Exploring the Technology-Writing Connection Through Collaborative Writing in Google Docs

Dorela Kaçauni, "Fan S. Noli" University, Albania

The European Conference on Education 2023 Official Conference Proceedings

Abstract

A strong connection between Technology and Writing is seen by many researchers in the field of Foreign Language Learning. They point out the importance of putting the thoughts into words via technology. It provides many tools for students to write online and offline. The aim of this paper is to explore the relationship between writing and technology through collaborative writing in Google Docs. The participants of the case study are 14 students who study in the Bachelor study programme "English Language", in the Faculty of Education and Philology, Department of the Foreign Languages at "Fan S. Noli" University, Korca, Albania. They were divided in two groups: Group A and Group B with 7 members each. The assignments that students had to complete in Google Docs were different. Group A had to write an informal letter and Group B had to write a formal letter. Students had one role within the group: an Initiator, a Topic Facilitator (1 participant), a Content Facilitator (2 participants), an Outlining Facilitator (2 participants) and Reviewing and Editing Facilitators (2 participants). After all the steps of their assignment have been completed, students were allowed to go to Grammarly (https://app.grammarly.com/) to edit the letters that they had written collaboratively. Students seemed to really enjoy taking these opportunities to work in collaboration with their friends. This connection between writing and technology seemed to be very strong and effective.

Keywords: Collaborative Writing, Google Docs, Technology-Writing Connection, Students' Assignments



1. Introduction

Before online collaborative writing became popular, writing was thought to be an individual activity. Due to the development of new digital technology tools like wikis, Google Docs, and other collaborative writing platforms, this perception has changed recently. According to Ardiasih and Rasyid (2019), online collaborative writing alters perspectives from product-based to process-based writing. The writers can sustain a constant cycle of writing by routinely engaging in a number of process-based writing tasks, such as idea generation, structuring, drafting, reviewing, concentrating on, and evaluating. Additionally, in collaborative writing, students are expected to maximize their writing assignments by turning in numerous drafts and receiving feedback from the instructor, their classmates, or by checking computer programs.

In a view of learning based on collaboration, Bakar and Som (2016) advocate the analysis of participation in social and collaborative activity where participants strive toward academic goals. One of the resources that teachers and professors might utilize to get their students writing is Google Docs. Because of Google Docs' collaborative writing tools, students in one class or at home can actively produce high-quality writing (Alkhataba et al., 2018). This is made possible by Google Docs' capabilities.

Peer collaboration is thought to have a good impact on writing abilities (Buss & Karnowski, 2000; Lundstrom & Baker, 2009).

More specifically, when students participate in peer editing, a collaborative learning process, they are able to communicate with one another and read and evaluate one another's writing (Nagin, 2012; Yu & Lee, 2016). This condition gives the writers the chance to get more constructive criticisms from the other writers, which will assist students, improve the caliber of their work.

Writing in Google Docs in L2 enable the educators to develop online interactive environments for collaborative writing in which students can engage in peer feedback and peer editing of work (Dizon, 2016; Strobl, 2013). This allows L2 students to obtain feedback from the teacher and their peers.

Therefore, as an attempt to shed more light on the potential benefit of using Google Docs on collaborative writing, this study tries to explore the connection between Technology and Writing by using Google Docs for group writing. A critical and analytical assessment is provided for the way that students worked on it.

2. Literature Review

Numerous collaborative web second-generation applications (such as Google Docs, Wiki, etc.) have entered language schools and universities during the past ten years and have changed the dynamics of student interactions. Given that they give them a virtual place to contribute to a text that is changing, these technologies are made to be very dynamic and collaborative (Hadjerrouit, 2011). Or, to put it another way, "The affordances of social digital networks enable people to work together on projects in ways not necessarily possible in the past due to distance, time, age, or language constraints" (Coiro, Knobel, Lankshear, & Leu, 2008, p. 527).

Technology software, which is currently being developed at a rapid rate, offers creative ways to streamline the collaborative writing process, encourage greater sophistication and accuracy in student writing, and facilitate timely, helpful feedback from one member to the other (Liu & Lan, 2016). For instance, university students, who frequently find it difficult to interact face-to-face, can complete their collaborative writing assignments with ease and efficiency using web-based writing tools like Google Docs (Davey, Bozan, Houghton, & Parker, 2016; Seyyedrezaie, Ghonsooly, Shahriari, & Fatemi, 2016).

Numerous studies concentrate on how technologies affect various parts of writing and writing instruction. Suwantarathip and Wichadee (2014), for instance, looked into the nature of student collaboration in Google Docs work groups as well as the potential effects Google Docs may have on student writing in a Thai university. The quantitative study discovered that students who commented and critiqued each other's work through Google Docs developed a deeper comprehension of the writing process overall and outperformed those who had been in face-to-face groups on an individual post-test.

According to this study, Google Docs can be effectively used to improve students' writing skills, and those changes can be observed even on a personal level.

Zhou et al. (2012) conducted a study to determine the efficacy of using Google Docs for L2 learners, and they found that it was successful in enhancing the learners' abilities for collaborative writing and learning. As homework outside of class, the participants completed writing projects in groups of three or four using Google Docs. The course was well-received by the students, who thought Google Docs was a useful tool for completing writing assignments.

In a different study, Bikowski and Vithanage (2016) discovered that while both solitary and collaborative web-based writing were successful at enhancing L2 learners' writing abilities, the latter strategy had a more profound impact. The survey's findings also showed that L2 writers had favorable opinions of the in-class web-based writing training, but they preferred group writing exercises over individual ones. The participants also preferred instructor corrections over peer corrections since they had doubts about their colleagues' editing abilities.

Alharbi (2019) investigated the efficiency of Google Docs in an EFL writing course using a qualitative case study. By giving students the chance to receive feedback from teachers and peers, peer-edit and revise drafts of writing, and give responses to peers, Google Docs was effective in improving writing skills, according to analyses of the teacher's observation and feedback, students' comments and editing via Google Docs, and their follow-up interviews.

Despite the studies discussed above, the widespread use of Google Docs for EFL collaborative writing requires further empirical support and warrants further studies to be carried out.

3. Method

3.1 Participants

The participants of this case study are 14 students, 9 of whom are females, and 5 are males. They range in age from 18 to 21. They study in the Bachelor study programme "English

Language", in the Faculty of Education and Philology, Department of the Foreign Languages at "Fan S. Noli" University, Korca, Albania. They had to write an assignment in Google Docs collaboratively and hand it in after three weeks.

3.2 The Research Design

Students were divided in two groups: *Group A* and *Group B* with 7 members each. The assignments that students had to complete in Google Docs were different. Group A had to write an informal letter and Group B had to write a formal letter. Students had one role within the group: an Initiator, a Topic Facilitator (1 participant), a Content Facilitator (2 participants), an Outlining Facilitator (2 participants) and Reviewing and Editing Facilitators (2 participants). Students worked for three weeks to hand in the assignment.

In the first week, students had to read the entire assignment carefully and the description of the roles. They had to access the group's collaborative document. The group's Initiator had to create and share the document. Then they had to decide on the purpose of the letter and find and share samples of letters to use as models. Students had to write an outline of the letter from beginning to end. They had to carry out the duties of your individual role. They also must contribute to their group's collaborative writing project.

In the second week, students had to keep working on writing the letters, editing and revising. They had to make sure their collaborative letter met the criteria stated in the rubric. All group members were responsible for reviewing and editing after completing the letter.

In the third week, students had to hand in the finished version of the letter and a reflection letter to explain each one's role and the progress of the assignment completed in Google Docs. They had also to write how this experience was and what they learned. Students were allowed to go to Grammarly (https://app.grammarly.com/) to edit the letters that they had written collaboratively.

3.2.1 Explanation of the Rubric

Students Were Given the Following Rubric:

As a group, you will collaboratively write a formal or informal letter. Your letter should be 200-350 words. You will work online using Google Docs. First, you have to *decide on the purpose*. After finishing your collaborative work, you will work individually on a reflection. Please read the instructions carefully before you start.

Instructions:

- (1) You have to take a role within the collaborative assignment.
- (2) Read the responsibilities of the chosen role and be sure to accomplish them correctly.
- (3) Hand the assignment within the deadline.
- (4) Write a 200-350-word **reflection letter** on your collaborative writing experience, discussing your role, contributions, and success or failures. Provide information on your role, how the experience was successful or not.

Recommended Timeline for Completion:

This assignment is designed to be completed in three weeks.

1st Week of the Assignment:

Step 1: Read the entire assignment sheet carefully.

- Step 2: Understand your role in this collaborative writing activity.
- Step 3: Access your group's collaborative document. The group's Initiator should create and share the document.

Step 4: Contribute to your group's collaborative writing assignment:

- Decide on the purpose of the letter.
- Find and share samples of letters to use as models.
- Plan the writing of the letter from beginning to end.
- Carry out the duties of your individual role.

2nd Week of the Assignment:

- Keep working on editing and revising.
- Make sure your collaborative letter meets the criteria stated in the rubric.
- All group members are responsible for reviewing and editing after the letter is complete.
- Remove all comments and notes so the letter is completely clean.

3rd Week of the Assignment

- Hand in the collaborative assignment.
- Hand in the reflection letter.

Suggestion: Once you finish your reflection, we highly recommend that you use www.Grammarly.com to make final revisions to your paper before submitting it.

3.2.2 The Description of Students' Roles

Role 1: Initiator (1 Participant)

As an Initiator, the student has to go to Google Docs and create the document that will be used by all group members in this collaborative writing task and select the option "Anyone on the internet with this link can edit". The document has to be named "Collaborative Letter Writing – Formal or Informal Letter". Then, the student has to share the document link to the group members and course. He has to start this collaborative work by asking all group members to share their opinions about what should be the purpose of the letter and work with all the group members to help them reach a consensus on the purpose of the letter. Later on, he has to ask them to find and share samples of letters to serve as references and contribute by helping keep the group motivated and engaged until this collaborative writing task is finished.

Role 2: Topic Facilitator (1 to 2 Participants)

As a Topic Facilitator, the students has to help the Initiator finalize the group's consensus on the purpose of the letter, encourage brainstorming, share topic suggestions, encourage and track suggestions, and maintain motivation and engagement until the collaborative writing task is completed.

Role 3: Content Facilitator (1 to 3 Participants)

As a Content Facilitator, the students must initiate and share content suggestions with group members, encourage them to share samples of letters as content references, and share their ideas on content, even if not based on samples. They have to keep track of all suggestions and remind them to be related to the chosen purpose of the letter. They also have to provide constructive comments on the relevance of ideas and help connect the group members to the chosen purpose.

Role 4: Outlining Facilitator (1 to 2 Participants)

Outlining Facilitator(s) focus on letter format, including heading, inside address, introduction/salutation, body, closing, and signature.

As an Outlining Facilitator, the student has the responsibility of initiating and sharing outlining suggestions with your group members. He also has to encourage outlining suggestions by sharing samples of letters and ideas on outlining, keeping track of all suggestions, and ensuring they are related to the chosen purpose of the letter. He must work with the group members to reach a consensus on the outline of the letter, and choose one part to draft. He also has to inform all group members and ask them to choose their part, ensuring each member is responsible for drafting it. At the end of the task he has to ask for feedback and contribute by keeping the group motivated and engaged in outlining and drafting until the task is completed.

Role 5: Reviewing and Editing Facilitators

All group members are responsible for this Group Role, in addition to the individual roles each group member chose previously.

As Reviewing & Editing Facilitators, group members have responsibilities to initiate and share suggestions, encourage suggestions, track suggestions, and ensure they are related to the letter's purpose. They should use grading criteria and rubrics to ensure the letter meets the expected criteria and facilitate the group's review and editing. Feedback is essential to keep the group motivated and engaged, and the reviewing and editing process must be completed before the submission deadline. It is crucial to maintain a friendly tone and remind group members that the task must be completed before the deadline to ensure individual reflections are submitted by the due date.

3.2.3 The Evaluation Rubric

The Collaborative Assignment of the Students Was Ggoing to be Evaluated Based on the Following Criteria:

Table 1. The evaluation rubric				
Criteria	Ratings			
Integrating knowledge	6 points Both the reflection letter and the letter of your group must be full. The individual reflection makes clear and logical connections to the concepts such as the connection between technology and writing, collaboration and writing as a process.	3 points	0 points The reflection and/or letter fail to connect with the content introduced in them.	
Completeness	5 points All the required components are included as explained on the assignment sheet. In other words, the individual reflection letter has been written fully.	3 points Some, but not all of the required components are included as explained in the assignment sheet.	0 points The assignment is substantially or fully incomplete.	
Clarity	4 points The individual reflection letter provided detailed answers. The first paragraph of the collaborative letter provides a clear statement of the main purpose of the letter. The following paragraphs include details supporting the main purpose of the letter.	2 points The reflection and/or the letter are partially unclear.	0 points The reflection and/or the letter are substantially unclear.	
Delivery	3 points The whole submission is visually appealing and well-organized. Both the reflection and the letter are well-formatted and well- organized visually and respect the word count (200-350 words). The Google Docs link to the Collaborative Letter has been shared within the deadline.	2 points Visually or organizationally, the reflection and/or the letter leave room for improvement.	0 points The reflection and/or the letter are not organized and/or visually appealing.	

Mechanics	2 points The submission is free of spelling and grammatical errors which obscure meaning. In other words, both the reflection and the letter have been carefully revised; edited and proofread before being submitted and have no grammar or spelling mistakes.	1 points The reflection and/or the letter include spelling and grammatical errors which obscure meaning.	0 points The reflection and/or the letter include substantial spelling and grammatical errors.
Total points	20 points	11 points	0 points

4. The Result of the Study

After students were introduced with the assignment, they were divided into two groups: Group A had to write the Informal letter and Group B had to write the Formal Letter.

The Result of the Group A

First students suggested some ideas concerning the purpose of the letter:

- Thanking someone
- Inviting a friend
- Apologizing to a friend
- Sending a reminder to someone
- Requesting help or information
- Congratulating a friend.
- Wishing someone a speedy recovery or a happy birthday
- Catching up to a friend
- Travel experiences
- Memories about something
- Family updates
- Future plans or invitations

They decided to choose the purpose: Inviting a friend.

Then the suggested the following outline of the letter:

- 1. Greeting: Start with a friendly greeting
- 2. Introduction: Begin by mentioning that you hope your friend is doing well and briefly explain the purpose of your letter
- 3. Event details: Provide the essential details of the party, including the date, time, and location
- 4. Express enthusiasm: Share your excitement and let your friend know how much you would love to have them there

- 5. RSVP: Kindly request your friend to RSVP by a certain date, so you can make necessary arrangements for food, drinks, and other arrangements. Provide your contact information (phone number or email) for them to respond
- 6. Closing: End the letter with a closing remark

Group A's Informal Letter:

Hey, Angela,

Hope this letter finds you in great spirits! How's everything going with you? I can't believe it's almost time for my birthday, and I couldn't imagine celebrating it without you by my side. So, I wanted to personally invite you to join me in the festivities.

I'm throwing a birthday bash that promises to be loads of fun, laughter, and memories. The event will be held on 23 July at 20:00 at D'Angelo. Trust me, you won't want to miss it!

I've planned some exciting activities and games that I know you'll enjoy. We'll have a DJ playing our favorite tunes, a dance floor for all the crazy moves, and of course, a delicious spread of food and drinks. It's going to be a blast, and it won't be the same without your presence.

Please let me know if you can make it, as I need to finalize the guest list and make necessary arrangements. You can RSVP by 21 July. If you need any help with transportation or directions to the venue, just let me know, and I'll be more than happy to assist.

On a side note, since we've been friends for such a long time, I'd love for you to bring along any photos or memories we've shared together. We can reminisce about the good times and create new memories to cherish.

I really hope you can come and celebrate this special day with me. Your presence would mean a lot to me, and it wouldn't be the same without you there. It's going to be an unforgettable evening, and I can't wait to have you by my side.

Looking forward to your positive response. I hope to see you there!

Take care and see you soon.

Warmest wishes, Group A

The Result of the Group B

First students gave some ideas concerning the purpose of the letter:

- 1. Write a Request Letter to the manager for a promotion
- 2. Write a Letter of Interest (job)
- 3. Write an Apology Letter to a client for a wrong order
- 4. Write a Reference Letter for someone who needs to start a job in a company

They all decided to choose option 2: Letter of interest: Applying for a job.

They wrote the following outline of the letter:

Dear Sir/Madam,
-Introduction
A. Where/when post appeared, reason for writing
-Main Body
B. Age, studies/qualifications
C. Work experience
D.Personal characteristics
-Conclusion
E. CV attached, when available for interview, closing remarks
-Yours faithfully, + (your full name)

Group B's Formal Letter:

Dear Mr. Johnson,

I am interested in applying for the programmer position which I saw advertised in the May edition of the magazine ESL Jobs.

I am 27 years old and I feel I have the required qualifications. I have a degree in Computer Programming and I also have a Master Degree in Advanced Algorithms .

I have experience in this job because I have been working as programmer for Oracle company for 3 years. Also I have worked as a private tutor offering online programming courses in the last 4 years.

I consider myself to be a highly motivated individual who works well in a team environment. I am a quick learner, detail-oriented, and I am always looking for ways to improve my skills. I am also an excellent communicator, and I am able to explain complex technical concepts in a way that is easy for others to understand.

I would be very grateful if you would consider my application. I have attached a copy of my CV. If you require any additional information regarding my application, please do not hesitate to contact me on 43422255. I am available for an interview at your convenience.

I look forward to hearing from you.

Yours sincerely, Anna Rossi

1. The Evaluation Rubric for Group A and Group B

After each member of the group A and B handed in the reflection letter and collaborative letters, they were evaluated based on the Evaluation Rubric below:

Criteria	Group A Informal Letter	Group B Formal letter
Integrating knowledge	6 points	6 points
Completeness	5 points	5 points
Clarity	4 points	4 points
Delivery	2 points	3 points
Mechanics	0 points	2 points
Total points	17 points	20 points

Table 2. Evaluation Rubric of Group A and B

Both groups showed responsibility and devotedness in working fir this assignment. They were involved in completing it within the deadline. They all handed the assignment and the reflection letter with the deadline.

Group B gained the maximum of the points: 20 points, which mean that they completed successfully all the criteria.

Whereas Group A gained 17 points in total as their letter had some grammar mistakes:

I need to finalize the guest list and make necessary arrangements – make the necessary arrangement.

On a side note, since we've been friends for **such** a long time, I'd love for you to bring along any photos or memories we've shared **together**. – The word **such** and **together** have to be omitted.

It's going to be an unforgettable evening, and I can't wait to have you by my side. – *Instead of it is going to be* – *it will be.*

Looking forward to your positive response. I hope to see you there! – it must be: Hope to receive a positive reply and see you there!

2. The Results of the Reflection Letters

Reflection letters were written correctly. They all answered the main points which had to be included in them. Students reflected on the way they had worked on the collaborative assignment and they expressed their thoughts on the main concepts such as working collaboratively online in Google Docs and how they improved their skills in writing and technology.

Some examples of students' reflection letters are given below:

My role for this assignment was that of "Content Facilitator." First, I learned to use Google Docs because I had never used that website. Then, I was very precise in completing all my duties as a content facilitator, like sharing samples, encouraging my friends, giving ideas, and providing constructive comments. I tried to be as active as possible and offer my help anytime. I also wrote the first three paragraphs of the formal (job application) letter while following the outline. (Student 1) Based on my experience, I learned to use Google Docs, which I now consider a valuable skill. It is an efficient and fun website. Also, I was very focused on the writing process, using suitable structures, vocabulary, and grammar. In the end, I can say that this assignment helped me to improve my writing and collaborative skills. (Student 2)

Conclusion

Collaborative writing in Higher Education is a great way to involve students working together to create a single document or content, used in various settings like business, academia, creative writing, and online content. Advancements in technology and online collaboration tools make it more accessible and efficient. So, technology is reinforcing the connection between collaborative writing and online tool.

In this study, 14 students from the study programme Bachelor in "English Language" at Fan S. Noli" University, Korca, Albania, took part in a collaborative assignment in Google Docs. They were divided in two groups; group A and B. Group A had to write an informal letter and group B had to write a formal letter.

The results of the study showed that working in Google Docs is great way to make writing a process rather that something that is done for a few minutes.

Students learned how to work in Google Docs and they found it to be an efficient tool for real-time collaborative writing, offering features like collaboration and sharing.

Through this assignment students learned that effective communication is crucial in a collaborative writing, and it is essential to define roles, responsibilities, and expectations from the beginning.

They outlined and planned the letters before diving into the writing, assigning specific sections or tasks to each group member based on their choice or interest. They reviewed and editted the document as a group, ensuring consistency in style, tone, and formatting.

They provided constructive feedback to the group members and tired to be open to receiving feedback.

At the end they conducted a final review to ensure the document is polished and error-free, checking for grammar, spelling, and formatting issues. Later on they publish and shared the completed document to the professor. Students wrote a letter of Reflection where they described their own experience.

Working in Google Docs made the students learn and improve after completing a collaborative writing project by reflecting on what worked well and what could be improved for future collaborations.

References

- Alharbi, M. A. (2019). Exploring the potential of Google Doc in facilitating innovative teaching and learning practices in an EFL writing course. Innovation in Language Learning and Teaching, 1–16.
- Alkhataba, E. H. A., Abdul-Hamid, S., & Ibrahim, B. (2018). Technology-supported online writing: an overview of six major web 2.0 tools for collaborative-online writing. Arab World English Journal, 9(1), 433–446.
- Ardiasih, L. S., & Rasyid, Y. (2019). Online Collaborative Writing Technique Using Wiki: How Effective Is It to Enhance Learners' Essay Writing? Journal of Asia TEFL, 16(2), 531.
- Bakar, N. A., & Som, A. P. M. (2016). A Sociocultural Theory to Learning: Malaysia's Experiences. Man in India, 16(12), 5285–5304.
- Bikowski, D., & Vithanage, R. (2016). Effects of web -based collaborative writing on individual L2 writing development. Language Learning & Technology, 20(1), 79–99.
- Buss, K., & Karnowski, L. (2000). Reading and writing literary genres. International Reading Association.
- Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (2008). Introduction to part IV: Popular culture, community, and citizenship. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), Handbook of research on new literacies (pp. 523-529). New York: Lawrence Erlbaum.
- Davey, B., Bozan, K., Houghton, R., & Parker, K. R. (2016). Alternatives for pragmatic responses to group work problems. Informing Science: The International Journal of an Emerging Transdiscipline, 19, 89-102. Retrieved from http://www.informingscience.org/Publications/3504
- Dizon, G. (2016). A comparative study of Facebook vs. paper -and -pencil writing to improve L2 writing skills. Computer Assisted Language Learning, 29(8), 1249 1258.
- Hadjerrouit, S. (2011). A collaborative writing approach to Wikis: Design, implementation, and evaluation. Issues in Informing Science and Information Technology, 8, 431-449. Retrieved from https://brage.bibsys.no/xmlui/bitstream/handle/11250/137909/Hadjerrouit_2011_Coll aborative.pdf?se quence=1&isAllowed=y
- Liu, S. H. J., & Lan, Y. J. (2016). Social constructivist approach to web-based EFL learning: Collaboration, motivation, and perception on the use of Google Docs. Educational Technology & Society, 19, 171–186. Retrieved from http://www.jstor.org/stable/jeductechsoci.19.1.171
- Lundstrom, K., & Baker, W. (2009). To give is better than to receive: The benefits of peer review to the reviewer"s own writing. Journal of Second Language Writing, 18, 30 43.

- Nagin, C. (2012). Because writing matters: Improving student writing in our schools. John Wiley & Sons.
- Seyyedrezaie, Z. S., Ghonsooly, B., Shahriari, H., & Fatemi, H. H. (2016). Mixed methods analysis of the effect of Google Docs environment on EFL Learners' writing performance and causal attributions for success and failure. Turkish Online Journal of Distance Education (TOJDE), 17, 90-110. Retrieved from http://dergipark.ulakbim.gov.tr/tojde/article/viewFile/5000196874/5000170473
- Strobl, C. (2013). Affordances of Web 2.0 technologies for collaborative advanced writing in a foreign language. Calico Journal, 31(1), 1–18.
- Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using Google Docs on students' writing abilities. The Turkish Online Journal of Educational Technology TOJET, 13, 148-156.
- Yu, S., & Lee, I. (2016). Peer feedback in second language writing (2005 -2014). Language Teaching, 49(4), 461 –493.
- Zhou, W., Simpson, E., & Domizi, D. P. (2012). Google docs in an out-of-class collaborative writing activity. International Journal of Teaching and Learning in Higher Education, 24, 359-375. Retrieved from http://files.eric.ed.gov/fulltext/EJ1000688.pdf

Contact email: dkonomi@unkorce.edu.al