The eighth Study

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Developing EFL Secondary Stage Teachers Competencies in the light of 21st century skills

By

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Abstract

This research was aimed at identifying the effect of a suggested blended learning training program on developing the EFL teachers' professional performance in the light of 21st century competencies for the Secondary stage. To fulfill the purpose of the study, A quasi-experimental study was conducted including two random samples, each consists of (60) EFL in-service teachers in four Secondary schools in Giza Governorate. Instruments were constructed; a Need Analysis survey, an EFL 21st century competencies Questionnaire, A pre-and post-test and a Rubric. The materials include the program Framework. The validity and reliability of the study instruments were established before their use in the study. The suggested blended learning program was administered on the participants for about (20) hours. The findings of the research revealed the significance of the t-test values for the difference between the pre- and post- administration of the teacher's competency observation checklist and the pre-and post-test in favour of the post administration. Results also revealed that the proposed blended learning training program had a remarkable impact on developing the EFL teachers' competencies related to their (Professional Knowledge, Professional Skills, Attitudes and Values) and in turn their students were remarkably affected by this. The study recommended using blended learning to develop EFL teachers' professional and pedagogical competencies in the light of 21st Century Skills in different educational stages.

Keywords: Teacher's Professional Competencies – 21st century skills- blended learning

الملخص:

يهدف هذا البحث إلى التعرف على تأثير برنامج تدريبي على التعلم المدمج في تطوير الأداء المهني لمعلمي اللغة الإنجليزية كلغة أجنبية في ضوء كفاءات القرن الحادي والعشرين للمرحلة الثانوية. ولتحقيق هدف الدراسة أجريت دراسة شبه تجريبية تضمنت عينتين عشوائيتين تتكون كل منهما من (٦٠) معلم لغة إنجليزية غير لغة إنجليزية أثناء الخدمة في أربع مدارس ثانوية بمحافظة الجيزة. صُنعت الأدوات ؛ دراسة استقصائية لتحليل الاحتياجات ، استبيان كفاءات اللغة الإنجليزية كلغة أجنبية للقرن الحادي والعشرين ، اختبار ما قبل وبعد واختبار قواعد التقييم. المواد تشمل إطار البرنامج. تم إثبات صحة وموثوقية أدوات الدراسة قبل استخدامها في الدراسة. تم تنفيذ برنامج التعلم المدمج المقترح على المشاركين لمدة (٢٠) ساعة. أوضحت نتائج البحث أهمية قيم اختبار t للاختلاف بين الاختبار القبلي والبعدي لقائمة مراجعة كفاءة المعلم والاختبار القبلي والبعدي لصالح الإدارة البعدية. أظهرت النتائج أيضًا أن برنامج التدريب على التعلم المدمج كان له تأثير ملحوظ على تطوير كفاءات معلمي اللغة الإنجليزية كلغة أجنبية فيما يتعلق بـ (المعرفة المهنية والمهارات المهنية والمواقف والقيم) وبالتالي تأثر طلابهم بشكل ملحوظ بهذا. أوصت الدراسة باستخدام التعلم المدمج لتطوير الكفاءات المهنية والتربوية لمعلمي اللغة الإنجليزية كلغة أجنبية في ضوء مهارات القرن الحادي والعشرين في المراحل التعليمية المختلفة. الكلمات الرئيسية: الكفاءات المهنية للمعلم – مهارات القرن الحادي والعشرين.

INTRODUCTION

Being a teacher is a complex profession in which teachers meet various students' background; social and intellectual. Successful teachers are not simply responsible for transferring knowledge, but they must also transfer it effectively and successfully, and for that reason alone, they should organize classrooms, implement effective classroom pedagogy and work cooperatively with a diversity of students and colleagues to transfer the knowledge effectively and successfully. One of the challenges for education is to identify competencies which are key to successful life in the twenty-first century – and competencies for learning to learn and for citizenship are widely accepted candidates. Canto-Sperber & Dupuy (OECD, 2001) refer to key competencies as competencies indispensable for the good life. (p. 182)

To develop this competence, an investigation of the present state of the English language education system in terms of the demands of twenty-first century competencies reveals that there are significant attempts in Egypt to develop EFl teachers' competencies; however, the educational system is already out of date, and a new curriculum structure is unavoidable. A variety of studies have been conducted to improve teachers' technical competencies and the value of in-service training services, including (Abd ElHalim (2008), Mohammed (2012). Elzayat (2015). Abd Elsalam and El-Koumy (2019). Teachers' competencies have recently gained traction in the field of education.

Although New Hello Secondary curriculum encourages students to become more global citizens who know English in order to be able to live, travel and work, and who have a range of 21st century skills. The books

incorporate a range of topics encouraging students to develop citizenship, critical thinking and other skills which will give them the flexibility and tenacity that they will need in their lives. The training courses don't meet the teacher's needs.

Statement of the problem

The problem of the study can be stated that most EFl teachers of the secondary stage lack the adequate EFl competencies.

Purpose of the study

This study aimed to:

1- Identify the adequate EFL teachers' professional competencies.

2- Indicate the features of the proposed program based on the 21st century competencies for developing the EFL secondary teachers' competencies.

3- Explore the effect of the propose program based on the 21st century competencies on developing the EFL secondary teachers' competencies.

Hypotheses of the Study

1. There is a statistically significant difference between the mean scores attained by the experimental group and the control group in the posttest of EFL teachers' professional competencies in favor of the experimental group.
2. There is a statistically significant difference between the mean scores attained by the experimental group in the pretest and posttest of EFL professional competencies in favor of the posttest mean scores.

Definitions of the Terms:

Professional competency

Badawi, (2009, p.25) defined teachers' competency as "teachers' teaching/ learning practices and activities inside and outside classroom such as lesson preparation, lesson delivery, teaching/learning materials manipulation, and test preparation and correction. EFL teachers'

competency refers to four specific areas namely; learner feedback, learner strategies, authentic material, and alternative assessment".

Schneckenberg and Wildt (2006) in Saliha, et al (2011: p. 92) defined a competency as " competencies are the various skills learners have to be taught; this may lead them to acquire the four skills (listening, speaking, reading and writing) in an interactional way to be able to use them later on either in their jobs or the demanding daily life".

The researcher defined competency as a teacher's demonstration of skills or competencies in class with an emphasis on teachers' ability to perform instructional tasks as well as ensuring his ability to achieve that through using technology in the light of 21st century competencies which in turn reveals a remarkable reflection on his students.

Competency-based learning (CL)

Anderson, (2013, p.45) stated that "the characteristics of any competency-based approach include learning that is explicit, measurable, transferable, and empowering for learners. It employs applying, analyzing, evaluating, and creating".

Ross-Fisher, (2017, p.1) assured that" (Cl) requires teachers to demonstrably master both technology and pedagogy during their teacher education course might help meet the goal of developing effective teachers".

The researcher defined (CL) as an effective approach to make sure that the teachers in their classrooms are to engage their students actively in mastering language, content, and technology, it is also well suited to both synchronous and asynchronous online learning, making learning management systems (LMS) a common tool for education.

Review of Related Literature
Theoretical Background of the study

Competency –based approach

Competencies are more than just qualifications in contrast to experience; they embody a dynamic articulation of knowledge, behaviors, and skills that learners will use anytime they are required, not just in exams. CBA curricula that promote learner-friendly teaching and learning strategies may result in a change away from memorization and toward the development of higher-order intellectual skills and life skills, such as communication, social and emotional skills, and other related skills." OECD (2009, p. 4) The core concept of competency-based learning is shown by: Partnership with 21st Century Skills. (2011). P21.

1. Instead of objectives, think "competencies";
2. Instead of content, think outcomes;
3. Learner activities will be based on performance of learner and accomplishment of criteria.
4. Teaching activities are learner centered
5. Formative evaluation is necessary.

Competency-based education

A competency-based curriculum relies on learning outcomes. It focuses on what learners are supposed to do rather than what they are expected to do. It refers to an educational trend that argues for identifying educational expectations in terms of specific quantitative descriptions of abilities, skills, and habits that students should have at the completion of a course of study (Richards and Rodgers, 2011). CBE is a practical educational approach that stresses life skills and assesses the mastery of those skills based on real learner success.

Types of Competence

A competence is a combination of knowledge, skills and attitudes appropriate to a particular context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment. (European Council, 2006) identified eight key competences: • Communication in the mother tongue; • Communication in foreign languages; • Mathematical competence and basic competences in science and technology; • Digital competence; • Learning to learn; • Social and civic competences; • Sense of initiative and entrepreneurship; and • Cultural awareness and expression. In addition to these eight competences, they identified a number of personal qualities which play a role in all eight key competences: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings.

Characteristics of the Competency- Based Approach

CBA is distinguished by the following characteristics. Anderson (2013)

- • It is a problem-solving approach in the sense that it puts learners in circumstances that test/check their ability to solve challenges and difficulties, makes learners think, and they learn by doing.
- • It is social constructivist in the sense that it views learning as taking place by social contact with other individuals.

Teacher's Role in the Competency- Based Approach

Since CBA is learner-centered, it does not necessitate instructor subservience. Since it is action-oriented, it necessitates teachers in action, teachers who can rely on their technical expertise in subject matter, technique, decision-making, and social skills to allow students to succeed. This also necessitates a teaching style that is focused on meditation on

what, when, and how to teach, as well as correcting goals and adapting teaching strategies to learning strategies. Breathnach & Cleary (2017)

A vital part of a teacher's role is to observe, listen, and ask questions and understand more about how students learn so that teachers can be more useful to students. Around the same time, a teacher should pay close attention and the children to see how they think. In doing so, the learner will use cognitive, affective, and motivational techniques to strike a balance between his prior and newly learned skills. Breathnach & Cleary (2017)

Language Teachers' competencies:

The Cambridge English Teaching Framework (Cambridge Assessment English, 2018) proposed five areas of language teacher competencies: literacy and the learner, teaching, learning, and assessment, language capacity, language knowledge and understanding, and professional development and values.   **(Table 1)**

Generic Teacher Competencies of MoNE

Competency Area	Competency	Definition
Professional Knowledge	Content (Subject) Knowledge	Has an advanced level of theoretical, methodological knowledge to develop a critical perspective in the field
	Pedagogical Content (Subject) Knowledge	Knows the content of the program and has pedagogi knowledge.
	Legislation and Regulation Knowledge	As an individual and teacher, acts in accordance with th on duties, rights and responsibilities.
Professional Skills	Planning Education and Teaching	Plans the education and teaching process effectively.
	Designing Learning Environments	Creates healthy and safe learning environments for effect to all students and prepares appropriate teaching material
	Managing the Learning and Teaching Processes	Manages the teaching and learning processes effectively.
	Assessment and Evaluation	Uses assessment and evaluation methods, techniques a accordance with the aims.
es and	National, Moral and	Observes national, moral and universal values.

	International Values	
	Attitude toward Students	Shows a supportive attitude for student development.
	Communication and Cooperation	Establishes effective communication and cooperation wit colleagues, parents and other stakeholders of education.
	Personal and Professional Development	Participates in personal and professional development o by making self-assessment.

MoNE (2017), CoHE ELTE (2018). Generic Competencies

MoNE has offered achievement metrics for each particular competency. There are five metrics that will be used to determine the competency of teachers and teacher applicants. The generic teacher competencies were presented by MoNE as a standardized guideline and a source to be used in defining, designing, evaluating, and organizing the content of the programs and practicum in pre-service teacher education; to be used in the criteria in teacher recruitment, candidate teacher training process, performance evaluation, career development, and rewarding; and to be used as a source (MEB, 2017, p. 9).

Methods and Procedures
Design of the Study:

The present study followed the quasi- experimental design that aimed to investigate the effect of a proposed professional development program based on blended learning to develop the EFL secondary stage teachers' competencies and its effect on their students in the light of 21st century competencies.

Participants

The participants of the main study were selected intentionally of EFL in-service teachers in the secondary schools in Giza during the academic year 2020/2021 of those who mentioned in the pilot study that they are using

the internet to participate in the proposed blended training program. The sample included (60) teachers (control group) and (60) teachers (experimental group).

(Table 2)
Bio data of the participants involved in the Blended Learning training program.

Directorate	No. participants	Qualification	Years of Experience	teachers'
Abo el nomros	36	B. ED	4-15	F & M
Alharam	25	&	8-21	F & M
Omrania	35	H. Dip. ED.	12-18	F & M
North Giza	24		12-25	F & M

F= female   B.ED. = Bachelor of Educatio   M = male   H. Dip. ED. = Higher Diploma in Education

Instruments of the Study

To fulfill the purpose of the study, the researcher designed the following instruments:

a) a EFL teacher's need analysis

b) a pre-and post-test to measure the EFL secondary teachers' competencies.

c) An observation checklist based on 21st century competencies.

d) A repetition of the pre- post test after a month of the treatment.

The need Analysis

The initial form of the interview was validated by 6 professors of Curriculum and EFL Instruction in some Egyptian universities and 6 EFL supervisors in the ministry of Education (Appendix VIII).

objectives

The need analysis aimed to determine the EFL teachers' satisfaction of the current EFL training programs and their benefits from using the presented training courses to improve their teaching competencies.

Description

After submitting the competency standard interview in its initial version to EFL specialists and professors of TEFL, the researcher developed a final need analysis in the light of the jury's suggestions. Its final form consisted of (9) questions. And the results of the interview were treated both quantitatively and qualitatively.

Form:

It consists of 28 questions concerning the teachers' professional development training courses that the teachers have attended. It mainly concentrates on, the effectiveness of the training courses, if they met their professional needs, were they theoretical trainings only or do they imply an application section and finally do they benefit from them in their professional career.

The Pre-post Test
Description

The developed pre-post Test in its final form consisted of (100) questions divided into four major domains. (Methods of Teaching, General knowledge about teaching, Professional skills, Language skills), and the total mark was 100 marks. The results of the pre-post Test were treated both quantitatively and qualitatively.

Table (7)
EFL secondary stage teachers' competencies test specifications

Variable	Domain	Partition	No. quest	
Domain 1	Methods of Teaching	Methods and approaches	20	
Domain 2	General knowledge about teaching	Information about teachers and teaching	10	
Domain 3	Professional skills	Receptive skills (reading- listening)	10	
		Productive skills (writing -speaking)	10	
Domain 4	Language skills	Grammar	20	
		Vocabulary	20	
		Pronunciation	10	
Total			100	

The teacher's competency observation checklist.

Description

The observation checklist in its initial form consisted of (12) standards, and (40) practices (Appendix IV). After submitting the observation checklist in its initial version to (6) professors of Curriculum and EFL Instruction and (6) EFL governmental supervisors. the researcher developed the final form of the observation checklist in the light of the jury's suggestions. The observation checklist in its final form consisted of (10) standards, (35) practices.

Objectives of the observation checklist:

The observation checklist aimed to rate the EFL teachers' professional competencies in the light of the 21st century competencies.

Validity of the study instruments:

Inter-rater Validity of the need Analysis

The jury members were asked to:

1. Judge the questions of the need analysis in terms the formation, suitability and appropriateness for the EFL teachers.

2. Determine if these questions were measurable and could be used to assess the EFL teachers' competencies and their benefits from the current training programs in the light of 21st century competencies.

The jury members disapproved the initial form of the interview and their major comments dealt with the following suggestions:

1. Reducing the interview questions (10 questions) as they were very long and boring.

2. Rephrasing some questions that had theoretical form and wouldn't give real responses.

3. Clarifying some questions that were very broad and needed to be more specific.

4. Reforming some questions to be clearer for the participants.

5. Omitting some questions because they were repeated.

6. Being an open-ended interview will help the researcher to treat it qualitatively and quantitatively to give right interpretations.

7. Modifications were made according to jury members' suggestions.

   So, the form of the interview deemed to be valid.

No	Topic	Delis	Reli...
1	Planning the lesson	How to build your lesson effectively (lesson planning and time management)?	0.
2	Teaching Grammar	How to make Teaching Grammar Fun?	0.
3	Fanfiction	How connecting Reading and Writing Using Fanfiction?	0.
4	Speaking& listening	How to Introduce speaking and listening technology?	0.
5	Four skills	How to integrate the four skills?	0.
6	Competencies	How to improve English Teachers' Competencies based on the 21st Century Skills?	0.
7	Learning technology	What are Learning Technologies?	0.
8	Integration	How to Integrate Technology into the Curriculum?	0.
9	21st century	How to integrate 21st century skills into the curriculum?	0.
10	Critical thinking	How to use Critical thinking as one of the major skills of the 21st century?	0.

Validity of the teacher's competency pre-post Test.

In order to ensure the validity of the teacher's competency pre-post Test,

the researcher used these types of validity measures:

Inter-rater Validity:

The initial form of the pre-post Test was validated by (5) professors of

Curriculum and EFL Instruction in some Egyptian universities and (5) EFL

governmental supervisors (Appendix VIII). The initial form of the pre-post

Test was presented to the jury.

The jury members were asked to:

1. Judge the questions of the test in terms the formation, suitability and appropriateness for the EFL teachers.

2. Determine if these questions were measurable and could be used to assess the   EFL teachers' competencies and their benefits from the current training programs in the light of 21st century competencies.

The jury members disapproved the initial form of the pre-post Test and their major comments dealt with the following suggestions:

1. Reducing the test questions (130 questions) as they were very long and boring.

2. Rephrasing some questions that had theoretical form and wouldn't give real responses.

3. Reforming some questions to be clearer for the participants.

4. Omitting some questions because they were repeated.

5. Modifications were made according to jury members' suggestions (Appendix VII).

6. So, the form of the pre-post Test deemed to be valid.

Constructive validity of the pre-post test

The test was administered to (120) EFL teachers. Cronbach alpha correlation coefficient was calculated. A practice was considered valid if its correlation coefficient to the T-test was (.05) and had statistical significance. (Table 8).

Pre-Control & pre-Experimental

Table (8)

t-test for the experimental and the control groups

Variable		N	Mean	S. D	T-Test	Sig	Eta (**R**
Domain 1	Experimental	60	12.32	6.32	.0506	0.954	0.013
	Control	60	13.01	6.58			
Domain 2	Experimental	60	9.25	4.26	.0220	0.892	0.005
	Control	60	9.95	4.95			
Domain 3	Experimental	60	19.45	10.32	.128	0.900	0.069

	Control	60	18.99	11.02			
Domain 4	Experimental	60	4.26	2.06	.0121	0. 632	0.085
	Control	60	5.01	2.25			
Total Test	Experimental	60	38.39	12.32	.059	0.869	0.019
	Control	60	39.01	11.95			

Validity of the teachers' observation

In order to ensure the validity of the teacher's competency observation checklist, the checklist was submitted to a panel of EFL specialists. The researcher used these types of validity measures:

Inter-rater Validity:

The initial form of the observation checklist was validated by (5) professors of Curriculum and EFL Instruction in some Egyptian universities and 5 EFL governmental supervisors. The initial form of the observation checklist was presented to the jury to determine:

1) Suitability of the practices of the observation checklist for measuring and assessing the EFL teachers' competencies in the light of 21st competencies.

2) Item's representativeness of the observation checklist objectives.

The jury members approved the observation checklist and their major comments dealt with the following suggestions:

a) Most of the practices were too broad and couldn't be applied in teaching English.

b) Some practices needed to be simplified to be more measurable.

c) There should be criteria for each practice in order to be amenable for evaluation.

The researcher developed the final form of the observation checklist in the light of the jury's suggestions. The observation checklist in its final form consisted of (10) standards and (35) practices (Appendix V).

Constructive validity:

Constructive validity for the observation checklist indicators and practices:

The observation checklist was administered to (60) EFL teachers. Cronbach alpha correlation coefficient was calculated for each practice and the total score of its indicators. A practice was considered valid if its correlation coefficient to the indicator it represents was (٠,٧٤٢) and had statistical significance. (Table 8, appendix IX).

B.2. Constructive validity for the observation checklist standards:

Table (9) delineates correlation values for the total score of the ten standards among themselves and the total score of the observation checklist.

Table (9)

The correlation coefficient between item dimensions and total score of the observation checklist.

Dimensions 1	Dimensions 2	Dimensions 3	Dimensions 4	Dimensions 5	Dimensions 6	Dimensions 7	Dimensions 8	
0.68**	0.52**	0.68**	0.60**	0.50**	0.53**	0.59**	0.67**	
0.55**	0.60**	0.51**	0.67**	0.59**	0.59**	0.60**	0.62**	
0.67**	0.75**	0.73**	0.65**	0.63**	0.57**	0.61**	0.59**	
0.62**	0.71**			0.67**				

Results in table (6) showed that correlation coefficient between the standards and the total score of the observation checklist ranged from (0.676 - 0.865) and are significant at 0.05 level. The results above indicated that the observation checklist validity was accepted.

Reliability of the Instruments

Reliability of the pre-post test

In order to establish the reliability of the pre-post test, the researcher used Cronbach 's Alpha using statistical package for the social science (SPSS), version 24. The reliability coefficient of the alpha Cronbach was (0.739), which is relatively high. Consequently, the test could be considered as a reliable one. The results are shown in table (10).

Table (10)
Cronbach's Alpha values for determining the pre-post test reliability.

Variable	Domain	Number of practices	Cronbach's Alpha	Intrinsic Validity	
Domain 1	Methods of Teaching	20	0.78	0.88	Ac
Domain 2	General knowledge about teaching	10	0.92	0.96	Ac
Domain 3	Professional skills	20	0.89	0.94	Ac
Domain 4	Language skills	50	0.92	0.96	Ac

The researcher found that the reliability coefficient of pre-post test ranged between (0.78 – 0.95) which was >0.5. This means that the observation checklist is considerably reliable. Also, the intrinsic validity values ranged between (0.88 – 0.98). These results in turn showed that the observation checklist had a high level of

reliability and high level of intrinsic validity.

Reliability of the teacher's competency observation checklist.

In order to establish the reliability of the observation checklist, the researcher used Cronbach 's Alpha coefficient in estimating the reliability of the observation checklist. The results are shown in table (11).

Table (11)
Cronbach's Alpha values for determining the observation checklist reliability.

The stability method was used by the Cronbach alpha method in the item of deleting

Item	Item of	Item	Item of Deleted	the	Cronbach	alpha

	Deleted			Checklist
1	0.588	19	0.522	
2	0.621	20	0.583	
3	0.655	21	0.552	
4	0.658	22	0.690	
5	0.625	23	0.541	
6	0.607	24	0.569	
7	0.649	25	0.591	
8	0.621	26	0.677	
9	0.613	27	0.641	
10	0.669	28	0.678	
11	0.611	29	0.646	
12	0.588	30	0.522	0.742
13	0.621	31	0.583	
14	0.655	32	0.552	
15	0.658	33	0.690	
16	0.625	34	0.541	
17	0.607	35	0.569	
18	0.649			

The value of the total stability coefficient for the Checklist came at 0.742 which was ≥ 0.5 and that all the stability coefficients for the items were below the value of total stability. Thus, the observation checklist is considered reliable.

Correlation

Table (12)

The correlation coefficient between item dimensions and total score was calculated

Dimensions 1	Dimensions 2	Dimensions 3	Dimensions 4	Dimensions 5	Dimensions 6	Dimensions 7	Dimensions 8	Dimensions 9	Dimensions 10
0.68**	0.52**	0.68**	0.60**	0.50**	0.53**	0.59**	0.67**	0.59**	0.61**
0.55**	0.60**	0.51**	0.67**	0.59**	0.59**	0.60**	0.62**	0.64**	0.67**
0.67**	0.75**	0.73**	0.65**	0.63**	0.57**	0.61**	0.59**	0.60**	0.70**
0.62**	0.71**			0.67**				0.69**	0.71**

From table (12) the results proved high correlation between the item and the mean score is very high as it is approximately 0.05 so the observation checklist is considered reliable

Table (13)

The correlation coefficient between dimensions and total score was calculated

Dimensions	Cronbach alpha	Correlation	Sign

Planning for the teaching and learning processes	0.730	0.865**	Accepted
Presentation	0.712	0.756**	Accepted
Managing the learning process effectively	0.701	0.698**	Accepted
Using educational enrichment activities	0.699	0.758**	Accepted
Effective assessment Technique	0.739	0.762**	Accepted
professional activities	0.729	0.701**	Accepted
Critical Thinking and Problem Solving	0.680	0.692**	Accepted
Innovation, Creativity, and Entrepreneurship	0.732	0.821**	Accepted
Collaboration	0.733	0.801**	Accepted
Communication	0.676	0.680**	Accepted

All dimensions and items are accepted as the correlation value is less than

(0.01) comparing with the Cohen scale standards.

The Need Analysis

In order to help the researcher, build the program and training models for

the secondary stage EFL teachers electronically, the researcher got this

training need analysis: (Table 14)

Need Analysis reliability

No	Topic	Delis	R
1	Planning the lesson	How to build your lesson effectively (lesson planning and time management)	0
2	Teaching Grammar	How to Make Teaching Grammar Fun	0
3	Fanfiction	Connecting Reading and Writing Using Fanfiction	0
4	Speaking& listening	Introduction to Speaking and Listening Technology	0
5	Four skills	Integrating the four skills	0
6	Competencies	English Teachers' Competencies based on the 21st Century Skills	0
7	Learning technology	Understanding Learning Technology	0
8	Integration	Integrating Technology into the Curriculum	0
9	21st century competencies	21st century skills integration into the curriculum	0
10	Critical thinking	Using Critical thinking as one of the major skills of the 21st century that is described as the "ability to design and manage projects, solve problems	0

The researcher found that the reliability coefficient of need analysis

ranged between (0.600 – 0.872) which was >0.5. This means that the need

analysis is considerably reliable. Also, the Correlation values ranged

between (0.569 – 0.884) which is accepted as it is less than (0.01) comparing with the Cohen scale standards. These results in turn showed that the need analysis had a high level of reliability and high level of intrinsic validity.

The proposed blended learning Training program
Learning Objectives and Learner Outcomes
The main objective of this program is to acquaint participants with technology tools and how they can integrate these tools into their own English language teaching to develop their teaching competencies (pedagogical and professional). At the end of the course, participants should be able to:

• Define 21st century EFL teaching skills

• Practice and apply teachers of English competencies

• Integrate technology in English teaching in the classroom

• Develop lesson plans with one or more of the technologies learned throughout the course.

• Use Critical thinking as one of the major skills of the 21st century that is described as the "ability to design and manage projects, solve problems

• Demonstrate how to integrate the four skills using technology

Aids of the proposed blended training program
The proposed program based basically on using the internet. It used a website for broadcasting the on-line training program *(http://measurement.netfast.org/syllabus/)* and one of the social media websites (WhatsApp) to communicate with the participants. The

researcher shared some important websites and videos with the participants.

Description

This Program is designed to help the Secondary stage teachers of English language in Giza acquire and maintain basic knowledge about Teachers' Competencies using blended learning approach for professional development including discussions, quizzes and readings in the light of the 21st century EFL competencies. The program helped participants utilize technology in lesson planning, materials development, feedback, and assessment, and professional communication, collaboration.

Content of the program

The program consists of ten modules delivered in ten sessions, each session included the following items: aims, training strategies, presentation, activities and the participants' responses.

Table (15)
content of the suggested on – line training program for developing the EFL teachers'
professional development.

Date	Session	Topic	Details
20/11/2020	Module 1	Planning the lesson	How to build your lesson effectively (lesson planning)
		Assignment	Self-assessment- Follow-on quiz
	Module 2	Teaching Grammar	How to Make Teaching Grammar Fun - Follow-on quiz
		Assignment	Self-assessment- Follow-on quiz
	Module 3	Fanfiction	Connecting Reading and Writing Using Fanfiction
		Assignment	Assignment Module 3: Self-assessment- Follow-on quiz
30-11-2020	Module 4	Speaking English	Introduction to Speaking and Technology - Follow-on quiz
		Assignment	Self-assessment- Follow-on quiz
	Module 5	Listening and technology	Introduction to Listening and Technology - Follow-on quiz
		Assignment	Self-assessment- Follow-on quiz
	Module 6	EFL competencies	English Teachers' Competencies based on the 21st Century
		Assignment	Self-assessment- Follow-on quiz
6-12-2020	Module 7	Learning technology	Understanding Learning Technology
		Assignment	Self-assessment - Follow-on quiz
	Module 8	Integration	Integrating Technology into the Curriculum

		Assignment	Self-assessment- Follow-on quiz
	Module 9	21st century competencies	21st century skills integration into the curriculum
		Assignment	Self-assessment- Follow-on quiz
	Module 10	Critical thinking	Using Critical thinking as one of the major skills of the 21st c that is described as the "ability to design and manage projec solve problems
		Assignment	Self-assessment - Follow-on quiz

Procedures of the program:

1- The first part is 3-hour face-to-face workshop delivered at the Training Centre at Giza Governorate. Education Directorate. (orientation)

2- The second part is a three -week 20-hour tutor moderated course delivered online using a learning (LMS) platform. (http://measurement.netfast.org/syllabus/)

3- The third and final part of the course is a one-week, students' achievement observation to ensure the effect of the program based on blended learning to develop the EFL teachers' competencies

4- The fourth part after a month of implementing the program the researcher did a Tracer study test to find out the effect of the program.

Steps followed in implementing the treatment

1- The participants' need analysis.

2- Implementing the program which consisted of (10) sessions, presented during (10) separated days through a website *(http://measurement.netfast.org/syllabus/)* for on- line training that the researcher had set up. Each session took about (2) hours on line. On the following day of each session, the recorded session was available on the site.

3-Trainees who couldn't contact the session on– line, could download the session and also for the trainees who contacted the session on – line and wanted to listen to it again for more benefits. The sources varied between some websites and a number of methodology books.

4- Administrating the observation checklist to the participants teaching in their classrooms.

5- A tracer study is implemented after a month to find out the remaining effect of the program.

Treatment

An official permission was taken from Giza Directorate of Education for administrating the EFL teacher's professional competency need analysis. The program was administrated at ten Secondary schools in Giza Directorate. They were conducted during the first term of the academic year 2020/2021. The participants were selected intentionally of EFL in-service teachers in the secondary schools of those who can use the internet to participate in the proposed blended training program. The sample included (120) EFL in-service teachers divided into two groups (60) control group and (60) experimental group.

Duration of the treatment:

The program lasted for one month followed by the observation of the participants in their classrooms for a week then after a month a tracer study was implanted to make sure of the effect of the program.

Procedures of the research

The present research proceeded as follows: -

1. Reviewing literature related to EFL teachers' training programs in relation to EFL teachers' competencies

2. Designing the EFL teachers' need analysis to measure how far they benefit from the training courses

3. Adjusting the need analysis according to the Jury panel's suggestions.

4. Establishing validity and reliability of the teacher's need analysis.

5. Selecting the participants of the study of EFL teachers of the secondary stage.

6. Designing a pre& post-test to measure teachers' professional and pedagogical competency.

7. Implementing the pre & post- test

8. Designing the proposed professional development program

9. Implementing the suggested program to improve the EFL teachers' competencies

10. Post administrating the pre-post and test to the participant.

11. Designing the teacher's observation checklist in the light of the 21st century skills.

12. Submitting the observation checklist to a group of professors in some Egyptian universities for validation.

13. Adjusting the observation checklist and the need analysis according to the Jury panel's suggestions.

14. Establishing validity and reliability of the teacher's competency observation checklist.

15. Analyzing the data statistically.

16. Calculating the effect size of the proposed program

17. Discussing and interpreting the results.

18. Coming to conclusions, recommendations and suggestions for further researches.

Results and Discussions

To fulfill the purpose of the study and answer the study question stating, "What is the effect of the proposed professional program based on blended learning for developing EFL secondary stage teachers' competencies and its effect on their student's achievement?", the researcher tested the following two hypotheses:

The first Hypothesis stated that " *There are statistically significant differences in the mean score of the pre-post-test implementation on the experimental group in favor of the post implementation".*
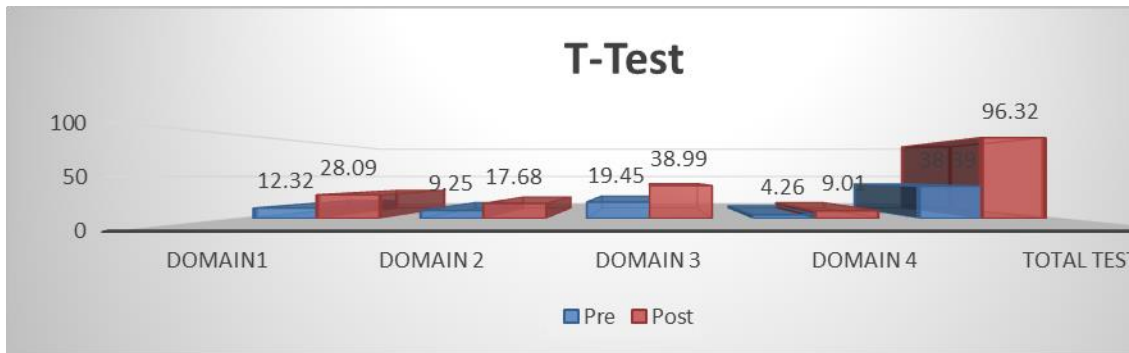
To verify this hypothesis the researcher administered the pre- and post-test and on the EFL secondary stage teachers of English and the results were as follow:

Table (16)

The T-test comparing the pre- and post-administrations Mean Scores of the Experimental Group in the EFL teachers' competencies

Variable		N	Mean	S. D	T-Test	Sig	Eta (R^2)
Domain 1	Pre	60	12.32	6.32	12.306	0.001	0.842
	Post	60	28.09	8.21			
Domain 2	Pre	60	9.25	4.26	9.520	0.001	0.822
	Post	60	17.68	6.85			
Domain 3	Pre	60	19.45	10.32	14.328	0.001	0.739
	Post	60	38.99	9.28			
Domain 4	Pre	60	4.26	2.06	6.211	0.001	0.790
	Post	60	9.01	3.81			
Total Test	Pre	60	38.39	12.32	32.392	0.001	0.900
	Post	60	96.32	14.63			

The results prove to be statistically consistent with the above stated hypothesis. Thus, the second hypothesis is supported. Furthermore, the growth of the experimental group teachers concerning their competencies before and after the implementation of the proposed blended program is compared in figure (18)
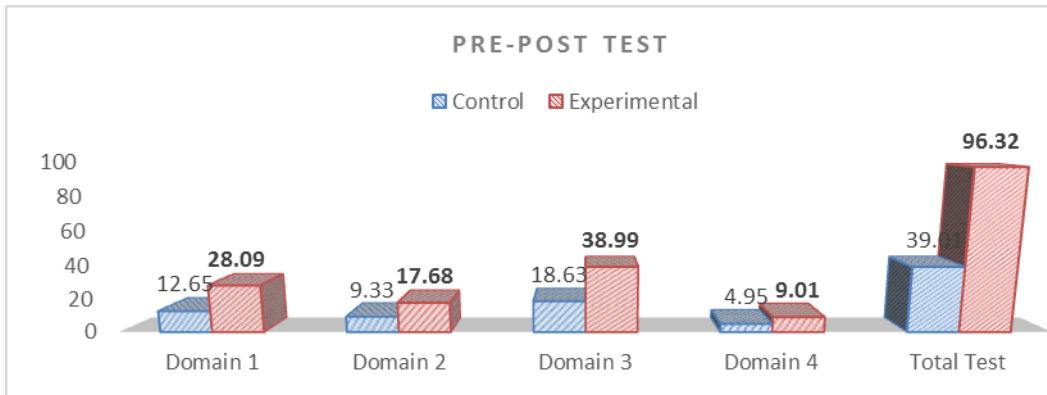
The Second Hypothesis stated that " *There are statistically significant differences between the experimental and the control group in the post administration of the test in favor of the experimental group".*

To verify this hypothesis the researcher calculated the t-test table (17)

Variable		N	Mean	S. D	T-Test	Sig	Eta (R^2)
Domain 1	Control	60	12.65	7.01	13.02	0.001	0.752
	Experimental	60	28.09	8.21			
Domain 2	Control	60	9.33	5.65	9.885	0.001	0.822
	Experimental	60	17.68	6.85			
Domain 3	Control	60	18.63	11.02	15.201	0.001	0.801
	Experimental	60	38.99	9.28			
Domain 4	Control	60	4.95	3.10	7.226	0.001	0.759
	Experimental	60	9.01	3.81			
Total Test	Control	60	39.01	13.00	33.962	0.001	0.809
	Experimental	60	96.32	14.63			

• The first the test 28.09 and a standard deviation of 8.21 while the control means after 12.65 and a standard deviation of 6.32 and the value of t is 13.02, which is statistically significant at 0.001 and the proportions of the effect size were 75%, which is according to the criteria. Cohen is too high.
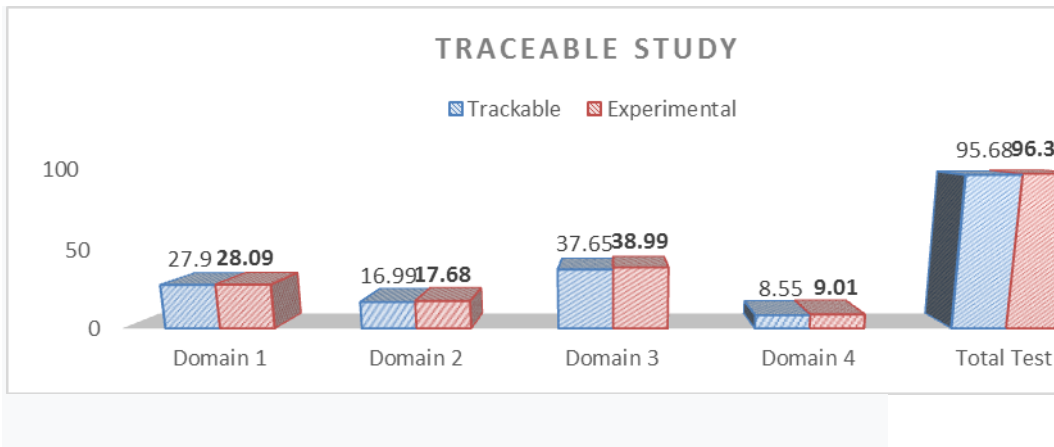
PRE-POST TEST

The Third Hypothesis stated that " *There are no statistically significant differences between the experimental group in the post administration of the blended program and traceable study through the test.*"

To verify this hypothesis the post test was implemented again after a month.

Table (18)
The effect size of the tracer study

Variable		N	Mean	S. D	T-Test	Sig	Eta (R^2)
Domain 1	Traceable	60	27.90	8.54	0.325	0.662	0.019
	Experimental	60	28.09	8.21			
Domain 2	Traceable	60	16.99	7.08	0.052	0.965	0.062
	Experimental	60	17.68	6.85			
Domain 3	Traceable	60	37.65	8.63	0.0165	0.851	0.045
	Experimental	60	38.99	9.28			
Domain 4	Traceable	60	8.55	4.01	0.530	0.632	0.039
	Experimental	60	9.01	3.81			
Total Test	Traceable	60	95.68	15.01	0.069	0.822	0.035
	Experimental	60	96.32	14.63			

From the previous table to analyze the t-test of the experimental groups after and the experimental traceable study in the test, the results were that there are no statistically significant differences between the post and traceable implementation of the test on experimental group, and this is due to the continuous effect of the proposed program.

TRACEABLE STUDY

Trackable   Experimental

	Domain 1	Domain 2	Domain 3	Domain 4	Total Test
Trackable	27.9	16.99	37.65	8.55	95.68
Experimental	28.09	17.68	38.99	9.01	96.3

Discussion and Interpretation of Results

The results of the statistical analysis underscored the effectiveness of the proposed professional program based on blended learning on developing the secondary stage teachers' competencies. The effect size of the proposed program based on blended learning lasted even after a month of the implementation of the program.

Conclusions of the Study

Based on the results obtained, the following conclusions can be inferred:

1- Most of the current EFL teachers' training programs did not cope with their training needs.

2- The EFL teachers' competencies were not in line with the 21st century skills.

3- The proposed professional development program based on blended learning had a significant effect on improving the participants' competencies.

4- The effect of proposed professional development program based on blended learning on improving the participants' competencies was high.

References

1. Anderson, L. (2013). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives* (abridged). New York: Pearson Higher Education.

2. Abdel-Halim, S. (2008). *The Effect of Using Some Professional Development Strategies on Improving the Teaching Performance of English Language Student Teacher at the Faculty of Education, Helwan University in the light of Pre- Service Teacher Standards,* Unpublished doctoral dissertation, Faculty of Education, Helwan University.

3. El-Zayat,A.A.(2015). *The Effectiveness of a Training Program Based on Lesson Study Approach in Developing EFL Teachers' Performance in Preparatory Stage.* Master's thesis –Faculty of Education- Mansoura University.

4. Cleary, M, & Breathnach, C. (2017). Competency-based education as a force for equity. *Competency-Based Education.* doi:10.1002/cbe2.1040

5. Cambridge Assessment English. (2018). *Framework competency statements*.

6. El-Koumy& Abdel Salam, (2019). *A Multifaceted Framework for EFL Curriculum Development to Prepare Students for Building a 21st Century Egypt (1st nd). p. cm*. Egypt.: Modern Academy for University Books.

7. European Council (2006) Recommendation of the European Parliament and the Council of 18 December 2006 on Key Competencies for Lifelong Learning. Brussels: Official Journal of the European Union.

8. European Council (2008) Recommendation of the European Parliament and of the Council on the Establishment of the European Qualifications Framework for Lifelong Learning. Brussels, Official Number 2006/0163.

9. MEB (2017). *Öğretmenlik mesleği genel yeterlikleri.* Ankara: Öğretmen Yetiştirme ve Geliştirme Genel
        Müdürlüğü. Retrieved from
        http://oygm.meb.gov.tr/meb_iys_dosyalar/2017_12/11115355_Y
        YRETMENLYK__MESLEYY_GENEL_YETERLYKLERY.pdf

10. Ministry of National Education, Turkey. (2007). *Teacher generic competencies*. Retrieved from

    http://tedp.meb.gov.tr/doc/Pubs/3ext%20website%20content%20down
    load%20teacher%20co

11. Mohamed, I. (2015) Using an E-Learning Program in Developing the Communicative Competence of in-
        Service EFL Teachers and their Attitudes Towards E-Learning. Master's Thesis. Minia University.
        Faculty of Education. Dep. Of Curricula & Instruction.

12. OECD (Organization for Economic Co-operation and Development). (2014a). *Beyond PISA 2015: A longer-
        term strategy of PISA.* Retrieved April 13, 2015 from:
    www.oecd.org/pisa/pisaproducts/Longer-
        term-strategy-of-PISA. pdf.

13. Partnership for 21st Century Skills. (2009). *Learning environments white paper.* Washington, DC: Author.
        Retrieved from: www.p21.org/storage/ documents/le_white_paper-
    1.pdf.

14. Richards, J. C. (2011). Exploring Teacher Competence in Language Teaching. *The Language Teacher*, 34 (4),
        3-7.

15. Ross-Fisher, R. (2017). Implications for education preparation programs considering competency-based
        education. Competency-Based Education, 2(2), 1–3. https://doi.
    org/10.1002/cbe2.1044

16. Trier, U.P. (2002) Key Competencies in OECD Countries:- similarities and differences. Aaddress to DeSeCo
        Symposium, Geneva, February 11-13, 2002. http://www.portal-
        stat.admin.ch/deseco/deseco_int02.htm (assessed 11 June,
    2007)

17. Schneckenberg, D.,Wildt,J. (2006). The Challenge of a Competence in Academic Staff Development. NN.Y.,
        CELT