

Journal of
Education and Practice
(JEP)

**Developing Students' Competences in the Era of Technology:
Experience of Integrating Writing in a Content Course at
Christian Bilingual University of Congo**



CARI
Journals

Developing Students' Competences in the Era of Technology: Experience of Integrating Writing in a Content Course at Christian Bilingual University of Congo

 ¹*Mumbere Malonga Mashauri, M.Ed TESOL, ²Malobi Pato, M.Ed, ³Lotsove Makuru, M.Ed

¹*School of Education

Christian Bilingual University of Congo, DRC

<https://orcid.org/0009-0002-0227-4171>

^{2,3}English Department

Teacher Training College of Bunia, DRC

Abstract

Purpose: The purpose of this study was double: 1) To describe the aspects of technology that were involved in the process of integrating writing in the teaching of a discipline. 2) To identify some students' skills/competences that began to improve thanks to writing integration in the teaching of a content course.

Methodology: Qualitative practices were used in data collection processes. Data were collected through participatory method, semi-structured interview, informal conversation and tutorial sessions. In order to determine the sample for our study, we used the type of sampling called "Purpose Sampling". The strategy used for this type of sampling was "Homogenous Sampling" in which the researchers identified individuals because of their membership in a group that has a well-defined characteristic. Based on this strategy, the subgroup consisted of students who took the course with the researcher in the first semester and in the first quarter of the second semester (139 in intensive English, 16 in Media Concepts, 2 in Method of University Work, 1 in Business English, and 23 in Initiation to Scientific Research) and the students whom the researcher supervised their thesis. The participants, thus, in this study were 44. Content and thematic analysis were used in the process of data analysis.

Findings: Four results have been revealed throughout this study: 1) The integration of writing into the course has begun to improve students' language proficiency. 2) The integration of writing into the course has begun to improve students' cognitive proficiency. 3) Incorporating writing in the content courses began to enhance collaborative competence between students. 4) Incorporating writing into the course began to develop students' proficiency in using ICT tools.

Unique Contribution to Theory, Practice and Policy: Developing students' competences in content as well as in language should adopt the integrated approach in which teachers incorporate technology related activities as well as writing activities. Regarding the benefits that technology offers in the process of content and language development, and owing to the fact that incorporating writing contribute to students' language proficiency, content acquisition, cognitive development, etc. researchers recommend the use of the integrated approach in which content, language, technology and writing are integrated in order to have a holistically trained student.

Keywords: *Students' Competences, Era of Technology, Integrating Writing*

INTRODUCTION

The 21st century is considered by many education actors as a century of technology. In this century of technology, in fact, a student does not need to develop only his knowledge; he also needs to develop his skills and competences. However, the problem that needs solution is to know how education actors can help learners start moving from knowledge development to skills/competence development.

This study presents an experience of writing integration in the teaching of a discipline at the Christian Bilingual University of Congo, and seeks to achieve the following objectives:

- To describe the aspects of technology that are involved in the process of integrating writing in the teaching of a discipline.
- To identify some students' skills/competences that begin to improve thanks to writing integration in the teaching of a content course.

In order to achieve these objectives, we asked two questions that are presented as follow:

- What aspects of technology are involved in the teaching of a content course in which the teacher incorporates writing?
- What skills/competences are developed in a content course in which the teacher incorporates writing?

LITERATURE REVIEW

The Theoretical Framework

The theoretical framework underlying the integration of writing in teaching seems very broad. In this study, we discussed some of them. The implementation of teaching that integrates writing creates a naturalistic and semi-authentic environment (Paschalidou, 2018) where materials are unconsciously learned. Krashen's theory of acquisition-learning states that subconscious learning of a subject gives a good result compared to conscious learning. Krashen (2013) called subconscious learning ACQUISITION and conscious learning LEARNING, and he argued that the best way to learn a subject is through an acquisition approach.

Another theory to which teaching that integrates writing is subordinate is Comprehensible Input. Krashen (2013) argues that the material is acquired when the input provided in the acquisition situation is just above the learner's level ($i+1$). This means that if the input is not adapted and if it is not understandable, there will be no more acquisition of the material. Dale & Tanner (2012) distinguished receptive skills from productive skills in the learning process of the material. They argued that receptive skills are enhanced by the level of comprehensible inputs and productive skills are concerned with outputs. (as cited in Paschalidou, 2018). Swain (2000) postulated that learning is intensified when the teacher and other classmates push the learner to produce. In addition, Long (1996) believed that the integration of input and output, that is, the

integration of receptive and productive skills, causes interaction in the learning room. According to her (Long), when learners receive contributions from each other, they decode them using their abilities as well as the way they negotiate meaning with their interlocutors. Thus, the conversation, dialogue or interaction between learners promotes the acquisition of the material.

With regard to the incorporation of writing into the teaching of a content course, the teacher must reassure himself that the activities related to it favor what Krashen calls ACQUISITION (learning the subject without knowing that one is learning something). Then the writing activity incorporated in the content course must be comprehensible (i+1); that is to say, the input must not be too far from the level of understanding of the students. In addition, the teacher will integrate inputs and outputs, he/ she will push (in collaboration with the whole class) the student to produce and build an environment in which the acquisition of the materials takes place in the atmosphere of dialogue, conversation, interaction and cooperation. Also, if the incorporation of writing in the teaching of a content course involves aspects of technology, then these aspects must be at the level of student comprehension.

Integration of Writing in the Teaching of a Content Course

A great deal of research in the field of didactics of disciplines is currently being conducted by teachers and other educational researchers. Many of them are interested in integrating writing into the teaching of a discipline. Lyster (2017) stated that students develop their writing skills if the context is interesting for them. According to him, an interesting context is nothing more than the field of expertise of the students. Lyster (2017), in fact, discovered that students' writing development is feasible if the teacher uses two approaches: REACTIVE and PROACTIVE. In the reactive approach, the teacher questions, he gives constructive feedback, he supervises his students by helping them to develop and to integrate the writing and the content of the course. With the proactive approach, however, the writing development process goes through 4 phases:

- The Noticing: The teacher presents the context that must rally to the course content.
- Awareness: The teacher encourages students to manipulate and reflect on the intended form of writing.
- Guided Practice: The teacher introduces students to the use of grammar and sentence structure by giving them constructive feedback.
- Autonomous Practice: Students begin to write according to the teacher's instructions.

Coyle (2010) conducted research on the integration of writing in the teaching of a course in a bilingual education program. His research revealed that the development of writing skills displays 4 dimensions that he called the 4 C's of bilingual education. The 4 C's, in fact, include content, cognition, communication and culture. According to him, content and cognition relate to integrated teaching (students create knowledge, they understand and they improve their writing skills).

Communication and Culture, however, relate to language learning and the whole subject. She discovered that the focal point of writing development is THE COURSE/THE DISCIPLINE.

Integration of Technology in the Teaching of a Content Course

A lot of research is being conducted on the use of ICT in teaching. Mpiti and Maken (2022) claimed that the teacher plays a big role in the development of student writing. He/she is responsible for exposing students to the use of ICT. In addition, there is a great need to start incorporating technology into any teaching. In their qualitative study in South Africa, they found that the integration of technology into the learning process is very important in this century because it offers a new learning experience, and they suggested that the integration of technology into teaching becomes an obligation in order to weaken technological illiteracy within students as well as teachers.

Blair (2012) postulated that the 21st century is a century of technology in which students do not only need to master the subject of their field of expertise to succeed in studies or gain a job, but they must also master the 4C's of the 21st century that are acquired in an ICT environment (Critical [thinking], Creativity, Communication and Collaboration). Blair (2012) recommended, "We must increasingly put technology in the hands of students and we must trust them with more progressive technology use" (Blair, 2012, p.10).

METHODOLOGY

Study and Target Population

This study has been conducted at Christian Bilingual University of Congo (UCBC) where one of the researchers (Mashauri) teaches some content courses (Media Concepts, Business English, Initiation to Scientific Research, Methods of University Work) and some English courses (Intensive English, Academic English and Technical English). The study population of this study is made of all students who took their enrollment at UCBC. These students took their enrollment in communication department, economics department, technology and engineering department, theology department, school of leadership, department of Psychology, school of Education, and the school of law. These students were 485 in total. The target population for this study are the students whom the researcher (Mashauri) taught in the first semester and the first quarter of the second semester of the academic year 2022-2023. Their number was 182.

Sample Identification

In order to determine the sample for our study, we used the type of sampling called "Purpose Sampling". Creswell and Guetterman (2019) said that purpose sampling is the type of sampling in which the researcher intentionally selects individuals or a site to study a phenomenon. The strategy used for this type of sampling was "Homogenous Sampling" in which the researchers identified individuals because of their membership in a group that has a well-defined characteristic (Creswell

& Guetterman, 2019). Based on this strategy, the subgroup consisted of students who took the course with the researcher in the first semester and in the first quarter of the second semester (139 in intensive English, 16 in Media Concepts, 2 in Method of University Work, 1 in Business English, and 23 in Initiation to Scientific Research) and the students whom the researcher supervised their thesis. The participants, thus, in this study were 44.

Data collection technique

The paradigm in which this study was situated was interpretivist and it used a qualitative study design. In fact, the methods we used to generate data include participatory method, semi-structured interview, informal conversation, and tutorial sessions. As far as the participatory method is concerned, the researchers assigned writing activities to students who worked in group, and submitted their work the next session or the same day before they go back home. We used semi-structured interview to gather in-depth data, and it helped us clarify a few things related to the integration of technology and writing in a disciplinary course, and how this integration contributed to the development of students' content, language, cognitive and collaborative competences. Informal conversation was used in order to learn about the importance of integrating technology and writing in the content course and what benefits the students got as they were involved in the learning process. We used tutorial orientation during the orientation on thesis writing and how to send the work for correction and feedback.

FINDINGS AND DISCUSSIONS

The purpose of this study was to describe the aspects of technology that were involved in the process of integrating writing in the teaching of a discipline. In addition, the focus was to identify the students' skills/competences that began to improve thanks to writing integration in the teaching of a content course.

The analysis of the data was based on the problem, the questions and the objectives of this research; and it presents the following findings:

The integration of writing into the course has begun to improve students' language proficiency.

Participants in the study displayed improvement in language. Their speaking started to show improvement and their vocabulary store started to have some new words and expressions. In addition, they started to write respecting writing mechanism. Moreover, they started to be familiar with some sounds and the pronunciation of some words. This finding connects with the search of several researchers. For example, Chansi and Wasanosomsithi (2016) argued that the integration of writing in the course develops students' vocabulary, language expression and writing mechanism. In addition, Goma (2001) stated that the integration of writing boosts students' writing skills.

The integration of writing into the course has begun to improve students' Cognitive proficiency.

Participants in the study began to display problem solving competences and knowledge application. Their capacity to store, to retain and to recall information step-by-step began to improve, and their capacity to reason through some issues began to improve too. In addition, the participants started to display ability in planning, organizing, and managing time and tasks. This finding connects with the research of Goma (2001) which revealed that the integration of writing in a course improves the cognitive and intellectual development of students and these are equipped with critical thinking skills, creative and imaginative abilities. Goma (2001) continued saying “As students writes, they use the theoretical knowledge they have acquired in the class that increases their understanding.” (Goma, 2001, p.12). Graig (2013) understood writing across the curriculum (WAC) as a pedagogy to develop the writing skills of EFL/ESL students at the university level. She believed that using the WAC approach in the writing classroom, students not only displayed their knowledge but also strengthened their critical thinking as they learn. Graid added that all writing exercises should aim at acquiring new knowledge and students should be responsible for translating the acquired knowledge to solve a real problem in their society.

Incorporating writing in the course enhances collaborative competence between students.

The participants built the belief that they can learn from themselves as well as from their classmates. They could go to seek a help from their team mates or other teams/groups. They could put their heads together to learn and to discover new things. They could learn about writing principles, technology use and they could develop their competences thanks to the help of their mates and thanks to collaborative tasks. More values started to be given to collaboration than to isolation. This finding connects with the research of Lawrence and Wah (2016) who postulated that the 21st century has its learning practices and collaboration is part of its practices that help students solve problems, have digital eloquence, and develop team spirit. Many sectors of everyday life practice collaboration nowadays. In the educational world, and particularly in English language teaching, collaboration has been found to be a model which address the needs of the learners related to English language curriculum (Adams, et al., 2016). Previously, teaching was considered as an isolating activity. Teachers were working in isolation and students were learning in isolation too. Ronfeldt, Farmer, McQueen, and Grissom (2015) declared, in recent years, teaching is shifting from being isolated work to being an activity where teachers work collectively on instruction. This shift is favored by multiple reforms which are transforming schools (Ronfeldt et al., 2015).

Collaborative writing, thus, is based on social development theory by Vigotsky (1978) and focuses on the social interaction, which gives learners a better sense of audience as they work in small groups.

Incorporating writing into the course develops proficiency in using ICT tools.

Teaching a disciplinary course that integrates writing and technology is very much beneficial to students. In fact, during the learning process students develop their knowledge as well as their competence. Participants in this study displayed ability to create email addresses. They were able to send emails, and reply to emails, upload and download documents, etc. They started using some social networks (WhatsApp, Facebook); they started using some applications like online dictionaries, hi translate,... The students whom I was supervising their work suggested that we begin to use google drive in the process of correcting and supervising his memoir.

The writing tasks in which the participants were involved step-by-step began to develop their fluency in using internet, computer, smartphones, and other high-tech tools. This result connects with the research of Yan (2019) who discovered that the integration of writing in the course that uses technology improves the use of social networks, email, etc. and students have the opportunity to continue studying outside the classroom.

CONCLUSION

Integrating writing and technology in the teaching of a content course yields countless benefits to students. Not only are students actors of the development of expertise in their field of study, but also they develop and improve their competences in language, technology, and so forth. This integrated approach proves to be essential to engage students in various writing and technology related tasks required, as well as to motivate them to work in group/in collaboration and to help them become actors of their own learning. Besides, the integrated approach allows students to be participants and contributors to the learning process' and ignore an archaic lesson in order to create a belief that an alternative method is possible.

Regarding the objectives and research questions for this study, the result revealed that the aspects of technology that intervened in the teaching of the content course that integrated writing included save a document/file, send a document, transfer a document, use of internet, use of social networks, use of email, print a document, check an online/electronic dictionary, use of a computer and a smart phone, etc. In addition, the skills that began to develop included language, cognition, technology and collaboration.

Future research should focus on an experimentation in which the researcher can compare the result of an experiment group and a control group in order to learn the degree of competence and/or knowledge development of the participants.

RECOMMENDATION

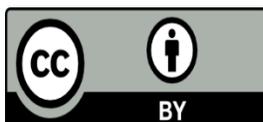
In light of the results of this study and considering the fact that we are found in the high-tech era, the researchers wish to recommend that teachers of content courses as well as language courses use the integrated approach as they engage their students in the learning processes. They

should foster collaboration in their lesson rooms, they should integrate content and language in their classes, they should incorporate reading and writing in their different classes, and they should integrate technology in their courses too. In addition, teachers should incorporate faith in their classes and make sure the student is holistically developed in order for them to be able to develop their respective communities upon completing their studies.

Références

- Adams, D., Harris, A., & Jones, M. S. (2016). Teacher-parent collaboration for inclusive classroom: Success for every child. *Malaysian Online Journal of Educational Sciences*, 4(3), 58-72. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1106456.pdf>
- Blair, N. (2012) Technology integration for the new 21st century learner. *Principal*.
- Chansri, C., & Wasanasomsithi, P. (2016). Implementing CLIL in higher education in Thailand: The extent to which CLIL improves agricultural students' writing ability, agricultural content, and cultural knowledge. *PASAA: Journal of Language Teaching and Learning in Thailand*, 51, 15-38. doi:10.14456/pasaa.2016.1
- Creswell, J., W. & Guetterman, T., C. (2019). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (6th Ed). New York, NY: Pearson.
- Goma, O. (2001). Creative writing in economics. *College Teaching*, 49(4), 149-152. doi:10.1080/87567555.2001.10844598
- Graig, J. L. (2013). *Integrating writing strategies in EFL/ESL university contexts: A writing-across-the-curriculum approach*. New York, NY: Routledge.
- Krashen, S. (2013). *Second language acquisition: Theory, application, and some conjectures*. Cambridge: Cambridge University Press.
- Lawrence, D., & Wah, L. K. (2016). Collaborative writing among second language learners using Google docs in a secondary school context. *International Journal on E-Learning Practices (IJELP)*, 3. Retrieved from <https://jurcon.ums.edu.my/ojums/index.php/ijelp>
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie, & T. K. Bhatia (Eds.), *Handbook of second language acquisition*. New York: Academic Press, 413-468.
- Lyster, R. (2017). *Content-based language teaching (The Routledge e-modules on contemporary language teaching)*. New York, NY: Routledge.
- Mpiti, P. T & Maken, B. (2022). Technology integration on teaching writing in the foundation phase classrooms in the eastern Cape province, South Africa. *New Updates in E-Learning*.

- Paschalidou, T. (2016). *Integrating CLIL modules of art history into Greek secondary education: an investigation of content, language and motivation levels* (Master's Thesis, University of Greece). Retrieved from <https://www.researchgate.net>
- Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, 52(3), 475-514. doi:10.3102/0002831215585562
- Swain, M. (2000). The Output Hypothesis and beyond: Mediating Acquisition through Collaborative Dialogue. In J. P. Lantolf (Ed.), *Sociocultural Theory and Second Language Learning*. Oxford: Oxford University Press, 97-114.
- TEAL Staff (2010). Technology-supported writing instruction. *American Institute for Research*, 7
- Yan, L. (2019). A study on WeChat-based collaborative learning in college English writing. *English Language Teaching*, 12(6), 1-9. doi:10.5539/elt.v12n6p1



©2024 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)