Towards an Effective Competency-based Education and Training Model

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Abstract:
Background: *Organizations are becoming increasingly concerned about their workers' ability to execute tasks effectively. This paper examines and describes the impact of competency-based education and training on employee performance and presents a competency-based evaluation. This paper includes a thorough assessment of the existing literature in order to establish a Competency-based Education and Training Model that can be utilized to enhance workers' competency and, as a result, organizational competency.*
Materials and Methods: *This research examines the literature on the interplay between competency-based education, competency-based training, and competency-based assessment in order to develop a comprehensive Competency-based Education and Training Model.*
Results: *The Competency-based Education and Training Model was developed to give researchers and practitioners a dynamic model that allows organizations to continually analyze and grow their employees' competencies.*
Conclusion: *The value of competency-based education (CBE) and competency-based training (CBT) is fully examined in this work. They were defined and discussed in a variety of disciplines in order to examine their role and significance. Later on, competency-based education and training are described, along with some of the evaluation techniques. The goal of this research was to create a Competency-based Education and Training Model that researchers and practitioners can use.*
Keywords: *Competency, Competency-based Education, Competency-based Training, Assessment, Quality Assurance.*

I. Introduction

The behavioral traits that are necessary to perform a position effectively are referred to as competencies. Many researchers have characterized competencies since the early 1900s. The author of [1] defined competence as a person's basic quality that may reflect the knowledge, skills, and attitudes necessary to effectively perform a position [2]. According to [3], competence is an underlying personal quality that is causally linked to criterion-referenced effective and/or superior performance in a certain work or scenario. A deep and persistent component of an individual's personality that manifests as meaningful behavior in many settings is referred to as an underlying feature of an individual. The term "criterion referenced" denotes that the underlying quality must be able to anticipate expected behavior in a certain environment and be distinguishable as outstanding or bad performance [3]. As a result, it may be stated that individual behavior manifestations must be contextually relevant and distinguishable as being of proper character in relation to the anticipated norms. All HR subsystems, including recruiting, selection, job assessment, training, and performance management, can use the recognized competencies as inputs.

In the Project Management Development Framework, [4] defined competency as a group of related knowledge, attitudes, skills, and personal characteristics that affect a major component of one's job and are related to job performance, which can be measured against well-accepted standards and improved through training and development. Human, functional, behavioral, management, threshold, and meta-competencies are among the competencies. These many forms of skills are specific to an organizational setting and, in particular, to the context of a job or function. These competencies represent the differences in distinct positions, as well as the demands that each function has from the job's stakeholders, with a focus on the applicable context. As a result, competency mapping aids in delineating the gaps between an individual's actual and desired levels of performance and is extremely useful in assisting employees in making significant contributions to their jobs by presenting a clear picture of the gaps that exist between required and actual competencies. It is a comprehensive

and integrated human resource management system that plays a crucial role in individual education and training [5].

To address the issue of education and training quality, various competency-based education frameworks and models have been implemented. As a result, the contribution it may make to quality is often ignored, especially in training and learning [6]. Therefore, this research aims at proposing an integrated competency-based education and training model. The next sections will cover the most important parts of creating such a model.

This paper begins with a literature review in Section 2, then moves on to the research methodology in Section 3, the competency-based education and training model (CETM) is proposed in Section 4. Section 5 concludes the study presented in this paper.

II. Literature Review

Researchers from a variety of fields have expressed an interest in competency-based education (CBE) and competency-based training (CBT). The authors [7] for instance, emphasized the development of medical professional activity in the sense of interdisciplinary and general effective competency [8]. Competencies are always accompanied by unique values, norms, and attitudes. Reflection on both one's and others' performance are critical to the formation of normative and emotional "characteristics" of competencies. Nonetheless, these areas of expertise – the so-called "soft skills" – are typically neglected among employees since they are given less weight in practice [9]. The ambiguous interpretation of qualifications and competencies might be one explanation for this. Unlike specialized medical knowledge that can be tested and subsequently verified through tests, a doctor's practical competency is only recognized after his activities have been judged to be successful by a third party. In order to provide medical (development) potential in an area like medicine, which is marked by the highest levels of innovation, complexity, and interdisciplinarity, a shift in learning culture is required, one that focuses on the holistic development of an individual's decision-making skills and capacity to act [7].

Networking to establish a vocational, scientific constructivist idea for molding competence-based and networked teaching and learning in vocational education and training (VET) is another domain that employs CBE and CBT. CBE and CBT are also employed in a variety of fields, such as the aviation industry, for pilot training (e.g., core courses; flight simulator) in order to improve pilots' technical and non-technical skills. In addition, flight crew training, etc. It's also utilized in the educational sector to create instructional programs [10], as well as a variety of other fields.

The author [11] examined Vocational Education and Training (VET) as it gives a subprofessional level to the job market. A mix of formal education and on-the-job experience is the foundation of vocational education. As a result, standards are used to determine the degree of student competency. Standards of performance (academic) and skills are used as a reference (vocational). Performance standards involve gathering information about the amount to which students know, comprehend, can accomplish, or have mastered what they have studied. The process of gathering information regarding the extent to which students have competence on an assignment in line with a predefined level of competency (knowledge, skills, and values) as intended is known as the competency standard [12].

In the following sections, in order to construct the model, the author will examine competency-based education, competency-based training, and their assessment.

2.1 Competency-Based Education

Every year, more schools integrate competency-based education at a deeper level. It is a significant transformation in school culture, institutions, and pedagogy aimed at ensuring that all students achieve while also correcting the old model's core flaws.

Knowledge, skills, and ability to operate in a profession according to the job's anticipated criteria are all required for occupational competence [13]. Occupational competence occurs when theoretical knowledge informs practice, and practice informs theory. Competency-based education can help individuals attain occupational competency (CBE). CBE emphasizes what someone can perform in the job to meet occupational requirements in a particular industry or profession. Occupational standards are declarations of the skills, knowledge, and understanding required in the workplace. The standards determine the minimum level of competence that must be exhibited in the workplace.

CBE is both a new and old concept. CBE originally appeared in the 1970s in the United States [14] , in the 1980s in the United Kingdom and Germany, and in the 1990s in Australia. CBE was eventually developed and adopted in a number of nations, including New Zealand, South Africa, and the United Kingdom [15]. CBE was first used in the context of Technical and Vocational Education and Training (TVET). TVET colleges and institutions were established to bring about desired changes and ensure national development [16], to alleviate poverty and stimulate employability [17], and to combat social exclusion where the cost of higher education is out of reach for the majority of students [17].

Competency-based education provides a curricular framework that connects practice and theory in more logical ways, avoiding the contradiction between "knowing that" and "knowing how" [18]. It is closely matched with job performance expectations [19]. The move from information acquisition to knowledge application and achieving learning objectives is the driving force and ultimate goal of the CBE curriculum. CBE curriculum focuses on both process and result and is defined by responsiveness to a continually changing world of work or technological advances in society. The term "process" refers to the events and activities that take place in the classroom. The outcome of these experiences and activities directly influences the career options available to students [15]. CBE also considers factors such as effective job skills, technical abilities, occupation survival skills, job search skills, and entrepreneurship skills when determining employment success.

Philosophical foundation, designing a curriculum (DACUM), task analysis, and all-" aspects"-strategy are some of the content-determination methodologies utilized in CBE curriculum creation [15]. The subjective method that employs a certain philosophy or combination of philosophies is referred to as a philosophical basis. An individual or group can utilize introspection to assess personal experiences and knowledge and combine them within a framework for the contents of a vocational program. To create relevant material, the DACUM method relies on vocational specialists with prior knowledge in the field. Task analysis is concerned with objective data and the identification and verification of tasks carried out by employees in a certain occupation or group of jobs. The all-aspects technique is used to find material from a wide range of sectors and areas and to match curriculum, instruction, and assessment to create capabilities [20].

Other methodologies, such as critical incident and Delphi techniques, can be applied. The critical event approach can help employees find curricular content that is relevant to worker values and attitudes. The Delphi method can be used to identify content in developing vocations. A panel of experts use the Delphi approach to select curriculum material through many rounds of anonymous feedback or iterations [21]. This technique's material often gives insight into a number of distinct possibilities, attempts to connect experts' insights, provides background information for decision-making, and eventually reaches consensus on curricular content.

The implementation and assessment of the CBE curriculum follow the creation of the curriculum. The main goal of the CBE curriculum review is to develop curriculum modifications. It involves all of the key education partners [19]. Changes to the curriculum document and/or the provision of materials or in-service training for instructors are examples of such enhancements. To establish the effectiveness of a curriculum, there is a need to first acquire information (the assessment phase) and then make judgements or conclusions based on that information (the evaluation phase).

2.2 Competency-Based Training

Competency-based training focuses on an individual's capacity to complete a specific activity. Competency-based training emphasizes growth based on demonstrated competence to perform certain tasks. This is an appealing concept (after all, who wouldn't want their physicians to be capable?).

Competency-based training dates back to the 1970s when a behaviorist approach to training (basically, the analysis of occupational roles and their translation into tasks or competencies) led to the introduction of NVQs (National Vocational Qualifications) in the United Kingdom and other similar higher education qualifications around the world [22]. The primary premise of a competence approach is that an occupation can be broken down into smaller chunks of specified knowledge and abilities (competencies) and that achieving an acceptable degree of proficiency in each of these domain's results in overall proficiency.

Both competency-based education and competency-based training are discussed in the literature. It's difficult to delineate between the two due to the dynamic and contentious nature of educational terminology. Nonetheless, aligning education, which is widely understood to be a vast and rich process, with competency attainment, which is generally conceived of instrumental terms, appears to be an inherent contradiction. As a result, we refer to it as "competency-based training" throughout the remainder of this paper.

Leadership, empathy, problem solving, complicated decision making, and clinical judgement, resource management, and other high-level integrated cognitive and performance abilities do not fit within a behaviorist model. As a result, several new descriptors have evolved, including core competencies, generic competencies, and meta competencies [23].

Competency-based education is described as "an outcomes-based approach to the design, implementation, assessment, and evaluation of a medical education program utilizing an organizational framework of competencies" by the International Competency-Based Medical Education (CBME) partners [24] . As a result, a competency-based approach to curriculum design is presented as a subset or variant of another method. What does this mean for trainees? Competency-based education is implemented through a curriculum structured as a collection of particular skills, behaviors, and knowledge outputs, workplace-based assessments, and frequent progress reviews measuring completion of the different competencies stated in the curriculum. The emphasis is on trainees' ability to acquire the competencies, with the premise that the workplace will be able to offer the necessary experiences. Importantly, advancement is believed to be competency-based rather than time-based, allowing for faster progression for those who are performing well and postponement of progression for

those who are considered unsuitable for their level of training. This hasn't really been seen in practice, perhaps because of the implicit recognition that isolated competencies aren't the same as safe, professional practice, which requires accumulated experience, as well as the practical difficulties of having trainees rotate at different speeds through set posts.

2.3 The Role of Education and Training

All HR responsibilities revolve around performance criteria, and people' performance is measured against each of these criteria to make choices about training, career advancement, and remuneration, among other things. There are several approaches to performance management in businesses, with the job-focused approach, the person-focused approach, and the role-based approach being the most prevalent [25]. The job-focused approach concentrates on defining important job activities and treats the jobholder as a separate entity from the job. It is thought that the individual must have the skills and knowledge demanded by the work requirements. The person-focused approach assumes that an individual is required to make a job a reality and that an individual's performance in terms of personality, values, motivation, and other factors are vital for a job. General capabilities are taken into account here as opposed to the task-specific competencies associated with the job-focused approach. Consider the difference between the capacity to input data into a computer and the ability to change data from one form to another. The first is a micro skill that is limited to a single sphere, whereas the second is a macro competency with a broader scope and greater transferability and applicability. These macro competencies have been stressed as being dynamic and important in enabling individuals to fulfil their respective duties [26]. The role-based approach is an extension of the person-based approach and takes into account the job's context. The context here refers to the current circumstances as well as the mutual expectations of the members of the linked job group. The fact that this technique emphasizes context makes it more valuable than the other two approaches. Competency frameworks may help design training needs and give essential metrics of behavioral outputs for the role-based approach to performance management [1, 27].

Competency-based methods have been proven to create a powerful connection between a company's business plan and its human resource strategy [28, 29]. Competency-based methods, according to [5], are at the heart of all approaches because they provide a framework for developing tools and procedures to enhance performance in a change-oriented organizational setting.

Organizational abilities are one-of-a-kind and should not be replicated in most cases. Only the firm's capacity to acquire and manage distinctive resources effectively and efficiently in comparison to its competitors allows it to sustain a competitive edge [30]. According to researchers, the only way to achieve this is to develop these skills in the workforce through efficient HR practices. As a result, it is economically justified to invest in organization-specific human capital through appropriate HR initiatives [31]. The advantages and productive capacities of firm-specific capabilities accrue over and above the firm's investment to build and retain them, such as selection and socialization [32], staffing [33], developmental performance appraisal, and firm-specific training [31].

Training and development activities are important to the reality of anything that can be genuinely referred to as human resource management, among the different initiatives to create firm-specific talents [34]. It is emphasized that an organization cannot commit to progress unless training and development are firmly rooted in the strategic management paradigm, which is based on three key assumptions: training should be viewed as an investment opportunity, a mechanism for allocating resources for strategic planning, and a way to bind individual and organizational interests [35].

The essential role that contributes directly to the development of human resources is training. If human resources must be developed, the organization should include effective training that fosters the acquisition of new information and abilities as well as the development of healthy behavioral patterns and styles. The training should be designed in such a way that it begins with altering attitudes, progresses to knowledge improvement, and concludes with the development of skills among the trainees. Training is mostly made up of well-structured chances for participants to gain the relevant knowledge and skills. The entire training procedure is divided into three phases: pre-training, training, and post-training [36].

The evaluation of training is the most important task and the foundation for the entire training and development process. It is a method for determining who needs training, what type of training is required, when and where training is required, and so on. The training gap is the difference between what is happening today and what should be happening. It's the difference between the current level of performance and the job's standard level of performance [37]. Trainers can use the needs identification process to ensure they've matched a training program to a training problem.

When a systematic training model is linked to a well-crafted plan, the organization's core competence is maintained. The methodical approach taken by businesses in analyzing training needs is critical to the success of any training plan. The Training Needs Analysis (TNA) is a critical strategic process for determining how to build and preserve a company's key competencies. TNA, according to [38], should be founded on corporate

objectives (Palmer, 2006), and a systematic approach with a meaningful focus on strategic drivers is required [39].

The mechanical approach to adult learning, which identifies training requirements based on task analysis, is emphasized in the conventional model of training, but it has the issue of being unable to identify the wider skills required to execute the work effectively. In recent years, there has been a greater emphasis on competency-based training, which guarantees that individual skills and organizational core competencies are integrated. HRD and organizational strategies are linked using such a framework, which is a highly successful instrument [40].

Competency frameworks are extremely useful because they enable people to make major contributions to their own growth by displaying a clear picture of the gaps that exist between expected and actual abilities [5]. In this context, a number of research have stressed the Organizational, Job, and Person (OJP) Analysis [35, 41]. The OJP model assumes an integration of the analysis at all of these levels, which would be appropriately supported by the organization's competence structure. According to [42], while system and process improvements may account for 80% of performance improvement methodologies, the remaining 20% is attributed to the competency area, and an effective TNA addresses training by highlighting the competency factors affecting individual performance.

2.4 Competency-Based Assessment

Competency-based assessment is a method in which an assessor works with a trainee to gather evidence of competency using the benchmarks supplied by the national qualifications' unit standards [43]. For attaining both fairness and excellence goals, many educational institutions have moved to competency-based education. Competency-based education, according to [44], demands students to demonstrate mastery of important information and abilities rather than just attaining a passing score. Learner mastery of defined competencies is frequently assessed using local assessment data. When utilizing tests to inform choices regarding students' competency, there are several measurement problems. According to [43], the evaluation process should be viewed as an integral part of the learning process, with gaps identified as chances to improve abilities rather than failures. It represents a collaborative approach through which competencies are discussed with the trainee rather than representing a one-time event.

Furthermore, [45] stated that competency-based assessment has sparked increased interest at universities in promoting the integration of information and communications technology (ICT) into the learning, teaching, and assessment system, resulting in the creation of new educational opportunities as well as more flexible and individualized knowledge.

Competency-based learning and training (CBLT) is a method of vocational education and training that emphasizes what a person can perform in the workplace after finishing a course or program [46]. CBLT's mission is to guarantee that vocational education and training programs are better suited to the demands of the workforce. CBLT outcomes reflect workplace responsibilities, working situations, and performance expectations. This should involve higher-level responsibilities, including planning, problem-solving, and overseeing the performance of tasks. CBLT programs are frequently made up of units of competency that have specific learning goals that are based on criteria established by the educational or workplace context place [47]. Assessment is the process of gathering information and determining whether or not a person has demonstrated competency. The goal of assessment is to determine whether or not a person can perform to the standard required in the workplace, as stated in the appropriate recognized industry or corporate competency standards.

The importance of applying knowledge and abilities in a real-world setting was highlighted by [48]. The terms "authentic assessment," "alternative assessment," and "performance assessment" have all been used to characterize the evaluation process. Although all three terms have the same meaning conceptually, [48] claim that they are not interchangeable. Alternative assessment is an alternative to the paper-pencil test that demands students to demonstrate attainment of knowledge and abilities to undertake a series of tasks such as carrying out experiments and operating a machine.

The growth of a country's economy and the prosperity of its people are heavily impacted by the level of vocational learning, which enhances the employability of competent workers in the workplace [49]. A skilled school is a portion of an organized educational framework that is directly linked to the training or further training of non-degree-holding bachelor's professionals [50]. Businesses demand skilled and expert graduates to contribute technically to the market in which corporate businesses are conducted because the industry is very dynamic and technologically evolves at a rapid pace.

A performance evaluation is the starting point for a conceptual shift in education and learning [51]. By combining training, knowledge, and judgement, performance evaluation enables a holistic understanding of the learner. As such, there is an unbreakable link between teaching, learning, and assessment, with all three in combination improving students' awareness and instructors' ability to educate them effectively. The Competency-Based Assessment (CBA) relates to the attainment of work competence levels (Fletcher, 2000). CBA focuses on abilities in the required skills of the job as a method of generating work-related ability criteria

[52]. Competency-based evaluation utilizes the quality of working skill competence based on industrial demands.

The skilled training competency exam consists of two main elements, namely the collection and utilization of factual information about a student's skill to assess whether or not the student has attained the national level of competence indicated or contained in the curriculum implemented [10]. The ability of students with the experience required to join the work field is influenced by their technical skills. The administration of an integrated competence exam must be complemented by integrated teaching and instructional techniques, as well as curricular material production. As a result, CBA is a configurable interconnected process within teaching, learning, and skills assessment. This necessitates the alignment of curriculum development and learning systems.

Professional competence is also defined as a set of knowledge, abilities, and attitudes that are required for effective performance [53]. Professional competency evaluation has progressed through time. Following the developments in education that have been observed over the previous few decades, education has evolved from an input- to an outcome-based style of learning [54]. Modern education programs are based on a defined set of outputs or competencies, rather than focusing on the completion of certain hours in a curriculum on a specific topic. The results are then linked across all courses and assessments. A second fundamental change is that many of these outcomes or abilities are moving away from the knowledge domain and toward more real professional skills or general competencies that are important for job success [55]. These broad competencies include the ability to work as part of a team, communicate effectively, write academically, and conduct oneself professionally. Because they are less domain-specific, they are referred to as being broad or generic. These types of talents are linked to both success and failure in the labor market [56]. As a result, current courses place a greater emphasis on developing these abilities. Finally, education is shifting from atomistic to holistic learning, from teacher-centered to student-centered learning, from a sole concentration on lecturing to more active learning approaches, and from highly teacher-led organized learning to self-directed learning [57]. The evaluation of professional competence has kept pace with these changes in schooling. As a result, evaluation has progressed beyond the area of knowledge to include more complicated assessments of abilities in real-world situations. There is a distinction between testing and assessment in the literature [58]. Testing refers to the more traditional style of standardized testing, which focuses on cognitive processes, whereas assessment refers to more current and authentic kinds of evaluation [59, 2].

III. Research methodology

The research technique is crucial in achieving the study goals [60]. There are three steps to the research approach used in this study: identifying the study boundaries, performing a literature evaluation, and developing a model. The literature gap is determined during the first phase: Defining Study Boundaries. The second phase is concerned with understanding the important terms that characterize competency-based education and competency-based training (literature review). During this phase, current methods for supporting competencies in education and training are also studied and explored. The Competency-based Education and Training Model is proposed in the third phase (Proposing and Developing) (CETM). The framework for this study's research technique is shown in Figure 1.
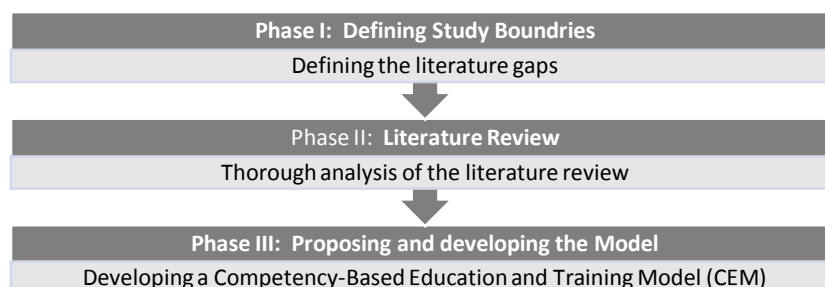

Figure 1: Research methodology framework

IV. The Proposed Competency-based Education and training model (CETM)

Many critical aspects must be in sync for the proper deployment of e-learning resources, including overall management, technical knowledge and social and organizational dynamics, in order for this to happen. These numerous factors must be weighed in order for society's pathways to be robust and successful. Figure 2 depicts a competency-based education and training model (CETM) based on the findings of the literature review, which include both successes and failures. All of the HR subsystems, including as selection, job evaluation, training, and performance, can use the defined competencies as inputs. There are a number of factors that determine whether or not a plan is successful. These include how well it is implemented in practice and how well it is linked to quality assurance (QA).
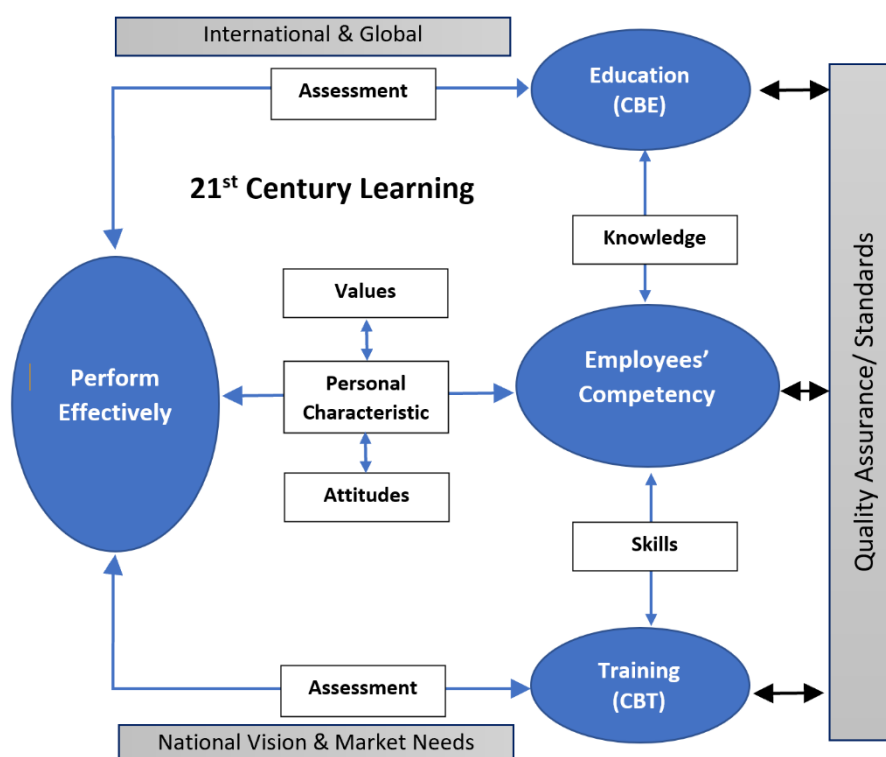

Figure 2: Competency-based Education and Training Model (CETM)

An implementation area is included in the proposed model, from knowledge sharing to learner partnerships, as well as venues for learners/trainers to participate and provide feedback. All of these components stand for performance management, as well. Along with quality assurance, the most important function is to keep an eye on and enhance pedagogical standards to help people achieve their learning objectives.

As the model indicates (Fig. 2), employee competency is associated with CBE and CBT while also being linked to their performance effectiveness. Starting with employee competencies, employees must have particular traits, have the appropriate attitudes toward work, have the necessary knowledge, and have practical skills in order to be competent at their jobs. Having the right personal attributes, according to [61] can contribute to successful team performance.

Employees with the correct attitude will be more self-motivated to learn the skills and information needed to perform successfully at work. Competency-based education leads to the acquisition of information, whereas competency-based training leads to the acquisition of skills. Employees will perform well as a consequence of all of these skills.

Nonetheless, even if staff achieve their goals, it is necessary to assess their performance. Employee performance may be measured using a variety of methods, each of which differs based on the type of job. For example, in the medical setting, competency is judged by physicians acting correctly, but in education, students are evaluated on their ability to memorize information through tests. Employees must be evaluated in all circumstances, even if they did not achieve their goals. If employees perform badly, they can obtain the necessary education and/or training after an evaluation. If they performed competently, on the other hand, their evaluation may be reviewed and awarded. Employee assessments should also be used for yearly performance evaluations, as well as for keeping track of progress and identifying weaknesses that need to be corrected. As a

result, this approach (Fig. 2) is a continuous loop of evaluating competency-based training and competency-based education for the employees' continuous improvement.

Assessment

Competency-based assessment is a procedure in which an assessor collaborates with a trainee to gather evidence of competency by referencing the unit standards that form the national credentials [43]. Numerous educational institutions have embraced competency-based education as a means of achieving equity and excellence. According to [44], competency-based education demands students to demonstrate mastery of critical knowledge and abilities rather than simply passing a test. Local assessment data are frequently utilized to determine whether or not learners have mastered identified competencies. Numerous measurement issues arise when assessments are used to inform judgments regarding students' competence. According to [43], assessment should be viewed as a component of the learning process, with gaps identified as chances to build skills rather than as failures. It is a collaborative process that must be negotiated with the trainee, not an imposed one-off event.

Additionally, [45] stated that competency-based assessment has increased interest in integrating information and communications technology (ICT) into the learning, teaching, and assessment system, resulting in the creation of new educational possibilities and more flexible and personalized knowledge.

Quality Assurance (QA)

Quality assurance (QA) is a top priority, necessitating regular system improvements in order to optimize learning/training capacity. Both quality assurance and educational/training performance will be reflected in performance levels, which will be examined to determine whether the model is accomplishing its objectives and goals [62, 63].

Given that customized and self-learning occur in a highly technical setting, it is critical to implement a Quality Assurance (QA) system. Quality and standards establish the expected levels of success and outcomes throughout the educational process, as well as the tactics used to accomplish these and other goals [64]. Due to the widespread recognition of QAs as a crucial success factor (CSF) in any educational system, numerous countries have adopted a variety of initiatives to develop and enforce them. Additionally, QAs are well-established as excellent management and administration tools, which adds additional incentive for their careful selection and implementation [65]. Quality control is a significant challenge in learning and training delivery and applying it to blended learning adds another layer of complexity. A QA must be capable of assessing and analyzing feedback and then feeding it back into the system in order to improve learning and teaching procedures and material in accordance with the national vision and market needs [66, 67].

21st -Century learning and Training

A well-designed education and training environment that incorporates learning management systems (LMS) and interactive learning resources promotes 21st-century learning/training skills such as personalized, collaborative, and self-learning [68, 69]. Additionally, it serves as the operational heart, enabling the administration of online courses, the monitoring of learners' activity, the distribution of e-learning content, and the reporting on the performance of all learning process parts. Notably, it addresses one of the primary issues presented by the evolution of education and training in response to global and market needs.

V. `Conclusion

This study offers a thorough examination of the literature on the benefits of competency-based education (CBE) and competency-based training (CBT). In order to examine their role and relevance, they have been described and discussed in a number of domains. Later in the paper, competency-based education and training, as well as several evaluation systems, are discussed. The purpose of this study was to develop a competency-based education and training model that could be used by researchers and practitioners. The proposed model includes both successes and failures. All of the HR subsystems, including training, and performance, can use the defined competencies as inputs. There are a number of factors that determine whether or not a plan is successful. These include how well it is implemented in practice and how well it is linked to quality assurance (QA) according to national vision and market needs.

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