

# The Measurement Tools Utilized in the Evaluation of Learning Outcomes for the Courses of Geography Program in King Khalid University: Analytical Study

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## Abstract

The present study aimed to analyze the measurement and evaluation tools in the light of learning outcomes of Geography Program in King Khalid University. The study sample composed of the questions of the final achievement tests for the academic year 2017/2018. The study utilized a card to analyze the test questions, and the study showed the high frequency of learning outcomes in the indicator of knowledge compared to cognitive knowledge, the type of the test questions limited to an essay, the multiple choice question and true-and -false question; and the high degree was in favor of the topic questions. The results also showed the poor outcomes for the test paper according to quality standards as well as poor formulation of learning outcomes in some courses, and remarkably there are duplicates in some outcomes related to the field of cognitive skills, despite the various types of the courses. Finally, the study developed a proposal to improve the quality of learning outcomes for the courses of Geography program and to be consistent with the measurement and evaluation methods shown by the present study.

**Keywords:** learning outcomes, measurement, evaluation, Geography program.

## Introduction

Teaching is one of the greatest and noblest occupations in our society as the greatest burden of preparing the future generations lies on the teacher. The prophet (PBUH) says: "Verily I have been sent as a teacher". Therefore, the more value and benefit a subject has, the more prominent its teacher becomes. Teaching, as a profession, is not only limited to teaching a curriculum to students, but s/he should ensure that the full and correct information was provided and the student fully comprehended it. Thus, evaluation becomes part and parcel of the educational process. The more effective evaluation is, the more quality the educational process has. That is, evaluation is a key element of this process because of its effective impact on its overall guidance and development. Lately, education, in general, and university education, in particular, has undergone a crucial reform movement by introducing new concepts to the methods and standards of evaluation to accomplish excellence of the graduate to face the challenges of the 21<sup>st</sup> century. It is noted that Western universities attempt to continuously develop its institutions despite the advanced international positions they hold, compared to the Arab ones that literature indicates the retreat of their positions, except for a limited number (Moqadam, 2008). The current strong competition among countries are not settled, but through the scientific, technological, and cognitive advancement. Thus, interest should be paid to the minds that provide the researcher, explorer and inventor (Abuallam, 2001). Therefore, endeavor to create a great leap to the future by reconsidering the traditional evaluation process that does not measure but knowledge and lower levels of thinking is a must. In other words, evaluation should be related to reality and student ability and readiness to perform real tasks in the professional life (Abu Senina, 2004). Currently, strong trends towards reforming the evaluation methods have emerged led by accreditation authorities and some governments. Some universities and colleges called for the interest in the quality of teaching and learning, including the authentication of student learning and using information to improve it as well as the provided services (Barker et al., 2012)

Additionally, accreditation authorities, including the National Commission for Academic Accreditation and Assessment (NCAAA) in Saudi Arabia called for defining the expected learning outcomes, whether at the level of academic programs or courses; evaluating their accomplishment; and providing proofs of improvement by analyzing the results of each of them. Accordingly, many universities have a system to measure learning outcomes at various levels (institutional, academic programs, and courses). King Khalid University is one of the universities that were keen on applying outcomes-based learning system and utilizing outcomes evaluation system to define their achievement. According to the results, developmental plans are set to promote the quality of students' performance, courses, and academic programs. Therefore, the current study attempted to validate the consistency of measurement and evaluation tools utilized in evaluating the learning outcomes for the courses of Geography program at King Khalid University.

## Statement of the problem

Measuring and evaluating learning outcomes is a highly significant issue, as it is the basis of continuous

improvement in curricula, methods of teaching, and all the needs of the educational process that affect students learning. Therefore, many universities adopted creating learning outcomes of the courses and academic programs. However, their accomplishment and the consistency of measurement and evaluation with learning outcomes have not been attempted yet. Hence, the author asked the Deanship of Academic Development and Quality, King Khalid University about its efforts in the field. She found out that a pilot study was conducted to investigate the consistency of learning outcomes of (43) Bachelor program with their evaluation methods in their specifications, as follows:

- Some programs utilized inappropriate evaluation methods for the learning outcomes such as researches or projects with the first field (cognitive).
- Some programs did not appropriately defined evaluation methods; just an explanation of the evaluation mechanism.

Accordingly, the author was interested in the measurement and evaluation tools utilized to evaluate the learning outcomes of Geography courses program to define the consistency of evaluation methods and learning outcomes as stated by the specifications, type of tests, and questions.

### Study questions

The problem of the current study can be defined by asking the following major question:

To what extent are final achievement tests of the courses of Geography program, King Khalid University consistent with the learning outcomes stated in their specifications?

It is further subdivided into the following minor questions:

1. What are the fields of learning outcomes measured by the achievement tests of Geography program courses, King Khalid University?
2. What is the level of test paragraphs related to learning outcomes of Geography program courses on Bloom's Taxonomy?
3. What are the type and level of achievement tests of Geography program courses, King Khalid University?
4. What is the proposal to promote the quality of learning outcomes of Geography program courses and achieve consistency with measurement and evaluation methods?

### Objectives

The study aims to:

1. Evaluate and analyze the questions of achievement tests of Geography program courses, King Khalid University to investigate their consistency with learning outcomes, especially in the cognitive field.
2. Identify the type and levels of achievement test questions in these courses.
3. Define the level and consistency of achievement test questions with learning outcomes fields.

### Significance

It is a significant study because it:

1. Provides a clear vision for decision makers to reconsider the evaluation methods of learning outcomes for the courses of Geography program.
2. Provides a feedback to Bachelor programs in King Khalid University regarding the level of preparing the appropriate evaluation methods.
3. Offers solutions based on the results of scientific studies to overcome the problems affecting the Bachelor learning outcomes of Geography program.
4. Provides a feedback on the consistency of measuring Bachelor's learning outcomes of Geography program, King Khalid University in the periodical and final tests.

### Study limitations

*Temporal limitations:* The second semester of the academic year 2017/2018.

*Spatial limitations:* King Khalid University, Asir Region.

*Objective limitations:* The content of the final test questions (Geography program) to define learning outcomes to be handled by the evaluation tools (tests).

### Terms

- *Measurement* is the process used to set various numbers or levels of the feature measured in different participants (Morad, 2001). The author defines measurement as a process prior to evaluation and assessment. It aims to regulate the phenomenon in the form of digital data that the evaluator and assessor use later.
- *Evaluation* is the process that aims to investigate the accomplishment of the aspired educational objectives

and the effectiveness of the whole educational program concerning planning, implementation, and educational methods and tools (Allam, 2003). The author defines it as the process conducted to check the success and failure of objectives according to the specifications of outcomes.

- *Learning outcomes* are action statements that show the extent of knowledge, skills, situations, values, or attitudes that are expected to be achieved by the student after studying and passing a course (Qweran, 2013). The author defines the outcomes of courses learning as written statements that are phrased before the initiation of the learning process. They refer to what is expected of the student of knowledge and mastering the various skills after passing this course.
- *Geography Program* is procedurally defined as a four-year academic program in King Khalid University that grants Bachelor degree.

## Theoretical framework

### 1. Measurement, assessment, and evaluation

According to Elazawy (2013), measurement is an indirect process that utilizes certain tools, e.g. tests. It infers the measured feature through behavior or quantitative performance. The obtained degree is known as assessment that is known as a diagnostic process conducted according to the obtained information. It is a tool of educational reformation that provides a clear image of the learner achievement. It tackles the processes and final results. It offers various sources of evaluation that leads to an accurate method of evaluating learners (Eldosary, 2004).

Evaluation is a methodological process that comprises collecting data of a certain feature, followed by judging it to define its competence. That is, a person is judged according to the set objectives (Abuallam, 2001). Evaluation is a basis of any course utilized to define the accomplishment of objectives aspired by the course design. However, educational evaluation has been limited to paper tests only (Damas, 2011).

Alfeqi et al. (2013) argues that evaluation objectives continuously change and evolve. In the past, evaluation aimed to measure the cognitive aspect only. It equaled a test that was conducted once or twice, at most, by the end of each semester. It only aimed to estimate students' knowledge and memorization of facts, not their higher mental abilities, e.g. understanding, analyzing, and investigating the nature of rules and ideas as well as structure, evaluation, and creativity. This concept took a long time until new theories in psychology were introduced. They stressed the multiplicity of learning aspects and the importance of their analysis to define the total development of a learner. That is, it attempts to define weakness and strengths utilizing various tools and measurements that provide enough data and proofs. It is followed by providing the appropriate treatment of weakness to overcome and strengths to support and promote.

### 2. Learning outcomes and its importance

Learning outcomes are the product of an educational reformation movement that globally prevailed on a large scale in higher education. They are known as "Outcomes-based Education" (OBE). A long time ago, it was adopted by many universities. They became a distinctive landmark of education, learning, and evaluation in the academic and professional programs offered by universities in many countries (Qweran, 2013). Biggs & Tang (2007) state that OBE is conducted in completely different ways to improve education and learning or to meet the administrative agenda. Qassem & Hasan (2012) also assured the importance of learning outcomes as they provide a strong basis of the development and design of academic programs, as follows:

- They help provide clarity, integration, and correlation of courses and represent a basis of developing academic programs.
- They are an application of learner-centered curricula design.
- They promote the various forms of motivation, including the intrinsic, social, and achievement. They motivate independent self-learning that enables students of assuming responsibility of their study and measuring their achievement.
- They provide an opportunity of group planning of curricula and cooperation among the faculty members.
- They help assure the distinctiveness of the decisions related to curricula and the educational environment.
- They support the philosophy of following-up, evaluation, and continuous improvement.
- They help assure the quality of academic programs.

Due to OBE importance in modern educational systems, the National Qualification Framework for Saudi Arabia (NQF) categorized learning outcomes expected of students into four fields, as follows:

1. Knowledge: The ability to retrieve, understand, and provide information, including knowing certain facts, defined concepts, bases, theories and certain actions.
2. Cognitive skills include the ability to:
  - Apply the conceptual recognition of concepts, principles, and theories.
  - Apply the methods implied in critical thinking and creative problem-solving, whether based on a request from others or when facing new and unexpected situations.
3. Interpersonal skills and responsibility

4. Communication, information technology and numerical skills
5. Psychomotor skills (NQF for higher education, 2009)

The current study focuses on the first and second fields because of the availability of measuring their related outcomes through the test paper.

### 3- *Measurement of Learning outcomes*

Learning outcomes measurement is an important step towards accountability. It helps the procedures of development and continuous development, whether at the level of courses, programs, or institution. According to Elkahifa (2015), the following are the aims of evaluating and measuring learning outcomes:

1. Identifying the level of achieving the aspired learning outcomes at the academic programs.
2. Documenting student learning to be used in holding various jobs and joining post-graduate studies programs.
3. Investigating the development of the educational performance of an institution by comparing the former, current, and future levels.
4. Providing indicators of the accountability of university, colleges, and employees.
5. Helping the faculty member set learning outcomes mastered by students and those requiring extra effort (Qassem and Hasan, 2009).
6. Making decisions of accrediting the university or college by the accreditation authority.
7. Providing students with feedback that help define performance weakness and strength.
8. Upgrading student substantial motivation and encouragement for more learning and work.
9. Offering a license to transfer a student to a higher class or choosing certain courses.
10. Predicting student success in the courses of post-graduate studies or later.

### **Methods of learning outcomes measurement**

Checking the achievement of learning outcomes requires certain tools. According to Jose & Ricardo (2008), this process requires many standards, including:

1. There is not a tool that can individually measure all the expected learning outcomes as it is not comprehensive and may not be accurate.
2. The validity and objectivity of the measurement tool should be verified.
3. The tool should directly measure the learning outcome.
4. Objectively specify students' samples.
5. Define when and how the tool should be applied.
6. There should be awareness of the pros, cons, and potential mistakes of the measurement.

According to Badwad and Abdulfattah (2013), Bers (2008) defined what the tools of learning outcomes measurement should comprise:

1. A clear definition of knowledge, skills, behaviors, and attitudes that students are expected to complete and demonstrate by passing the course or program.
2. Defining the appropriate attitudes of a certain measurement if this learning has been demonstrated or the student has achieved a set of defined tools that can be considered successful.
3. Defining individual responsibility in applying and interpreting measurement and identifying the way results are announced and how to use them in institutional improvement.

The educational literature refers that there should be more than a tool to measure learning outcomes. For example, Huda and Freed (2000) argue that there are two types of measurement that should be used. The first one is direct evaluation in which proofs of the students mastering of learning outcomes are introduced. Students should prove their learning and it allows a direct observation of their performance using various tools, including exams, essay questions, case studies, achievement portfolio, projects, assignments, authentic tests, etc. The second is indirect evaluation which depends on the points of view and opinions that express students mastering of learning outcomes, including the opinions of graduates, employers, and faculty members. It is used to support the direct evaluation. It is noteworthy mentioning that King Khalid University seeks to apply both types of evaluation to check the achievement of learning outcomes; direct evaluation including the various tools that differ from one course or program to another and the indirect one that uses surveys directed at students, graduates, and employers.

### **Review of the Literature**

Ibraheem (2014) investigated the reality of learning outcomes for academic programs, Aden University from the perspective of College Deans, Heads of Departments, faculty members, and expected graduates. The study concluded that there is a clear low level of learning outcomes development to fulfill learner needs or reflect achieving any of their creations in many academic programs of Aden University's colleges. In addition, there is a clear low level of learning experience development that help connect the student to the external world. Hence, there are no learning outcomes that fulfill learner needs and achieve their creations.

Badwad and Abdulfattah (2013) investigated the coverage and accomplishment of all set learning outcomes at Kindergarten Program, King Saud University by analyzing the content of a sample of written, practical, and performance tests to define what has been measured of the cognitive and skill outcomes. They concluded that there was a focus on a small number of the outcomes (i.e. 43% of the college's) and (20%) of the total professional outcomes. Additionally, the focus of test items was more on the cognitive outcomes, achieving (95.3%). Skill and attitudes outcomes were (4.5%) and (0.2%), respectively. Fakhro (2013) aimed at creating a proposed training program to train teachers on preparing the tools of learning outcomes evaluation in the main aspects (cognitive, skillful, and emotional) in Arabic, English, Mathematics, and Science. The study concluded that the participants lacked various skills when preparing the achievement tests, e.g. formulating written questions, preparing specifications' table, and results' analysis skills.

Jideani and Jideani (2012) aimed to evaluate the consistency of learning outcomes and evaluation methods in nine courses in the science and technology of nutrition depending on Bloom's Taxonomy of the cognitive levels. Results indicated that these courses learning outcomes assured the skills (memorization to innovation) of about (52.9 - 72.9%). In addition, evaluation questions varied from a course to another in the accomplishment of knowledge aspects, achieving (33.3% - 62.5%). Regarding the type of knowledge, (facts-metacognition) achieved (37.5% - 66.7%). Furthermore, evaluation largely focused on understanding, memorization, concepts, and knowledge.

Jose & Ricardo (2008) sought to identify the methods of evaluating the learning outcomes of foreign language programs at the Bachelor stage in the USA. They concluded that the process of evaluating the learning outcomes combined performance and traditional evaluation. In addition, some evaluations tend to focus on evaluating the linguistic knowledge. There were also many methods, e.g. oral performance evaluation, writing and translation skills, and portfolio that are used to evaluate students' progress.

Elqodayerat (2008) aimed to investigate the evaluation of the questions of final tests by Mathematics teachers in the Secondary stage in Jordan in the light of Bloom's Taxonomy according to the teacher experience and academic qualification. The sample comprised all the papers by (134) teachers in Arbad and Aqaba. The study mainly concluded that there were statistically differences that could be attributed to the teacher qualification. In addition, most of the questions set by the teachers of low-cognitive levels focused on understanding and knowledge and they ignored higher-cognitive levels.

Sevily et al. (2003) conducted a study on (4003) exam papers to analyze and compare the questions of achievement tests in Chemistry at a number of schools in two Turkish cities according to Bloom's Taxonomy. They revealed that (96%) of the questions focused on low-knowledge levels. Elkhawalda et al. (2007) evaluated the questions of Islamic Sciences of the general secondary school questions in Jordan from 1997 to 2005 according to knowledge levels. They concluded that: While the questions focused on memorization, understanding, and analysis, they avoided application, synthesis, and evaluation.

Accordingly, some Arab and foreign studies investigated the reality of achieving learning outcomes, either according to learning outcomes or Bloom's Taxonomy, and defining the methods used in evaluation. However, some studies largely focused on the cognitive learning outcomes of the academic programs compared to other outcomes, either at the professional or emotional aspect. Literature did not focus on the consistency of evaluation methods with the learning outcomes defined in the courses. The current study matched literature in focusing on learning outcomes and evaluation methods. But, it differed in focusing on the consistency of evaluation methods, i.e. achievement tests, with learning outcomes of the Geography program.

## **Procedures of the Study**

### *Methodology*

According to its nature, content analysis utilized to reveal measuring the learning outcomes of Geography courses in the cognitive and emotional aspects by the achievement tests of Geography program.

### *Population*

The study utilized evaluation tools of final written tests of all courses of Geography program used by the faculty members of Geography Department, King Khalid University. Additionally, a list of the learning outcomes and evaluation methods of each course as stated in the specifications was utilized.

### *Sample*

The study sample composed of the learning outcomes of all specialized courses of Geography program (i.e. 32 course) distributed to all levels. However, 12 courses were excluded because:

- The study plan of the program is introduced each semester. Because the female students do not enroll in some courses, they are excluded.
- Some outcomes are generally formulated; not specific to the nature of the course.
- Some learning outcomes are unclearly formatted. Thus, the author found it difficult to connect them to the questions. For example, in Agricultural Geography, the first and only outcome in knowledge states that: "the

female student should perceive the concept of Geography". This outcome is unmeasurable and is defined as an objective. However, it was mentioned only, the test paper comprised (46) questions covering various topics that were not referred to in the course specifications.

#### Tool of the study

The questions of final achievement tests in these courses were utilized as measurement tools of the learning outcomes. The study utilized a content analysis card of Geography tests in the Bachelor stage, depending on its consistency with learning outcomes of Geography program courses at the cognitive and emotional levels. After testing the card's validity and reliability and making the required modifications, analysis began according to a number of procedures, as follows:

- Agreement on the basics, procedures, and controls of the analysis.
- Individual analysis by specialists according to the indicators and regulations in the card analysis of each learning outcome of the Bachelor stage of Geography program.
- Extracting cards data and counting frequencies and percentages.
- Making recommendations and suggestions.

#### Results

The author extracted data according to the learning outcomes of each field specified in course specifications and analyzing test questions to find out those covered outcomes, as shown in the following table:

Table (1) Descriptive results of learning outcomes for specialized courses of Geography program, the measured and uncovered ones in the final achievement tests

S.	Course	Level	Learning outcomes in the specification		learning outcomes covered by the final tests		learning outcomes uncovered by the final tests	
			Knowledge	Cognitive Knowledge	Knowledge	Cognitive Knowledge	Knowledge	Cognitive Knowledge
1	Introduction to Geography	First	2	2	2	-	-	2 Cognitive skills
2	Fundamentals of Mapping	First	2	4	2	2	-	2 repeated
3	Distribution Maps	Second	4	2	4	-	-	2 repeated
4	Dryland Environments	Third	2	2	2	-	-	2 repeated
5	Geography of Natural Disasters	Third	3	2	2	-	-	2 repeated
6	Sea and Ocean	Fifth	2	2	2	-	-	2 Cognitive skills
7	Biogeography	Fifth	3	3	3	2	-	1 Cognitive skills
8	Geography of the Arab World	Sixth	3	3	3	-	-	3 of them, 2 repeated
9	Environmental systems	Sixth	4	3	4	2	-	2 repeated
10	Human Geography in Saudi Arabia	Sixth	4	2	4	1	-	1 Cognitive skills
11	Geography of Water	Sixth	2	2	2	-	-	2 repeated
12	Regional Planning	Sixth	4	3	4	2	-	2 repeated
13	Medical Geography	Seventh	4	4	4	-	-	4 Cognitive skills
14	Geography of the Islamic World	Seventh	2	4	2	1	-	3 of them, 2 repeated
15	Social Geography	Seventh	3	2	3	--	-	2 repeated
16	Problems of Desertification and Drought	Seventh	2	3	2	1	-	2 repeated
17	Methods of Research in Geography	Eighth	1	1	1	1	-	-
18	Transportation and Commerce	Eighth	3	3	3	1	-	2 repeated
19	Geography of Development	Eighth	3	3	3	1	-	2 Cognitive skills
20	Advanced Quantitative Methods in Geography	Eighth	4	2	4	1	-	1 Cognitive skills
	Total	-	57	52	57	13	-	39 outcomes; 26 are repeated in 13 courses in the same format
	Percentage		52.3%	47.70%	100	25%		75%

Table (1) shows that the largest frequencies favored the cognitive learning outcomes, achieving (52.3%).

They were followed by those of the cognitive skills of (47.70%). Learning outcomes related to the field of knowledge were (57); the least of which were in Methods of Research in Geography achieving (1). There were (4) outcomes in (6) courses: Distribution Maps, Environmental Systems, Human Geography, Regional Planning, Medical Geography, and Advanced Quantitative Methods in Geography. Learning outcomes in the cognitive skills were (52); the least of which were in Methods of Research in Geography achieving (1). The highest were (4) outcomes in (3) courses: Fundamentals of Mapping, Medical Geography, and Geography of the Islamic World. All learning outcomes related to the cognitive field were covered in the final tests of the (20) courses. While (13) outcomes related to the cognitive skills were covered in the tests, rating (25%), (39) ones were not covered, rating (75%). It is a very high percentage, indicating lack of interest in measuring high-thinking skills and that there is a focus on the cognitive aspects. This agrees with Elqodayerat (2008) indicating that most of the questions are focused in the lower-thinking skills. In addition, (26) out of (39) outcomes of the cognitive field, representing (50%) were duplicated in (13) courses. That is, there is a great need to reconsider the formatting of learning outcomes, in general, and those related to the cognitive skills, in particular, to illustrate the role of courses in developing the performance skills that match the nature of each course.

Table (2) Frequency and distribution of the questions related to each course learning outcomes according to Bloom's Taxonomy of educational objectives and those related to questions that are unrelated to outcomes and their percentage

S.	Course	Frequency of test questions related to the outcomes and their distribution according to Bloom's Taxonomy of the educational objectives						Frequency of test questions unrelated to the outcomes	Percentage
		Memorization	Understanding	Application	Analysis	Synthesis	Evaluation		
1	Introduction to Geography	12	-	-	-	-	-	34	73.91%
		26.1%							
2	Fundamentals of Mapping	27	10	-	-	-	-	10	21,27%
		57.44%	21,27%						
3	Distribution Maps	25	16	-	-	-	-	6	12.76%
		53.19%	34.04%						
4	Dryland Environments	11	4	-	-	-	-	31	67.39%
		23.91%	8.69%						
5	Geography of Natural Disasters	15	12	-	-	-	-	19	41.30%
		32.60%	26.08%						
6	Sea and Ocean	31	-	-	-	-	-	15	32.60%
		67.39%							
7	Biogeography	37	6	-	-	-	-	7	14%
		74%	12%						
8	Geography of the Arab World	50	-	-	-	-	-	-	-
		100%							
9	Environmental systems	23	16	-	-	-	-	7	15.21%
		50%	34.78%						
10	Human Geography in Saudi Arabia	24	11	-	-	-	-	12	25.53%
		51.06%	23.40%						
11	Geography of Water	16	12	-	-	-	-	18	39.13%
		34.78%	26.08%						
12	Regional planning	20	9	-	-	-	-	16	35.55%
		44.44%	20%						
13	Medical Geography	46	-	-	-	-	-	-	-
		100%							
14	Geography of the Islamic World	25	19	-	-	-	-	2	4.34%
		54.34%	41.30%						
15	Social Geography	22	-	-	-	-	-	28	56%
		44%							
16	Problems of Desertification and Drought	37	6	-	-	-	-	7	14%
		74%	12%						
17	Methods of Research in Geography	26	4	-	-	-	-	16	34.78%
		56.52%	8.69%						
18	Transportation and Commerce	28	7	-	-	-	-	12	25.53%
		59.57%	14.89%						
19	Geography of Development	24	14	-	-	-	-	8	17.39%
		52.17%	30.43%						
20	Advanced Quantitative Methods in Geography	30	15	-	-	-	-	5	10%
		60%	30%						
Total		507	161					262	
		54.51%	17.31%					28.17%	

Table (2) shows that the total number of objective questions in addition to the essay ones are (930). The

number of essay questions related to learning outcomes in memorization are (507) rating (54.51%). While those related to understanding are (161) rating (17.31%). This suggests that the majority of test questions reflects lower thinking levels not the higher ones, although there are advanced courses in the study plan of the program. That is, the student can work, apply, and implement what the program sought to achieve. Additionally, there are courses of applied nature that require tools that measure the performance skills in evaluation.

Furthermore, the questions related to application, analysis, synthesis, and evaluation are absent. This suggests that these tests are low level, despite the diversity of courses, regarding level, content, and nature. This matches Elkhawalda et al. (2007) that concluded that the questions focused on memorization, understanding, and analysis but avoided application, synthesis, and evaluation.

There are (262) question items rating (28.17%) that are unrelated to learning outcomes of the courses under study. This suggests that the consistency of final achievement tests with the learning outcomes in the specifications are not high enough. Table (1) shows that there are (39) learning outcomes of the cognitive skills that were not covered in the tests and that there are two duplicated ones in (13 out of 20) courses. This indicates the need to: Reconsidering the preparation of achievement tests to consider achieving consistency between the questions and learning outcomes of each course and reformatting learning outcomes to reflect the nature and role of the course in achieving the program outcomes. The cognitive aspect is interested in transforming knowledge acquired by the student into applications and practices to be used in life performance.

Table (3) Results of question types in the courses

S.	Course	Type of questions				
		Essay	Percentage	Objective	Percentage	Both
1	Introduction to Geography	1	2.17	45	97,82	100
2	Fundamentals of Mapping	2	4.25	45	95.74	100
3	Distribution Maps	2	4.25	45	95.74	100
4	Dryland Environments	1	4.25	45	97,82	100
5	Geography of Natural Disasters	1	4.25	45	97,82	100
6	Sea and Ocean	1	4.25	45	97,82	100
7	Biogeography	1	4.25	45	97,82	100
8	Geography of the Arab World	-	-	50	100	100
9	Environmental systems	1	4.25	45	97,82	100
10	Human Geography in Saudi Arabia	2	4.25	45	95.74	100
11	Geography of Water	1	4.25	45	97,82	100
12	Regional planning	1	4.25	45	97,82	100
13	Medical Geography	1	4.25	45	97,82	100
14	Geography of the Islamic World	1	4.25	45	97,82	100
15	Social Geography	-	-	50	100	100
16	Problems of Desertification and Drought	2	50	2	50	100
17	Methods of Research in Geography	1	4.25	45	97,82	100
18	Transportation and Commerce	2	4.25	45	95.74	100
19	Geography of Development	1	4.25	45	97,82	100
20	Advanced Quantitative Methods in Geography	-	-	50	100	100

Table (3) shows that essay questions in most tests are lower than the objective ones as they are not more than two questions with marks from (5) to (10), except for the course of "Problems of Desertification and Drought" that comprises one essay question including sub-questions for (25) marks, a true-false question, and a multiple-choice question for (25) marks. The objective questions are high rating (100%) and not less than (95.74%), comprising true-false and multiple choice questions. Therefore, the questions of memorization and understanding focused on this type as they are hard to measure analysis, synthesis, or evaluation. This agrees with Badwad and Abdulfattah (2013) showing that test items focus on the cognitive outcomes rating (95.3%). It also agrees with Jideani and Jideani (2012) showing that evaluation in Nutrition and Technology Sciences largely focused on understanding, memorization, concepts, and knowledge. In addition, it agrees with Sevily et al. (2003) revealing that (96%) of the questions measure the lower-cognitive aspects.

The author observed that there are some test papers that lack quality standards related to the test format, e.g. disorganization of choice questions whether vertically or horizontally, available questions for each item are unequal ranging from two to four, some true-false questions begin with negation, and font size was sometimes small. This agrees with Fakhro (2013) concluding to the shortage of many skills in preparing the achievement tests including choice questions. There are many items related to a certain learning outcome and the distribution of questions are unequal. In addition, essay questions are generally formatted as they lacked performance indicators that accurately define student level, e.g. number of examples, lines, items, and indicators related to written language.



## Conclusion

The results refer to high frequency of learning outcomes in knowledge field compared to cognitive knowledges. While learning outcomes related to knowledge rated (100%), cognitive knowledge rated (25%), indicating the low percentage. Question items in memorization were high compared to understanding. While other levels of Bloom's Taxonomy were totally neglected from application to synthesis. The type of questions was limited to essay, multiple choice, and true- and false-question with the maximum mark in favor of the objective ones. The results also indicate weakness of the skills of producing the test paper according to quality standards and formatting the learning outcomes of some courses. Some learning outcomes related to the cognitive skills were related in a way that draws attention despite the difference of the course nature.

Accordingly, a proposal is provided to promote the quality of learning outcomes for Geography program courses and achieve consistency with measurement and evaluation methods. The proposal is based on: a) King Khalid University obtained institutional accreditations and seeks program accreditation from the NCAAA and international accreditation institutions. b) The availability of quality systems at each college and a coordinator of each academic program to follow-up the educational process, its quality and obstacles. c) The desire to overcome weakness in the academic programs. The proposal is based on a philosophy that measurement and evaluation are the essence of improvement and development. Continuous improvement is the essence of the educational process, and its promotion will not be completed but by promoting evaluation and measurement to check its achievement and consistency with learning outcomes. It aims to promote the educational process of Geography program through improving the specification of program and courses to match learning outcomes required by the labor market. Improving faculty members to design achievement tests according to quality standards and expected learning outcomes. Also, regular evaluation of the quality of program and courses according to the labor market and ongoing developments.

In the light of the study results, the proposal is needed due to: 1) Weakness of the type and format of the current courses learning outcomes; 2) inconsistency of evaluation methods and learning outcomes; 3) develop the performance of faculty members to increase the opportunities of achieving learning outcomes and upgrade student levels; 4) support the culture of continuous development and motivate the members to evaluate to improve and achieve learning outcomes; and 5) develop the program to prepare graduates for the labor market.

### *Procedures of implementation*

The proposal takes the form of defined action objectives to handle weakness revealed by the study and define the activities, actions, person in charge, and performance indicators.

#### 1. Developing the specifications of program and courses to match learning outcomes required by the market

Activities and actions	Expected results	Person responsible for implementation	Time of implementation	Performance indicator
<ul style="list-style-type: none"> <li>- Activating the role of planning and academic programs commission</li> <li>- Training the members on the skills of setting plans and fulfill the specifications of programs and courses</li> <li>- Setting-up a plan to review the current study plan of Geography program</li> <li>- Setting-up a time line to develop the current plan.</li> <li>- Submitting the plan to an external evaluator to give opinions</li> </ul>	<ul style="list-style-type: none"> <li>- Participation of planning and academic programs commission in developing the current plan</li> <li>- Improving faculty members.</li> <li>- Defining the weaknesses of the current plan</li> <li>- Re-setting the current plan according to quality standards and the guidelines of NFQ</li> </ul>	<ul style="list-style-type: none"> <li>- Head of Department</li> <li>- Program Coordinator</li> <li>- planning and academic programs commission</li> </ul>	Next Academic Year	<ul style="list-style-type: none"> <li>- Number of decisions made regarding development</li> <li>- Number of meetings held to discuss the current plan</li> <li>- Commitment to implement the development plan</li> <li>- Satisfaction of the external evaluator on development</li> </ul>

2. Improving faculty members to design achievement tests according to quality standards and expected learning outcomes.

Activities and actions	Expected results	Person responsible for implementation	Time of implementation	Performance indicator
<ul style="list-style-type: none"> <li>- Preparing training courses in preparing and designing tests according to quality standards</li> <li>- Training the members on measuring the learning outcomes and linking them to test questions</li> <li>- Training the members on modern teaching strategies that match learning outcomes and their achievement</li> </ul>	<ul style="list-style-type: none"> <li>- Mastering the skills of test preparation according to quality standards by the faculty members</li> <li>- Measuring learning outcomes by the achievement tests</li> <li>- Diversity of the teaching performance methods in the classroom</li> </ul>	Deanships of Development and Quality and College of Education	Next Academic Year	<ul style="list-style-type: none"> <li>- No. of faculty members trainee</li> <li>- Percentage of the tests that accomplished quality standards</li> <li>- Percentage of the tests that matched the courses learning outcomes</li> <li>- Student satisfaction of the faculty member performance in the classrooms</li> </ul>

3. Periodical evaluation of the quality of program and courses according to the labor market and ongoing developments.

Activities and actions	Expected results	Person responsible for implementation	Time of implementation	Performance indicator
<ul style="list-style-type: none"> <li>- Commitment to monitor the quality of the educational process in the annual reports of the program and defining strengths and weakness</li> <li>- Setting-up developmental plans according to the previous steps</li> <li>- Learning outcomes measurement across the program to check their achievement</li> <li>- Applying surveys to students, graduates, and employers to verify their satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>- Continuous following-up of performance, discovering errors, and immediate treatment</li> <li>- Using learning outcomes measurement across the program and the opinions of graduates and employers in setting-up developmental plans</li> </ul>	- Quality coordinator, the accompanying team, and the members of measuring learning outcomes throughout the program	Next Academic Year	<ul style="list-style-type: none"> <li>- Implementation of the developmental plans in the annual reports</li> <li>- Achievement of the learning outcomes throughout the program</li> <li>- The satisfaction of graduates, students, and employers of the program learning outcomes</li> </ul>

**Suggestions**

1. Conducting a study on the quality of tests in Geography program, King Khalid University.
2. Conducting an evaluative study of the training needs of the faculty members in Geography program, King Khalid University.
3. Conducting a study to develop the current plan of Geography program to match the labor market needs.

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