



*Faculty of Sport Science
and Movement*

**GUIDE FOR CONSTRUCTIVE
ALIGNMENT OF LEARNING
OUTCOMES WITH LEARNING
ACTIVITY AND STUDENT
ASSESSMENT**

Prishtina, 24.10.2022

TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
1. INTRODUCTION	3
2. ENSURING ALIGNMENT.....	3
3. LINKING LEARNING OUTCOMES TO ASSESSMENT	4
4. LINKING OUTCOMES TO TEACHING AND LEARNING STRATEGIES	5
5. DIFFERENCE BETWEEN TRADITIONAL COURSE OUTLINES AND OUTCOME-BASED LEARNING COURSE OUTLINE.....	5
5. CONSTRUCTIVE ALIGNMENT SAMPLE.....	7
6. UTILITY FORMULA IN SELECTION OF ASSESSMENT METHOD	7
7. ALIGNMENT EXAMPLE.....	10

1. INTRODUCTION

The present Guide aims at explaining the principle of Constructive Alignment. Constructive alignment refers to an approach to instructional design that integrates Course Learning Outcomes (CLOs), (b) Teaching and Learning Activities (TLAs), and (c) Assessment methods (Ass.). As shown in Figure below the constructive alignment demands optimal coherence between these three elements in a course or curriculum. Moreover, constructive alignment underpins and assures the quality of an educational programme.

Figure 1: Constructive alignment



“[Constructive alignment] makes quite explicit the standards needed if the intended learning outcomes are to be achieved and maintained” (Biggs & Tang, 2015, p. 14).

Constructive alignment at the course level implies that course learning outcomes, student assessment, and learning and teaching activities all act in support of each other. The constructive alignment triangle is symmetrical triangle. If one part of the triangle is absent or is not supportive of the other parts, the triangle will collapse, hence the constructive alignment will not function.

2. ENSURING ALIGNMENT

Student assessment based on well-guided criteria lay down the clear foundation for inclusive learning processes at Faculty os Sport Science and Movement. If implemented properly, the student assessment with well-guided criteria can provide a shared language between students and professors, who serve as assessors at the same time.

In ensuring constructive alignment, course learning outcomes play a primary role. Course learning outcomes guide the selection and design of learning activities and assessments.

Furthermore, assessment is in alignment with the course learning outcomes, when it really assesses whether or not a student can achieve a specific course learning outcome.

In addition, the part of constructive alignment is also the teaching and learning activities and teaching resources, which are in alignment when they provide students the best opportunity to learn what is specified in the learning outcome.

An effective learning outcome contains a verb that can guide the selection or creation of activities that students need to engage with to achieve the outcome. The same verb can guide the selection of student assessment mechanisms, which can measure how well students achieved the outcome and facilitate appropriate feedback.

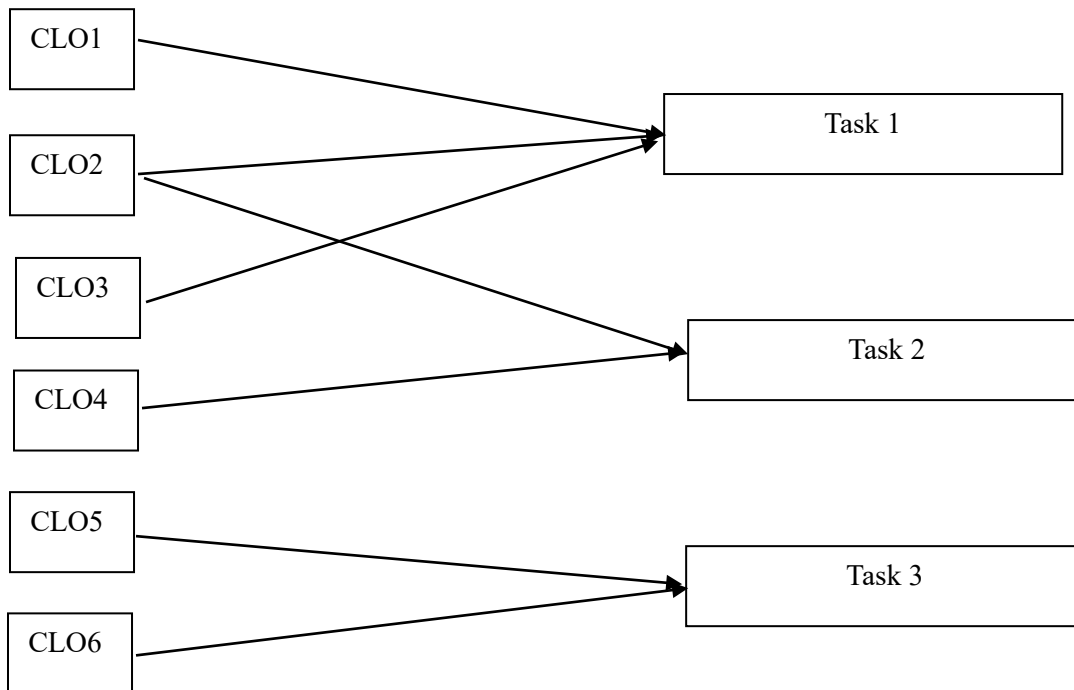
It is essential that teaching and learning activities, including skills practice, match the learning outcome and that assessments measure what students learned and practiced. Oftentimes, upon course review, the course bearer may discover that teaching and learning activity or student assessment form is not aligned with the specific course learning outcome for which it designed for. To this end, the course bearer should modify the teaching and learning activity or student assessment format in order to reflect the course learning outcome. If this is not applicable, the course bearer may end up revising the learning outcome.

3. LINKING LEARNING OUTCOMES TO ASSESSMENT

The assessment process examines the extent to which students have achieved the course learning outcomes. Therefore in designing an assessment program it is essential that the course learning outcomes form the basis of what is assessed and how it is assessed.

Each course learning outcome should be assessed. If a stated course learning outcome is not assessed, neither the course professor nor the students will know if it has been realized. If the learning outcome is framed in such a way that assessment is not feasible, the course bearer must reframe it so that demonstration of course learning outcome attainment is possible.

Figure 2: Alignment of CLOs with tasks



4. LINKING OUTCOMES TO TEACHING AND LEARNING STRATEGIES

The action verbs of course learning outcomes will flag the sorts of learning activities that will best lead to their attainment. For example, if one learning outcome is for students to be able to analyze and interpret data, then there should be activities where students are asked to analyze and interpret data, and opportunities for them to monitor, assess and receive feedback on their progress regarding these skills. If, as an outcome, students are expected to be able explain the importance of exercise and physical activity for the human organism., then they will need to be taught the skills involved and engaged in activities that allow them to practice and refine those skills.

5. DIFFERENCE BETWEEN TRADITIONAL COURSE OUTLINES AND OUTCOME-BASED LEARNING COURSE OUTLINE

Proper constructive alignment between teaching, learning, assessment activities and learning outcomes is crucial for successful implementation of the OBL approach (Barkley & Major 2016; Biggs & Tang 2007).

Table 1: Difference between traditional course outlines and OBL course outlines

Traditional course outline	OBL course outline
Course objectives	Course learning outcomes
1. Enable students to understand and learn about the mechanisms of disease acquisition related to a lack of physical activity (sedentary lifestyle). 2. Provide to students a comprehensive theoretical and practical understanding of the science of personal training and rehabilitation.	CLO1: Explain the negative consequences of leading an inactive lifestyle and the effects of physical activity on the human body; Develop skills in designing safe and effective exercise programs for individuals with different fitness levels, goals, and health conditions;

Comparison of assessment tasks under the traditional model and outcome-based learning model is shown below:

Table 2: Assessment tasks under old course outline and OBL course outline

Assessment tasks in the old course outline	Assessment tasks in the new OBL course outline
1. Mid-term exam (30%) ^a 2. Final exam (30%) ^a 3. Three assignments (40%) ^a	1. Exam 1 (25%) ^a 2. The laboratory exercises (15%) ^a 3. Case study home assignment (20%) ^b 4. Project (10%) ^b 5. Individual and group work (15%) ^{a,b} 6. Research paper and presentation (15%) ^c

^a Individual assessment. ^b Group assessment. ^c Group assessment for the written document and individual assessment for the presentations.

5. CONSTRUCTIVE ALIGNMENT SAMPLE

Table 3: Constructive alignment sample

Type of course learning outcome	Course learning outcome	Teaching and Learning activity	Assessment task
Cognitive (Demonstrate: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation)	CLO1: Describe how the concept of inclusive fitness differs from a traditional model of training specific populations (rehabilitation settings)	Lectures Tutorials Case study discussion	Case study home examination
Affective (Benefits of exercise in health)	CLO2: Identify and analyze the health benefits of regular physical activity.	Seminars, workshop Group work	Individual and group work Project work
Psychomotor skills	CLO3: Develop skills in designing safe and effective exercise programs for individuals with different fitness levels, goals, and health conditions.	Laboratory exercise Workshops	Class Participation and Discussions Individual and group work

6. UTILITY FORMULA IN SELECTION OF ASSESSMENT METHOD

Examples of criteria to assess the student achievement of intended learning outcomes are presented below as a form of guidelines for professors of various courses:

Selecting appropriate assessment methods for a course is often a difficult task. Prior to wise selection of assessment method, it is very important to assess the specific function of the respective assessment.

Why measuring the function of the respective assessment method is important?

The function that assessment method plays in a study process is influenced by five factors and so-called utility formula.

The functions of assessment method can be the following:

- Provision of feedback to students;
- assigning grades to students;
- selecting students;
- Influencing student's learning behavior like timely starting to study the materials;
- Make student's experience satisfaction for the learning effort they put in, or completing or wrapping up the learning process; □ Be accountable to external stakeholders.

The utility of an assessment method is influenced by five factors such as reliability, validity, educational effects, acceptance of stakeholders, and cost efficiency.

The reliability reflects the extent to which repetitive sessions of an assessment instrument will generate the same results. In other words, if two or more comparable groups of students will be assessed, the same results should come out of it. The reliability is influenced by the length of an exam, the number and the diversity of questions in an exam, the transparency of an assessment, and the clarity of the language used then the clarity of expectations of both students and the course professor.

The next factor is validity. The validity raises the question whether the assessment method really measures what is really intended to measure. In other words, the validity questions whether the assessment method is aligned with the formulated learning outcome and whether the assessment method provides the course professor with the insight about the extent to which the learning outcome has been attained.

The third factor is the educational effects of the assessment method. It measures the extent to which the learning process is influenced by the assessment method and measures whether the effect is positive or negative and does it have a positive or a negative effect.

The assessment method's intentions are as follows:

- stimulate students to put time and effort in the learning process
- assists students to start timely with the learning activities
- provide students information on how well they did in the learning process (feedback);
- offer students information on how to improve next time (feed forward);

- offers students information on how their learning outcomes contribute to achieving the higher level program outcomes (feed up);

The fourth factor that influences the utility of the selected assessment method is acceptance by stakeholders. A chosen assessment methodology needs to be accepted by all crucial stakeholders. This means students, professors, and program management should have enough confidence in the outcomes generated by the assessment. In some cases, this means that before a new assessment methodology is used, effort needs to be put in creating commitment for it especially by students

The final factor influencing the utility of the selected assessment method is better cost efficiency. In all assessment methods, costs are involved, cost for the staff, locations, technology, etc.

The utility equals reliability multiplied by validity multiplied by educational effects multiplied by acceptance and, finally, multiplied by cost efficiency.

For a utility formula to work, none of the factors should be too low or even zero, because in that case, the utility of the assessment will not function.

Table 4: Utility formula factors

Utility Formula Factors					
Methods of Assessment	Reliability	Validity	Educational Effect	Acceptance	Cost Efficiency
MC Exam	+	+	+/-	+	+
Essay	-	+	+	+/-	-

$$\text{Utility} = R \times V \times E \times A \times C$$

(R= Reliability, V= Validity, EI= Educational impact, A= Acceptability, C= Cost) In some cases, the utility formula also includes practicability.

$$\text{Utility} = R \times V \times EI \times P \times A \times CE$$

(R= Reliability, V= Validity, EI= Educational impact, P = Practicability, A= Acceptability, CI= Cost-effectiveness)

The utility of the assessment method is functional if none of these factors equals or nears zero.

7. ALIGNMENT EXAMPLE

As an example how to link the assessment criteria to learning outcomes by using particular assessment assignments, these Guidelines use one of learning outcomes of the course Fundamentals Of Physical Activity of the bachelor study program in Sport, for which a seminar and an individual and group work is used as an assessment assignment to measure the student achievement of the learning outcome 1: Apply theories of motor control and learning to explain the acquisition and refinement of motor skills.

Table 5: Example of assessment criteria for intended learning outcomes in the courses Fundamentals Of Physical Activity

Intended learning outcomes	Assessment criterion	Fail descriptor
Apply theories of motor control and learning to explain the acquisition and refinement of motor skills.	Demonstrate an Understanding of Motor Control and Motor Learning.	Demonstrate partially developed knowledge of motor control and learning to explain the acquisition and refinement of motor skills. Make insufficient or wrong assumptions about motor control and learning to explain the acquisition and refinement of motor skills Partially link to real life practices.

The achievement of learning outcome: Apply theories of motor control and learning to explain the acquisition and refinement of motor skills is measured by the assessment assignment with seminars and individual and work group as described in the following assessment criteria:

1. Demonstrate an Understanding of Motor Control and Motor Learning. (35 %);
2. Apply theories of motor control and explain the acquisition and refinement of motor skills. (35 %);
3. Explain physiological responses to exercise (30 %);

The standard descriptors used to assess the student achievement of the learning outcome: Apply theories of motor control and learning to explain the acquisition and refinement of motor skills through the assessment assignment (seminars and individual and work group) are:

- Fail – Grade 5;
- Pass – Grade 6;
- Average credit – Grade 7 and 8;
- Distinction – Grade 9;
- High distinction – Grade 10

