) sought to explore undergraduate students' media literacy level and their ability to identify fake news on social media. Their questionnaire was adapted from Lin et al. (2013), and their results showed that the

participating capacity to judge fake news was relatively low, indicating the necessity of enhancing students' media literacy. Layzer and Sharkey (2018) shared their experiences working with English as a foreign language (EFL) students to develop their media literacy by critically viewing cultural images. Their pioneering research sought to develop students' media literacy via an EFL course. They found that the course motivated students to explore the world around them and encouraged them to realise the complexity of intercultural communication in different sociocultural contexts. Furthermore, Dvorghets and Shaturnaya (2015) attempted to incorporate a module called *Mass Media Analysis and Interpretation* into an English language teaching course. The aim was to cultivate students' media literacy via accessing, analysing and evaluating various British and American TV news programmes, talk shows and films. The researchers acknowledged that this approach presents challenges for language teachers as it is necessary for them to be equipped with interdisciplinary knowledge and to be able to continually impart it to their students.

Although many countries have already integrated media literacy into their national education systems, China is still in the preliminary stages of this process. Thus, there is a need for more analytical attention in the Chinese context. Studies such as that by Xu et al. (2022) point out that in China, some university students demonstrate a relatively weak ability to understand and process the information they encounter online. Specifically, in the face of an enormous amount of information on new media platforms, some college students do not question and verify the authenticity of the information. Moreover, some even casually disseminate information without any attempt to verify its reliability. Guo (2021) proposed four suggestions for Chinese university students' media literacy education. Firstly, he argued that media literacy education should be added to the current teaching objectives to build well-rounded "Foreign language+" talents. Secondly, he advised that foreign language teachers' media literacy should be developed, and that teaching staff who specialise in media should help establish multidisciplinary teaching teams. His third suggestion was that media-related courses, or at least certain lectures or seminars, should be integrated into the current curriculum to help students understand fundamental theories and basic knowledge concerning the media. Fourthly, he recommended that universities and colleges should create friendly and open environments for cultivating students' media literacy. For instance, university WeChat public accounts should be established to encourage foreign language majors to participate in the new media environment actively and critically.

However, a limitation of the above studies is that they predominantly focus on traditional media literacy rather than on NML in the digital era. Yet, from a methodological perspective, there are researchers, both in China and internationally, who have developed and validated scales to measure university students' NML (Kara et al., 2018; Koc & Barut, 2016; Luan et al., 2020b). For instance, Koc and Barut's (2016) study, which was conducted in Turkey, collected 1,226 Turkish university students' responses to a 35-item self-developed NML questionnaire. The results of the study

showed that the questionnaire is reliable and valid. In China, Luan et al. (2020b) developed and validated an instrument to assess Chinese EFL learners' NML. This instrument was designed based on Lee et al.'s (2015) 61-item NML questionnaire for young learners. 974 Chinese university EFL students participated in the study. The results demonstrated the validity and reliability of the NML scale and provided insights to help understand EFL learners' NML.

Empirically, Luan et al. (2020a) conducted a study on the current status of Chinese university students' English NML to investigate their ability to utilise new media to learn English. The study adopted Lin et al.'s (2013) framework and Lee et al.'s (2015) instrument. The study added one more indicator to the NML scale in CP called *feedback*. This was done to highlight the importance of the students' ability to critically question and reflect on the feedback from new media. The study demonstrated the reliability and validity of the adapted framework by inviting 486 students to self-evaluate their NML. The questionnaire results showed that the students reported a low overall level of NML, with higher FC and lower CP. However, although the study can help us understand the current NML level of Chinese university students, it did not attempt to integrate any form of intervention to develop students' NML, such as a course or training.

To summarise, the aforementioned theoretical and practical studies provide valuable insights into students' NML. However, only a few studies have concentrated on language majors' NML. Moreover, further studies are needed that integrate classroom practices to develop students' NML rather than simply evaluating students' current NML level. As Koc and Barut's (2016) study predominantly focused on university students and adopted an appropriate number of items, the present study draws on their instrument. In particular, this study aims to explore Chinese English majors' NML development via a journalism English course. The overarching research question of this study is: *Can a one-semester Journalism English reading and listening course enhance Chinese English majors' NML? If so, how?*

4 Methodology

4.1 Sampling and the course

The present study investigated 70 second-year undergraduate students from a Chinese public university. This included 56 females and 14 males, ranging in age from 19 to 21. The participants were all majoring in English linguistics or English language education. The *Journalism English Reading and Listening* course is one of the optional courses in their curriculum. The course lasted 18 weeks and predominantly sought to cultivate the students' journalism English reading and listening skills. There were

both theoretical and practical sessions on the course. In the theoretical sessions, the teacher introduced basic knowledge concerning journalism, such as news values, different categories of news (i.e., news briefs, news reporting, commentaries and columns, feature articles), news titles, news leads and news datelines. Furthermore, the standard grammatical and lexical features of English news were also covered. The practical sessions focus on five themes: (1) politics; (2) business; (3) science and technology; (4) sports and entertainment; and (5) disasters and calamities. In the practical sessions, students needed to understand, analyse, synthesise and evaluate the latest news on the five themes. To formatively assess students' learning, two group work assignments were undertaken. Students were formed into groups of five or six, where they interacted and collaborated with one another. The first group assignment (Group work 1) required students to select an internationally renowned new media source (e.g., *BBC, CNN, Reuters, China Daily)* and then to summarise, analyse, evaluate and criticise their standpoints. The second group work assignment (Group work 2) was more open, and students were asked to independently find, analyse and discuss principles and tips in journalism English.

Finally, the course instructor guided the students to create a WeChat public account to summarise, synthesise and publish (1) the knowledge that they acquired during the course, as well as (2) their group work. This activity mainly aimed to improve the students' prosuming literacy via producing, distributing and creating content in the participatory new media environment.

4.2 Data collection and analysis

This is a mixed methods study in which both quantitative and qualitative approaches have been applied. A pre- and post-course student self-evaluation NML question-naire based on Koc and Barut (2016) was conducted. There were 35 items in the questionnaire. Each used a five-point Likert scale to describe the divergent degrees of acceptance of each concept: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree. In Koc and Barut's (2016) study, both construct validity and reliability were determined by exploratory factor analysis, confirmatory factor analysis, and item analyses. Specifically, Cronbach's α of the questionnaire was 0.85 in functional consuming, 0.87 in critical consuming, 0.89 in functional prosuming, and 0.93 in critical prosuming, demonstrating that all factors were internally consistent and the questionnaire was reliable.

At the end of the course, students were invited to complete a reflective journal designed based on Pavlovich (2007), which is a commonly cited study on reflective journal development. The reflective journal, with three open-ended questions, aimed to collect data concerning their NML development gains, challenges and solutions.

Classroom activities and after-class group work were also recorded to demonstrate their improvements.

After the data collection process, descriptive and statistical analyses were applied to the self-evaluation questionnaire data via *SPSS Version 26.0*. Specifically, independent paired-sample *t*-tests were employed to uncover whether there were significant differences between the pre- and post-course questionnaire data. For the qualitative part, thematic analysis was used to analyse the students' reflective journals with the aim of "identifying, analysing and reporting patterns within data" (Braun & Clarke, 2006, p. 6). The group work was analysed using content analysis, discourse analysis and multimodal analysis. Specifically, we used content analysis to analyse the content of the visual data, especially images and videos on the media (Cohen et al., 2018). Discourse analysis in this study focused more on the underlying power of the media with more critical perspectives (Foucault, 1998). Our multimodal analysis was particularly concerned with content that contains the interaction and integration of two or more modes of communication (Adami, 2016), such as analysing how textual and pictorial information complement each other in one piece of news. All of the qualitative data were coded and then analysed in *MAXQDA Plus*.

5 Results and discussion

5.1 Results from the NML questionnaire

5.1.1 Consuming literacy

Table 1 shows that the students' consuming literacy improved after the course, as the five indicators (i.e., *consuming skill, understanding, analysis, synthesis, evaluation*)

Table 1: Descriptive results of students' consuming literacy (*N* = 70).

Pairs		Mean	Std. deviation	Std. error mean
Pair 1	Post_consuming skill	3.36	0.682	0.081
	Pre_consuming skill	2.94	0.814	0.097
Pair 2	Post_understanding	3.71	0.568	0.068
	Pre_understanding	3.46	0.674	0.081
Pair 3	Post_analysis	3.31	0.603	0.072
	Pre_analysis	2.94	0.759	0.091
Pair 4	Post_synthesis	3.60	0.689	0.082
	Pre_synthesis	3.20	0.791	0.095
Pair 5	Post_evaluation	3.61	0.705	0.084
	Pre_evaluation	3.23	0.788	0.094

were elevated in the post-course questionnaire data compared to the pre-course data. Specifically, the students' functional consuming literacy (i.e., *consuming skills, understanding*) was slightly higher than their critical consuming literacy (i.e., *synthesis, analysis, evaluation*) (mean = 3.2 and 3.12, respectively). This is in line with the findings of Luan et al. (2020a). Nevertheless, critical consuming literacy caught up, and the average score was the same (mean = 3.51) in the two parts. According to the paired samples *t*-test, there were statistically significant differences in the students' consuming literacy ($p < 0.05$) with a medium effect size (Cohen's *d* = 0.559, 0.401, 0.540, 0.539, 0.508) (see Table 2). This demonstrates the effectiveness of the course in developing the students' consuming literacy.

In comparison, their *understanding* ability ($M = 3.46$ and 3.71) was higher than the other four indicators in the pre- and post-course questionnaire, while their *consuming* and *analysis* abilities exhibited relatively low scores (consuming skill: $M = 2.94$ and 3.36; analysis: $M = 2.94$ and 3.31). The main possible reason for the high score in understanding was that the participants, as English majors, could access various types of English reading materials daily and were accustomed to reading English articles, including English news. Their academic training and daily reading habits contributed to their *understanding* skill. However, despite the various reading resources and opportunities, their ability to deconstruct media content (i.e., analysis) requires improvement. Furthermore, the students' *consuming skill*, which refers to technical skills, was their weak point as they receive relatively little technical training as part of the current English major curriculum. Therefore, we could conclude that although the students are "digital natives" who are familiar with digital technologies, they still need support to be able to more effectively use technologies both in their academic studies and daily lives.

5.1.2 Prosuming literacy

Like consuming literacy, the students' prosuming literacy exhibited improvements across all five indicators (i.e., *prosuming skill, production, distribution, participation,* and *creation*) (see Table 3). The paired samples *t*-test showed that there were significant differences in *prosuming* skill, *production* and *creation* ($t = 69, p < 0.05$) with a medium effect size (Cohen's *d* = 0.615, 0.578, 0.403). However, no significant differences were found in *distribution* and *participation* ($t = 69, p > 0.05$) (see Table 4).

In contrast to Luan et al.'s (2020a) study, which found that the students' critical prosuming literacy was weaker than their functional counterpart, the results in this study showed that the students' critical aspect achieved higher scores than their functional aspect both in the pre- and post-course questionnaire (i.e., mean = 3.54 and 3.05 in the pre-test; mean = 3.75 and 3.41 in the post-test). As can be seen from Table 3, the students' *participation* skill ($M = 3.70$ and 3.83) was higher than the other four

Table 2: Statistical results of paired samples *t*-test of students' consuming literacy.

Pairs	Paired differences					*t* (69)	Sig. (2 tailed)	Effect size (Cohen's *d*)
	Mean	Std. deviation	Std. error mean	95% Confidence interval of difference				
				Lower	Upper			
Pair 1 Post_consuming skill – pre_consuming skill	0.414	0.825	0.099	0.218	0.611	4.200	0.000	0.559
Pair 2 Post_understanding – pre_understanding	0.257	0.829	0.099	0.060	0.455	2.597	0.011	0.401
Pair 3 Post_analysis – pre_analysis	0.371	0.935	0.112	0.148	0.594	3.323	0.001	0.540
Pair 4 Post_synthesis – pre_synthesis	0.400	1.027	0.123	0.155	0.645	3.258	0.002	0.539
Pair 5 Post_evaluation – pre_evaluation	0.382	0.986	0.118	0.079	0.549	2.667	0.010	0.508

Table 3: Descriptive results of students' prosuming literacy (*N* = 70).

Pairs		Mean	Std. deviation	Std. error mean
Pair 1	Post_prosuming skill	3.13	0.721	0.086
	Pre_prosuming skill	2.67	0.775	0.093
Pair 2	Post_production	3.51	0.697	0.083
	Pre_production	3.09	0.756	0.090
Pair 3	Post_distribution	3.61	0.644	0.077
	Pre_distribution	3.40	0.806	0.096
Pair 4	Post_participation	3.83	0.589	0.070
	Pre_participation	3.70	0.749	0.090
Pair 5	Post_creation	3.66	0.649	0.081
	Pre_creation	3.37	0.783	0.094

skills, especially compared with their *prosuming skill* (*M* = 2.67 and 3.13). As "digital natives", they were active on various media platforms, mainly social media (e.g., WeChat, Weibo, TikTok). Therefore, it seems that their daily access to new media has enabled them to become active media users in the participatory "we media" environments and that their *participation* skills developed during this process. However, as mentioned above, as the students have received relatively little technical training and guidance, their *prosuming* skill needs further improvement (Zhang & Chiang, 2022).

5.2 Evidence from students' group work

5.2.1 Consuming literacy

In terms of the functional aspect, Group 3 on average achieved a score of 2.95 in the pre-course questionnaire, which increased to 3.35 after the course. In Group work 1, this group selected *Reuters* as their target media. As the students mentioned in their reflective journals, they firstly needed to access the official website of *Reuters*, and then search for news that was suitable for discussion and criticism. This process cultivated the students' *consuming* skill. The news they finally chose concerned China's efforts to develop a vaccine for COVID-19 by Sezer and Graff (2021) (see Figure 1).

After that, the students read the news to understand the literal meaning of the text, which developed their *understanding* ability. Taking Student M as an example, his questionnaire score in *understanding* increased from 3.48 to 3.70, demonstrating his progress in this aspect. As he shared, there were some unknown

Table 4: Statistical results of paired samples *t*-test of students' prosuming literacy.

Pairs	Paired differences					*t* (69)	Sig. (2-tailed)	Effect size (Cohen's *d*)
	Mean	Std. deviation	Std. error mean	95% Confidence interval of difference				
				Lower	Upper			
Pair 1	Post_prosuming skill – pre_prosuming skill	0.457	1.003	0.120	0.218	0.696	3.814	0.000	0.615
Pair 2	Post_production – pre_production	0.429	0.926	0.111	0.208	0.649	3.873	0.000	0.578
Pair 3	Post_distribution – pre_distribution	0.214	1.062	0.127	-0.039	0.467	1.689	0.096	0.288
Pair 4	Post_participation – pre_participation	0.129	0.962	0.115	-0.101	0.358	1.118	0.267	0.193
Pair 5	Post_creation – pre_creation	0.286	0.965	0.115	0.056	0.516	2.477	0.016	0.403

China steals march on West in developing nations' vaccine rollout

By Murad Sezer, Peter Graff   5 MIN READ   f   y

ISTANBUL/LONDON (Reuters) - China is stealing a march on Western drugmakers in the COVID-19 vaccine race in developing nations, with Indonesia and Turkey rolling out huge campaigns with a Chinese shot this week, Brazil due to follow soon, and even EU member Hungary signing up.

FILE PHOTO: Medical workers in protective suits administer the vaccine against the coronavirus disease (COVID-19) at a makeshift vaccination site in Beijing's Haidian district, China January 8, 2021. cnsphoto via REUTERS

Figure 1: A screenshot of the selected news on *Reuters*.

words in the selected news article, such as "the Sinovac shot" and "scandalously", as well as some phrases (e.g., "rolling out") that were new to them. The group worked collaboratively to fully comprehend the news, and the course instructor gave them some advice.

Reuters mission statement is "We tell all sides, but take none. We go back to the start, where there is no bias and no agenda to tell the real story". This statement attempts to underscore the authenticity of the news that *Reuters* reports. However, after reading the news published by *Reuters,* it is clear that the organisation has a standpoint and displays certain biases.

Specifically, the news article that Group 3 selected was about the COVID-19 vaccine with the title "China steals march on West in developing nations' vaccine rollout". In this title, the phrase "steals march on", which means "to obtain an advantage over, especially by a secret or underhand measure", may stigmatise China's vaccine development.

Students need well-developed critical literacy skills to be able to compare, discuss, analyse, and evaluate news. On average, Group 3 scored 2.98 for their *analysis* skills in the pre-course questionnaire, which increased to 3.28 after the course. In the group work, the students found a piece of news on the same topic in *China Daily*, entitled "China helps international vaccine drive" by Wang (2021). Entries in the students' reflective journals indicated that they were able to deconstruct media messages and focus on language, genres and modalities and that this helped them to develop their analysis skills. For example, they mentioned that both news articles integrated a lot of quantitative data (i.e., statistics) to demonstrate their authenticity (i.e., language). The news from *Reuters* was a news report, while the one from *China Daily* was a news brief (i.e., genre). Both of them were digital news (i.e., modality).

The text highlighted in yellow in Figure 2 (an excerpt from the selected *China Daily* article) reports China's humanitarian assistance to the international community, including donations and vaccines to achieve victory over the COVID-19 pandemic. After comparing the news from *Reuters* and *China Daily*, Student W summarised:

> Every media has its point of view. *Reuters* is no exception. After all, *Reuters* is a Western media organisation, and it inevitably adopts a Western perspective. We should know as much as possible about the facts. The more facts you know, the more accurate the judgments you form. We should read more reports from different media to understand more comprehensive facts.

During this process, the students compared the news content of the two media sources but did not evaluate which one was closer to the truth. This indicates their development in Synthesis, echoing the improvement of their questionnaire scores (i.e., 3.23 and 3.58 for the pre- and post-course questionnaires, respectively).

Evaluation, as a form of higher-order criticality in consuming literacy, requires students not merely to deconstruct and compare information but also to question, criticise, and challenge it based on their viewpoints concerning identity, ideology, and power relations. The students in this group obtained a score of 3.60 in the post-course questionnaire, an increase of 0.35. In the group work, the students had a heated discussion about why two media organisations distributed such different information to the public. For example, Student T argued that *Reuters,* as a Western media organisation, undoubtedly supports Western countries like the UK and reflects the ideology

The Chinese embassy in Myanmar said China had helped Myanmar get in touch with Chinese vaccine developers and facilitated its acquisition of vaccines speedily and at the most favorable price.

By early this month, China had provided nearly 38.8 million doses of Chinese-made vaccines to Myanmar, including 8.9 million given as donations, the embassy said.

The first batch of vaccines donated to Tanzania arrived this month, as well as the second batches of doses donated to Rwanda and Vanuatu.

Albert Tuyishime, a Rwandan health official, said during a handover ceremony that the donation was expected to ease the country's vaccine shortage.

China has supplied more than 70 million doses of vaccine and donated $100 million to COVAX. China has also launched the Initiative for Belt and Road Partnership on COVID-19 Vaccines Cooperation, together with more than 30 countries, and conducted joint vaccine production with 19 developing countries, Wang said.

He added that China will provide more vaccines to developing countries in a variety of ways, and will make a greater contribution to achieving equity and accessibility to vaccines, together with an early and complete victory over the pandemic.

Figure 2: A screenshot of the selected news on *China Daily*.

of these countries and thus may hold certain viewpoints or even stereotypes about China. Student T argued that this led to the misrepresentation of China's efforts concerning the COVID-19 vaccine. On the other hand, *China Daily* is an English-language daily newspaper owned by the Publicity Department of the Communist Party of China and is responsible for disseminating the country's achievements. Therefore, it is clear from this process that the students' evaluation ability could be improved, which would allow them to better understand the hierarchical power relations and embedded ideologies behind the media (Share, 2002).

5.2.2 Prosuming literacy

According to Lin et al. (2013), prosuming skills require students to be able to set up media platforms and then create media content on the platforms. In this study, the students created a WeChat public account called "newsporter 007". This account, from their perspective, was a platform to publish their group work, share their opinions, and interact with others. The setup process enabled the students to develop their prosuming skills, in line with their progress shown in the questionnaire with their scores increasing from 2.70 to 3.12.

The students operated the WeChat account themselves, and their posts were published and updated once a week. The students were responsible for: (1) drafting, editing and publishing one to two new posts per week; (2) replying to comments and questions from the people who followed their account; and (3) sharing their feelings and perspectives.

Group 5 chose *The Washington Post* as an example to analyse its positions and viewpoints. After presenting their group work, they summarised and synthesised their interpretation of the standpoints of this media organisation and included an evaluation of it when disseminating their views via a post on their WeChat public account. This process verified the students' improvement in their *distribution* and *production* skills in the questionnaire (distribution: M = 3.42 and 3.60; production: M = 3.10 and 3.49). Figure 3 shows three screenshots of Group 5's post concerning The Washington Post.

In addition to posting their own analysis, the students were responsible for reading and selectively replying to readers' messages. For instance, when a reader asked whether *The Washington Post* has any social media accounts, the students replied:
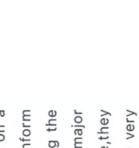
> Compared with *The New York Times*, *The Washington Post's* strategy to get page views is slightly different. T*he Washington Post* is more focused on reaching audiences through social platforms, and you will be more likely to see more *Washington Post* articles on Facebook, Twitter, and YouTube, which is partly because *The Washington Post* puts out about 500 articles a day. This is twice as many as *The New York Times.* So, we may use these platforms to get news from *The Washington Post.* If you want to learn some opinions about key global figures and the issues of the day, you can watch *The Washington Post Live* on YouTube.
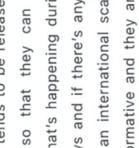
This process provided the students with the chance to practice and improve their *participation* skills as it required them to actively participate in the media environment, in line with the increase of their questionnaire scores (i.e., from 3.72 to 3.80). Moreover, the process underlined that they need to be equipped with more criticality, which would help them when they encounter comments like this:

> Q: I wouldn't say I like Western media like *The Washington Post.* They are biased and don't disseminate the truth to the public. Why should we, as Chinese students, read news on such media?
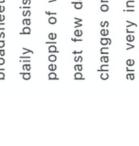
> A: Yes, every media organisation has its standpoint, serving different powers like countries and parties. *The Washington Post i*s no exception. It predominantly endorses Democrats in congressional, state, and local elections. However, it doesn't mean there is no point in reading the news from this media organisation, as it is the most widely circulated newspaper within the Washington metropolitan area and has a large national audience in the U.S. Its posts, especially political posts on the White House, Congress, and other aspects of the country, are generally valuable to read. We need critical eyes when reading and evaluating the posts. The reading tips in our post may give you some suggestions.

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✕

The layout of the newspapers

Broadsheet : a newspaper having a large format, approximately 15 by 24 inches. More informative, covering more political and Broadsheet: a newspaper having a large format, approximately 15 by 24 inches. More informative, covering more political and international news.

Tabloids (小报）: a newspaper with pages about 30 cm (12 inches) by 40 cm (16 inches), usually characterized by an emphasis on photographs and a concise and often sensational style.

International news

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newsporter007 >

✕

Compared with tabloids, Broadsheets are usually bigger and they include fewer pictures their color scheme tends not to use very much color. The broadsheets tends to be released on a daily basis so that they can inform people of what's happening during the past few days and if there's any major changes on an international scale,they are very informative and they are very formal.

We know that newspapers are usually arranged in descending order of importance, so from the font page of the Washington Post, we can learn the main news of the day. In Washington Post, it usually contains four to five main parts. The front page only tells you brief information of the news, and you can just scan the front page to get a view of the most important ones. And for more, you can check out the note at the end, for example,the keywords can be seen, usually picked from the title, and then the page you need to turn to.

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newsporter007 >

✕

In the picture below, there are only white and black colors, and one picture right in the middle of the page, from the top to the bottom. And the number 100,000, just pumped into the reader's eyes.

In this picture, each point of light is one life lost to covid-19, and you can see the death toll number just by the conspicuous white light in contrast to the black color. And it matches the word, somber, which is mentioned here above. Somber means dark and gloomy, so it can be used here to describe the gloomy picture or the feelings about the lives lost. And you can compare it with the similar content in the New York times. Although there aren't so many pictures, we can still take full advantage of the pictures or graphs to help us understand the facts and opinions expressed in the news better.

Figure 3: Screenshots of students' post on The *Washington Post*.

VI / **Conclusion**

From the introduction of the Washington Post we know that based in the capital, the newspaper has great achievements especially in political news, either from global or specific news from DC, ML, VA, and the movie gives us a better understanding of the spirit of its slogan：**Democracy dies in darkness.** When reading the news, we should be cautious about its political stance although the Washington Post mostly stays neutral, at the same time, we can try to draw upon the opinions from different parties to get a whole view of the issue. All in all, by exploring different platforms of the Washington Post, we will have a deeper insight into the news, learn to discern facts and opinions, think openly, and form our own ideas.

Figure 4: The conclusion of Group 5's post.

As the highest level of NML, *creation* requires learners to have criticality concerning sociocultural values and ideologies. Although we could not offer learners the opportunity to post their ideas with commercial media organisations like *The Washington Post*, our students critically create media contents on the WeChat public account. For example, the students in Group 5 wrote a critical conclusion for their post (Figure 4). In their conclusion, they summarised the whole post and highlighted the importance of critically reading the news by considering its values and stances. This provided evidence of their improvement reported in the questionnaire (i.e., from 3.39 to 3.64) in criticality and creativity.

To summarise, this section has showcased some of the results from the students' two group work assignments (presentation and WeChat post). It has demonstrated their development in consuming and prosuming literacy in terms of the 10 main constructs in Lin et al.'s (2013) NML framework. The group work evidence further verifies the questionnaire results detailed in the previous section.

5.3 Gains, challenges and solutions in students' reflective journals

In this study, the students were asked to complete a reflective journal to share their perceptions concerning what they gained from the course and the challenges and problems that they encountered. They were also asked to propose some solutions for addressing the challenges and problems based on Pavlovich (2007).

5.3.1 Gains

(1)   Becoming more critical

In terms of consuming literacy, most of the students mentioned that the course had helped them to develop their reading and listening skills, as they were exposed to a vast amount of media input via the teaching and assignments. Furthermore, they underscored that their gains not only related to their linguistic skills but also to their ability to compare, analyse and evaluate media content. As Student L shared, unlike other language courses that predominantly focus on language development, this course improved their skills in comparing, analysing and evaluating the messages from different media. In this case, the students are no longer passive receivers of news but have gradually become readers with a critical mindset when accessing news on various media.

Another student mentioned an exciting interplay between language learning and critical consuming literacy of news and stated that dissecting news is beneficial for enhancing language skills. However, the converse is equally true: language skills can help students critically consume news. As Student J reflected:

> In this course, I reckon I did read a lot of news. When I read the news, I don't follow the crowd. I know how to analyse the news' positioning, and I also can understand what the news is trying to express. At the same time, I consciously pay attention to English language knowledge in the news and understand the main meanings of the news.

Thus, it can be concluded that this course not only improved the students' language skills but also developed their critical thinking skills and creativity, which are within the field of critical consuming literacy. These skills are crucial in the 21st century and thus are necessary for students to succeed in their careers.

(2)   Keeping reading and listening

Apart from improving the students' language ability and NML, they also highlighted that the course helped them to develop the habit of reading and listening to the news. Unexpectedly, some students who previously shied away from reading and listening to the news started to find it enjoyable. For instance, Student M wrote that he felt nervous and was not confident when reading and listening to the news because he couldn't understand some expressions, and he did not know why the media tell the story in such a way. The in-class instructions and after-class assignments not only helped them to strengthen their NML, but also motivated them to read and listen to English news.

Some students stated that they deliberately rejected consuming the news before attending this course. For many of these students, this course helped to bring about a major change in their attitudes and behaviour. Many students reported that they could apply what they learned from the course to their daily reading and dissecting of the news. This will likely have a long-term beneficial effect on their NML cultivation and English language learning. A case in point comes from Student L's reflection:

> Before attending this course, I didn't focus my attention on the news. I even actively avoided consuming any current news. However, after attending this course, I gradually undertook some news listening and writing exercises since the in- and after-class tasks were pretty interesting. During this period, I also accessed numerous news outlets and understood a chunk of theories and concepts within the domain of journalism. I used to merely understand news content superficially, but now I always consciously reflect upon the news and can critically evaluate it.

5.3.2 Challenges

According to their reflective journals, firstly, the students reported that they sometimes face challenges in understanding English news. This was because the one-term course was a relatively short period for them to enhance their English language ability and NML. For example, as Student L mentioned:

> I think this course is quite useful. My English language ability has improved, especially in reading and listening to English news. I recognise my progress, but I still have difficulties reading and listening to long news items with lots of ambiguous expressions, terminology and slang. Developing my journalism English reading and writing skills is a long journey.

Secondly, some students also pointed out their difficulties finding high-quality media content. As Student P said, "It isn't easy to select high-quality news for English language learning or daily reading and listening". This is because so many media organisations are impacted or even controlled by different powers. Although they have the mindset and skills to compare, analyse and evaluate the news, they still need time to further develop these skills to access more high-quality media messages.

Thirdly, the students also mentioned some challenges in prosuming literacy, especially prosuming skill. This corroborates the quantitative data from the questionnaire. Specifically, they felt it was challenging to produce media content in some forms like video and audio or even via programming. As Student B shared, though she had no problem creating textual and pictorial posts on new media like the WeChat public account as we have done during this course, she felt that it is challenging and time-consuming for her to make video and audio clips. She stated, "I hope we can have more courses relating to media technology, which will contribute to developing our technological ability".

5.3.3 Solutions

In terms of solutions to address the identified challenges, the students' responses can be summarised using three keywords: "study", "practice", and "collaborate". Specifically, they planned to find more opportunities to study and read and listen to English news, including (1) accessing news every day via news applications on mobile devices and (2) frequently checking social media platforms (e.g., Weibo, WeChat public account) of media organisations.

They also agreed with the importance of practice and reported that they are planning to undertake news reading and listening exercises using mobile-assisted language learning applications or workbooks. For example, Student X stated:

> Reading and listening to English news in the mornings and at night is necessary. Besides, analysing one piece of representative news every day is also helpful.

Moreover, they underscored that collaboration is also significant because they believe that teamwork stimulates their learning interests and helps them to regulate their study over the long term. For instance, Student W argued that studying is more effective when students form study groups and learn from each other.

In summary, the reflective journal offered the students a platform to review and self-evaluate their learning process, including main gains, challenges and solutions. Their responses indicated that they believed their NML and habits in accessing English news had improved. However, they recognised that they still need to make more efforts to develop their English language abilities and NML. In the future, they plan to continue to study, practice and collaborate to improve their NML.

6 Conclusion, limitations and future research

This study has explored how a "Media + English language learning" course (i.e., *Journalism English Reading and Listening*) helps Chinese English majors improve their NML. From classroom teaching to group work, the students had various chances to develop their NML. Quantitatively, the students' self-evaluation questionnaires revealed their NML gains in consuming and prosuming literacy. The differences between the pre- and post-course questionnaires were statistically significant except for *distribution* and *participation*, as students nowadays have many opportunities to express their ideas via new media. Qualitatively, evidence from the students' group work verified their progress in NML. Moreover, the reflective journals showed the students' gains and challenges concerning their NML development. They also detailed several solutions to address their challenges which can be summarised in three words – "study", "practice", and "collaboration".

Given the increasingly vital role of language majors and new media in this globalised world, the present study has both theoretical and pedagogical implications. Theoretically, the current NML scale could serve as a tool for language educators and curriculum designers to understand the nature of NML and to evaluate Chinese language majors' NML levels. Pedagogically, the results will facilitate the design and implementation of specific language learning courses and tasks to develop students' NML. It is expected that in this way language majors could become the backbone of global connections, communication and collaboration.

However, it is also important to recognise certain limitations of the present study. First, the intervention (i.e., the course) only lasted one term, which is a relatively short period for students to improve their NML. In the future, more long-term courses and training could be integrated, and more opportunities could be created for students to further develop their NML. Second, as the main focus of this study was Chinese English majors, the sample size of students could be enlarged and could include both English majors and non-English majors. This would enable the results to be generalised and better represent all Chinese students. Third, there was no control group in the present study to compare the students' NML development after taking the course and to identify the potential contributions of the course. Future studies could consider conducting experimental research by adding a control group to make the results more convincing. Fourth, despite the combination of both quantitative and qualitative data collection methods in the present study, other approaches, such as interviews, could also be considered to obtain more robust data.

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