

TIRF-British Council Research Mentoring Awards

Researcher

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Project Title

Effects of Computer-mediated Multimedia Glosses
with Output Production Instruction on Overhauling
Vocabulary and Reading Comprehension:
Evidence from Ethiopian Secondary Education

Dissertation Supervisor

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TIRF Research Topic Investigated

Digital Technology in Language Education

TIRF Mentor Name

Prof. Neil J Anderson
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Final Report

Research Background

The Ethiopian general education curriculum underscores developing advanced-level language skills, particularly developing reading skills in secondary schools. Through this approach, reading students unlock learning potential across their academic pursuits. However, many learners struggle due to the challenges of learning through English, the medium of instruction. Thus, a provocative innovation that supports second-language reading through presenting multimedia glosses (i.e., textual, pictorial, or textual and pictorial glosses), accessible via hyperlinks to help learners notice a definition, explanation, or synonym of unknown words while reading on a digital screen, is a pedagogical support worth exploring. Therefore, this study will examine the following research questions:

- What effects do multimedia glosses with output activity (summary writing on a reading incorporating the newly learned words) instruction have on secondary school learners' vocabulary learning and reading comprehension?
- How do learners perceive learning to read in English through the help of multimedia glosses along with output activity instruction?

Addressing these issues may contribute to the existing efforts for English language improvement in Ethiopia and provide new insights for policymakers to encourage the development of guidelines for the application of e-learning materials enhanced with multimedia glosses.

To explore these possibilities, I proposed a mixed-methods experimental study to investigate upper secondary school learners' perceptions of computer-mediated multimedia glosses with output activity instruction in enhancing vocabulary acquisition and reading comprehension. By comparing an experimental group using glossed texts with output activity to a control group receiving conventional instruction, this design aims to ensure a rich, multi-layered understanding of how multimedia glosses with output activity-based reading instruction impacts students' vocabulary and reading comprehension, offering both quantitative data via pre-and post-tests and qualitative insights collected through journal writing and interviews.

Research Progress and Achievements

Over the past few months, my research proposal has gained substantial progress in several areas. With the guidance of my supervisors, I have developed the core components of the proposal, including the literature review, theoretical framework, and methodology, particularly the data collection instruments and intervention materials, setting a strong foundation for the next phase of the study.

I have critically analyzed existing research on multimedia glosses, and L2 reading comprehension interventions including output production activities and vocabulary learning strategies. Studies have consistently highlighted the benefits of multimedia glosses in scaffolding L2 learners by providing contextualized vocabulary support, thereby enhancing text comprehension (Khezrlou & Ellis 2017; O'Bryan, 2008). Moreover, output production, i.e., summarizing reading, has been recognized as helping students enhance their comprehension and recall of reading materials (Gao, 2013; Kim, 2006). Thus, drawing from the integrated model of L2 acquisition in a multimedia environment, the theoretical framework of my proposal focuses on input, interaction, and output as essential bases of successful L2 digital reading in a CALL environment. This alignment with learning theories strengthens my argument for implementing multimedia glosses with output activity instruction with upper secondary school EFL learners who struggle with reading comprehension.

With the support of my supervisors, I have developed the instruments, and intervention materials tailored to Ethiopian grade 11 students, marking a significant milestone in the mentorship period. Specifically, following the recommendation of my mentor, Professor Neil J Anderson, who has truly brought my work to life, I have prepared these materials with the assistance of ChatGPT and the Extensive Reading Foundation Online Graded Text Editor (OGTE), a tool designed to assist language teachers and material developers providing essential insights by analyzing text vocabulary coverage. The Extensive Reading-Central OGTE truly helped me to ensure the materials were both linguistically appropriate and pedagogically sound to the 11th graders. The experience has been highly enriching, enhancing my skills in both materials development and the use of technology to support language learning. I look forward to applying these skills to advance ELT practice in my classroom.

The progress made so far has laid a solid foundation for the next phase of my work. Currently, I am conducting a pilot study with 40 experimental and 39 control group students to ensure the feasibility of the intervention and the validity and reliability of the instruments. This accomplishment represents significant progress driven by a strong collaborative framework in producing impactful research that can help Ethiopian language learners. Looking ahead, I am preparing an application for a 2025 TIRF-British Council DDG, incorporating key upcoming activities including the pilot study report.

Collaboration and Mentorship

One of the most valuable aspects of this mentorship program is the triad collaboration between my advisor, mentor, and me, providing continuous guidance and constructive feedback. Despite geographical distances, we have established an effective communication system through Zoom meetings and email exchanges. This collaboration allows us to discuss the research progress, including material development procedures, revisions, and challenges while providing feedback and follow-up. This positive working relationship is critical to the success of the proposal by providing guidance, expertise, and diverse perspectives. Significantly, the mentorship has offered valuable insights to make necessary adjustments in time by refining the data collection instruments and intervention materials ensuring that the proposal remained on track and adhered to best practices.

Additionally, this scholarship has been an exceptional opportunity to share with my mentor, Professor Neil J Anderson, the challenges Ethiopian students face in reading. Consequently, he promised to continue working with us beyond the mentoring period to support struggling learners in second-language reading in Ethiopia.

Overall, the TIRF-British Council RMA scholarship has enabled me to focus on my work, engage with experts, and meaningfully contribute to English language education advancements in Ethiopian education. The program has also strengthened my professional network through interactions with experts in my field.

Finally, the main deliverables to the TIRF-British Council include the method chapter of the proposal including instruments and intervention materials. I grant full permission for TIRF to share any of my input and deliverables with the public.

References

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