A Training Program to Develop the Culture of Competency-Based Assessment among Preparatory Stage Teachers in the Asir Region

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Abstract

The main objective of this study was to evaluate the effects of adopting a training program aimed at cultivating a culture of competency-based evaluation among teachers in the preparatory stage within the Asir region. A cohort study was undertaken to examine teachers who were associated with preparatory schools situated in the Asir region. The study consisted of a cohort of 24 educators, with an equal distribution of 10 teachers in both the experimental and control groups. The findings of the study indicated a statistically significant improvement in post-test scores related to the acquisition and development of the culture of competency-based evaluation for the experimental group, as compared to the control group. No statistically significant difference was seen in the scores of the experimental group and the control group in relation to their culture of competency-based evaluation, both immediately after the intervention and during the later follow-up assessment.

Keywords: *training program, culture of competency-based assessment, preparatory stage teachers, Asir region.*

Introduction

Evaluation is a crucial component of the curriculum, as it is intricately interconnected with all other parts of the curriculum. This process involves evaluating the quality of these elements, identifying their strengths and shortcomings, enhancing the strengths, addressing the problems, and implementing preventative steps to mitigate future weaknesses (Al Kasi et al., 2020). Subsequently, it is imperative to make informed educational choices in order to initiate comprehensive reforms within the educational system, so facilitating its enhancement, particularly in response to the advancements and remarkable progress witnessed in the contemporary period (Mellati & Khademi, 2018).

The topic of assessment, on a global scale, holds significant prominence within the realm of educational reform. It has garnered increasing attention, resulting in substantial transformations in the domain of educational evaluation (Boukaiba & Bourouh, 2021). The aforementioned modifications had an impact on both the theoretical framework and instructional methods, and this transition is commonly referred to as a move from a testing-oriented culture to an evaluation-oriented culture (Gallardo, 2020). Numerous advocates of reform have expressed their disapproval of conventional evaluation methods, such as traditional tests. They argue for the urgent need to create alternative evaluation models that align with the significant advancements and changes occurring in the knowledge society. These models should also be adaptable to the intricate demands imposed by the knowledge economy and the evolving nature of work (Akala, 2021).

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Considerable endeavors have been dedicated towards the formulation and enhancement of educational curricula throughout the Kingdom of Saudi Arabia, encompassing both structural and substantive aspects (Al Kasi et al., 2020). Regarding the visual attributes, books across all educational levels exhibit commendable characteristics in terms of their arrangement and printing. Furthermore, each course is accompanied by a comprehensive set of materials, including a teacher's guide, a student's book, and an activity book (Mulenga & Kabombwe, 2019). In relation to their content, all curricula are constructed upon educational principles that align with global standards of education. Furthermore, there has been an elevation in the position of the teacher, including various responsibilities such as planning, designing, monitoring, facilitating, guiding, mentoring, and evaluating the learning process of their students (Mokhtar & Ghania, 2018).

Additionally, integrating applied components has been emphasized, establishing connections between science, technology, and the practical application of knowledge in the learner's everyday life, thereby enhancing the overall satisfaction of the educational experience (Kabombwe & Mulenga, 2019). The topic of inquiry pertains to the process of acquiring knowledge and skills. There is a pressing imperative and requirement to enhance the proficiency of educators in accordance with these advancements to effectively execute these curricula and proficiently assess student learning outcomes (Jacob et al., 2022).

Investing in the enhancement of teacher performance and the amelioration of working conditions is crucial, as it serves as the fundamental basis for both the educational process and broader societal development. Enhancing one's efficacy in fulfilling professional responsibilities necessitates a paramount consideration of the level of dedication exhibited toward adhering to the benchmarks of exemplary instructional delivery (Gyll & Ragland, 2018). Hence, it is imperative to design training programs aimed at cultivating evaluative aptitude as a fundamental teaching skill among educators across various educational levels (O'Donovan et al., 2022).

The teacher holds a significant role in the educational process as they have a direct influence on students' learning outcomes and their acquisition of both specialized and general knowledge and skills in the subjects they teach (Thoma et al., 2022). Additionally, the teacher plays an educational role that emphasizes the long-term development of students and fosters their self-responsibility for their own learning. The National Center for Measurement and Evaluation (2012) developed a national professional standards document for teachers in the Kingdom of Saudi Arabia as part of the King Abdullah Project for the Development of Public Education (Al Kasi et al., 2020). This document outlined twelve standards aimed at enhancing teacher performance. The seventh standard specifically focused on improving teacher performance in the area of assessing student learning and providing constructive feedback. This standard delineates the manner in which educators employ a variety of assessment techniques that align with the curriculum and instructional practices, fostering the acquisition of advanced knowledge and skills (Wawrykow et al., 2020). Furthermore, it entails the utilization of diverse assessment strategies and methods to gather substantiating evidence of students' progress, and the issuance of consistent evaluations based on criteria derived from the curriculum's goals and objectives. Additionally, it assesses the degree to which students consistently demonstrate improvement, delivers them with timely and effective feedback, and utilizes the evaluation outcomes to assess educational programs and measure their efficacy. These evaluations serve as a foundation for making necessary adjustments and informing future planning endeavors (Hamdan & Coloma, 2022).

The cultivation of a culture centered around educational evaluation within the science teaching community is a significant objective of teacher training programs across different educational tiers. The significance of fostering a culture centered on competency-based evaluation among these educators is heightened in the current context (Ahmad & Rofiq, 2020). The Ministry of Education has presently implemented a

competency-based education system for the instruction and assessment of educational curriculum, particularly those pertaining to the field of science. In order to facilitate the acquisition of information, skills, and scientific ethics among students. In the Kingdom of Saudi Arabia, there have been notable endeavors to enhance science curricula and establish an education system centered on competency-based teaching and evaluation (Al Kasi et al., 2020). Nevertheless, the effectiveness of these curricula in attaining their intended outcomes hinges upon the enhancement of teachers' capacities. It is the responsibility of teachers to implement and oversee these curricula, ensuring that their objectives are met through the utilization of competency-based evaluation methods (Murray et al., 2019).

Competency-based assessment is a contemporary approach that aligns with the principles of Criterion-Referenced Assessment. This particular style of assessment aims to evaluate the knowledge and skills of students based on a predetermined set of criteria (Combéfis, 2021). Its primary objective is to ascertain the level of competency exhibited by individuals in relation to the specified standards. The student has achieved a high level of proficiency in the subject matter. The primary attribute of competency-based evaluation lies in its foundation upon well-defined and precise standards and objectives that are readily observable and quantifiable, as well as interrelated and sequential in nature (Combéfis & de Moffarts, 2020). Competency-based assessment entails the pre-introduction of learning outcomes to students prior to the assessment, followed by the evaluation of their level of learning based on the degree of progress made towards attaining the specified learning outcomes (Dauphinee et al., 2019). Furthermore, students are furnished with feedback that aids them in identifying areas for improvement in the learning process and facilitates the achievement of the desired learning outcomes. Each student progresses to the subsequent level by presenting evidence or demonstrating a degree of learning that showcases their proficiency (Wahyuni, 2021).

Upon conducting a comprehensive analysis of existing literature, it has been observed that no research has been conducted to particularly address the cultivation of a culture centered around competency-based assessment among teachers across diverse specialties in all educational levels within the Arab world as a whole, and more specifically, within the Kingdom of Saudi Arabia. Hence, it is imperative to undertake research in order to ascertain the efficacy of a training program in fostering the culture of competency-based assessment among educators at the primary and secondary school levels within the Kingdom of Saudi Arabia.

Research Questions

The objective of this study is to examine the inquiries mentioned within the context of the preceding discourse.

1.   Are there statistically significant changes in the results of the experimental and control groups regarding the development of the culture of competency-based assessment following the implementation of a training program?

2.   Are there notable disparities in the cultural development of competency-based assessment between the experimental group before and after implementing a training program?

3.   Is there a statistically significant difference detected between the scores obtained from post-test and follow-up tests when testing the cultural development of competency-based assessment?

Literature Review

The term "competency-based teacher education" was first documented in the 1969 edition of the Encyclopedia of Educational Research. However, its origins can be traced back to 1967 when the American Research and Education Offices solicited proposals for the development of a comprehensive program aimed at renewing and integrating the preparation of university teachers and in-service teachers (Dheressa et al., 2022). The demands were met with responses from educational institutions. In 1967, the United States Office of Schools introduced 10 novel program models aimed at the preparation and training of primary school teachers. The application made a substantial contribution to the reassessment of teacher preparation and training programs, as well as being a valuable resource for identifying supplementary approaches and concepts (Jamieson et al., 2019). In the realm of education, the introduction of these 10 programs marked the initial phase of what subsequently came to be recognized as the competency-based teacher education movement. There has been a growing interest in competency-based teacher training programs, which have gained widespread adoption in various educational systems across developed nations (Ahmida et al., 2019). UNESCO has additionally formulated several training initiatives in developing nations that align with the fundamental ideas underlying competency-based teacher education. The foundation of this movement is rooted in the belief that the process of teaching can be deconstructed into a collection of competencies and that training teachers in these competencies, guarantees the development of highly competent educators (AlKhateeb, 2023).

Competencies encompass a range of attributes, such as skills, knowledge, behavior, and attitudes, which contribute to the academic achievement and personal development of students. These competencies aid in fostering success as learners, cultivating competence and confidence as individuals, and promoting active engagement and informed citizenship (Al Kasi et al., 2020). According to the United States Department of Education, competency-based education is a flexible framework that enables students to progress based on their proven proficiency in academic subjects, irrespective of the temporal, spatial, or pace-related factors associated with learning (Mellati & Khademi, 2018). Competency-based education programs strive to guarantee that students acquire knowledge, attain proficiency in skills, and acquire specialized talents that align with their individual capabilities, aptitudes, and developmental stages. The utilization of abilities necessitates the cultivation of three components that overlap and interact with one another (Boukaiba & Bourouh, 2021). The aforementioned components provide a comprehensive portrayal of competencies, encompassing the requisite methods for assessing and appraising these competencies, as well as the established criteria by which an individual's mastery of the competency can be assessed (Gallardo, 2020).

The competency approach is a prominent trend observed in teacher preparation programs in developed countries. This approach aligns with specific educational objectives driven by two key factors: a commitment and responsibility to attain these objectives, and the need to ensure program suitability to meet the learners' needs (Akala, 2021). Teacher preparation and training programs that are grounded in many competencies and philosophies play a crucial role in equipping teachers with the necessary teaching and learning experiences and abilities. This, in turn, enables them to effectively carry out their given activities. Furthermore, these programs facilitate the development of professional, physical, and personal growth abilities in the individual (Al Kasi et al., 2020). Additionally, they prioritize the enhancement of the individual's competency to the utmost degree, achieved through the acquisition of knowledge, information, skills, attitudes, and values that are imparted (Mulenga & Kabombwe, 2019).

In order to have a comprehensive understanding of the concept of a competency-based evaluation culture, it is imperative to establish a clear definition of evaluation, competency, and culture. Evaluation can be defined as a methodical approach to

acquiring, analyzing, and utilizing information pertaining to an individual, with the aim of implementing essential enhancements. Evaluation is typically characterized as an ongoing and interactive process involving two distinct entities, namely the evaluator and the evaluated party (Mokhtar & Ghania, 2018). The evaluator is the individual responsible for assessing performance according to predetermined criteria, whereas the evaluated refers to the individual undergoing evaluation. The objective of this process is to assess the efficacy of the overall performance of the entity under evaluation and identify potential areas for enhancement Kabombwe & Mulenga, 2019). The process encompasses several key components, namely goal setting, information collection (both qualitative and quantitative in nature), and utilizing the acquired information to enhance quality and optimize performance (Jacob et al., 2022).

Evaluation can be described as a methodical procedure that relies on established principles and protocols to provide a precise and unbiased assessment of the inputs, processes, and outcomes involved in the teaching and learning of students within educational contexts (Gyll & Ragland, 2018). Its primary objective is to identify strengths that can be reinforced and weaknesses that can be addressed, with the ultimate aim of enhancing learners' performance and attaining educational objectives (O'Donovan et al., 2022). It is evident from this analysis that evaluation encompasses several procedures, with notable emphasis placed on diagnosis, enhancement of strengths, remediation of weaknesses, and preventive measures. The educational process is distinguished by its consistent progression from initiation to culmination, with the objective of enhancing and cultivating performance (Thoma et al., 2022).

The notion of competency has been associated with the field of education since the inception of the teachers' movement centered around competencies. This connection has been referred to by various terms that carry the same connotation, such as educational competencies, teaching competencies, professional competencies, pedagogical competencies, and education based on competencies (Al Kasi et al., 2020). Some individuals have exclusively employed the term competency or competencies to denote educational competencies or competency-based education. Competency can be conceptualized as a multifaceted construct encompassing different dimensions of performance, such as attitudes, knowledge, and abilities Wawrykow et al., 2020). These dimensions collectively constitute the lowest threshold required to attain cognitive, affective, and psychomotor objectives within the context of a teacher's professional practice. It has also been delineated as the essential competencies that an educator must attain as a consequence of completing a designated curriculum, which is manifested in their instructional effectiveness within the classroom setting (Hamdan & Coloma, 2022). When an individual attains this threshold, it signifies that they have achieved a level of proficiency that enables them to effectively carry out the tasks at hand, and these capabilities are not quantifiable. One method of evaluating the teacher's performance in the classroom is through the utilization of note cards specifically produced for this purpose. Hence, sufficient refers to the diverse manifestations of performance that embody the minimal requisites for attaining an objective (Ahmad & Rofiq, 2020).

From the perspective of the Arab Educational, Scientific, and Cultural Organization (ELISCO), the term "culture" can be defined as a comprehensive compilation of knowledge, values, customs, and regulations that are prevalent within a society. Its influence on individuals varies based on their individual capacities, ultimately manifesting in their behavior and cognitive processes (Al Kasi et al., 2020). The phenomenon frequently assumes an attribute of privacy as it originates from the historical and intellectual foundations of the nation, giving rise to a distinct cultural ethic. Numerous scholarly works have underscored the significance of culture, highlighting its three primary dimensions: cognitive, skill-based, and emotional (Murray et al., 2019).

The benchmark exam evaluates a student's academic achievement by comparing their performance to a preset set of learning benchmarks. This study examines the anticipated

knowledge and skills that students are required to possess and demonstrate during a certain phase of their educational journey (Combéfis, 2021). In essence, this style of assessment entails measuring students' knowledge and abilities against a specific and deliberate standard, rather than comparing their performance to that of a cohort that underwent the same examination. The objective of this form of assessment is to ascertain the extent to which the student has achieved proficiency in specific standards or learning objectives (Combéfis & de Moffarts, 2020). This form of assessment offers educators valuable insights into students' academic advancement in relation to predetermined educational standards or objectives. In the context of this evaluation, it is feasible for every student to attain the highest attainable grade if they fulfill all the requisite criteria associated with that grade (Dauphinee et al., 2019). Given the aforementioned context, competency-based assessment emerges as a prominent and contemporary style of assessment that seeks to operationalize the underlying principle of criterion-referenced assessment (Wahyuni, 2021).

Researchers have identified the dimensions of the culture of competency-based evaluation in light of what many literatures have indicated about the three main components of competency and culture, which are the cognitive, skill, and emotional components, as follows:

1.   The cognitive dimension: The cognitive dimension encompasses several facets of scientific knowledge pertaining to competency-based assessment, such as factual information, conceptual frameworks, fundamental principles, established laws, and scientific hypotheses. The cognitive dimensions of the culture surrounding competency-based assessment can be discerned through an understanding of the conceptualization of competencies and related terminology, familiarity with the various types of competencies and their distinguishing features, knowledge of contemporary approaches to competency-based assessment across diverse domains of learning, comprehension of the strategies employed in cultivating a culture centered around competency-based assessment, and proficiency in the techniques employed for evaluating such a culture (Dheressa et al., 2022).

2.   The skill dimension: The skill dimension of the culture surrounding competency-based assessment encompasses the capacity of educators to effectively and efficiently implement competency-based assessment methodologies. The skill components of this dimension can be discerned by examining the proficiencies associated with teaching and learning science at various levels of general education, devising instructional strategies that align with these proficiencies, and evaluating the attainment of these proficiencies relative to different educational levels. The present inquiry aims to explore the extent of scientific knowledge and the development of a note card that encompasses practical, social, academic, and mental skills within the framework of competences (Jamieson et al., 2019).

3.   The emotional dimension: The emotional component encompasses several variables pertaining to feelings and emotions, such as beliefs, appreciation, interests, inclinations, trends, values, and behaviors in relation to the implementation of competency-based assessment. Certain factors can be discerned by examining the conviction in the significance of competency-based assessment, the eagerness to apply practices related to competency-based assessment, and the prevailing culture surrounding competency-based assessment. This study focuses on the examination of competencies among colleagues and their conformity to the criteria of competency-based evaluation, as well as the underlying foundations and ethical considerations (Ahmida et al., 2019).

Standards-based assessment carries substantial importance for students, teachers, educational institutions, and scholars contend that this importance also applies to competency-based assessment (AlKhateeb, 2023). The reason for this phenomenon can be attributed to the inherent interconnection between competency-based assessment and

standards-based assessment, since they encompass two mutually reinforcing aspects (Al Kasi et al., 2020). The standards provide a precise representation of the intended degree of skill to be achieved, without any additional components. The significance of competency-based evaluation is exemplified by its relevance to students, educators, and educational establishments (Mellati & Khademi, 2018).

In order to optimize the efficacy of competency-based assessment, it is imperative to initiate the establishment of a shared perspective within the educational institution on the function of assessment in guiding educational trajectory and impacting student acquisition of knowledge (Boukaiba & Bourouh, 2021). Teachers often find it challenging to envision assessing student learning without relying on grades. Consequently, several things need to be carefully considered when implementing competency-based evaluation (Gallardo, 2020). The utilization of grades should primarily serve as a means to assess pupils' acquired knowledge, rather than merely quantifying the accumulation of points. There is a possibility that they are: One of the foremost challenges encountered by educational institutions transitioning to a competency-based system is the establishment of uniformity in grading practices, ensuring consistency among teachers and classes (Akala, 2021). It is imperative to incorporate formative or interim assessment, alongside summative or final assessment, while maintaining a comprehensive understanding of the significance of each type. Formative assessment serves as a valuable tool for facilitating the learning process, as it allows educators to gauge students' progress and gain valuable feedback on their instructional methods (Al Kasi et al., 2020). Additionally, it enables teachers to provide students with constructive feedback aimed at enhancing their learning outcomes. Regarding the summative assessment, it serves as a comprehensive evaluation of the student's capacity to exhibit their proficiency in the knowledge, abilities, and ideas encompassed within the course (Mulenga & Kabombwe, 2019). Typically occurring at the culmination of an instructional module, the assessment is administered by the educator to appraise the extent or proficiency of the student's acquisition of knowledge, ascertained by a comparative analysis of their work against the benchmarks outlined in the grading rubrics (Mokhtar & Ghania, 2018). The utilization of grading scales is preferable over the use of percentages. It is recommended that educators develop a customized grading rubric for individual skills or competencies, which should be provided to students concurrently with the assignment. This will ensure that students have a clear understanding of the expectations and requirements necessary to attain the desired level of proficiency (Kabombwe & Mulenga, 2019).

Previous Studies

Ahmida (2019) evaluated the level of knowledge competencies among primary school teachers in the domain of teaching physical education and sports. Additionally, the study sought to identify potential differences based on variables such as gender, professional experience, and scientific qualification. To achieve these objectives, an analytical descriptive approach was employed. The study sample consisted of 127 teachers, selected through a systematic sampling method. The findings indicated that primary school students exhibited a considerable degree of knowledge competences. Furthermore, no statistically significant disparities were seen in cognitive abilities when considering the variables under investigation.

Al Ahmadi (2019) assessed the effectiveness of a training program for successful assessment on creating Assessment Practices for mathematics teachers in the intermediate stage and its effect on their students' mathematical thinking. The training program was planned and implemented using the experimental approach, namely by creating a group to assess the efficacy of the program on a sample of 16 intern intermediate stage teachers in Riyadh. These teachers were selected from the first and second intermediate grade levels. The study employed the experimental approach, utilizing both experimental and control groups. The participants consisted of 307 students from the first intermediate grade in Riyadh, with an experimental group and a control group. The study included two

assessment tools: a note card was employed to evaluate the criteria of effective evaluation techniques, while a mathematical analysis scale was used to examine the program's impact specifically on female pupils. The study encompassed a sample of 307 female students enrolled in the first grade. Among them, 204 students received training through the program, while the remaining 103 children were under the instruction of female teachers who had not undergone training in the program. The findings of the study underscored the efficacy of the training program in cultivating the proficient assessment practices of the selected group of teachers. Additionally, the study demonstrated a significant influence of the program on the enhancement of students' mathematics reasoning abilities across various mathematical skills, as compared to the control group. However, it should be noted that there was no notable improvement observed in the students' mathematics justifying skills.

Al Kasi et al. (2020) established a training program that enhances the assessment literacy of science instructors in the general education stages of Saudi Arabia. In order to accomplish this goal, a training program was developed, including a guidebook for the trainer and worksheets for the trainees. Three measuring instruments were devised to assess competency-based assessment literacy. These instruments encompassed a knowledge exam of competency-based assessment, an observation checklist of competency-based assessment abilities, and a scale evaluating attitudes toward competency-based assessment. The study employed a quasi-experimental approach with a pre-posttest of one group. The research study was conducted on a cohort of 34 male and female science educators in the general education sector in the Kingdom of Saudi Arabia. The experiment took place during the summer training program in the month of Dhu al-Qi'dah 1439 AH at King Khalid University. The findings of this study demonstrated the efficacy of the training program in enhancing competency-based assessment literacy across three dimensions among the research group.

AlKhateeb (2023) investigated the effects of an intended training program on enhancing the abilities of teachers of Islamic Education in Al-Ahsa Governorate, specifically in the area of alternative evaluation. The study sample had 40 participants who were instructors of Islamic Education. In order to accomplish the study's objectives and address its research issues, a combination of the descriptive analytical approach and experimental approach was employed. The study instruments encompassed a compilation of alternative assessment competencies that are deemed necessary for instructors of Islamic Education. Additionally, a training program was developed, including of eight training sessions spanning a total of sixteen hours, along with an achievement exam designed to evaluate the proficiency of individuals in alternative assessment competencies. The study findings indicated that there were statistically significant disparities at a substantial level in the average scores of Islamic Education instructors in the pre and post-applications in the alternative evaluation competency exam, with the post-application showing a favorable outcome. The study's findings also indicated that the effect size values for the various fields of study demonstrated a noteworthy impact associated with the proposed training program in enhancing the competencies of Islamic Education instructors in alternative assessment.

Methodology

The research employed an experimental methodology, characterized by the manipulation of one or more variables (the independent variable), followed by the observation of the resultant impact on the dependent variable. In order to assess their influence on the study population, the researcher implemented a training program. In this study, the participants were divided into two distinct groups: the experimental group, which underwent training utilizing the designated training program, and the control group, which did not get any form of training.

Population and Sample

The study sample comprises 1851 teachers residing in the Asir region, who were later allocated to 170 schools. A deliberate decision was made to incorporate a sample of instructors from two preparatory Schools for Boys in the Asir region. The participants in the study were chosen through the utilization of a random selection technique. The research employed a sample of two classrooms, with one classroom designated as the experimental group consisting of 12 teachers, and the other classroom assigned as the control group, also including 12 teachers.

Research Instrument

Preparing the training program to develop the culture of competency-based evaluation research instrument was used to achieve the study's objectives. The study focused on a specific field of inquiry, namely examining the cultivation of a culture of competency-based evaluation among educators at preparatory schools. The current study was designed to be conducted in the forthcoming academic year of 2023/2024. The researcher formulated a comprehensive set of 26 initial behavioral objectives by conducting a meticulous examination of the overarching goals and subject matter of the themes under investigation in the experiment. The framework comprises multiple components, namely remembering, understanding, applying, analyzing, synthesizing, and evaluating. To ascertain the precision and comprehensiveness of the material, it passed a rigorous examination process conducted by a panel including professionals and experts in the field. Based on the input received, the specific objectives have been updated while ensuring that the total number of objectives remains at 26. The study groups have designed instructional programs that incorporate a training program package for the experimental group while employing a traditional approach for the control group. The panel of specialists in the field of teaching techniques was presented with numerous examples of exemplars. The purpose of this action was to assess their suitability for the topic and the established behavioral goals. In light of the feedback supplied by the experts, specific paragraphs were further revised, leading to their final iteration. A combined total of 28 instructional plans were applied across both groups, with an equal distribution between the two techniques. In particular, 14 plans implemented a training program, whereas the remaining 15 plans adhered to a conventional approach.

Instrument Validity and Reliability

Two approaches were employed to evaluate the reliability of the instrument.

1.   The evaluation of the instrument's validity involves the administration of the instrument to a panel consisting of ten arbitrators, followed by the establishment of a minimum acceptance rate requirement of 80%.

2.   A group consisting of ten educators conducted an evaluation in order to evaluate the degree to which it has discriminant validity. The discriminant validity of the coefficients was determined by assessing the statistical significance of the observed (F) values, which were 3.30, 3.80, and 4.30.

The determination of the instrument's internal consistency was conducted utilizing the Cronbach's alpha formula. The instrument demonstrated a satisfactory level of overall reliability, as evidenced by a coefficient of (0.834). Furthermore, the reliability coefficients for each of the three dimensions exhibited a range of 0.764 to 0.842.

Data Analysis

After the conclusion of the data collection process, the mean test scores and standard deviations for both the pre-test and post-test were calculated. The Eta square statistic was utilized to calculate the effect size, which offers an indication of the degree to which the training program contributes to the cultivation of a culture centered around competency-

based evaluation. To further clarify the differences between two similar samples, the statistical techniques of Wilcoxon's test and Z-value were utilized.

Results and Discussion

Table 1 illustrates that prior to the commencement of the training program, the levels of competency-based culture development in both the experimental and control groups were similar.

Table 1: Pre-Measurement

Dimensions	Group	N	M/R	S/R	U	Z	P
The cognitive	Experimental	12	20.10	241.20	28.00	8.80	0.200
	Control	12	21.60	259.20			
The skill	Experimental	12	21.30	255.60	31.00	8.00	0.220
	Control	12	20.20	242.40			
The emotional	Experimental	12	19.10	229.20	23.00	9.20	0.160
	Control	12	19.30	231.60			
Total	Experimental	12	20.20	242.40	27.00	8.70	0.210
	Control	12	20.40	244.80			

Based on the data presented in Table 1, there is no statistically significant difference observed between the two groups in terms of the mean scores related to the teacher pre-test of competency-based culture across various competencies, including cognitive, skill, and emotional competencies.

In order to address the first question, which posited "Are there statistically significant changes in the results of the experimental and control groups regarding the development of the culture of competency-based assessment following the implementation of a training program?". The aforementioned table illustrates the attained outcomes.

Table 2: Post-Measurement

Dimensions	Group	N	M/R	S/R	U	Z	P
The cognitive	Experimental	12	26.10	313.20	328.00	0.760	0.000
	Control	12	20.00	240.00			
The skill	Experimental	12	25.50	306.00	346.00	0.650	0.000
	Control	12	17.00	204.00			
The emotional	Experimental	12	26.50	318.00	321.00	0.810	0.000
	Control	12	20.20	242.40			
Total	Experimental	12	26.00	312.00	327.00	0.780	0.000
	Control	12	19.10	229.20			

Control

The findings of the post-testing conducted on the experimental group are displayed in Table 2. Regarding the evaluations of a competency-based culture encompassing cognitive, skill, and emotional competencies, the findings indicate noteworthy alterations in the mean scores of both the control and experimental groups, with statistical significance. This suggests that the teachers in the experimental group have a remarkable level of competence-based culture.

The observed outcome can be attributed to the inclusion of training activities focused on developing competency-based assessment skills within the training program. Additionally, the application of these skills by members of the study group, together with the provision of prompt and ongoing feedback during the training period, contributed to the observed result. This factor significantly facilitated the acquisition and enhancement of these talents within their respective contexts. Alongside the practical assignments given to the research group members during their training period, which encompassed the examination of science learning competencies within general education curricula, the development of lesson plans aligned with these competencies, the creation of assessment tools based on these competencies, and other practical tasks, there was a notable enhancement in the proficiency of the research group members in competency-based assessment skills. The impact on the development of competency-based assessment abilities within the research group was influenced by several training techniques and activities, including modeling or imitation, self-training, and group training. This finding is consistent with prior studies conducted by Ahmida (2019), Al Ahmadi (2019), Al Kasi et al. (2020), and AlKhateeb (2023), which revealed that educators in the experimental group who utilized the training program to enhance their competence in many areas exhibited superior performance compared to instructors in the control group. This result offers empirical support for the efficacy of implementing a training program aimed at enhancing the competence set of teachers.

In order to respond to the second question, "Are there notable disparities in the cultural development of competency-based assessment between the experimental group before and after implementing a training program?" The findings are shown in the table below.

Table 3: Pre and Post-Measurement

Dimensions	Pr/Po	N	M/R	S/R	Z	P
The cognitive	negative rank	3	2.00	6	26.50	0.000
	positive rank	9	4.00	36.00		
	ties	0				
	total	12				
The skill	negative rank	3	2.00	6	26.80	0.000
	positive rank	9	4.00	36.00		
	ties	0				
	total	12				
The emotional	negative rank	3	2.00	6	26.60	0.000

		N					
	positive rank	9	4.00	36.00			
	ties	0					
	total	12					
Total	negative rank	3	2.00	6		26.70	0.000
	positive rank	9	4.00	36.00			
	ties	0					
	total	12					

The findings shown in Table 3 indicate a statistically significant disparity in the average scores of the experimental groups across many dimensions of competency-based culture, including cognitive, skill, and emotional competencies, as well as the overall post-measurement score. This finding indicates that educators in the experimental group demonstrated enhanced cultural competency subsequent to the introduction of the training program.

The observed outcome can be attributed to the heightened comprehension of educators of competency-based assessment and the corresponding enhancement of their competency-based assessment abilities. The experience had a substantial impact on enhancing their understanding of competency-based assessment and their recognition of its significance in the context of education. This was evident in the evolution of their attitudes towards competency-based assessment. Furthermore, the inclusion of a wide range of training activities is closely linked to the crucial element of evaluation in the realm of teaching and learning. The research group experienced a notable influence on their perceptions of the significance of competency-based assessment, leading to the development of their attitudes towards it. Alongside the incorporation of diverse group and individual training approaches in the training program's implementation, the inclusion of presentations, the establishment of a democratic learning environment, the cultivation of a harmonious and cooperative atmosphere, and the facilitation of open dialogue, discussion, and exchange of opinions, these factors may influence the research group's perception of the significance of competency-based assessment. Furthermore, these factors may contribute to their engagement in the implementation of various practices associated with competency-based assessment and the subsequent development of positive attitudes towards its application. This observation aligns with previous research conducted by Ahmida (2019), Al Ahmadi (2019), Al Kasi et al. (2020), and AlKhateeb (2023), which demonstrated that educators in the experimental group who implemented the training program to improve their proficiency in various domains demonstrated superior performance in comparison to instructors in the control group. The findings of this study provide empirical evidence in favor of the effectiveness of implementing a teacher training program designed to improve the competence set of educators.

The last question, "Is there a statistically significant difference detected between the scores obtained from post-test and follow-up tests when testing the cultural development of competency-based assessment?". In order to formulate an appropriate response, it is necessary to address the question. The results are displayed in the table that has been provided.

Table 4: Post and Follow-up

Dimensions	Po/ Foll	N	M/R	S/R	Z	P
The cognitive	negative rank	7	5.40	37.80	10.500	0.210
		0	0.00	0.00		
	positive rank	5				
	ties	12				
	total					
The skill	negative rank	7	5.40	37.80	10.400	0.140
		0	0.00	0.00		
	positive rank	5				
	ties	12				
	total					
The emotional	negative rank	7	5.40	37.80	10.310	0.120
		0	0.00	0.00		
	positive rank	5				
	ties	12				
	total					
Total	negative rank	7	5.40	37.80	10.630	0.170
		0	0.00	0.00		
	positive rank	5				
	ties	12				
	total					

After conducting an analysis of the data shown in Table 4, it is apparent that there are no statistically significant differences in the mean scores of the experimental group when comparing the post-test and follow-up evaluations. The findings of this study indicate that the program's efficacy remained consistent in the post-intervention period, with no observable signs of deterioration following its completion.

The observed outcomes can be ascribed to the thorough and ongoing assessment, the prompt feedback that accompanied the training from its initiation to its conclusion, and the continuous interaction among the trainees and the trainer through direct communication both inside and outside the classroom, facilitated by the social networking platform "WhatsApp." The aforementioned factors exerted their influence. The development of attitudes towards competency-based assessment plays a significant impact. Furthermore, the allocation of time for various activities, completion of homework assignments, and engagement in communication beyond training sessions collectively facilitated the cultivation of teachers' attitudes towards competency-based evaluation.

Conclusion

This study presents empirical evidence that substantiates the hypothesis that the introduction of a training program aimed at cultivating a culture of competency-based assessment among teachers in the preparatory phase in the Asir region. Therefore, it is beneficial for educators to incorporate training activities that specifically target the enhancement of competency-based assessment abilities within the training program. Furthermore, the utilization of these competencies by individuals within the research cohort, in conjunction with the timely and continuous provision of feedback during the duration of the training phase, played a role in the observed outcome. This particular aspect played a key role in facilitating the acquisition and development of these skills within their respective contexts. In addition to the practical assignments assigned to the members of the research group during their training period, which involved the analysis of science learning competencies in general education curricula, the formulation of lesson plans that align with these competencies, the design of assessment tools based on these competencies, and other practical tasks, there was a significant improvement in the proficiency of the research group members in competency-based assessment skills. Moreover, the increased understanding of educators regarding competency-based assessment and the subsequent improvement of their competency-based assessment skills. The aforementioned experience greatly influenced their comprehension of competency-based assessment and heightened their awareness of its importance within the realm of education. This phenomenon became apparent in the progression of their perspectives on competency-based evaluation. Moreover, the incorporation of a diverse array of instructional exercises is intricately connected to the pivotal aspect of assessment within the domain of education.

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