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Collaborative Writing using CMC Technologies – Benefits & Challenges for L2 Learners: A Research Synthesis

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Definition

What is Computer-mediated communication (CMC)?



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The process of generating, exchanging, and perceiving information through various forms of networked communication programs (Romiszowski & Mason, 2013)



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Definition

English as a Foreign Language (EFL)

- EFL refers to English that is used by foreign speakers who are learning English in their own country.

English as a Second Language (ESL)

- ESL refers to English that is used by people who live in an English-speaking country but do not have mastery of English.

L1 vs. L2 learners

- L1 learners: English is their first or native language.
- L2 learners: English is their second language. Both ESL and EFL students are second language (L2) learners.

Introduction

- Many studies have been conducted to **assess the effectiveness of CMC technologies for L2 learners** (Du et al., 2016; Li, 2018; Miyazoe & Anderson, 2010; Wu et al., 2015; Yen et al., 2015; Zou et al., 2016).
- CMC tools such as **Wikis, Facebook, and Forum** have been adopted in L2 classes to **enhance students' motivation and achievement**.
- Collaborative writing **strengthens students' motivation and writing skills** through social interaction, but it also **raises interpersonal problems and issues**.
- **The dual aims of this study** are to ...
 - 1) Identify the benefits and challenges of collaborative writing using CMC technologies
 - 2) Provide useful guidelines for CMC writing for L2 learners.

Method – A qualitative research synthesis



Inclusion and Exclusion Criteria for Article Selection

| Category | Inclusion Criteria | Exclusion Criteria |
|------------------|--|---|
| Year | 2010 – 2022 | Published before 2010 |
| Article type | Empirical, peer-reviewed | Conceptual/theoretical, literature review, non-reviewed |
| Language | English | Non-English languages |
| Research context | Formal learning settings (elementary, middle, high, college) | Informal learning settings (e.g., MOOC, social media, etc.) |
| Subject | English L2 learners (i.e., EFL & ESL learners) | L2 learners of other languages (e.g., Spanish, German) |
| Topic/focus | A study includes collaborative English writing using CMC tools for peer interaction. | A study involves English writing but there is no peer interaction (e.g., peer feedback, group writing). |
| Tool | Asynchronous, text-based CMC tools (e.g., Wiki, Forum, etc.) | Audio & video-based CMC tools; electronic devices without networks |

Method – Coding Scheme

| Category | Subcategory | Codes |
|-----------------------|---------------------|--|
| Basic information | Author | First author's last name |
| | Year of publication | 2010, 2011, ..., 2022 |
| | Empirical | Yes/No |
| | Study purpose | This was taken from each journal article |
| Method | Student level | Elementary, middle, high, college |
| | Student type | EFL, ESL |
| | Target language | English, English/Chinese, English/Spanish, etc. |
| | Native language | English, Korean, Japanese, German, etc. |
| | Data type | Quantitative, qualitative, mixed |
| | Data collection | Achievement test, interview, survey, text archive, writing assignment, etc. |
| | CMC Tool | Wikis, Forum, Facebook, blog, etc. |
| Collaborative writing | Form | These subcategories (form, benefits, and challenges) were summarized and analyzed thematically to answer the research questions. |
| | Benefits | |
| | Challenges | |

Note. Some of the selected studies were conducted in the context of language exchange programs.

Method – Methods Used in 15 Articles

| Category | Subcategory | Number of Studies |
|-------------------|------------------------------|---|
| Basic information | Year of publication | 2010 (1), 2011 (0), 2012 (2), 2013 (2), 2014 (0), 2015 (1), 2016 (2), 2017 (2), 2018 (1), 2019 (1), 2020 (0), 2021 (1), 2022 (2) |
| Method | Student level ¹ | Elementary (1), middle (1), high (3), college (13) |
| | Student type | EFL (13), ESL (2) |
| | Target language ² | English (15), Chinese (1), Spanish (1) |
| | Native language ³ | - EFL: Arabic (2), Chinese (9), Spanish (1), Thai (1) - ESL: Creole & Spanish (1), various (1) - Others (CFL, SFL): English (2) |
| | Data type | Quantitative (1), qualitative (3), mixed (11) |
| | Data collection ⁴ | Achievement test (6), interview/FGI (5), observation (2), survey (6), text archive (10) |
| | Course format | - Web-based, in-person/computer lab (10) - Online, outside of school (5) |
| | CMC tools | Facebook (1), Google Docs (3), Forum (1), Wikis (10) |

Note. ¹ One study included students at all levels from elementary to college. ² Chinese and Spanish were studied by English learners through the language exchange program. ³ Chinese as a Foreign Language (CFL) and Spanish as a Foreign Language (SFL) for native English speakers in language exchange programs.

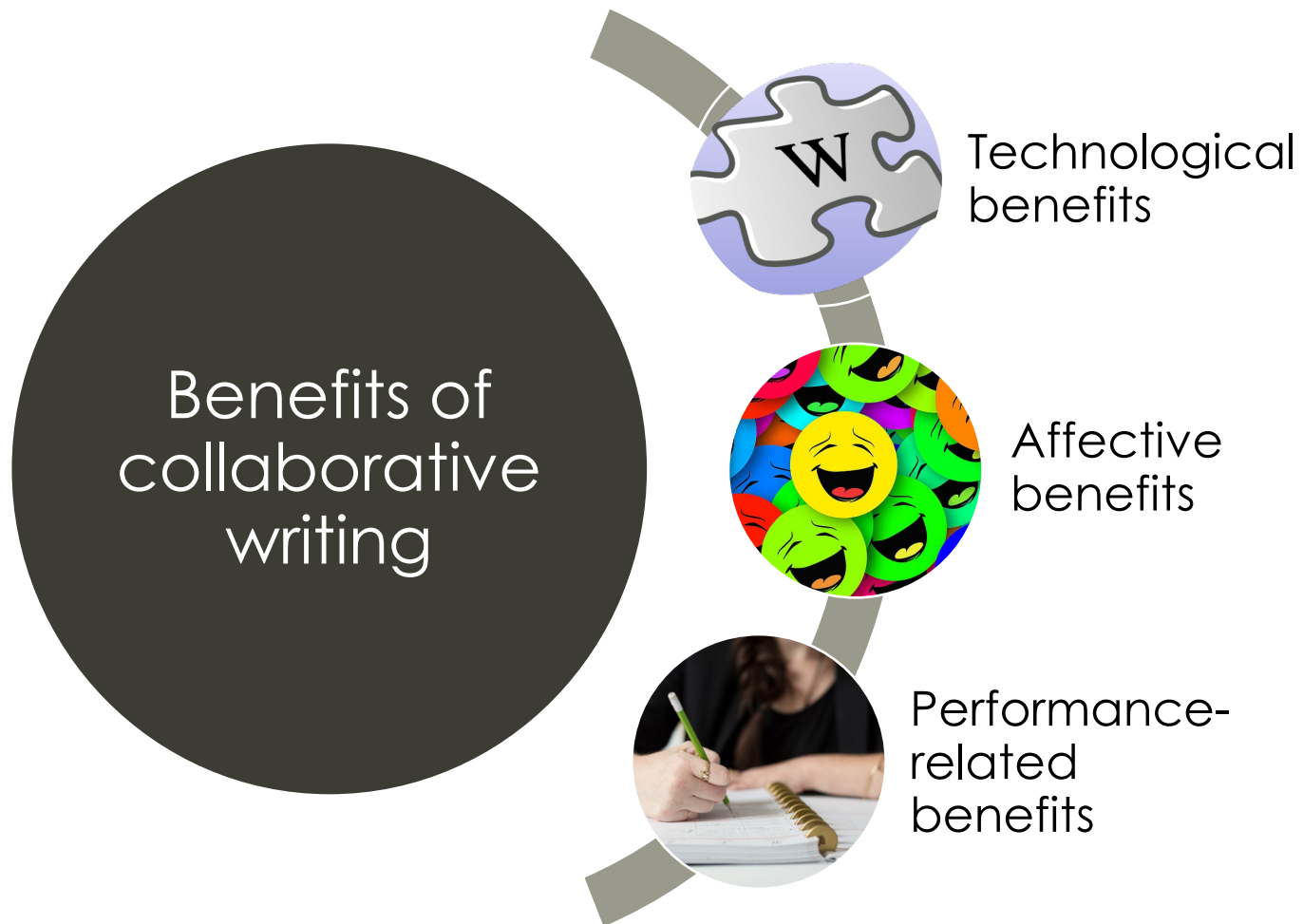
Results

RQ1. What are the forms of collaborative writing?



Results

RQ2. What are the benefits of collaborative writing using CMC for L2 learners?



Results

RQ2. What are the benefits of collaborative writing using CMC for L2 learners?

Technological benefits

- Convenient feedback and fast response
- Simultaneous revision and tracking
- Extended communication and learning beyond traditional classroom

Affective benefits

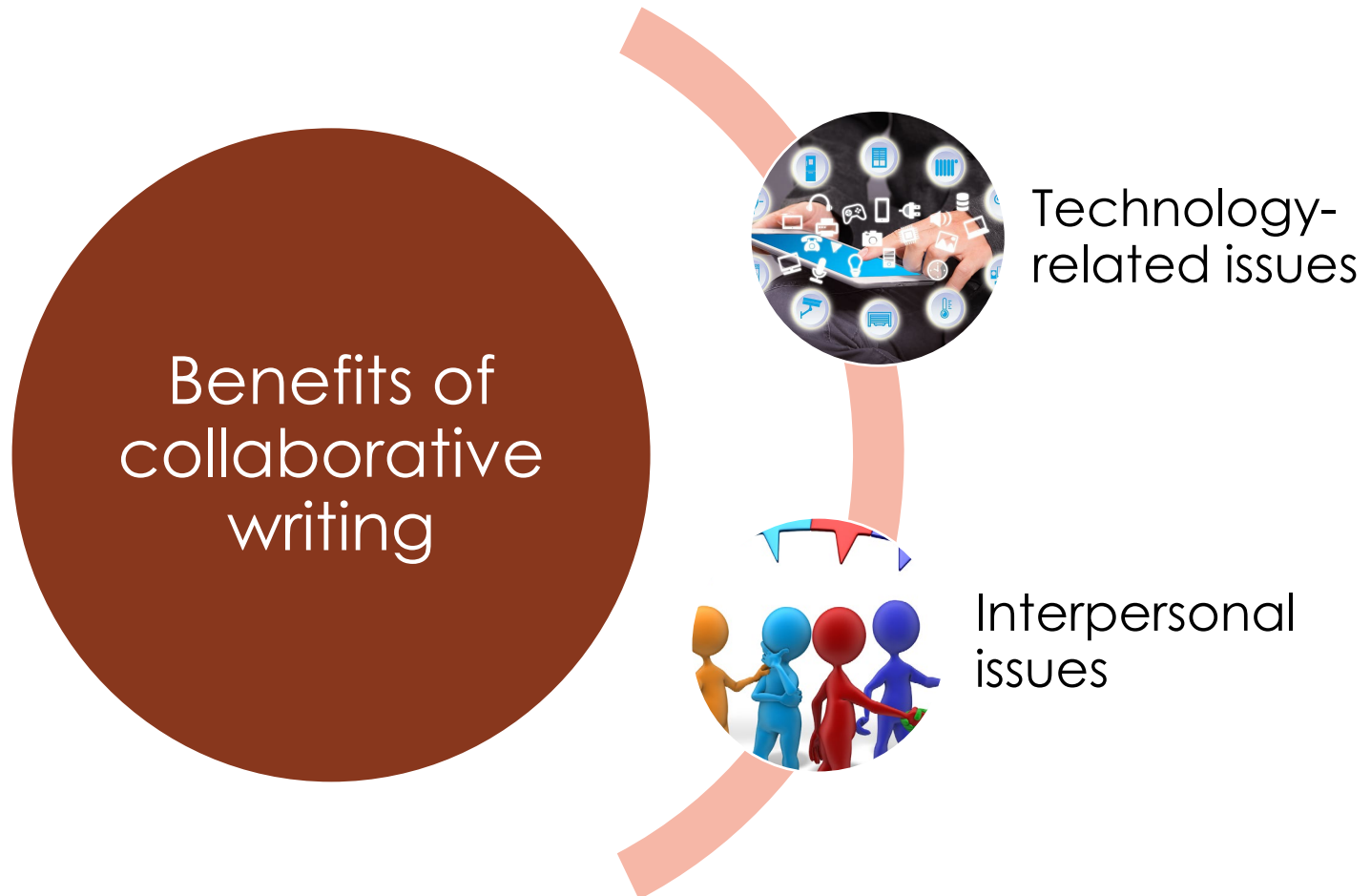
- A safe place for shy & reticent students
- Candid feedback via anonymous features
- Intrinsic motivation through fun activities

Performance-related benefits

- Writing skills through collective scaffolding
- 21st century skills such as collaboration, communication, and critical thinking skills
- No effects if course is not well designed

Results

RQ3. What are the challenges and issues of collaborative writing using CMC for L2 learners?



Results

RQ3. What are the challenges and issues of collaborative writing using CMC for L2 learners?

Technology-related issues

- Lack of technical proficiency but no sufficient help while using technologies
- Different technologies with different features – less effective in some situations
- Technology design/interface

Interpersonal issues

- Familiarity/friendship and group dynamics
- Cultural difference in communication
- Students' different levels of English proficiency
- Passive participation and free riding

Discussion and Implications

- Select **right CMC tools**.
- Consider **combining CMC tools** for nonverbal communication.
- Design CMC **interface/access authority carefully**.
- **Consider anonymity** if needed.

Careful selection & design of CMC tools



- Provide **training for peer review and constructive feedback**.
- Provide **technology training and constant assistance**.

Training for CMC tools and peer feedback



- Consider **gender and personality** if possible.
- Consider **language proficiency**.
- Consider **familiarity** among group members.
- Consider **different design by age group**.

Careful group composition/ activity design



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Q&A



THANK YOU