



Constructive Alignment and Higher Order Thinking in Undergraduate Academic Writing Course Specification: A Descriptive Analysis

Soundous Ibrahim Ali Gadid *

Department of English, Faculty of Faculty of Arts and Language, University of Tripoli, Libya

المواءمة البنائية ومهارات التفكير العليا في توصيف مقرر الكتابة الأكاديمية لمرحلة البكالوريوس:
دراسة وصفية تحليلية

سندس إبراهيم علي الجديد *

قسم اللغة الإنجليزية، كلية الآداب واللغات، جامعة طرابلس، ليبيا

*Corresponding author: s.gadid@uot.edu.ly

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Abstract:

Drawing on Bloom's revised taxonomy and Biggs' Constructive Alignment Theory, this qualitative study uses document analysis to yield insights into the quality of an undergraduate core academic writing (1) course offered by the English Language Department at the University of Tripoli. The document specification was closely examined using a developed checklist to explore higher order thinking development through the observable action verbs that appear in the course general learning aims and the intended learning outcomes represented in the four domains: knowledge and understanding, intellectual skills, scientific and transferable skills and general skills. Then, intended learning outcomes (ILOs), teaching and learning activities (TLAs), and assessments were examined regarding their connection to the targeted learning goals. The findings reveal that the presence of higher order skills in the course document, specifically in the intended learning outcomes, is not enough as these skills must be supported with clearly defined learning activities and assessment tasks. Although several teaching methods were identified, the document doesn't establish how those methods are used to develop the specific higher order processes identified in the outcomes. The course specification identifies two main summative examinations but provides no sufficiently clear description of the tasks or cognitive processes assessed. Thus, the analysis indicated partial documented alignment rather than fully demonstrable alignment. The study offers several implications on enhancing the alignment between intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessments tasks (ATs) to make course specifications more effective in achieving the intended goals and further promoting higher order thinking. The paper shows how document analysis can identify gaps in curriculum documentation and inform more clearly defined and sufficiently detailed course design.

Keywords: constructive alignment, higher cognitive skills, course specification.

الملخص

استناداً إلى تصنيف بلوم المُنتَج ونظرية المواعمة البنائية لبيغز، تعتمد هذه الدراسة النوعية على تحليل الوثائق لتقييم جودة توصيف مقرر الكتابة الأكاديمية (1)، وهو أحد المقررات الأساسية التي يقدمها قسم اللغة الإنجليزية بجامعة طرابلس. وقد خضع توصيف المقرر لفحص دقيق باستخدام قائمة معايير أعدت لهذا الغرض، بهدف استكشاف مدى الاهتمام بتنمية مهارات التفكير العليا من خلال الأفعال القابلة للملاحظة والواردة في الأهداف العامة للمقرر ومخرجات التعلم المستهدفة، والموزعة على أربع مجالات هي: المعرفة والفهم، والمهارات الذهنية، والمهارات العلمية والقابلة للنقل، والمهارات العامة. كما جرى تحليل مخرجات التعلم المستهدفة، وأنشطة التعليم والتعلم، وأساليب التقييم؛ للكشف عن مدى ترابطها واتساقها في تحقيق الأهداف التعليمية المنشودة. أظهرت النتائج أن مجرد تضمين مهارات التفكير العليا في وثيقة المقرر، ولا سيما في مخرجات التعلم المستهدفة، لا يكفي لضمان تنميتها؛ إذ ينبغي أن تقترن هذه المهارات بأنشطة تعليمية محددة بوضوح ومهام تقييمية ملائمة. وعلى الرغم من تحديد عدد من طرائق التدريس، فإن التوصيف لا يوضح كيفية توظيفها لتنمية عمليات التفكير العليا المحددة في مخرجات التعلم. كما يشير توصيف المقرر إلى اختبارين رئيسيين ضمن التقييم الختامي، دون تقديم وصف واضح وكاف للمهام التي يتضمنانها أو لعمليات التفكير التي يستهدفان تقييمها. وبناءً على ذلك، خلص التحليل إلى وجود مواعمة موثقة جزئياً، دون توافر أدلة كافية لإثبات تحقق المواعمة بصورة كاملة. وتطرح الدراسة عدداً من الدلالات التطبيقية التي يمكن الاستفادة منها في تعزيز المواعمة بين مخرجات التعلم المستهدفة، وأنشطة التعليم والتعلم، ومهام التقييم، بما يساهم في جعل توصيف المقررات أكثر فاعلية في تحقيق الأهداف التعليمية المنشودة وتعزيز مهارات التفكير العليا. كما توضح الدراسة كيف يمكن لتحليل الوثائق أن يكشف عن أوجه القصور في توثيق المناهج الدراسية، وأن يساهم في تحسين تصميم المقررات من خلال صياغة أكثر وضوحاً وتفصيلاً لمكونات العملية التعليمية.

الكلمات المفتاحية: المواعمة البنائية، مهارات التفكير العليا، توصيف المقرر الدراسي.

Introduction

Undergraduate academic writing involves more than learning conventions of grammar and paragraph organization. Students are expected to interpret information, compare arguments and analyze texts; these processes represent higher order forms of thinking that extend beyond the simple recall and reproduction of knowledge as education that “involves the recall of specifics and universals” represents the lowest level of learning outcomes (Bloom et al. 1965). The development of students’ higher order cognitive skills, particularly in academic writing classes, is largely related to how courses are designed and implemented in class. (Loughlin et al. 2021)

Course documents may specify that students should compare arguments and analyze texts however these expectations need to be supported by appropriate teaching tasks and assessment methods. To achieve this, instructors’ and curriculum developers’ should not only set promising learning objectives or selecting relevant content but also clearly specify the classroom tasks that engage students in activities that are directly connected to the specified goals. Thus, educational components of a given course need to work closely together so what students are expected to learn and attain are translated in classroom activities and assessments (Biggs, 1996, 2014; Biggs and Tang, 2011; Loughlin et al, 2021).

Biggs’ (1996; 1999) addressed this persistent issue through his Constructive Alignment theory. At the core of this theory, teaching should be designed in ways that all components of a course, including objectives, activities and assessment methods are meaningfully combined to support students’ attainment of the intended learning outcomes. The constructive alignment (CA) framework has become “one of the most influential ideas in higher education”

(Houghton, 2004, p.27). The framework is based on two central principles: constructivism and alignment.

The first principle considers learning as an active process that requires both instructors' and students' agency as "knowledge is constructed by the activities of the learner" (Biggs, 2014, p.9). Thus, learning takes place through meaningful interaction rather than the passive transmission of knowledge (Fosnot and Perry, 2005). The second principle is that of alignment which refers to the directed coherence between intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessment tasks (ATs).

According to Biggs' theory, deep learning is more likely to happen when students are given classroom activities and assessment tasks that directly reflect the specified goals of the course. As Biggs and Tang (2011) note "*the basic principle of constructive alignment is that assessment tasks should address the intended learning outcomes and that students should learn through the learning activities what they are intended to be assessed on*" (p. 25). The misalignment between the instructional components may result in a failure to achieve the general course objectives.

The relationship between constructive alignment theory and higher-order cognitive processes has been widely documented in educational research as they both play a complementary role in course design. The revised taxonomy of educational objectives developed by Anderson and Krathwohl (2001) represents a systematic categorization of cognitive thinking processes, encompassing the *higher order thinking skills* (HOTS) including analyze, evaluate, and create and the *lower order thinking skills* (LOTS) reflecting the lowest levels of thinking processes such as, remember, understand and define. Bloom's taxonomy has widely been adopted as an analytical framework that examines the extent to which curricula, teaching practices, and assessments methods foster students' learning. (Anderson & Krathwohl, 2001; Duron et al., 2006)

In the context of undergraduate academic English writing courses, the intended learning outcomes usually extend beyond the mere attainment of solid knowledge. Writing courses typically expect students to develop a set of practical skills, including analyzing ideas, developing arguments, paraphrasing, summarizing and more. The presence of higher order verbs in a learning outcome does not ensure students' development of that skill without clearly connecting it to a corresponding teaching learning task. Therefore, the course needs to be designed to provide classroom activities and assessment tasks that give students opportunities to practice and develop these specified skills.

In Libya, higher education institutions adopt course documentations proposed by the national quality assurance system. The NCQAE framework for academic program standards and course specifications necessitates the explicit inclusion of measurable higher order cognitive and intellectual skills within intended learning outcomes, including analytical thinking, problem-solving, and several other higher-order cognitive processes.

Evidence from existing studies expose that Libyan EFL students' weak analytical writing skills reflect evident inconsistencies mainly in learning objectives and classroom tasks (Saleh, 2019; Hadoud, 2020; El-Badri et al., 2021; Harb et al., 2022). As (Saleh, 2019) noted that "despite acknowledging the importance of critical thinking [on the part of instructors], classroom practices remained largely teacher-centered and examination oriented" (p. 13).

Academic writing 1 (Eng. 314) is one of the core course within the English language program at the faculty of Arts and Language. The course specification identifies academic writing and research related skills as key areas of learning. The document covers a range of topics including process writing, thesis statement, cause and effect, compare and contrast writing.

The teaching methods include lectures, training, and cooperative learning while assessment is divided between a midterm and a final examination.

Through a descriptive document analysis, the present study explores two related issues: the representation of higher order cognitive skills in the intended learning outcomes and the constructive alignment of the intended course outcomes, teaching and learning activities and assessment methods. The study doesn't entail what actually happens in the classroom, nor does it measure students' actual cognitive abilities.

Research Problem

The quality of a course description cannot be determined only in terms of its individual components; a course might state that students should develop certain skills, however the learning activities and assessment methods do not clearly support the development of those skills. For this reason, there is a need to examine the internal coherence of course components to determine if the relationship between them is explicit and aligned with the intended learning outcomes. Thus, this study aims to a descriptive analysis of EFL undergraduate Academic Writing (1) to examine the degree of constructive alignment between course components and the representation of cognitive processes, specifically higher order thinking skills.

Research Questions

The present papers seeks to answer the following questions:

1. What cognitive processes are represented in the intended learning outcomes of Academic Writing (ENG 314) Course?
2. To what extent are the documented teaching and learning activities and assessment methods aligned with the intended cognitive processes from a constructive alignment perspective?

Research Objectives

1. To examine the cognitive processes represented in the intended learning outcomes of Academic Writing I (ENG 314), with particular attention to higher order thinking skills.
2. To evaluate the extent to which intended learning outcomes (ILOs), teaching and learning activities, and assessment methods are constructively aligned to support higher order thinking skills in Academic Writing (1).

Contribution

The findings of this study may inform course developers, professors and quality assurance reviewers to identify areas where specification needs clearer connections. The findings should not be generalized to other courses without further analysis.

Literature Review

Quality Assurance in Higher Education: The NCQAE Framework for Course Specifications

The role of quality assurance centers have moved beyond evaluating institutional resources, facilities and administrative processes toward examining educational outcomes and competencies that students develop throughout the academic journey (Harvey & Green, 1993; Biggs & Tang, 2011). Within this outcome oriented perspective, intended learning outcomes have become a central feature of quality assurance frameworks. Academic programs and course specifications are expected to specify clear measurable learning outcomes that describe what students should acquire not only in terms of disciplinary knowledge but also regarding the intellectual and transferable competencies upon the successful completion of the course. These requirements reflect the growing recognition that university graduates need both disciplinary knowledge and transferable cognitive skills to succeed academically and professionally.

The NCQAE framework requires every undergraduate course by Libyan higher education to be documented using a standardized course specification framework. The document serves as a curriculum planning and a quality assurance tool that defines the essential components of a course and provides a framework for its design, delivery, and evaluation. According to the NCQAE course specification guide, each course includes course objectives, intended learning outcomes (ILOs), course content, teaching and learning methods, assessment methods, learning sources.

Within this framework, intended learning outcomes (ILOs) constitute the core element of the course specification. They define knowledge, skills and competencies that students are expected to demonstrate upon the successful completion of the course. The academic program offered by the NCQAE organizes intended learning outcomes (ILOs) into four main domains: (a) knowledge and understanding, (b) intellectual skills, (c) practical and professional skills, (d) general and transferable skills. Each intended learning outcome is assigned to a specific code, which enables it to be systematically linked to the course content, teaching and learning activities, assessment methods, and the course matrix.

Although the NCQAE framework explicitly incorporates intellectual skills within course specifications, these standards do not ensure their effective implementation in classroom practice. Libyan based empirical studies continue to report that teaching practices remain predominantly teacher centered and assessment emphasize memorization and knowledge reproduction rather than evaluation, analysis, problem solving and other higher order cognitive skills that enhance the development of students' higher order thinking (Saleh, 2019; El-Badri et al., 2021). Clearly, this issue discloses a gap between policy expectations and educational practice.

Thus there remains a need to investigate whether NCQAE expectations regarding promoting cognitive skills are genuinely reflected in curriculum design. Accordingly, the present study examines quality assurance not only as a process of accreditation but also as a framework for evaluating the relationship between intended educational outcomes and actual teaching practices.

Higher-Order Cognitive Thinking and Bloom's Revised Taxonomy

Researchers in education have constantly sought systematic frameworks that operationalize abstract cognitive processes and make them observable and measurable in educational objectives. Among these frameworks, Bloom's Taxonomy (Bloom et al., 1956) has had a profound influence on curriculum design and educational assessment. However, the taxonomy has been later revised to provide a more dynamic framework for categorizing cognitive processes.

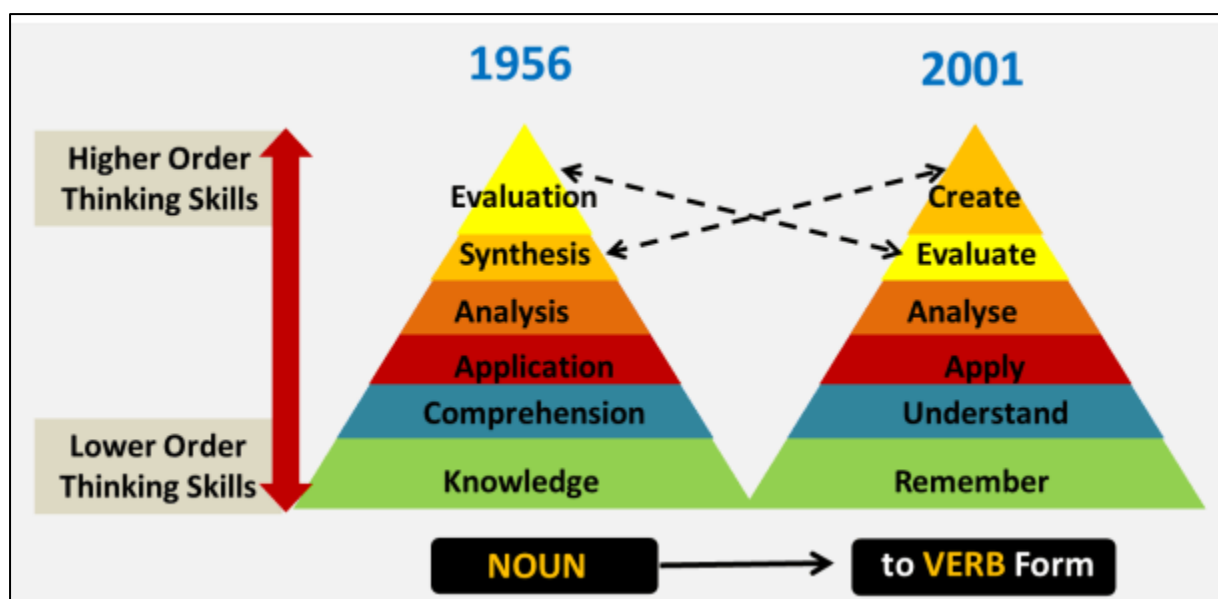


Figure 1: Comparison of Bloom's Taxonomies: Original (1956) and Revised (2001)

Note. *The original taxonomy emphasizes categories of knowledge (nouns), whereas the revised taxonomy highlights cognitive processes (verbs), positioning Create at the highest level.*

The principal distinction between Bloom's original taxonomy and its revised version lies in how cognitive learning processes are described as well as classified; Bloom et al (1956) categorized learning into 6 main classes: Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. Anderson and Krathwohl (2001) later made some revisions by changing these categories into action oriented verbs: Remember, Apply, Analyze, Evaluate and Create. As Figure 1 shows, the original taxonomy presented types of knowledge and learning outcomes, whereas the revised taxonomy focuses more clearly on what learners are expected to do with knowledge.

Table 1: Cognitive Categories, Definitions, and Subcategories in Bloom's Revised Taxonomy

Level	Definition	Key Sub-process
Remember	Retrieve knowledge from memory	<i>Recognizing, recalling</i>
Understand	Construct meaning from instructional messages, including oral, written, and graphic communication	<i>Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing, Explaining</i>
Apply	Carry out or use a procedure in a given situation	<i>Executing, Implementing</i>
Analyze	Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose	<i>Differentiating Organizing Attributing</i>
Evaluate	Make judgements based on criteria and standards	<i>Checking Critiquing</i>
Create	Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure	<i>Generating, Planning Producing</i>

This version of the revised taxonomy helps instructors and curriculum developers' to design learning objectives as well as create tasks that assess students' understanding at increasing levels of cognitive complexity.

Biggs's Constructive Alignment Theory

Although Bloom's revised taxonomy provides a valuable analytical framework for classifying students cognitive processes associated with higher order thinking, it doesn't explain how these cognitive processes should be effectively incorporated into and implemented within educational programs. This particular limitation has led many educational researchers to adopt Biggs's (1996, 1999, 2003) *Constructive Alignment Theory* as a complementary framework for designing, implementing and evaluating teaching and learning. Constructive alignment emphasizes the coherent alignment of intended learning outcomes, teaching and learning activities, and assessment methods, thereby providing a practical framework for ensuring that higher order thinking processes are meaningfully integrated into educational practice.

The theory of constructive alignment is built on two main principles: *constructivism* and *alignment*. The first principle considers learning as an active process that is mainly based on the gradual construct of knowledge through meaningful interaction and learning experiences rather than the passive absorption of information (Biggs, 1999). The second principle is that of alignment which refers to the coherence between intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessment methods. Each component should support the achievement of the same educational objectives (Biggs' & Tang, 2011). Thus, meaningful learning occurs when students are provided with classroom tasks and assessment that directly reflect the intended learning outcomes. As Biggs and Tang (2011) note "*the basic principle of constructive alignment is that assessment tasks should address the intended learning outcomes and that students should learn through the learning activities what they are intended to be assessed on*"(p. 25) The misalignment between the instructional components may result in a failure in achieving the intended learning outcomes.

Therefore, constructive alignment provides an appropriate theoretical lens for examining whether intended learning outcomes related to higher order thinking are effectively supported by teaching practices and assessment methods within undergraduate Academic Writing (1) course.

Integrating Higher Order Cognitive Processes into Course Document: Curriculum, Teaching, and Assessment

Developing students' higher order thinking requires more than recognizing it as a desirable learning outcome; it must be systematically integrated into curriculum design, teaching practices, and assessment methods. Students are unlikely to develop higher order cognitive skills unless teaching strategies are deliberately designed to make students actively engage in relevant activities including inquiry, discussion, problem solving and reflection; accordingly, assessment tasks should be designed assess these higher order processes (Biggs & Tang, 2011; Brookhart, 2010). Therefore, the effectiveness of critical thinking instruction depends on the coherent alignment of curriculum, pedagogy and assessment. Biggs and Tang (2011) assert that "the teacher's fundamental task is to get students engage in learning activities that are likely to result in their achieving those outcomes." (p. 26)

These implications are very important for the present study as although NCQAE framework for program and course specifications require the explicit integration of higher order cognitive processes in course specifications in terms of objectives and classroom practices, little attention has been devoted to evaluate whether theses intended outcomes are consistently reflected in classroom teaching and assessment. This study addresses this critical

issue by examining the alignment among intended learning outcomes, teaching practices and learning activities, and assessment systems in Academic writing (1), an EFL undergraduate course specification offered by the department of English at the University of Tripoli.

Methodology

Research Design

The current study adopts a qualitative descriptive approach to an undergraduate academic writing (ENG314) course specification document delivered in the English language department, faculty of Arts and Languages, the University of Tripoli, during Fall 2024.

Document analysis was considered an appropriate method for it provides “a systematic procedure for reviewing or evaluating documents” (Bowen, 2009, P. 27). This method enables the study to examine the extent higher order cognitive expectations and constructive alignment are represented in an official undergraduate academic course offered in the English Language Department at the University of Tripoli. The analysis will exclusively focus on documented intended learning outcomes, teaching and learning activities and assessment tasks rather than students’ performance or instructors’ actual classroom practices.

The existing document identifies the course as a two-hour weekly session and provides details about the learning objectives, intended learning outcomes, teaching methods, assessment procedures and references of the core and supporting textbooks. The purpose was not to generalize the entire program but to examine one course in detail. (See appendix)

Data Source

The primary source of the present study was the official course document of Academic Writing (1). The document is in Arabic and provides the following key general information:

Table 1: General Academic Writing (1) Course Information

Item	Description
Institution	University of Tripoli
Faculty	Faculty of Arts and Languages
Department	English Language Department
Program	BA in English Language
Course	Academic Writing I
Course Code	ENG 314
Semester	Fall 2024
Course Hours	2
Language of Instruction	English

Analytical Framework

Two main approaches were used to analyze the data: the first is the cognitive process framework of Anderson and Krathwohl (2011). The analysis focused mainly on the classification and distinction of lower order thinking and higher order cognitive processes articulated in intended learning outcomes (ILOs).

Table 3: Hierarchy of Cognitive thinking Skills

Lower Order Thinking	Cognitive Process	Typical Verbs
	Remember	List, define, recall, identify
	Understand	Explain, summarize, classify, interpret
	Apply	Use, demonstrate, implement, solve
Higher Order Thinking	Cognitive Process	Typical Verbs
	Analyze	Compare, differentiate, organize, examine
	Evaluate	Critique, assess, justify, argue
	Create	Design, construct, compose, develop

Note. Adapted from A taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives edited by L. W. Anderson and D.R. Krathwohl. 2001, Longman.

The analysis particularly examined the verbs involving the (ILOs) intended learning outcomes along with the corresponding teaching learning activities. The second perspectives was Biggs' constructive alignment. The framework was used to examine the relationship between the three course components: (1) intended learning outcomes (ILOs), (2) teaching and learning activities (TLAs) and (3) assessment tasks (ATs). Four main questions guide the analysis: 1) what cognitive processes are stated in the ILOs; 2) whether listed content correspond to those outcomes; 3) whether documented teaching methods are connected to specific outcomes; and (4) whether assessment tasks are described sufficiently to determine their cognitive demands. A simplified checklist was developed for analysis. Each criterion was classified as follows:

Table 4. Classification of Criteria Based on Evidence of Relationship

Yes	Clear evidence of the relationship was found
Partly	Some evidence was present, but the relationship was incomplete or insufficiently explicit
No/ Insufficient	The document didn't provide enough information to establish relationship

Data Analysis Procedures

The paper followed four steps for the analysis of the data.

Step 1: Identification of Intended Learning Outcomes (ILOs)

In the first step, the researcher extracted all the intended learning outcomes from Academic Writing (1) course specification which appear in the four main domains: (1) *Knowledge and Understanding*; (2) *Intellectual Skills*; (3) *Scientific and Transferable skills*; and finally (4) *General skills*. A close examination of the cognitive processes represented by the outcomes was carried using the revised Bloom's Taxonomy as a conceptual and classification framework.

Step 2: Identification of Higher Order Processes

In the second step, all intended learning outcomes were scrutinized for explicit reference to higher cognitive processes mainly *analyzing*, *comparing* and *creating*. It is important to note that the present study focused mainly on document analysis and did not assume that the presence of higher order verbs was an evidence of students' actual ability.

Step 3: Analysis of Teaching and Learning Activities

Teaching and learning sections were examined for the purpose of identifying the methods of teaching documented in the course document. The aim was to determine if the document explicitly connected those methods with specific intended learning outcomes.

Step 4: Analysis of Assessment and Alignment

The assessment section was examined for obtaining evidence about assessment types, specifically the cognitive demands and the degree of alignment between the three educational components: intended learning outcomes ('ILOs'), teaching tasks and assessment methods.

Findings and Discussion

Cognitive Processes in the Intended Learning Outcomes

The intended learning outcomes are presented under four main domains. The general learning target toward academic writing knowledge and research skills, including writing several forms of academic writing, paraphrasing, converting numerical data to written passages and using direct and indirect quotations. The intended learning outcomes represent more complex cognitive processes, for examples, in the intellectual skills domain there is an outcome that requires students to “analyze” and “infer” the way scientific writing is constructed (ان يحلل و يستنتج طريقة الكتابة العلمية). Another professional skills outcome requires students to analyze and compare information objectively. (تحليل الموقف بطريقة موضوعية). Apparently, the existence of these verbs provide explicit evidence that higher order cognitive processes are part of the intended curriculum. However, the outcomes are varied as they range from relatively basic knowledge and application to more complex processes such as analysis and comparison.

Table 5:Examples of Cognitive Processes Represented in the Course Outcomes

Intended learning outcomes (ILOs)	As stated in the source documented	Cognitive Process	Level represented
Apply different forms of academic writing	ان يطبق الطالب الأساليب المختلفة للكتابة الأكاديمية	Apply	Lower order thinking
Train students to paraphrase information	ان يتدرب الطالب علي إعادة كتابة المعلومات paraphrasing	Apply	Lower order thinking
Understand how to convert information from table into written passages	ان يعرف الطالب مهارة تحويل المعلومات من جداول الي مقاطع مكتوبة.	Apply	Lower order thinking
Analyze and infer how scientific writing is constructed	ان يحلل ويستنتج طريقة الكتابة العلمية	Analyze	Higher order thinking
Analyze and compare information objectively	ان يحلل ويقارن المعلومات بطريقة موضوعية	Analyze Compare evaluate	Higher order thinking
Search websites for information	استكشاف واستعمال المواقع الالكترونية للبحث عن المعلومة.	Apply	Lower order thinking
Analyze a situation objectively	تحليل الموقف بطريقة موضوعية	Analyze	Higher order thinking

The above table shows that higher order cognitive processes are present in the course outcomes; however, they coexist with a large number of outcomes directed toward knowledge and application. Cammie's et al (2024) explain that “students must develop higher order cognitive skills (HOCS) that allow them to think critically and use their learning in novel situation” (p. 588). He particularly stresses the importance of maximizing opportunities for students to develop these skills through appropriate teaching activities and assessments methods. Furthermore, as for the general course objectives, they are two and they emphasize

the development of core research skills including paraphrasing, describing numerical data, quoting and organizing references in research.

Table 6: Course Objective as They Appear in the Course Specification

أهداف المقرر:
1- تطوير مهارة الطلاب فيما يخص مجال الكتابة.
2- تغطية أجزاء واسعة من مهارات البحث العلمي كما يعمل على تبصير الطلاب بمختلف مهارات الكتابة الأكاديمية مثل إعادة صياغة الجمل وكيفية وصف البيانات الرقمية والاقتباس من المصادر الأخرى وإيضاً كيفية ترتيب المصادر في البحث العلمي

The analysis of the cognitive processes of the documented course objective showed a clear direction toward lower order thinking processes. Several broad, rather vague, objectives were detected, verbs such as develop (تطوير), cover (تغطية), and familiarize students with (تبصير الطلاب), do not explicitly specify observable student performances, hence they cannot be allocated confidently to a particular cognitive level. Some verbs such as paraphrasing, describing, quoting arranging may indicate process ranging mainly from understanding to applying. Paraphrasing, for example, may involve understanding and application depends upon the demands of the task. Further, describing numerical data largely indicates understanding when students are required only to report observable information. The objectives of the course do not contain explicit verbs corresponding to analyzing, evaluating, or creating. In fact this issue of using non-measurable verbs was thoroughly investigated by Schoepp (2017) who detected that many learning outcomes contain verbs are non-operational or abstract such as “appreciate”, “recognize” and “realize” and “should be avoided”. Therefore, the un-measurability of such verbs stands as challenges for teachers in choosing the right teaching and learning activities. (Chatterjee and Corral 2017)

Documented Teaching and Learning Activities (TLAs)

Three main teaching and learning methods were identified in the course specification.

Table 7: Documented Teaching and Learning Methods

Teaching and Learning Activities	As stated in the source document
Lectures	المحاضرات
Training	اسلوب التدريب
Cooperative learning	التعلم التعاوني

The table demonstrates the presence of training and cooperative learning indicates that the documented teaching and learning approach goes beyond traditional formal lectures. Still, the specification does not account for the specific activities students are expected to perform within these methods. Therefore, this creates a limitation when examining the alignment between the components. For example, the course includes an outcome requiring students to analyze and compare information objectively. However, the teaching method section doesn't specify a particular analytical or comparative task through which students would practice this outcome. Likewise, cooperative learning is mentioned as a teaching method, but the document doesn't clearly specify the collaborative tasks associated with particular learning outcomes. Hence the document provides evidence of general instructional methods, but limited evidence of their direct relationships with specific higher order cognitive outcomes.

Documented Assessment Procedures

Two assessment procedures were identified in the course specification: A midterm examination worth 40%, conducted in week 8 and a final examination worth 60%, conducted after week 15; these examinations together account for 100% of the documented assessment. The document, however, does not describe the specific tasks included in either examination.

Therefore it is not possible to determine from the course specification whether students are required to: analyze information, compare information, interpret data, construct an argument, and evaluate evidence as stated in the intended learning outcomes section. The assessment section doesn't provide sufficient evidence concerning its cognitive demands.

Constructive Alignment

The comparison of the three components reveals partial evidence of constructive alignment.

Table 8: Comparison of Course Components for Constructive Alignment

Dimension	Finding	Evidence
Higher order cognitive processes represented in outcomes	Yes	Analysis, inference, comparison, objective judgment are explicitly represented
Learning and teaching activities documented	Yes	Lectures, training and cooperative learning
Specific activities linked to higher order	Partly	General methods are provided
Assessment procedures documented	yes	Midterm 40% and final examination 60%
Assessment tasks linked to higher order	Insufficient evidence	Actual examination tasks are not described
Overall documented alignment	Partly	The three components exist however the relationship between them is insufficiently evident

As the table shows, the document explicitly consists of several higher order processes. The evidence, however, becomes less explicit as the teaching activity level. Although several teaching methods are identified, the document doesn't establish how those methods are used to develop the specific higher order processes identified in the outcomes. The course specification identifies examinations but provides no description of the tasks or cognitive processes assessed. Thus, the analysis indicated partial documented alignment rather than fully demonstrable alignment.

Implications for Course Design

Based on the findings yielded from the current study, the researcher suggests strategies that could make course specifications more explicit and effective in terms of promoting higher order thinking and constructive alignment.

First, intended learning outcomes should be made clear and precise by using observable verbs and by avoiding vague ones as they may obscure the intended cognitive demand. Hence, outcomes state clearly whether students are expected to remember, understand, and apply analyze, compare, evaluate, or create.

Second, teaching and learning activities could be connected directly to specific outcomes. For example, instead of listing "cooperative learning" as a general method of learning activity, the specification could identify the cognitive activities students will perform within cooperative learning, such as comparing texts, analyzing texts and arguments.

Third, assessment tasks should be provided in detail, specifically the tasks through which learning outcomes will be demonstrated. Stating only that the final examination equates 60% is insufficient, further information may determine whether higher order outcomes are being assessed and learning objectives are being targeted and achieved. The table below is a proposed structure that explicitly connects the three components: intended learning outcomes, learning and teaching activities and assessment tasks in a meaningful way.

Table 9: Proposed Structure Linking ILOs, TLAs and ATs

Intended outcome	Higher order processes	Learning activity	Assessment task
Analyze how scientific writing is constructed	analysis	Analyze sample academic texts	Written analysis of a sample text
Compare information objectively	Analysis/ comparison	Compare information from two sources	Comparative writing task
Produce an organized academic text	Apply /create	Guided writing and peer review	Academic writing assignment
Infer relationships in academic information	inference	Interpret examples and discuss conclusions	Short analytical response

Note. *The table demonstrates how higher order cognitive processes can be explicitly linked to learning activities and assessment tasks to enhance constructive alignment.*

Limitations

The study has several limitations. First, the analysis covered only the course specification of Academic Writing (1). Therefore, the findings cannot be generalized to other courses or to the entire English program. The results also cannot establish how the documented activities were implemented in actual classroom or how students experienced or responded to them.

Conclusion

This study examined the alignment of intended learning outcomes, teaching and learning activities, and assessment methods in the specification of an undergraduate Academic Writing course at the University of Tripoli. The analysis revealed partial documented alignment: although some intended learning outcomes refer to higher-order cognitive processes, the specification does not clearly identify the teaching activities and assessment tasks through which these processes are to be developed and assessed. This finding highlights the importance of moving beyond the inclusion of higher-order verbs in learning outcomes towards a more explicit connection between intended learning, teaching activities, and assessment. The course specification could be strengthened by defining learning outcomes more precisely, identifying activities that support the targeted cognitive processes, and specifying assessment tasks that provide evidence of those processes. Since the study examined one course document, its findings cannot establish how the course is implemented in practice or be generalized to other courses. Nevertheless, the analysis demonstrates the value of document analysis for identifying gaps in course design and informing efforts to improve constructive alignment in undergraduate English language education.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

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