

Application of Constructive Alignment (CA): An Actualization Case from Secondary Level EFL Learning in Bangladesh

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Abstract

To ensure validity and reliability of an EFL program, it is necessary to ensure that the program teaches what it has intended to teach and tests what it has taught. In the Competency-Based Education system; a backward design tradition in EFL learning, intended learning outcomes are determined first, following which materials and assessment-tasks are designed. To ensure that the EFL material (textbook) that is going to be used and the assessment-tasks adapted to assess the achievement of the intended learning outcomes align with the curriculum objectives, Constructive Alignment (CA) can be applied, especially in the context of Bangladesh, where at the secondary level (class six) competency-based curriculum had been previously adopted (though aborted now). Such alignment helps to better understand and apply the curriculum objectives in the field of EFL learning, as the aligned learning materials can credibly account for the desired learning outcomes. This qualitative paper uses document analysis methodology to show that Constructive Alignment (CA), by employing the verbs found at the various levels of Bloom's taxonomy and Structure of Observed Learning Outcomes aka SOLO taxonomy, helps in actualizing intended learning outcomes by incorporating the verbs found in the teaching-learning activities (TLAs) provided in the textbook and the assessment-tasks (ATs) used to assess the achievement of desired curriculum objectives. Hence, this paper shows that Constructive Alignment can be applied to evaluate actualization of the curriculum objectives at the secondary level (class six) EFL program in Bangladesh and finds that TLAs, ATs and curriculum objectives are constructively aligned.

Keywords: Assessment-Tasks (ATs), Bloom's Taxonomy, Constructive Alignment (CA), Curriculum Objectives, SOLO (Structure of Observed Learning Outcomes) Taxonomy, Teaching-Learning Activities (TLAs)

Introduction

The term Constructive Alignment (CA) was first coined by John Biggs in 1994 (though the idea of CA was first proposed by Ralph Tyler), where the term 'Constructive' came from constructive theory that depicts learners as users of activity to construct their knowledge interpreted through their existing schemata, and 'Alignment' came from curriculum theory depicting that assessment tasks (ATs) should be aligned with what is intended to be learned (Biggs & Tang, 2011,

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p.97). Hence, Constructive Alignment (CA) refers to the knowledge constructed by the activities of the learners, which is achieved by the alignment of curriculum objectives with TLAs and ATs. In Bangladesh, by adopting the National Curriculum Framework 2021 Pre-Primary to Grade 12 a textbook had been designed for the learners of sixth grade (English Class Six, for Academic year 2023 which is now no more in use) based on Competency-Based Education system by NCTB (National Curriculum and Textbook Board) following the curriculum objectives of achieving-linguistic rules, interpretability, clarity of expression, contextual understanding, cultural awareness, democratic attitude, and Intercultural Communicative Competence (ICC) (NCTB, 2021, p.41). According to the stated information, the current paper shows, Constructive Alignment (CA) can be applied to categorize and match curriculum objectives with TLAs and ATs to evaluate actualization of the curriculum objectives in respect to TLAs and ATs at the secondary level (class six), by using the textbook of grade six (for TLAs), 1st Summative (Half Yearly) Assessment Guideline for Grade and practice questions found in the guidebook of English Dakhil Class Six (for ATs), and curriculum objectives that the secondary level (class six) EFL program follows.

Objectives of the Study

General Objective: Constructive Alignment (CA) can be applied at the secondary level EFL program (class six) in Bangladesh.

Specific Objectives:

1. This paper categorizes and matches terms/verbs used in curriculum objectives with verbs of TLAs and ATs to indicate application of Constructive Alignment (CA) at the secondary level (class six) in Bangladesh.
2. This paper shows that Constructive Alignment (CA) of curriculum objectives, TLAs, and ATs ensures actualization of the curriculum objectives at the secondary level (class six) in Bangladesh.

Research Questions

R.Q.1. The main focus of this paper is the application of CA at the secondary level (class six) in Bangladesh. Now the question arises, can CA be effectively applied in the desired level?

R.Q.2. This paper shows actualization of curriculum objectives by applying CA that arises the question, can curriculum objectives be properly actualized in TLAs and ATs?

Theoretical Framework

Constructive Alignment (CA)

The idea of CA is first proposed by Ralph Tyler in his Basic principles of curriculum and instruction by four questions-

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained? (Tyler, 1949, p. 1)

For Tyler curriculum objectives are useful, only when they identify necessary behaviours to be developed and the life-event where these behaviours are needed to operate. He has stated,

Learning takes place through the active behaviour of the student: it is what he (sic) does that he learns, not what the teacher does. (Tyler, 1949, p. 63).

Thomas Shuell has restated Tyler as,
what the student does is actually more important in determining what is learned than what the teacher does. (Shuell, 1986, p. 429).

McMahon and Thakore (2006, p.17) have identified the advantages of CA as following-

- Greater standardization leading to fairer and more reliable assessment.
- Greater transparency leading to easier and accurate comparisons and students being able to effectively focus on the key learning goals.
- More effective evaluation of both modules and courses: given the outcomes, an evaluator can estimate how well teaching and learning strategies are supporting students to learn.
- Greater coherence in learning programs.
- Increases criticality and depth of student work.

John Biggs and Catherine Tang (2011, p. 100) have described four prototypical stages of constructive alignment in teaching and assessment procedures of a course-

1. Describe the intended learning outcomes (ILOs) in the forms of verb (learning activity), its objects (the content) and specify the context and a standard the students are to attain;
2. Create a learning environment using teaching/learning activities (TLAs) that address that verb and therefore are likely to bring out the intended outcome;

3. Use assessment tasks (ATs) that also contain that verb, thus enabling you to judge with the help of rubrics and how well students' performances meet the criteria;
4. Transform these judgements into standard grading criteria.

Consequently, CA becomes a procedure of aligning curriculum objectives' verbs with the verbs of TLAs and ATs to achieve the intended learning outcomes at all the levels of an education system.

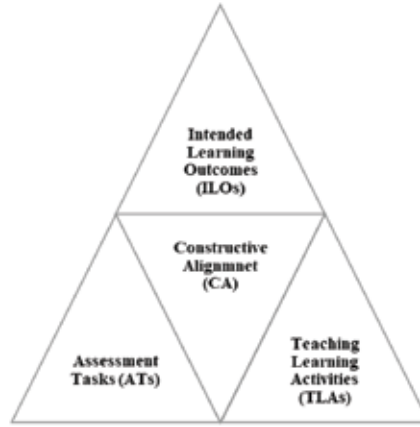


Figure 1: Biggs' Constructive Alignment in Education System

Bloom's Taxonomy

Benjamin Bloom et al. (1956) have categorized ILOs aka curriculum objectives specifying three domains of human learning- cognitive, affective, and psychomotor, where cognitive domain has six levels developing one after another-

1. Knowledge refers to remembering specific ideas, terms, materials, abstraction, and phenomena by recognition and recall.
Verbs: Define, describe, find, list, name, match, quote, recall, recite, write.
Examples: The secondary level (class six) EFL program- Curriculum objective Linguistic norms are part of knowledge, as they require remembering various grammatical rules;
TLA-1.1 from Lesson-1 (Talking to People) of the textbook is part of knowledge, as it requires remembering information about one's own family;
AT-2 from the Practice-01 of Practice Items of the Dakhil Guide of class six is part of knowledge, as it requires information to be memorized and remembered.
2. Comprehension refers to understanding the literal meaning of a message in a communication without necessarily relating it to other material.

Verbs: Classify, interpret, locate, translate, predict, identify, explain, discuss, compare, demonstrate, exemplify.

Examples: The secondary level (class six) EFL program-

Curriculum objective Contextual understanding is part of comprehension, as it requires literal understanding of a situation;

TLA-1.2 from Lesson-1 (Talking to People) of the textbook is part of comprehension, as it requires understanding a picture given and predicting answers of some questions;

AT-4 from the Practice-02 of Practice Items of the Dakhil Guide of class six is part of comprehension, as it requires understanding meaning of some given words in the provided context.

3. Application refers to using previously learned materials in new situations.

Verbs: Apply, use, change, dramatize, interview, prepare, practice, implement.

Examples: The secondary level (class six) EFL program-

Curriculum objective Democratic practice is part of application, as it requires using previously learned norms in practicing democracy;

TLA-1.11 from Lesson-1 (Talking to People) of the textbook is part of application, as it requires predicting an illustration and reaching a conclusion in groups;

AT-4 from the Practice-01 of Practice Items of the Dakhil Guide of class six is part of application, as it requires application of the rules on article.

4. Analysis refers to breaking-down materials into parts to detect their relationships and order.

Verbs: Analyse, characterize, classify, compare, contrast, deduce, differentiate, discriminate, distinguish, criticize, solve, debate.

Examples: The secondary level (class six) EFL program-

Curriculum objective Cultural awareness is part of analysis, as it requires analysis of the acquired knowledge to detect their relationship and order in real life situation;

TLA-1.3 from Lesson-1 (Talking to People) of the textbook is part of analysis, as it requires analysis of formal and informal expressions in their actual context;

AT-3 from the Practice-01 of Practice Items of the Dakhil Guide of class six is part of analysis, as it requires analysis of the rhyming words.

5. Synthesis refers to putting elements or parts together to form a whole.

Verbs: Compose, formulate, arrange, construct, perform, plan, produce, create, hypothesize.

Examples: The secondary level (class six) EFL program-

Curriculum objective Creative expression is part of synthesis, as it requires

creative practices;

TLA-1.7 from Lesson-1 (Talking to People) of the textbook is part of synthesis, as it requires composing and performing a conversation in a given situation; AT-2 from the Practice-03 of Practice Items of the Dakhil Guide of class six is part of synthesis, as it requires rearranging sentences to compose a meaningful story.

- 6. Evaluation refers to making judgement about values, ideas, works, solutions, methods, etc.

Verbs: Evaluate, appraise, argue, justify, judge, critique, decide, conclude.

Examples: The secondary level (class six) EFL program-

Curriculum objective Intercultural Communicative Competence (ICC) is part of evaluation, as it requires evaluation of cultures for gaining critical insight;

TLA-5.9 from Lesson-5 (Together We are a Family) of the textbook is part of evaluation, as it requires justification of performing household chores by all the members of a family;

Final AT of 1st Summative (Half Yearly) Assessment Guideline for Grade is part of evaluation, as it requires submitting an assignment after reviewing and rewriting it.

In competency-based curriculum Bloom's taxonomy is usually inductively approached by flipping the stages.

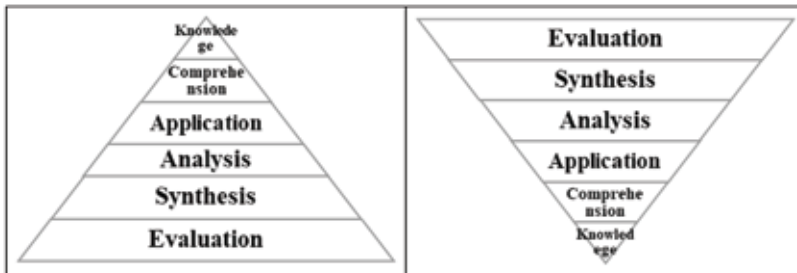


Figure 2: Flipped Bloom's Taxonomy

SOLO Taxonomy

Structure of Observed Learning Outcomes aka SOLO taxonomy was developed by John Biggs and Kevin Collis in 1982 defining the complexity of learners' thinking and understanding from unistructural and multistructural quantitative levels to relational and extended abstract qualitative levels. It offers a structured outline for learners to use to determine their present level to engage in increasingly complex activities-tasks to develop understanding and succeed in examination as shown in figure 3. It enables educators in realizing how learners

actually achieve the ILOs. It has five levels as following-

1. Prestructural Level refers to minimal thinking and lack of understanding.
Verbs: Identify, memorize, recall.
2. Unistructural Level refers to isolated singular disciplinary knowledge with limited understanding.
Verbs: Identify, memorize, recall, recognize, find, write, match, quote.
Examples: The secondary level (class six) EFL program-
Curriculum objective Linguistic norms are part of unistructural level, as they require remembering various grammatical rules;
TLA-1.1 from Lesson-1 (Talking to People) of the textbook is part of unistructural level, as it requires remembering information about one's own family;
AT-2 from the Practice-01 of Practice Items of the Dakhil Guide of class six is part of unistructural level, as it requires information to be memorized and remembered.
3. Multistructural Level refers to increase in knowledge without any coherence.
Verbs: Classify, describe, discuss, narrate, sequence, illustrate, list.
Examples: The secondary level (class six) EFL program-
Curriculum objective Contextual understanding is part of multistructural level, as it requires literal description of a situation;
TLA-1.2 from Lesson-1 (Talking to People) of the textbook is part of multistructural level, as it requires narrating a picture given and discussing answers of some questions;
AT-4 from the Practice-02 of Practice Items of the Dakhil Guide of class six is part of multistructural level, as it requires describing meaning of some given words in the provided context.
4. Relational Level refers to complex thinking, where multistructural level becomes a coherent whole by manifesting relationships between facts.
Verbs: Apply, analyse, explain, predict, argue, review, transfer, characterize, predict, compare, contrast, differentiate, organize, construct, review and rewrite, examine.
Examples: The secondary level (class six) EFL program-
Curriculum objective Intercultural Communicative Competence (ICC) is part of relational level, as it requires analysis of cultures for gaining critical insight;
TLA-5.9 from Lesson-5 (Together We are a Family) of the textbook is part of relational level, as it explains the reasons why every-members of the family should perform household-chores;

Final AT of 1st Summative (Half Yearly) Assessment Guideline for Grade is part of relational level, as it requires reviewing and rewriting an assignment before submitting it.

- Extended Abstract refers to extrapolating and hypothesizing beyond given context by exhibiting the ability to apply coherent knowledge to new and abstract situations.

Verbs: Theorize, hypothesize, generalize, reflect, create, compose, invent, originate, solve unseen problems.

Examples: The secondary level (class six) EFL program-

Curriculum objective Creative expression is part of extended abstract, as it requires creative practices;

TLA-1.7 from Lesson-1 (Talking to People) of the textbook is part of extended abstract, as it requires composing and performing a conversation in a given situation;

AT-4 from the Practice-06 of Practice Items of the Dakhil Guide of class six is part of extended abstract, as it requires theorizing different of given expressions.

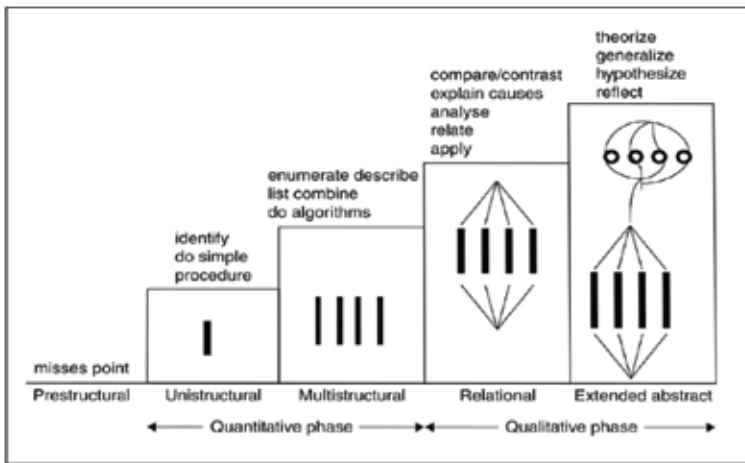


Figure 3: Hierarchy of Verbs in SOLO Taxonomy (Biggs, 2011, p. 91)

Both of these taxonomies facilitate in designing curriculum objectives. However, Bloom’s taxonomy is content-oriented that classify curriculum objectives (i.e. Intended Learning Outcomes) hierarchically, and SOLO taxonomy is learner-oriented (i.e. Observed Learning Outcomes) based on learners’ achievements. To constructively align curriculum objectives with TLAs and ATs, both of these taxonomies’ concepts and verbs are used to ensure more reliability.

Literature Review

Biggs (1996) has proposed a marriage between constructivism (learners' activities in creating meaning) and instructional design (alignment between the objectives of a course or unit and the targets for assessing student performance). He coined the term Constructive Alignment, wherein curriculum objectives are accurately reflected in the teaching-learning activities, and assessment outcomes indicate the extent to which these objectives are achieved. Consequently, this approach contributes significantly to professional development in educational psychology for teachers. Moreover, it can be generalized across various programs in higher education.

In a similar vein, Saeed and Rashid (2014) aligned the chemistry curriculum with textbooks at the secondary level (grades nine and ten) in Pakistan by employing the Curriculum-Textbook Alignment Rubric (CTAR) and Curriculum-Textbook Alignment Checklist (CTAC), both developed and validated through expert opinion. Their findings revealed discrepancies between curriculum objectives and textbook content. Therefore, they recommended that curriculum developers and textbook authors ensure better alignment between curriculum, textbook content, and assessment tasks to effectively achieve the intended learning outcomes.

Likewise, Higgins et al. (2017) evaluated the learning experience of level 5 (year 2) medical students engaged in a research-informed teaching (RiT) activity. They mapped the findings against learning outcomes and level descriptors using the constructive alignment framework. Their analysis supported integrating RiT into the curriculum to develop students' learning and research skills. However, they also identified a need to revise the activity for better alignment with level 5 descriptors and to incorporate higher-order cognitive skills.

Similarly, Croy (2018) applied constructive alignment principles to group work assessment within the module 'Mental Health Nursing 1', part of the BSc (Hons) Nursing Programme. This review provided a valuable opportunity to explore how constructive alignment informs assessment pedagogy. The results indicated that the constructively aligned assessment process offers a meaningful learning experience. Nonetheless, the study also highlighted a gap in the effectiveness of group work assessment when using constructive alignment.

In another study, Njuguna (2020) implemented constructive alignment in a model-based design course for a master's program in engineering. The research emphasized the importance of instructors having a clear understanding of the

intended learning outcomes and effectively communicating them to students. Although students often focus more on assessment to guide their learning, the study concluded that constructive alignment serves as a powerful tool to enhance learning if applied appropriately.

Furthermore, Mahroof and Saeed (2021) examined the alignment between curriculum, textbooks, and examination papers of the Board of Intermediate and Secondary Education in Pakistan for English (grades nine and ten) for the years 2014 and 2015. Their findings showed a lack of alignment with textbooks that did not fully reflect national curriculum outcomes and the assessments chiefly focused on lower-order skills from Bloom's taxonomy. As a result, they advocated for a more balanced alignment that includes both lower and higher-order cognitive levels to support comprehensive student learning.

Turning to the integration of 21st Century Skills, Sermona et al. (2022) aligned science competencies with skills such as information literacy, problem-solving, and critical thinking in the Philippines. Their study revealed that students in grades three and ten had a high potential to develop information literacy skills, while grade six showed the highest potential for such development. In addition, senior high school students demonstrated strong possibilities for acquiring both information literacy and critical thinking skills. Hence, the researchers underscored the need to align science competencies across all educational levels to ensure the systematic development of these crucial skills.

Similarly, Grande et al. (2022) investigated predictors of research competency among Saudi nursing students enrolled in a Nursing Research course, applying Biggs's constructive alignment model. Their study found a significant correlation between course performance and research competency development. However, they emphasized the need for further comprehensive research to evaluate these competencies more thoroughly.

In a recent study, Rajadurai et al. (2024) explored the alignment of learning objectives with the haptic simulation curriculum for first-year undergraduate dental students. The results suggested that students were generally successful in achieving most learning objectives, though certain persistent weaknesses remained. To address these issues, the study proposed strategies such as enhancing teacher-student responsibility sharing, distributing learning objectives before instruction, and incorporating peer and individualized feedback.

Finally, Houssaini et al. (2024) proposed a novel educational framework that combines Design Thinking (DT) principles with constructive alignment and

generative artificial intelligence to create student-centered learning experiences. Their case study focused on first-year medical students in Morocco and demonstrated how DT encourages innovation and creativity in curriculum design. Overall, the study validated the effectiveness of this integrated framework in fostering transformative learning.

Review Summary

Croy (2018), Grande et al. (2022), Higgins et al. (2017), Houssaini et al. (2024), and Rajadurai et al. (2024) have all made significant efforts to align the curriculum objectives of medical and nursing college programs with their respective teaching-learning activities, assessment tasks, and research-based projects using the framework of Constructive Alignment (CA). Moreover, these researchers have aimed to develop effective and context-specific teaching pedagogies, offering essential insights into how constructive alignment can enhance educational practices in their targeted disciplines. Meanwhile, Biggs (1996) originally introduced the concept of constructive alignment as a structured model designed to promote meaningful learning in higher education by ensuring coherence between objectives, instruction, and assessment. Building on this model, Njuguna (2020) applied constructive alignment in implementing a model-based design course for master's-level engineering students, emphasizing the importance of clearly communicated learning outcomes. In a different context, Sermona et al. (2022) focused on aligning science competencies with 21st Century Skills – such as information literacy, critical thinking, and problem-solving – and demonstrated the importance of such alignment for skill development across educational levels. Similarly, Saeed and Rashid (2014) utilized a Curriculum-Textbook Alignment Checklist and Rubric to align the chemistry curriculum with textbooks at the secondary level, thereby highlighting the necessity of maintaining consistency between instructional content and curriculum goals. Furthermore, Mahroof and Saeed (2021) applied constructive alignment principles to the English language curriculum for grades nine and ten in Pakistan, examining its alignment with textbooks and board examination papers. Their findings emphasized the critical need for coherence across all curriculum elements to ensure the effective achievement of learning outcomes.

Research Gap

Constructive Alignment is mostly used in university level education systems to align curriculum, textbook, and assessment that ensures appropriateness and credibility of the program. In this paper the author shows that Constructive Alignment can be effectively used at the secondary level (class six) English language course in Bangladesh to successfully actualize the curriculum objectives through appropriately designed TLAs and ATs.

Research Methodology:

This paper follows qualitative document analysis research methodology to critically observe, analyze, and evaluate curriculum objectives reflected through the TLAs and the ATs for the level of class six English language course of Bangladesh by showing that constructive alignment actualizes curriculum objectives in actual language learning programs.

Materials and Tools

The materials used for showing constructive alignment are as follows-

- (a) National Curriculum Framework 2021 Pre-Primary to Grade 12 (for curriculum objectives),
- (b) English Class Six (for Academic year 2023) textbook (for TLAs), and
- (c) 1st Summative (Half Yearly) Assessment Guideline for Grade and (practice questions from the guidebook) English Dakhil Class Six (for ATs).

The constructive alignment tools to categorize and match curriculum objectives with TLAs and ATs are-

- Concepts and verbs defining various levels of Bloom's taxonomy and SOLO taxonomy.

Analysis Procedure

The TLAs of EFL textbook and ATs of EFL program for class six were constructively aligned with the national curriculum objectives using Bloom's taxonomy and SOLO taxonomy. Here at first, curriculum objectives were analyzed and categorized using the concepts of both Bloom's and SOLO taxonomy. Again, the textbook TLAs and ATs were analyzed and categorized using verbs that indicate different levels of both taxonomies. Then, the categorized curriculum objectives were compared and matched with the categorized TLAs and ATs using both taxonomies as means of constructive alignment among the three. The ultimate results of data analyses, categorization, comparison, and matching were shown in two tables, in the finding and discussion section of the paper, where frequencies and percentages of TLAs and ATs were represented against each cognitive stage of both taxonomies to determine the emphasis given to each level that actually matched with the various levels of the taxonomies and eventually with the curriculum objectives. Descriptive statistics of Bloom's taxonomy and SOLO taxonomy were separately presented in two graphs, where each textbook TLAs and each ATs relevant to each level of taxonomies were contrasted with each other. Henceforth, through categorization and matching all these data were constructively aligned with each other to show their relevance to one another. Furthermore, this whole procedure showed that constructive alignment had validated that the textbook of

class six had been teaching what it had specified to teach and testing what it had taught. Under the assessment tasks (ATs), tasks from the 1st Summative (Half-Yearly) Guideline for Grade and the “Practice Items” of the guidebook English Dakhil Class Six as the representative final summative assessment tasks were jointly counted to account for the assessment procedures. Under the teaching-learning activities (TLAs) English Class Six (for Academic year 2023) textbook activities were counted to account for the learners activities.

Findings and Discussion

Constructive Alignment (CA)

In Competency-Based Education system Curriculum Objectives as Intended Learning Outcomes are designed first, following which a Textbook containing appropriate Teaching-Learning Activities (TLAs) is designed and all these learnings are examined through Assessment Tasks (ATs) in assessment procedures. Hence, a good curriculum is reflected by its textbook and assessment, and whether the textbook and the assessment tasks really reflect their curriculum or not can be determined by CA, where concepts and verbs of a taxonomy help in alignment. And so, the EFL curriculum objectives are aligned here with the EFL textbook and assessment tasks of class six in Bangladesh using two taxonomies known as- Bloom’s taxonomy indicating intended learning outcomes, and SOLO taxonomy indicating observed learning outcomes to ensure the efficacy of the alignment procedure by proving the usefulness of the EFL curriculum in an ELT context. Firstly, Curriculum Objectives are categorized according to the concepts of Bloom’s taxonomy and SOLO taxonomy in section ‘A. Curriculum Objectives’, then, how many TLAs of the EFL textbook and ATs of assessment procedure align with the verbs of Bloom’s taxonomy and SOLO taxonomy are shown in separate tables in section ‘B. Bloom’s Taxonomy of TLAs and ATs’ and ‘C. SOLO Taxonomy of TLAs and ATs’ respectively.

A. Curriculum Objectives

Here concepts and terms of Curriculum Objectives (taken from National Curriculum Framework 2021 Pre-Primary to Grade 12) (National Curriculum and Textbook Board (NCTB), 2023, p.41-43) are aligned with the verbs of Bloom’s taxonomy and SOLO taxonomy.

(i) Bloom’s Taxonomy:

1. Knowledge: Curriculum objectives linguistic norms, clarity of expression, and interpretability are part of knowledge as they require core knowledge and skills for answering information based questions. Here, Interpretability can work as mediator between knowledge and comprehension.

- 2. Comprehension:** Curriculum objective contextual understanding is part of comprehension, as it requires to make meaningful understanding of a particular situation or context.
- 3. Apply:** Curriculum objective democratic practice is part of application, as it requires using previously learned norms in practicing democracy such as, working in a pair/group and reaching a conclusion with the consent of the majority.
- 4. Analysis:** Curriculum objective cultural awareness is part of analysis, as it needs analysing acquired data to find out connection and order between them in real life situations.
- 5. Synthesis:** Curriculum objectives Creative expression, real-life application, and sense of identity are parts of synthesis, as they require synthesis of all the acquired knowledge and skills to compose a creative whole. Here, Sense of identity is created through synthesis of distinct cultural and linguistic norms.
- 6. Evaluation:** Curriculum objective Intercultural Communicative Competence (ICC) is part of evaluation, as it involves formulation of critical insights.

(ii) SOLO Taxonomy:

- 1. Unistructural:** Curriculum objectives linguistic norms, clarity of expression, and interpretability are parts of this level as it involves core knowledge and skills of learning which is at its very initial stage.
- 2. Multistructural:** Curriculum objectives contextual understanding, cultural awareness, democratic practice are parts of this level, as they involves tasks of classifying, describing, narrating, illustrating, listing, etc.
- 3. Relational:** Curriculum objective Intercultural Communicative Competence (ICC) is part of this level, as it combines unistructural and multistructural levels to apply, analyse, explain, review, rewrite, and examine etc.
- 4. Extended Abstract:** Curriculum objectives creative expression, real-life application, sense of identity are parts of this level, as it combines unistructural, multistructural, relational levels to theorize, generalize, reflect, create, compose, etc.

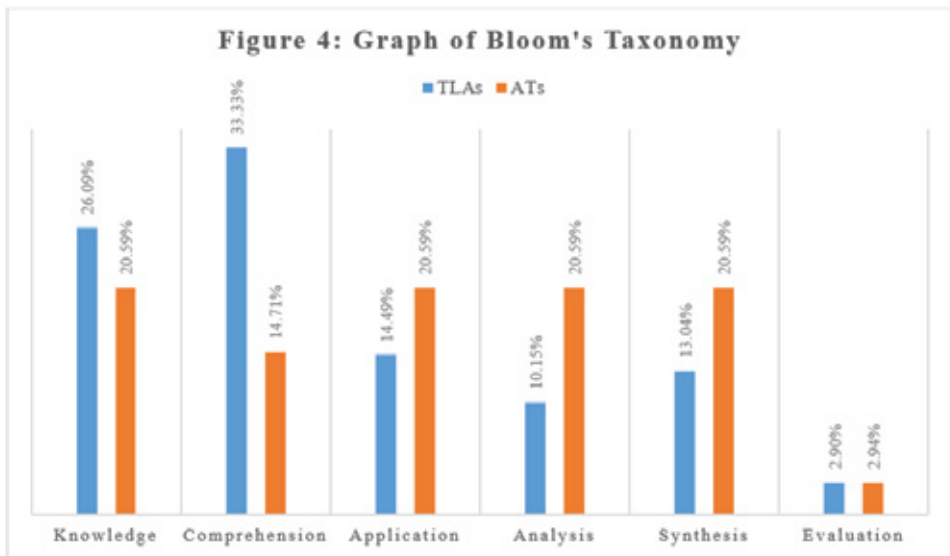
B. Bloom's Taxonomy of TLAs and ATs

Here numbers and percentages of the TLAs aligning with the verbs of Bloom's taxonomy and SOLO taxonomy are shown-

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
36	46	20	14	18	4
26.09%	33.33%	14.49%	10.15%	13.04%	2.9%

(ii) Bloom's Taxonomy of ATs

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
7	5	7	7	7	1
20.59%	14.71%	20.59%	20.59%	20.59%	2.94%



The research findings of CA shows that all 138 TLAs of the textbook of class six constructively align with the verbs of the various levels of Bloom's taxonomy. Similarly, all 34 ATs of assessment totalling 6 ATs found in 1st Summative (Half Yearly) Assessment Guideline for Grade and 28 ATs found in 7 "Practice Items" of English Dakhil Class Six Guidebook constructively align with the verbs of the various levels of Bloom's taxonomy. As all Curriculum Objectives, TLAs and ATs matches with the verbs of various levels of Bloom's taxonomy, they are constructively aligned. In the above table 36 (26.09%) TLAs and 7 (20.59%) ATs represent knowledge, 46 (33.33%) TLAs and 5 (14.71%) ATs represent comprehension, 20 (14.49%) TLAs and 7 (20.59%) ATs represent application, 14

(10.15%) TLAs and 7 (20.59%) ATs represent analysis, 18 (13.04%) TLAs and 7 (20.59%) ATs represent synthesis, 4 (2.9%) TLAs and 1 (2.94%) ATs represent Evaluation. Depending on this data a graph is drawn to show a comparison between TLAs and ATs and a balanced proportionate growth of each cognitive level, though due to the complexity of higher levels more priority is given to the lower levels.

C. SOLO Taxonomy of TLAs and ATs

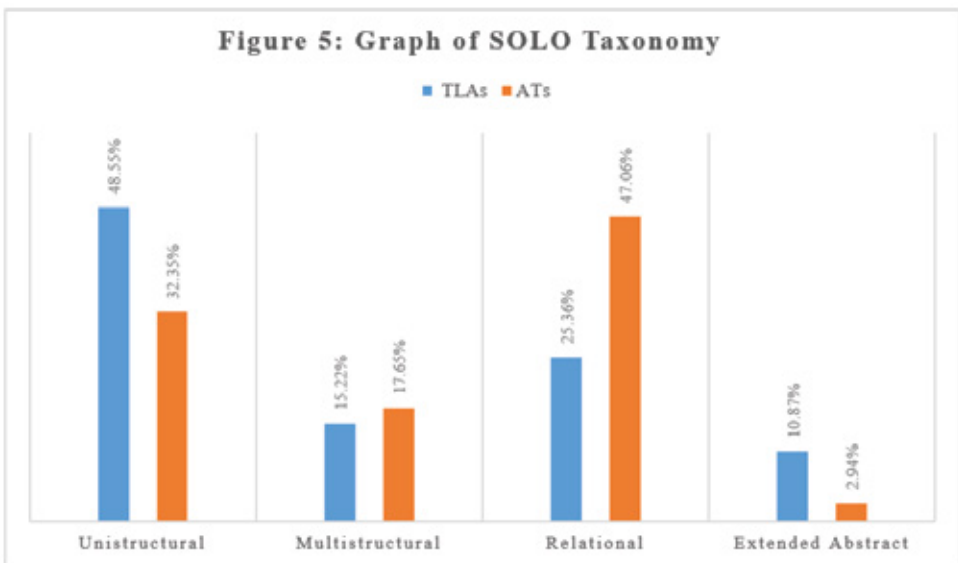
Here numbers and percentages of the ATs aligning with the verbs of Bloom’s taxonomy and SOLO taxonomy are shown-

(i) SOLO Taxonomy of TLAs

Unistructural	Multistructural	Relational	Extended Abstract
67	21	35	15
48.55%	15.22%	25.36%	10.87%

(ii) SOLO Taxonomy of ATs

Unistructural	Multistructural	Relational	Extended Abstract
11	6	16	1
32.35%	17.65%	47.06%	2.94%



The research findings of CA shows that all 138 TLAs of the textbook of class six constructively align with the verbs of the various levels of SOLO taxonomy. Similarly, all 34 ATs of assessment procedures totalling 6 ATs found in 1st Summative (Half Yearly) Assessment Guideline for Grade and 28 ATs found in 7 “Practice Items” of English Dakhil Class Six Guidebook constructively align with the verbs of the various levels of SOLO taxonomy. As all Curriculum Objectives, TLAs and ATs matches with the verbs of various levels of SOLO taxonomy, they are constructively aligned. In the above table 67 (48.55%) TLAs and 11 (32.35%) ATs represent unistructural level, 21 (15.22%) TLAs and 6 (17.65%) ATs represent multistructural level, 35 (25.36%) TLAs and 16 (47.06%) ATs represent relational level, 15 (10.87%) TLAs and 1 (2.94%) ATs represent extended abstract level. Depending on this data a graph is drawn to show a comparison between TLAs and ATs and a balanced proportionate growth of each level is found according to Observed Learning Outcomes, though due to the complexity of higher levels more priority is given to the lower levels.

Accordingly, the previously stated study literatures indicate that the alignment between curriculum, textbook, and assessment is necessary for ensuring the achievement of desired learning. Furthermore, constructively aligned language program can create a valuable learning experience through innovation and creativity, as it moderates the tendency to focus more on assessment tasks than to focus on actual learning. However, it is also necessary that there is a balance between the various levels of cognitive domain of the taxonomies, as not all the levels are equally required within a given time, complexity, and necessity limit. Also, TLAs and ATs can be revised to incorporate higher levels. Moreover, grade six learners have the more possibility of developing information literacy skill. After considering all these factors, the current paper has found that the application of Constructive Alignment (CA) in the secondary level (class six) English language course is possible, and actualization of curriculum objectives through TLAs and ATs can be ensured by Constructive Alignment (CA).

Conclusion

In conclusion it can be said that, the Teaching-Learning Activities (TLAs) of the EFL textbook English Class Six and the Assessment Tasks (ATs) found in 1st Summative (Half Yearly) Assessment Guideline for Grade and Practice Items of Guidebook of English Dakhil Class Six match with the curriculum objectives. Curriculum Objectives, TLAs, and ATs are easily categorized and matched by applying Constructive Alignment at the secondary level (class six) in Bangladesh. Therefore, proper actualization of curriculum objectives in TLAs and ATs can be ensured by the effective application of Constructive Alignment.

Recommendations

The researcher recommends the followings to ensure the best result out of an EFL curriculum-

1. As the already existing literature of studies demand that there should be a balance between higher level and lower level of the taxonomies while designing curriculum objectives, TLAs and ATs.
2. Paper setter needs to be well aware of the various cognitive levels of taxonomies to be able to appropriately use it in designing ATs.
3. Various research literature has claimed that Assessment Tasks (ATs) should include all the cognitive levels of taxonomies proportionately, though with the rise of the level their quantity of occurrence will significantly decrease due to the complexity of the level.
4. ATs and TLAs are needed to precisely follow curriculum objectives and must be constructively aligned.

Limitations of the Study

The limitations of the study include representation of self-reported data that may contain individual bias of understanding and interpreting ideas from one's own personal view, which can be arbitrary in some respects. The study shows a way to actualize curriculum through document analysis not through implementation in reality. The study thus does not consider the class size, learner motivation, and teachers' ability that actually affect the procedure of learning. As the aim of the study is to develop a mechanical tool of a language program evaluation, it ignores all the other realities of an effective EFL program that play more crucial roles in ensuring the actual achievement of intended learning outcomes. Here practice questions from the English Dakhil Class Six guidebook are used as representative summative assessment tasks to align with the textbook and the curriculum, because no summative assessment has taken place yet, hence, the researcher has adopted this means.

References

- Abswer, M. N. (2023). *English Dakhil Class Six*. Bangladesh. <https://www.abswer.com/2023/06/class-6-english-guide-book-2023-pdf.html?m=1>
- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347–364. <http://www.jstor.org/stable/3448076>
- Biggs, J. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1, 5–22. https://www.tru.ca/_shared/assets/Constructive_Alignment36087.pdf
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R., (1956). *Taxonomy of educational objectives: The classification of educational goals*, 1. Longman.
- Croy, S. R. (2018). Development of a group work assessment pedagogy using constructive alignment theory. *Nurse Education Today*, 61, 49–53. <https://doi.org/10.1016/j.nedt.2017.11.006>
- Grande, R. A. N., Berdida, D. J. E., Villagrancia, H. N., Ablao, J. N., & Garcia, P. R. B. (2022). Multi-university assessment of Biggs's constructive alignment as an index of nursing research competencies among Saudi students. *Teaching and Learning in Nursing*, 17(1), 68–76. <https://doi.org/10.1016/j.teln.2021.09.004>
- Higgins, R., Hogg, P., & Robinson, L. (2017). *Constructive alignment of a research-informed teaching activity within an undergraduate diagnostic radiography curriculum: A reflection*. *Radiography*, 23(1), S30–S36. <https://doi.org/10.1016/j.radi.2016.11.004>
- Houssaini, M. S., Ahmed, A., Toughrai, I., & Ibrahim, A. (2024). Development of a design course for medical curriculum: Using design thinking as an instructional design method empowered by constructive alignment and generative AI. *Thinking Skills and Creativity*, 52, 101491. <https://doi.org/10.1016/j.tsc.2024.101491>
- Mahroof, A., & Saeed, M. (2021). Alignment between curriculum, textbook and Board of Intermediate and Secondary Education question papers of English at secondary level. *Open Access Library Journal*, 8, e7282. <https://doi.org/10.4236/oalib.1107282>
- McMahon, T., & Thakore, H. (2006). Achieving constructive alignment: Putting outcomes first. *The Quality of Higher Education* (Aukštojo mokslo kokybė), 3, 10–19.
- National Curriculum and Textbook Board (NCTB). (2023). 1st summative (half yearly) assessment guideline for Grade VI. *Bangladesh*. https://file-rajshahi.portal.gov.bd/uploads/6ad824e5-556f-4fea-8e13-e8de_2462d0cc//647/5ce/01b/6475ce01bf57e846857108.pdf
- National Curriculum and Textbook Board (NCTB). (2023). *English Class Six*. Ministry

of Education, Bangladesh. <http://www.nctb.gov.bd>

National Curriculum and Textbook Board (NCTB). (2023). *National Curriculum Framework 2021 Pre-Primary to Grade 12*. Bangladesh. https://nctb.portal.gov.bd/sites/default/files/files/nctb.portal.gov.bd/page/0d5a8524_4bfc_9e14_985380773fa9/2023-04-05-53-ed730ced57e4704a4e10e83b40a6d305.pdf

National Curriculum and Textbook Board (NCTB). (2023). *Teachers' Guide English Class VI*. <http://www.nctb.gov.bd>

Njuguna, J. (2020). *Constructive alignment of intended learning outcomes, learning activities and assessments for an engineering masters degree course module*. <https://doi.org/10.13140/RG.2.2.36031.12965>

Rajadurai, S., Hebballi, T., Sharif, Z., Kukreja, G. K., & Derdour, I. (2024). Evaluating the constructive alignment of learning objectives within haptics simulation in the dental undergraduate curriculum. *International Dental Journal*, 10, 2–6. <https://doi.org/10.1016/j.identj.2024.10.002>

Richards, J. C., & Rodgers, T. S. (2016). *Approaches and methods in language teaching* (3rd ed.). Cambridge University Press.

Saeed, M., & Rashid, S. (2014). Alignment between chemistry curriculum and textbook at secondary level. *The Sindh University Journal of Education*, 43, 29–46.

Sermona, N. L., Bug-os, M. A. A., Bacarrisas, P., & Fajardo, M. T. (2022). *Alignment of the science competencies with the 21st-century skills*. 34, 595–599.

Shuell, T. J. (1986). Cognitive conceptions of learning. *Review of Educational Research*, 56, 411–436.

Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. University of Chicago Press.