



An Analysis of Creativity, Critical Thinking, Communication, and Collaboration Skills in the G.C.E. (Advanced Level) General English Textbook in Sri Lanka

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Abstract

The Advanced Level General English (GE) Course in Sri Lanka aims to prepare students for success in higher education, work, and social life. To achieve this objective, it is necessary to equip students with “21st century skills” in addition to language skills. A crucial factor that determines the success of the programme is the teaching material. The Advanced Level GE textbook is the primary teaching material for the GE course in schools nationwide. This study explored the representation of 21st century skills in this textbook by employing Qualitative Content Analysis (QCA) to systematically categorize and evaluate instances of 21st century-related activities and discussions within the textbook. Although the study investigated twelve 21st century skills, in this paper, we focus on the 4Cs (Creativity, Critical Thinking, Communication, Collaboration). The results indicate that although the 4Cs were the most visible skills and constituted the majority of occurrences (85.27%), some important aspects or subskills were not adequately represented. In addition to other outcomes, the presentation will mainly contribute to English Language teaching material development and evaluation at both policy and implementation levels.

Keywords: 21st century skills; English Language Teaching (ELT); General English (GE); Textbook; Qualitative Content Analysis (QCA)

Introduction

Despite efforts in English language teaching, students in Sri Lanka consistently perform poorly in English language examinations (Department of Examinations, 2016-2021), and their proficiency remains inadequate (Wijesekera, 2011/12), which impacts their higher education and employment opportunities. For instance, Fonseka (2009) who studied the English proficiency of university entrants found that the language competencies of the majority of students were far from adequate. Furthermore, Brunfaut and Green's (2019) study of 21 employment sectors in Sri Lanka identified significant deficiencies in the productive language abilities of employees. The employment struggle is exacerbated by the lack of 21st century skills among graduates. 21st century skills can be described as the range of competencies and skills required to succeed in education, employment, and social life in the 21st century, and Youth with the necessary technical and academic qualifications often lack these skills (Asian Development Bank & the International Labor Organization, 2017).

Moreover, the national educational goals of Sri Lanka emphasize the development of 21st century skills, which is a pathway towards achieving Sustainable Development Goals, making their integration in core subjects such as English crucial. Thus, there is a need to move beyond traditional language teaching and incorporate teaching-learning of 21st century skills in

the language classroom. Empirical research reveals that these skills will, in turn, improve language skills (Motallebzadeh et al., 2018). Since textbooks are the primary material in the English language classroom, it is necessary to study the integration of 21st century skills in them. While numerous studies have been conducted on English language textbooks used in Sri Lanka, no studies have been conducted thus far on the integration of 21st century skills or the current GE textbook published in 2017, to the best of our knowledge. Therefore, this study has evaluated the GE textbook from the perspective of 21st century skills, in order to contribute to the existing literature and mainly to provide insights to policy makers, curriculum designers, and material developers regarding the content of the textbook in relation to 21st century skills, shed light on the significance of integrating these skills in the English language classroom, and lay the foundation for further research.

Materials and Methods

The study utilized Qualitative Content Analysis (QCA) that combines quantitative and qualitative techniques (Schreier, 2012) to answer the research question: To what extent have 21st century skills been incorporated into the GE Textbook prescribed for General Certificate of Education Advanced Level (GCE A/L) classes in Sri Lankan government schools? The sub research questions were:

1. What specific 21st century skills are identified in the A/L GE textbook?
2. To what extent are these identified skills addressed within the A/L GE textbook?
3. How comprehensively does the A/L GE textbook include the subskills or subcategories associated with each 21st century skill?

QCA was chosen as the research method as it helps reduce textual data by classifying it into categories, and follows content-analytical rules, ensuring all parts of the material are examined while allowing for the tailoring of the coding frame to suit the research question. Furthermore, double coding provides

explicit and transparent results. Additionally, by combining quantitative and qualitative analysis, QCA can answer the research questions more comprehensively. The qualitative analysis helped identify the 21st century skills and the sub-skills included in the textbook through descriptive analysis. The quantitative analysis helped identify the number of activities that promote the required skills and primarily consisted of frequency counts and percentages of the whole. The primary instrument was the researcher, and two co-coders took part in analysis as well to ensure reliability, as double coding is the most prevalent reliability test in QCA, involving inter-coder agreement (Schreier, 2012).

$$\text{Percentage of agreement} = \frac{\text{Number of units of coding on which the coders agree}}{\text{Total number of units of coding}} \times 100$$

The final inter-coder percentages of agreement between the researcher and co-coder 1 and co-coder 2 were 91.7% and 92.8% respectively. A coding frame was the secondary instrument. The initial coding frame included 12 skills derived in a concept-driven (the codes are constructed from existing theoretical and empirical frameworks or based on the research questions) method, and 57 subskills derived in concept-driven and data-driven (the codes are derived from the data) methods (Schreier, 2012). The concept-driven categories and subcategories of the coding frame were developed by reviewing the national curriculum and existing 21st century skills frameworks. The Partnership for 21st Century Learning (P21) and the Assessment and Teaching of 21st Century Skills (ATC21S) were the primary frameworks used, as they are the most widely adopted 21st century skills frameworks in education and provide detailed definitions and descriptions (Griffin & Care, 2015; Partnership for 21st Century Learning, 2019). Following the segmentation of the textbook into coding units using thematic criteria (using changes of topic to separate the coding units), two pilot studies were conducted, and the coding frame was modified accordingly. The final coding frame with 12 skills and 47 subskills was used for the main analysis. A codebook with the names of the

categories and subcategories, detailed descriptions of the subcategories as well as examples of activities was developed and used for the analysis to ensure the reliable use of codes by the coders.

Results and Discussion

The findings are presented in relation to the 3 sub-research questions and the 4Cs.

21st Century Skills Included in the Textbook

1052 coding units or occurrences of 21st century skills were identified in the textbook in total. Answering the sub-research question 1, the analysis shows that all 4C skills are included in the textbook and constitute the majority (85.27% of the total coding units/ 897 out of 1052) of all 12 skills studied.

Table 1. Inclusion of 4C Skills in the Lessons

	Creativity	Critical Thinking	Communication	Collaboration
Lesson 1	17	36	60	34
Lesson 2	7	44	64	37
Lesson 3	4	22	29	17
Lesson 4	5	17	54	24
Lesson 5	5	28	39	21
Lesson 6	4	46	37	21
Lesson 7	11	43	58	33
Lesson 8	2	30	35	13

From the above table, it can be seen that all the 4C skills are included in all lessons.

The Distribution of 21st Century Skills

This section discusses the extent each skill is addressed in the textbook.

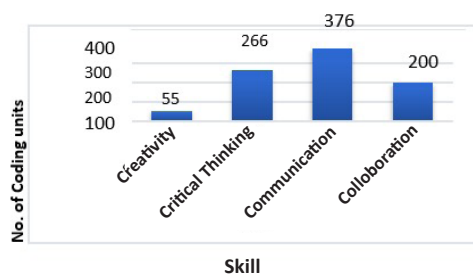


Figure 1. Distribution of 21st Century Skills

Communication is the most prominent skill, making up 35.74% of the total coding units, followed by Critical Thinking (25.29%), Collaboration (19.01%), and 'Creativity' (5.23%).

Subcategories of 21st Century Skills

The sub research question "To what extent does the A/L GE textbook include the subskills or subcategories of the 21st century skills?" is answered in this section.

Creativity

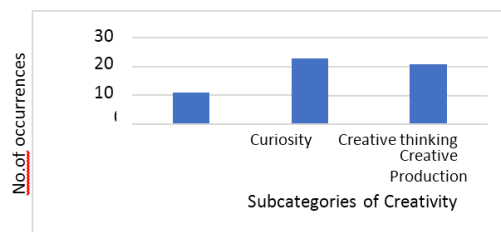


Figure 2. Distribution of the Subcategories of Creativity

Creative Thinking has the highest number of occurrences (41.82% of the total coding units under Creativity), followed by *Creative Production* (38.18%), and *Curiosity* (20%).

Creative Thinking activities involve using imagination, different thinking styles, and idea-creation techniques. However, most activities focus on imagination concerning role-playing, whereas it would be advantageous to present more complex scenarios. Furthermore, idea-creation techniques such as brainstorming and mind mapping are not evident as well.

Creative Production involves the creation of original products, performances, or processes. Examples include writing stories and verses which help develop general creativity and creativity in language use and role-playing as a tool for developing creative use of language (Russ, 2016).

The activities under *Curiosity* are concerned with a desire to explore, learn something or fill gaps in knowledge. One such activity requires students to ask questions after presentations. However, the questions focus on finding information, while "What if...?" and "Why...?" questions that encourage creativity are not evident.

In summary, while the *Creative Production* activities are suitable for enhancing Creativity, incorporating more activities related to *Curiosity* and *Creative Thinking* would motivate students to delve deeper,

generate more innovative ideas, resulting in further development of the skill.

Critical Thinking & Problem Solving

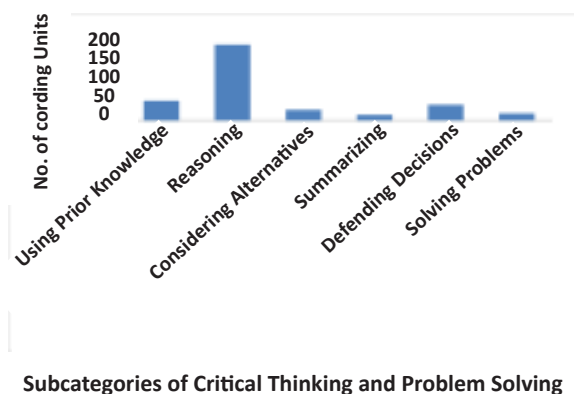


Figure 3. Distribution of the Subcategories of Critical Thinking and Problem Solving

Reasoning activities are the most evident (56.39% of the total activities representing the skill), followed by *Using Prior Knowledge* (14.66%), *Defending Decisions* (11.65%), *Considering Alternatives* (7.89%), *Solving Problems* (5.26%), and *Summarizing* (4.14%). *Reasoning* involves making connections and using different types of reasoning to make inferences, forecasts, decisions, judgments, and identify trends. For example, following a reading activity on crime reports, students are asked to think of reasons for these crimes. Another type of activity is making judgments and selecting the “best” or “most” option. Such activities help students develop higher order thinking skills.

Using Prior Knowledge involves utilising previously acquired knowledge as context for new learning and making real-world connections. For example, the lesson on emails requires students to think about how they keep in touch with family and friends in the pre-reading activity. Such activities activate the schema and help students make connections between their learning and the world, making learning more meaningful and long-term.

Defending Decisions involve developing persuasive arguments based on supporting evidence or reasoning and explaining decision making. For instance, following questions related to making decisions, students are asked to give reasons for their

decisions. These types of activities help students develop higher order thinking skills, understand prejudices and biases, and make rational decisions.

Considering Alternatives involves comparing information from different sources or analysing competing arguments/perspectives, or solutions to a problem. Related activities include debating and considering different interpretations for phrases or diagrams. A key step in the ‘evaluating’ stage of the revised Bloom’s taxonomy (Krathwohl, 2002), it is essential for education and living in a society.

Solving Problems is related to developing solutions to complex, open-ended questions or problems. For example, one activity requires students to help their friends deal with cyberbullying. Such activities are relatable and encourage meaningful communication.

Summarizing activities involve students creating their own interpretation of what they have read, listened to, or been taught. For example, students read short descriptions of laws in different countries and summarize each law. Cognitive processes in the ‘understand’ category include summarizing (Krathwohl, 2002), and such activities help build higher order critical thinking skills.

Overall, all subcategories of ‘Critical Thinking’, are evident and the activities are suitable for encouraging critical thinking practices.

Communication

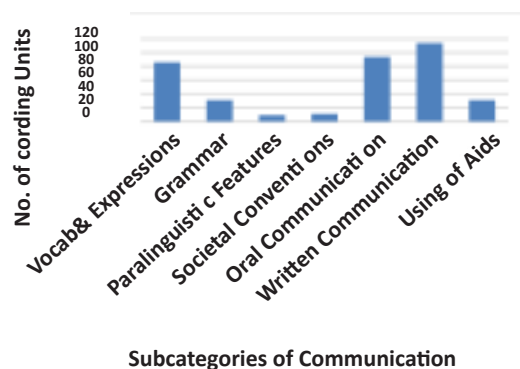


Figure 4. Distribution of the Subcategories of Communication

Written Communication is the most visible subcategory (30.32% of the total number of coding units representing the skill), followed by *Oral Communication* (25.00%), *Vocabulary and*

Expressions (22.87%), *Using Aids* (8.18%), *Grammar* (8.18%), *Social and Cultural Aspects* (2.93%) and *Paralinguistic Features* (2.39%).

Written Communication includes writing different types of texts and reading and understanding different texts. Writing and reading tasks include writing/ reading essays, verses, dialogues, short descriptions, summaries, formal and informal letters and emails, and writing in point form. One notable omission is academic (scholarly essays, research papers, dissertations) writing and reading tasks. It is necessary to include relevant tasks to expose learners to the conventions of academic writing and foster critical reading skills before they transition to tertiary education.

Oral Communication includes the articulation of thoughts/ ideas clearly and understanding spoken messages in a variety of communicative situations. Speaking activities in the textbook include presentations, debates, role plays, mini dramas, and dialogues. Additionally, there are 14 non-participatory listening tasks. However, the total number of listening activities is low.

Moreover, since academic listening skills differ from conversational listening skills, such tasks should be included as well.

Vocabulary & Expressions involve knowledge of words, phrases, and expressions. An example is matching words and meanings. By explicitly teaching keywords in pre- reading/ listening activities, students are provided with scaffolding to improve their understanding of the text. Furthermore, some activities provide useful language structures and sentence frames that aid students with output, help them focus on the content, and develop fluency and accuracy.

Using Aids activities involve the use of notes, schemes, maps, tables, graphs and charts to produce, present, or understand texts. For example, students are tasked with reading job advertisements and including all the essential details on a table. Most of the activities involve using tables, and notes. A notable omission is

the use of charts and graphs.

Grammar activities involve knowledge of functional grammar, which is important for improving coherence in communication. Grammar points are mostly linked to the unit's content. Presenting grammar in a suitable context aligns with the principle that "appropriate grammatical choices can only be made with reference to the context and purpose of the communication" (Nunan, 1998, p.102). However, there are activities where grammar is presented without proper context, and thus, their usefulness in improving communication skills is questionable.

Societal Conventions and Cultural Aspects are concerned with the variability of language in different geographical, social, and communication environments. For example, one of the activities deals with the different varieties of English in the world. Such tasks, though appropriate, are limited in number.

Paralinguistic Features involves the use of aspects such as voice quality, facial expressions, and postural/ gesture systems. The number of activities that explicitly address this subcategory is very low. Since paralinguistic features or non- verbal communication constitute the majority of communication and are part of culture and language (British Council, n.d), it is essential to include more related activities in the textbook.

In summary, the activities in *Written Communication* and *Oral Communication* covered various settings and purposes, promoting students' grammatical and discourse competence. However, the lack of activities related to academic communication can be considered a significant drawback since one of the objectives of the GE course is to prepare students for higher education. The visibility of *Societal Conventions and Cultural Aspects*, and *Paralinguistic Features of Communication* was comparatively low, representing further limitations as these are important for developing socio-linguistic competence and strategic competence respectively, which are important aspects of effective communication.

Collaboration

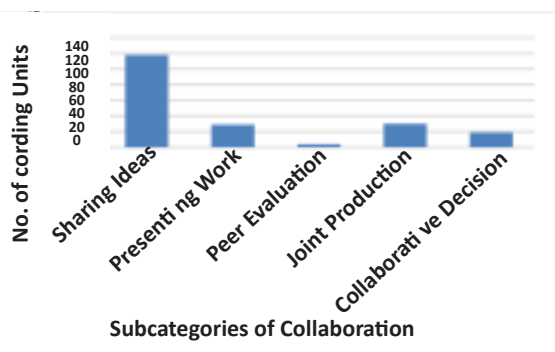


Figure 5. Distribution of the Subcategories of Collaboration

Sharing Ideas constitute the majority (59% of all coding units under Collaboration), followed by *Joint Production* (15.00%), *Presenting Work* (14.50%), *Collaborative Decision Making* (9.50%), and *Peer Evaluation* (2.00%).

Sharing Ideas involves pair or small group discussions and the contribution of ideas, information, and efforts, to complete a task. Based on the Think–Pair–Share (TPS) strategy, working in pairs/ small groups reduces anxiety, resulting in higher volunteered sharing (Mundelsee & Surkowski, 2021).

Joint Production involves students working together to produce mini dramas, skits, poems/verses and presentations. An example of an activity is working in small groups to dramatize a given story. Such activities increase accuracy, student motivation, confidence, speaking skills, vocabulary and interpersonal skills (Mardiani & Hanifah, 2022).

Presenting Work allows students to share the outcome of their work with others. An example activity is having a mini exhibition in school. Knowing their work will be shared with others increases student motivation, engagement, responsibility and confidence, resulting in more meaningful, high quality and authentic work (Walton, 2019).

Collaborative Decision Making involves making decisions or solving problems as a pair/group such as selecting the most suitable job for a group member. Such activities encourage discussion and focus on agreement, and in the process, help develop language and social skills.

Peer Evaluation involves giving feedback or assessing

other students' work. Peer assessment helps students gain a better understanding of the assessment criteria and improve their own work, and performance in examinations. However, despite the social, cognitive and linguistic advantages of peer evaluation, it has not been fully utilized.

Overall, although 'Collaboration' as a skill seems to have been given a lot of prominence, it was observed that important task elements such as clearly defined roles, subtasks and assessment criteria were not evident in the textbook. Furthermore, important aspects of collaboration such as negotiation skills, conflict resolution skills, responsibility, and being respectful to others were not explicitly mentioned or taught. Consequently, the benefits of collaborative learning may not be fully realized.

Conclusion

Although the 4C skills were highly visible in the textbook, the visibility of some subskills was low. In 'Creativity', tasks that promote curiosity, and the use of different types of thinking and idea creation techniques were lacking. 'Critical Thinking' was well represented with age and level appropriate tasks. In 'Communication', written and oral communication were well represented.

However, tasks related to academic communication were limited. The subcategories *Societal Conventions and Cultural Aspects*, and *Paralinguistic Features of Communication* were not sufficiently represented. The presentation of grammar points without a proper context in some lesson units was another limitation.

'Collaboration' as a category was represented adequately. However, the use of peer evaluation was limited, and the design of collaborative tasks lacked several important aspects. Therefore, revising the textbook to address these limitations would enhance the effectiveness of the textbook in promoting the development of 21st century skills among A/L students. Similarly, incorporating age and level-appropriate activities that promote 21st century skills in English Language textbooks used in lower grades by would be beneficial. Hence, the implications of

these findings are vital for English Language teaching in all contexts: primary, secondary and tertiary; educational policy and curriculum design, course/material writing to advocate a shift towards SGD goals which are to be achieved through education.

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References

- Asian Development Bank & International Labour Organization. (2017). *Sri Lanka - Fostering Workforce Skills through Education: Employment Diagnostic Study*. <https://www.adb.org/sites/default/files/publication/382296/sri-lanka-employment-diagnostic.pdf>
- British Council (n.d). Non-verbal Communication. <https://www.teachingenglish.org.uk/professional-development/teachers/inclusive-practices/articles/non-verbal-communication>
- Brunfaut, T., & Green, R. (2019). *English and Employability in Sri Lanka*. British Council. https://www.britishcouncil.lk/sites/default/files/elassess_output_1_english_and_employability_in_sri_lanka_brunfautgreen.pdf
- Department of Examinations, (2016- 2021). *Statistics and School Performance Indices*. <https://www.doenets.lk/statistics>
- Educational Publications Department. (2017). *General English*. Education Publications Department.
- Griffin, P. & Care, E. (eds.). (2015). *Assessment and Teaching of 21st Century Skills: Methods and Approach*. Springer.
- Krathwohl, D.R. (2002). A Revision of Bloom's Taxonomy: An Overview, *Theory into Practice*, 41(4), 212-218.
- Mardiani, R. & Hanifah, M. (2022). Enhancing English Language Skills through a Collaborative Drama Project. *Athens Journal of Education*, 10, 1-18.
- Motallebzadeh, K., Ahmadi, F. & Hosseinnia, M. (2018). Relationship between 21st Century Skills, Speaking and Writing Skills: A Structural Equation Modelling Approach. *International Journal of Instruction*, 11 (3), 265-276.
- Mundelsee, L, & Surkowski, S. (2021). Think and pair before share: Effects of collaboration on students' in-class participation, *Learning and Individual Differences*, 88.
- National Education Commission. (2022). National Education Policy Framework (2020-2030). http://nec.gov.lk/wp-content/uploads/2022/10/NATIONAL-EDUCATION-POLICY-FRAMEWORK-2020-2030_Full-Text.pdf
- Partnership for 21st Century Learning. (2019). *Framework for 21st Century Learning Definitions*. http://static.battelleforkids.org/documents/p21/P21_Framework_DefinitionsBfK.pdf
- Russ, S. W. (2016). Pretend Play: Antecedent of Adult Creativity. Perspectives on creativity development. *New Directions for Child and Adolescent Development*. 2016(151), 21-32.
- Schreier, M. (2012). *Qualitative content analysis in practice*. Sage.
- Walton, J. (2019). *8 Reasons Why Students Should Share Their Work*. <https://www.gettingsmart.com/2019/02/04/eight-reasons-why-students-should-share-their-work/>
- Wijesekera, H. D. (2011/2012). Dreams deferred: English language teaching in Sri Lanka. *Journal of Humanities & Social Sciences*, 7/8, 16-26.