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The Effectiveness of a Training Program Based on the Dimensions of Professional Learning Communities among Stage Teachers Primary school and its impact on the development of life skills for their students

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Research summary.

The research aimed to build a training program based on the dimensions of professional learning communities, to reveal the effectiveness of the training program based on the dimensions of professional learning communities, in developing life skills, among female teacher students who applied the training program, and the research found that there are statistically significant differences at the level of significance (0.05≥ ∝)The research indicated that there are statistically significant differences, at the level of significance (0.05≥∝), between the average scores of the experimental and control group students, in the post-application of the life skills scale, in favor of the experimental group, the research showed that The percentage of adjusted gain for some life skills among female students was greater than the value set by Black, which is (1.20), and some are greater than (1.00) and less than (1.20), which shows the effectiveness ranging from medium to large, to use the training program based on the dimensions of professional learning communities, in the development of life skills, among the female teacher students to whom the training program was applied.

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Research Introduction

Paying attention to the teacher, and providing him with the latest methods for sustainable professional development, which is reflected in the educational reality, and the product of human capital, is one of the most important issues that have occupied researchers and educators in the world, and this is confirmed by many international conferences, such as the Future Teacher Conference held in 2015 at King Saud University, and the Fifth Conference for Teacher Preparation held at um Al-Qura University in 2016, entitled: Preparing and training the teacher in light of the demands of development and the developments of the times, and the conference held by the College of Education at King Khalid University in 2016, entitled: The teacher and the age of knowledge: opportunities and challenges, and the first conference held by the Saudi Teacher Association (JASS) at King Khalid University in 2019, entitled: Development requirements and future ambition, as well as the second international conference at King Khalid University in 2023, entitled: Teacher and quality education, all of which recommended the need to activate in-service teacher training in order to raise professional competence and achieve the requirements of Knowledge Society.

In implementation of these developmental visions, the Kingdom of Saudi Arabia has adopted the professional license system, where the Education and Training Evaluation Commission prepares

professional tests, directs development programs to improve the quality of teacher performance, and sets performance indicators, and the average number of hours of professional development for the teacher, to ensure continuous professional growth, based on specific professional standards, and meets the needs of the school as a professional learning community (Canaan, 2021).

Accordingly, the goal of teaching science is not only to provide knowledge, but to seek to build the learner's ability to apply knowledge in life, and to develop mental skills, by analyzing, linking and producing knowledge, and embodying this in behavior is considered a mental skill, you need creativity in thinking, and skills must be used for education, Increasing the awareness of learners of what is going on around them, and increasing the efficiency of the mental work of learners, in addressing life issues (Al-Qumaizi, 2015).

Professional learning communities emerge as an educational philosophy, a reformist development project, and an introduction to professional development, and this has been confirmed by several studies, such as Atif and Sharahili (2021), Al-Dhafiri et al. (2020), MohamedD (2019), Moussa (2020), Admiraal (2021), Dogan et al. (2016), andMeesuk et al. (2021).

In the era of the knowledge explosion, educational organizations bear a great responsibility and face the real challenge in order to prepare a generation capable of the requirements of the times, through proper preparation and the development of intellectual capabilities, as societies race to produce knowledge because it represents an important income, and the need becomes urgent to deal with knowledge in more useful and productive ways (Gabriela, 2015).

At the beginning of the millennium, life skills received international and regional attention, in 2000 the International Conference on Education was held under the auspices of the United Nations Educational, Scientific and Cultural, and its slogan was to ensure quality learning for all young people, challenges, trends and priorities, and focused on enhancing basic skills, and following effective learning methods (Al-Ma'shouq, 2014).

In light of the above, life skills are one of the main axes that the Kingdom has paid attention to in its vision, as well as organizations interested in human development, and the importance of developing life skills in all stages that the learner goes through, it is necessary to pay attention to them in the primary stage, as the primary stage is the main pillar of public education, which is the stage of learning and acquiring values, behaviors, knowledge and skills that affect the future of the learner, and is considered a building base for a balanced personality produced in various Its dimensions, which contribute to the formation of manpower appropriate to the knowledge society (Abdel Hamid and Al-Hiyari, 2005; Erawan, 2010).

Based on the above, and in light of the importance of professional growth processes and building professional learning communities, and their desired impact on the development of qualified competencies of teachers, to reflect positively on the learner's skills, there was a need to build a training program based on the dimensions of professional learning communities, which contributes to the development of life skills for female students.

Search problem

Based on the above, the teacher is one of the most important elements on which the educational system is based, as the need has become urgent to train him and develop his abilities, to become an effective professional product, and a creative teacher who keeps pace with the developments of the times, keen to seek knowledge and continuous learning, and is not limited to academic preparation.

Many local studies have recommended activating professional learning communities in schools, and their importance in acquiring sustainable professional growth, and as an entry point for developing teachers' performance and skills, which are reflected in the quality of human outputs, and stressed the need to include training programs, and provide the appropriate environment, with appropriate support, in light of the knowledge society, such as the study of: Al-Kasi and Al-Ahmari (2019), Al-Shehri and Al-Asiri (2021), Al-Arifi and Al-Anzi (2021), Atif and Sharahili (2021), Mohammed (2019).

Many local studies pointed to the importance of applying students' life skills (such as a study: Khashram, 2020; Nasser Al-Zahrani, 2021), which recommended the need to pay attention to life skills, move them from the stage of indoctrination to the stage of practice, and qualify teachers and develop their abilities, with regard to the development of life skills for their students.

Several studies (such as: Al-Bassiouni et al., 2021; Al-Banna, 2021; RaqbaN et al., 2016; Abdul Majeed and Sawadi, 2019; Matar, 2020) recommended the need to provide developmental training programs for the teacher, which qualify him to develop and refine the life skills of learners and conduct more studies on the development of life skills among learners.

Based on the above, and in light of the professional development directions of the teacher, which are reflected in the quality of the educational outputs sought by the Ministry of Education, within the directions of the future visions of the Kingdom of Saudi Arabia, the research problem has emerged, as the current research seeks to prepare a proposed training program, based on the dimensions of professional learning communities for primary school teachers, and its impact on the development of life skills for their students.

Research Questions

The current research sought to answer the following questions:

1- What is the training program based on the dimensions of professional learning communities among science teachers at the primary stage?

3- What is the effectiveness of the training program based on the dimensions of professional learning communities in developing life skills among female teacher students to whom the training program was applied?

Research Objectives

The objective of the current research is to:

1-Building a training program based on the dimensions of professional learning communities.

2-Disclosure of the effectiveness of the training program based on the dimensions of professional learning communities, in developing life skills, among female teacher students to whom the training program was applied.

Importance of research

Theoretical significance:

The importance of theoretical research lies in providing the following:

- A training program based on the dimensions of professional learning communities, which may contribute to the benefit of those in charge of professional development programs for teachers.

- A specific procedural definition of life skills for the primary stage, which may contribute to the possibility of accurate measurement and help to form new measures consistent with the conditions of the local environment.

Applied importance:

The importance of applied research lies in the following:

- Contribute to improving professional learning among science teachers at the primary stage, and the possibility of transmitting its impact on the life skills of their students

- Inform teachers and educational supervisors about the possibility of using the dimensions of professional learning communities as an internal reform approach that may contribute to improving the performance of the educational institution.

- Research tools and materials may be useful to researchers and educational supervisors in using them in the educational field, or to create similar tools and materials.

Search terms

In the light of the researcher's review of the relevant educational literature, it was possible to reach the following definitions of search terms:

Dimensions of professional learning communities:

Haidar and Moselhy (2006) defined professional learning communities as: "a group of individuals working together according to a common vision, discussing specific professional problems facing them, and sharing their findings with other members of the professional community, thus contributing to the development of their knowledge, awareness, and skills" (p. 40).

The dimensions of professional learning communities are defined procedurally as: a set of key elements represented in the vision and shared values, creativity, collective learning and sharing of professional experiences and pedagogical practices, on which the professional learning community is based consisting of primary school science teachers, who share professional experiences and personal practices, and have opportunities for direct interaction through frequent meetings, according to a time plan, seeking to achieve continuous improvement through a common vision that includes goals to develop their competencies as teachers in an era Knowledge economy, and the development of life skills for their students.

Training program based on the dimensions of professional learning communities:

El-Baz (2006) defined the training program as: "an organized educational plan developed with the aim of bringing about desirable changes in the performance, professional and personal aspects" (p. 55).

The training program based on the dimensions of professional learning communities is defined procedurally as: an organized plan with specific objectives, specific content, and sequential organized procedural steps, represented in a set of specific and intended methods and activities, based on the dimensions of professional learning communities represented in (vision and common values, creativity and collective learning, sharing professional experiences and educational practices), to develop the competencies of the knowledge economy among science teachers for the primary stage and develop the life skills of their students.

Life Skills:

Hayek (2010) defined it as: "a set of skills related to mental, physical, social and emotional abilities, through which the individual can solve his daily life problems and participate effectively, in line with the requirements of the times and the needs of the labor market" (p. 111).

It is defined procedurally as: a set of skills related to personal, social and mental abilities, acquired by the learner in the primary stage, to make her able to assume responsibility, solve problems, deal with the requirements of daily life with the highest effectiveness, and the ability to keep pace with the requirements of the times, and the needs of the labor market, and contribute effectively to achieving the goals of the knowledge society.

1.7 Research Limits

The current research was limited to the following limits:

1.7.1 Objective limits:

– The dimensions of professional learning communities represented in (common vision and values, participatory leadership, creativity and collective learning, supportive conditions, sharing of professional experiences and educational practices), and the research will be limited to three dimensions, namely:

(common vision and values, creativity and collective learning, sharing professional experiences and educational practices) for their suitability for science teachers at the primary stage.

- Sixth unit (forces and energy) in the science course for the sixth grade of primary school.
- Life skills for primary school students in the following areas: the personal field, the social field, the scientific and mental field.

1.7.2 Human limits:

- A sample of primary school science teachers at the Mahayel Education Office, where the research problem was diagnosed and the exploratory study was conducted.
- A sample of sixth grade students in the primary stage at the Mahayel Education Office**.**

1.7.3 Spatial boundaries: Government general education primary schools in the Mahayel Education Office.

1.7.4 Time limits: The research was applied during the academic year 1444 AH.

Theoretical framework and previous studies:

Life Skills

Life skills agree that they help the learner to build a confident personality, capable of positive thinking, dealing with life problems, in a logical way, able to make decisions, communicate with the other, while maintaining identity.

The characteristics of life skills are based on several basic aspects mentioned by Abdul Wahed (2015) as follows:

- Cognitive aspect: It focuses on providing the individual with information that forms the basis for performing the roles assigned to him, in addition to attention and perception.
- Skill aspect: involves performing and practicing the skill easily.
- The emotional aspect: It is concerned with the formation of values and attitudes towards life skills**.**

The importance of acquiring life skills for the learner:

Saravanakumar (2020) explained that acquiring life skills for the learner at the primary stage contributes to the following:

- Formation of one's own identity, through healthy balanced growth in the transition from childhood to adulthood.
- Providing the learner's functional knowledge, and preparing him to enter the labor market and succeed in daily life.
- Be the link between theoretical study at school and life situations**.**

Life Skills Classification:

The study of Banaser (2021) showed the skills that help individuals face pressures and solve problems, and enable them to lead a healthy and positive life, and classified the life skills necessary for individuals in Saudi society for those over the age of 12 years, as follows:

- Investing the capabilities of individuals: including resisting negativity, respecting points of view, and time management.

- Personal skills, the most important of which are: adapting to changes and pressures, dealing with others honestly and fairly, taking responsibility, making decisions, motivating himself to form a better future, commitment to principles and acceptance of others.

- Interactive skills: working in a team, leading and directing the work team, investing and managing time, listening to others effectively, good planning.

- Social skills: including social participation, acting according to the requirements and customs of society, the ability to form social relations together.

Critical thinking skills: such as analyzing facts, editing and organizing ideas, making comparisons, reaching conclusions, and solving problems efficiently

Among the studies that dealt with the classification of life skills in the science curriculum for the primary stage, Abu Al-Hamael (2013) study nutritional skills, health skills, preventive skills, consumption skills, manual practical skills, and scientific skills. While Klopp (2013) analyzed the content of the science curricula for the basic welcome, and prepared a list of those skills that should be included in the science books for the basic stage, and they were: manual scientific skills, preventive skills, and health, , environmental and food. In the study of Al-Jubeir and Al-Fayez (2021), life skills were classified into three areas: food skills, health skills, and preventive skills. In the study of Saeed Hassan (2021), life skills were classified into five main dimensions, as follows:

- Problem solving and decision-making: It includes the logical practical steps and procedures that the learner follows while solving a problem, and includes the skills of identifying a problem, collecting parameters and data, developing possible solutions to the problem, choosing the most appropriate solutions, and evaluating the solution of the problem.

- Health and preventive dimensions, which refer to skills related to the ability to maintain personal hygiene and acquire healthy and sound habits.

- Environmental dimensions: It means the skills that the learner needs to maintain the safety of the surrounding environment.

- Nutritional dimensions: dimensions related to balance in a healthy and varied food, and the organization of mealtimes.

In light of the above, it appears that despite the multiplicity of classifications, they agreed in the presence of the personal, social, and mental aspect, and this was adopted in the current research, where the life skills necessary for the primary stage were classified into three main areas, from which a number of sub-skills emerge, as follows:

First, the personal domain: includes self-empowerment skills, time management skills, health and preventive skills, and technology use skills.

Second, the social field: includes communication skills and building social relationships, leadership skills and teamwork, belonging and citizenship skills, and environmental skills.

Third, the scientific and mental field: It includes problem-solving skills, critical thinking skills, and creative thinking skills.

Developing life skills for primary learnersthrough science curricula:

Acquiring a skill at an early age is one of the most important characteristics of life skills to grow and gradually develop during learning and exercise, so that the learner can skill.

The primary stage is considered the basis of the educational system, and the basis for building a strong base, which is the stage of learning and acquiring values and behaviors, which will affect the preparation of the learner for life, build his psychological and social personality, and develop his ability to lead, decision-making, and effective communication, as well as the acquisition of thinking skills, and problem solving, and the acquisition of life skills in the early stages develops the learner's awareness of himself, and

understanding others and their requirements, which enables him to balance psychologically, socially and functionally (Thabet, 2020).

One of the most important requirements for the development of life skills for the learner in the primary stage is to get out of the traditional pattern of teaching that focuses on the cognitive aspect, and to adopt educational theories and strategies that contribute to the development of life skills, in light of the huge amount of knowledge, in addition to intensive training to find innovative solutions to problems and activate them in life situations: (UNICEF Regional Office , 2017).

Science curricula are a suitable field for the development of life skills, as they are related to the surrounding environment, and the multiplicity of applied fields, and the development of many skills, and the transition from verbal education to performance education, are considered one of the main pillars in science teaching (Abu Al-Hamael, 2020).

In the study of Matar (2020), the researcher used a proposed training program in realistic evaluation, in developing the skills of measuring the learning outcomes of teachers of the basic stage, and the life skills of their students, and the study sample consisted of (15) teachers, and (120) learners, and the researcher used the tool of measuring teachers' skills scale in measuring the outcomes of learning mathematics, and the scale of life skills for learners, and the study adopted the semi-experimental design, based on one group with two measurements before and after, and the results of the study found that the most important life skills Which is suitable for the basic stage are: problem solving skill, cooperation skill, and self-management skill, and that there is effectiveness of the training program on the development of life skills for learners.

Among the studies that specialized in dealing with the development of life skills, through the science curriculum for the primary stage, using various programs, the study of Abu Al-Hamael (2013), which aimed to identify the effectiveness of an enrichment program for the development of life skills, among learners in the sixth grade of primary school, and the researcher prepared a measure of skills, emanating from a list also prepared, and concluded that there are statistically significant differences between the average scores of students in the control and experimental groups, in the dimensional measurement, in favor of the group Experimental

Al-Jubeir and Al-Fayez 's study (2021) aimed to develop the life skills of sixth grade students, through an enrichment program based on constructivist theory, and they used the experimental approach with a semi-experimental design, and used the life skills test as a tool, and the results concluded that there are statistically significant differences between the pre- and post-tests, in favor of the post-test, which indicates the effectiveness of the program.

Saeed Hassan's study (2021), which aimed to measure the effectiveness of a program in science, based on the theories of multiple intelligences and social constructivism in achievement, life skills development, the trend towards science, and self-esteem, and the study tools consisted of the achievement test, the life skills test, the scale of attitude towards science, and the self-esteem scale, and the researcher used the experimental approach with one group, which is based on the pre- and post-measurements of the dependent study variables, and the results showed the effectiveness of the proposed program in developing Life skills, and the tendency towards science and self-esteem.

In light of the above, it became clear that many studies dealt with the ways and means that lead to the acquisition and development of life skills for learners, and these methods and means varied, some relied on teaching methods, others started from the knowledge content of the curricula, while others took the path of training and professional qualification of the teacher, to reflect on his performance in developing the skills of learners.

On the other hand, some literature pointed to the most important obstacles to the acquisition and development of life skills, as mentioned in Al-Judaibi (2010), as follows:

- Lack of programs and projects regulating life-skills-based education.

- The lack of specialized strategies for teaching and developing life skills among learners in general education in general, and the primary stage in particular.
- Failure to activate school activity programs and student counseling to keep pace with the latest developments in life skills education.
- Poor school equipment and community partnerships.
- The presence of large numbers of learners in classrooms.

3. Research hypotheses

The current research tried to test the validity of the following hypotheses:

1- There are statistically significant differences at the significance level (0.05) Among the average scores of the experimental group students, in the pre- and post-applications of the life skills scale, in favor of the post-application.

2- There are statistically significant differences at the significance level (0.05) between the average scores of the experimental and control group students in the dimensional application of the life skills scale, in favor of the experimental group.

Research Materials

The research materials were: (1) a list of life skills for primary school students, and (3) a training program based on the dimensions of professional learning communities. These materials have been prepared as follows:

Life Skills Scale for Sixth Grade Students:

Checking the psychometric properties of the scale:

The psychometric properties of the scale were verified according to the following procedures:

First, the validity of the measure:

The researcher relied in calculating the validity of the scale on three types of honesty, which are as follows:

A- Arbitrators' Validation:

The scale was presented in its initial form, which numbered (35) phrases to a group of professors specialized in the field of curricula and teaching methods in the faculties of education,

The ratios of the agreement of the two arbitrators on the arbitration clauses ranged between (33.83% - 100%), the average agreement ratios (66.91%), which is a high agreement ratio, which calls for confidence in the validity of the scale to measure what it aims at, this has been modified the language formulation of some phrases according towhat was indicated by some arbitrators, and the percentage of agreement of arbitrators was considered an indicator of its sincerity, which calls for confidence in the results that can be reached after the application of the scale.

B- Self-honesty of the scale: After judging the scale, the researcher applied it in the field, and on the data of the exploratory sample consisting of (36) primary school students, and the self-honesty was calculated by calculating the square root of the stability coefficient (Fouad Al-Sayed, 2006, p.402). The degree of self-honesty was as shown in Table (1) below:

Table (1)

Self-honesty of the Life Skills Scale

Square Root of the Coefficient of Stability (Self–Truthfulness)	**Coefficient of stability**	**Axes and the overall degree of the scale**	**M**
0.944	0.892	Interpersonal skills	1
0.904	0.819	Social skills	2

0.963	0.928	Mental skills	3
0.980	0.961	**Overall score of the scale**	

It is clear from Table (1) that the values of the square root of the stability coefficient ranged between (0.904-0.980), which thus approaches the correct one, which confirms the validity of the life skills scale.

Third, stability:

To measure the stability of the scale, the researcher used the Cronbach alpha equation Cronbah, s to ensure the stability of the scale, after applying it to the survey sample, and the number of its members reached (36) students in the sixth grade of primary school, and the following table (2) shows the stability coefficients for each skill of the scale and the total degree.

Table (2)

Stability coefficient of skills and the overall score of the life skills scale

Coefficient of stability	**Number of questions**	**Skills and overall degree**	**M**
0.892	12	Interpersonal skills	1
0.819	12	Social skills	2
0.928	11	Mental skills	3
0.961	35	**Overall score of the scale**	

It is clear from Table (2) that the overall stability coefficient of scale skills is high, reaching (0.961) for the total paragraphs of the scale, while the stability of the axes ranges between (0.819) minimum, and between (0.928) as a maximum, this indicates that the scale has a high degree of stability and can be relied upon in the field application of research.

5- Description of the scale in its final form:

After calculating the honesty and stability of the life skills scale, the scale in its final form (Appendix No. 7) consists of (35) questions representing life skills, where personal skills included (12) questions, social skills (12) questions, and mental skills (11) questions. Table (3-12) below shows the distribution of statements on the Life Skills Scale**.**

Table (3)

The final image of the distribution of the phrases of the Life Skills Scale on each of its skills

Total	**Ferry numbers**	**Scale Skills**	**M**
12	1-2-3-4-5-6-7-8-9-10-11-12	Interpersonal skills	1
12	13-14-15-16-17-18-19-20-21-22-23-24	Social skills	2
11	25-26-27-28-29-30-31-32-33-34-35	Mental skills	3
35	**Total Ferries**		

Data Collection Procedures

The research was carried out by following the following steps:

Phase I (pre-application):

4- Identifying a random sample of science teachers for the primary stage to attend the training program, as well as a random sample of sixth grade students in cooperation with the researcher with the educational supervisors at the Mahayel Education Office.

5- Create a group link on the WhatsApp program, and add all the trainees to facilitate communication with them

6- Pre-application of the observation card for sample parameters.

7- Pre-application of the life skills scale, on the research sample of sixth grade primary students, in the experimental and control groups, with the aim of ensuring the parity of the level of life skills of the two groups before in a period of (8/9-15/9/1444), where the application was as follows:

- Contacts were made with the principals of experimental and control schools to determine the date of implementation of the scale test.

- Conducting two physical visits by the researcher to experimental and control schools, to apply the life skills scale.

8- Setting an appropriate date for the training program, and informing all members of the sample.

9- Identifying an appropriate hall in the building of the Career Development Center in Mahayel to establish the training program, and the hall was equipped with all the necessary tools to implement the program.

10- Correcting the life skills scale test and monitoring the grades according to the correction key attached to the scale, in preparation for conducting appropriate statistical treatments to answer the research questions and verify the validity of its hypotheses.

The second stage (training phase):

The proposed training program (Appendix No. 5) was implemented in the period between (17-21/10/1444), with 21 training hours divided into (5) days, at a rate of (4) hours per day.

Third stage (post-training phase):

1- Activating the possibility of obtaining certificates of attendance for the teachers who attended the proposed training program.

4- Post-application of the life skills scale after (4) weeks of the implementation of the training program

Answer to the first question:

The first question stated: "What is the effectiveness of the training program based on the dimensions of professional learning communities in developing life skills among the female students of the teachers to whom the training program was applied?" In order to answer this question and to identify the effectiveness of the training program based on the dimensions of professional learning communities in the development of life skills, among the female students of the teachers to whom the training program was applied, the first hypothesis was tested, which stated: "There are statistically significant differences at the significance level ($0.05 \geq \propto$) among the average scores of the experimental group students, in the pre- and post-applications of the life skills scale, in favor of the post-application. To verify the validity of the hypothesis, **the** Paired Samples Statistics **test was used** and the results were as follows:

First: Personal field skills:

Table (4)

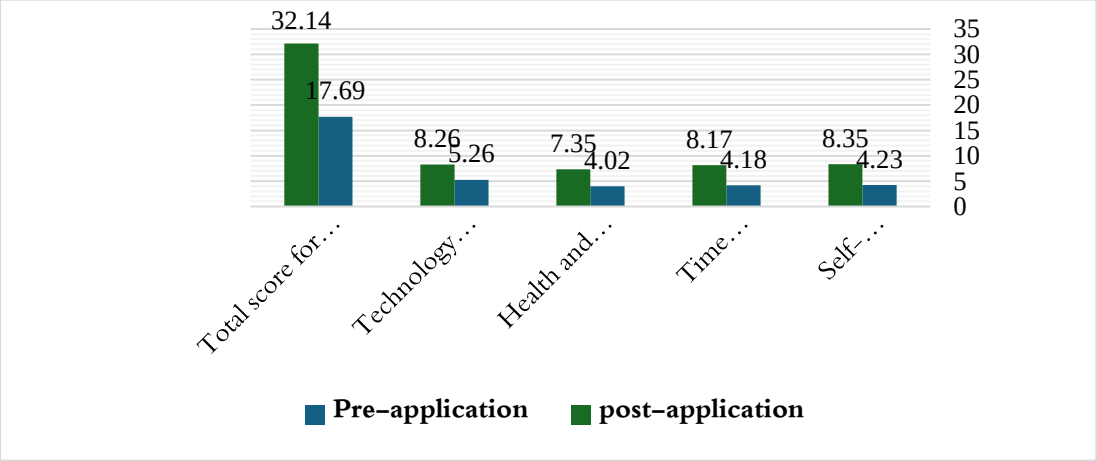
T test results for correlated samples, to indicate the differences between the average scores of the experimental group in the pre- and post-applications of the life skills scale (personal field skills)

Level of significance	Degrees of freedom	Value (v)	Standard deviation	Average score	Number of female students	Application	Interpersonal Skills
0.00* function	64	16.154	1.748	4.23	65	Tribal	Self-empowerment
			1.052	8.35		Post	
0.00* function	64	-24.178	1.171	4.18	65	Tribal	Time management
			0.876	8.17		Post	
0.00* function	64	-17.100	1.192	4.02	65	Tribal	Health and preventive skills
			1.096	7.35		Post	
0.00* function	64	-11.209	2.094	5.26	65	Tribal	Technology skills
			0.906	8.26		Post	
0.00* function	64	-32.657	3.964	17.69	65	Tribal	**Total score for personal domain skills**
			2.228	32.14		Post	

* A function at the level of (0.05).

Figure (1)

Average scores of the experimental group in the pre- and post-measurements of the life skills scale (personal domain skills)



Looking at Table 4 and Figure 1, it is clear that:

- The superiority of the scores of the experimental group students in the dimensional application of the personal field skills scale, as one of the life skills when the skill (self-empowerment), where the average scores of the experimental group students in the pre-application (4.23), while the average score in the post-application (8.35), at the degree of freedom (65), and it is also found that the level of significance (0.00), which is a statistically significant value at the level of significance **(0.05≥), ,** which shows a statistically significant difference at the level **of (0.05≥),** between the average scores of the experimental group students, in the pre- and post-applications of the personal field skills scale, as one of the life skills when the

skill (self-empowerment), in favor of the post-application, and then the validity of the first hypothesis was partially verified.

Social skills

Table (5)

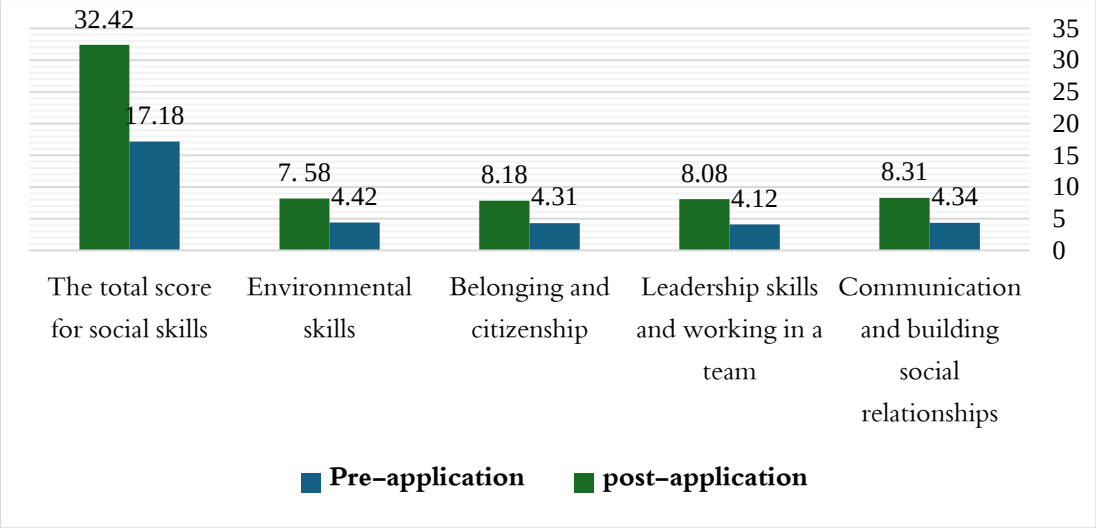
Test results for correlated samples, to indicate the differences between the average scores of the experimental group in the pre- and post-applications of the life skills scale (social field skills)

Level of significance	**Degrees of freedom**	**Value (v)**	**Standard deviation**	**Average score**	**Number of female students**	**Application**	**Social field skills**
0.00* function	64	-20.118	1.513	4.34	65	Tribal	Communicate and build social relationships
			0.828	8.31		Post	
0.00* function	64	-15.670	1.606	4.12	65	Tribal	Leadership and teamwork skills
			1.254	8.08		Post	
0.00* function	64	-18.285	1.236	4.31	65	Tribal	Belonging and citizenship
			0.934	8,18		Post	
0.00* function	64	-14.406	1.870	4.42	65	Tribal	Environmental Skills
			1.093	7,85		Post	
0.00* function	64	-29.652	3.852	17.18	65	Tribal	**Total score for social field skills**
			2.833	32.42		Post	

* A function at the level of (0.05).

Figure (2)

Average scores of the experimental group in the pre- and post-measurements of the life skills scale (social field skills)



Looking at Table 5 and Figure 2, it is clear that:

- The superiority of the scores of the experimental group students in the dimensional application of the scale of social field skills, as one of the life skills when the skill (communication and building social relations), where the average scores of the experimental group students in the tribal application (4.34), while the average score in the post-application (8.31), at the degree of freedom (65), and it is also found that the level of significance (0.00), which is a statistically significant value at the level of significance **(0.05≥), ,** which shows a statistically significant difference at the level **of (0.05≥),** between the average scores of the experimental group students in the pre- and post-applications of the social field skills scale, as one of the life skills when the skill (communication and building social relationships), in favor of the post-application, and then the validity of the first hypothesis was partially verified.

Third: Cognitive (mental) field skills:

Table (6)

T test results for correlated samples, to indicate the differences between the average scores of the experimental group in the pre- and post-applications of the life skills scale (cognitive-mental field skills)

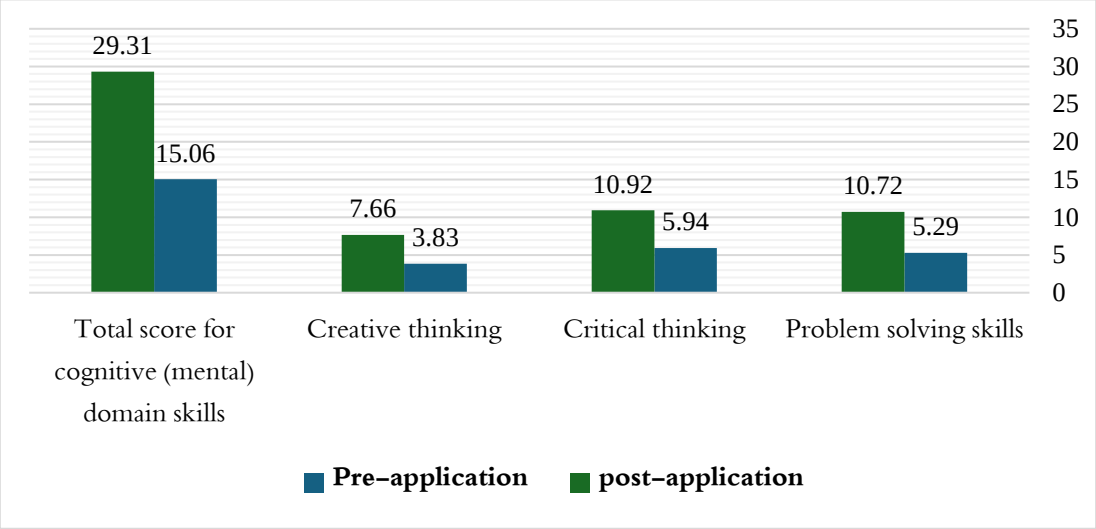
Level of significance	**Degrees of freedom**	**Value (v)**	**Standard deviation**	**Average score**	**Number of female students**	**Application**	**Cognitive (mental) field skills**
0.00* function	64	-18.211	1.271	5.29	65	Tribal	Problem-solving skills
			1.386	10.72		Post	
0.00* function	64	-21.530	1.285	5.94	65	Tribal	Critical thinking
			1.163	10.92		Post	
0.00* function	64	-12.557	1.474	3.83	65	Tribal	Creative thinking
			1.564	7.66		Post	
0.00*	64		3.240	15.06	65	Tribal	

function		-21.124	2.984	29.31		Post	**Total degree of cognitive (mental) field skills**

* A function at the level of (0.05).

Figure (3)

Average scores of the experimental group in the pre- and post-measurements of the life skills scale (cognitive - mental field skills)



Looking at Table 6 and Figure 3, it is clear that:

- The superiority of the scores of the experimental group students in the dimensional application of the cognitive field skills scale (mental), as one of the life skills when the skill (problem solving), where the average scores of the experimental group students in the pre-application (5.29), while the average of their scores, in the post-application (10.72), at the degree of freedom (65), as it turns out that the level of significance (0.00), which is a statistically significant value at the level of significance **(0.05≥), ,** which shows a statistically significant difference at the level **of (0.05≥),** between the average scores of the experimental group students, in the pre- and post-applications of the cognitive field skills scale (mental), as one of the life skills when the skill (problem solving), in favor of the post-application, and then the validity of the first hypothesis was partially verified.

In order to identify the effectiveness of the training program based on the dimensions of professional learning communities, in developing the sub-skills skills of the areas of the life skills scale among the female students of the teachers to whom the training program was applied, the researcher used the Black equation, and the following table (7) illustrates this.

Table (7)

Adjusted earning percentage for all life skills, as well as their overall score

BlackBerry Adjusted Gain Percentage	**Maximum Class**	**Average Dimensional Application Score**	**Average Pre-Application Score**	**Sub-dimensions of the Life Skills Scale**
1.35	9	8.45	4.23	Self-empowerment

1.27	9	8.17	4.18	Time management
1.04	9	7.35	4.02	Health and preventive skills
1.22	27	23.97	12.43	Technology skills
1.25	9	8.26	4.52	**Personal sphere**
1.29	9	8.31	4.34	Communicate and build social relationships
1.25	9	8.08	4.12	Leadership and teamwork skills
1.26	9	8.18	4.31	Belonging and citizenship
1.13	9	7.85	4.42	Environmental Skills
1.24	45	40.68	21.71	**Social sphere**
1.26	12	10.72	5.29	Problem-solving skills
1.24	12	10.92	5.94	Critical thinking
1.17	9	7.66	3.83	Creative thinking
1.23	33	29.3	15.06	**Cognitive (mental) sphere**
1.22	105	93.86	49.94	**Total score for all life skills**

Table 7 shows the following:

First- Personal field skills: It was found that the percentage of adjusted gain for personal field skills represented in (self-empowerment, time management, technology use skills) amounted to (1.35-1.27-1.22), all of which are values greater than the percentage set by Black, which is (1.20), which indicates that the proposed training program has great effectiveness in developing self-empowerment skills, time management, and technology use skills.

It also required answering the second question, testing the second hypothesis, which stated: "There are statistically significant differences at the level of significance ($0.05 \geq \propto$) between the average scores of the experimental group students and the control, in the dimensional application of the life skills scale, in favor of the experimental group." To verify the validity of the hypothesis, **the Independent Samples t-test was used** to clarify the significance of the differences**.**Between the averages of the scores of the students of the experimental and control groups, in the dimensional application of the life skills scale**, the results were as follows:**

First: Personal field skills:

Table (8)

The significance of the differences between the average scores of the experimental group and the control group, in the dimensional application of the life skills scale (personal field skills)

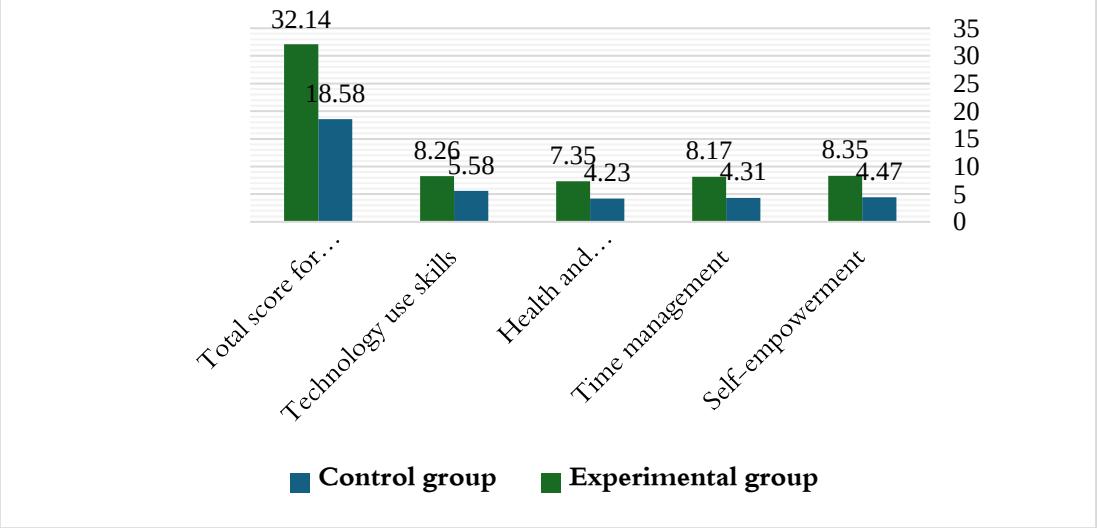
Significance level	**Degree of freedom**	**Value (v)**	**Standard deviation**	**Arithmetic mean**	**Number**	**The Collection**	**Interpersonal Skills**

0.00* function	125	-12.894	2.178	4.47	62	Adjuster	Self-empowerment
			1.052	8.35	65	Experimental	
0.00* function	125	-19.458	1.326	4.31	62	Adjuster	Time management
			0.876	8.17	65	Experimental	
0.00* function	125	-16.210	1.078	4.23	62	Adjuster	Health and preventive skills
			1.096	7.35	65	Experimental	
0.00* function	125	-10.999	1.733	5.58	62	Adjuster	Technology skills
			0.906	8.26	65	Experimental	
0.00* function	125	-20.827	4.727	18.58	62	Adjuster	**Personal sphere**
			2.228	32.14	65	Experimental	

* D at the level of (0.05).

Figure (4)

Averages of the experimental and control group scores in the dimensional application of the life skills scale (personal field skills)



Looking at Table 8 and Figure 4, it is clear that:

- The superiority of the scores of the experimental group students over the control group's scores, in the dimensional application of the life skills scale when the skill (self-empowerment), where the average scores of the control group students in the post-application (4.47), while the average scores of the experimental group were (8.35), at the degree of freedom (125), it is also found that the significance level (0.000), which

is a statistically significant value at the level of significance (0.05≥ ∝), which shows a statistically significant difference at the significance level (0.05≥ ∝) between the average scores of the experimental group students and the control, in the dimensional application of the life skills scale, when the skill (self-empowerment), in favor of the experimental group, and then the validity of the second hypothesis was partially verified.

Second: Skills of the social field:

Table (9)

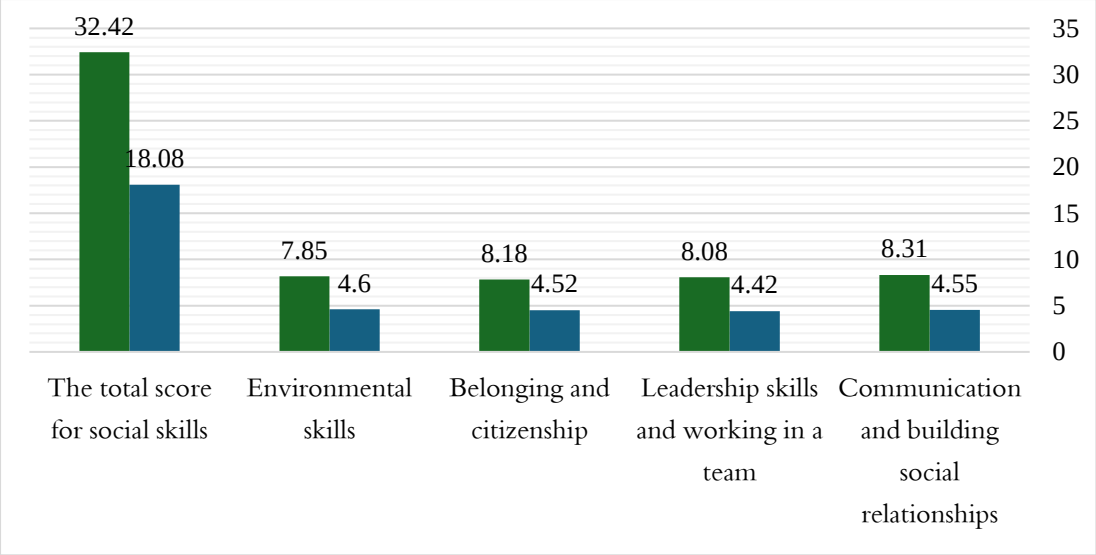
The significance of the differences between the average scores of the experimental group and the control group - in the dimensional application of the life skills scale (social field skills)

Significance level	**Degree of freedom**	**Value (v)**	**Standard deviation**	**Arithmetic mean**	**Number**	**The Collection**	**Social field skills**
0.00* function	125	-16.609	4.55	4.55	62	Adjuster	**Communicate and build social relationships**
			8.31	8.31	65	Experimental	
0.00* function	125	-14.239	4.42	4.42	62	Adjuster	**Leadership and teamwork skills**
			8.08	8.08	65	Experimental	
0.00* function	125	-11.617	4.52	4.52	62	Adjuster	**Belonging and citizenship**
			8.18	8.18	65	Experimental	
0.00* function	125	-12.945	4.60	4.60	62	Adjuster	**Environmental Skills**
			7.85	7.85	65	Experimental	
0.00* function	125	-23.938	18.08	18.08	62	Adjuster	**Social sphere**
			32.42	32.42	65	Experimental	

* D at the level of (0.05).

Figure (5)

Averages of the scores of the experimental group and the control group in the dimensional application of the life skills scale (social field skills)



Looking at Table 9 and Figure 5, it is clear that:

- The superiority of the scores of the experimental group students on the control group's scores, in the dimensional application of the life skills scale when the skill (communication and building social relations), where the average scores of the control group students in the post-application (4.55), while the average scores of the experimental group (8.31), at the degree of freedom (125), it is also shown that the significance level is (0.000), which is a statistically significant value at the level of significance (0.05≥ ∝), which shows that there is a statistically significant difference at the level of significance (0.05≥ ∝), between the average scores of the experimental group students and the control, in the dimensional application of the life skills scale when the skill (communication and building social relations)), in favor of the experimental group, and then the second hypothesis was partially validated.

Third: Cognitive (mental) field skills:

Table (10)

The significance of the differences between the average scores of the experimental group and the control group - in the dimensional application of the life skills scale (cognitive - mental field skills)

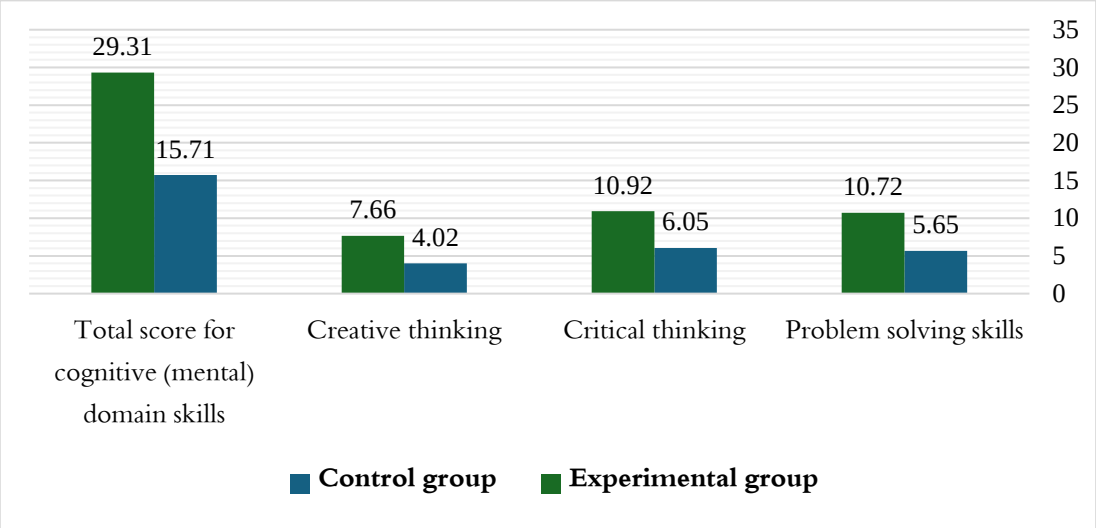
Significance level	Degree of freedom	Value (v)	Standard deviation	Arithmetic mean	Number	The Collection	Cognitive (mental) field skills
0.00* function	125	-16.337	2.065	5.65	62	Adjuster	**Problem-solving skills**
			1.386	10.72	65	Experimental	
0.00* function	125	-18.171	1.806	6.05	62	Adjuster	**Critical thinking**
			1.163	10.92	65	Experimental	
0.00* function	125	-14.834	1.166	4.02	62	Adjuster	**Creative thinking**
			1.564	7.66	65	Experimental	

0.00* function	125	-22.916	3.682	15.71	62	Adjuster	**Cognitive (mental) sphere**
			2.984	29.31	65	Experimental	

* D at the level of (0.05).

Figure (6)

The averages of the experimental and control group scores in the dimensional application of the life skills scale (cognitive - mental field skills)



Looking at Table 10 and Figure 6, it is clear that:

- The superiority of the scores of the experimental group students on the control group's scores, in the dimensional application of the life skills scale at (problem-solving skills), where the average scores of the control group students in the post-application were (5.65), while the average scores of the experimental group were (10.72), at the degree of freedom (125), it is also found that the significance level (0.000), which is a statistically significant value at the level of significance (0.05≥ ∝), which shows that there is a statistically significant difference at the level of significance (0.05≥ ∝), between the average scores of the experimental group students and the control, in the dimensional application of the life skills scale at (problem-solving skills), in favor of the experimental group, and then the validity of the second hypothesis was partially verified.

The research showed that there are statistically significant differences at the level of significance (0.05≥ ∝), between the average scores of the experimental group students, in the pre- and post-applications of the life skills scale, in favor of the post-application, and that the percentage of adjusted gain for some life skills among female students, It came greater than the value set by Black, which is (1.20), and some are greater than (1.00) and less than (1.20), which shows the effectiveness ranging from medium to large, to use the training program based on the dimensions of professional learning communities, in the development of life skills, among female students teachers who applied the training program, and the research indicated that there are statistically significant differences at the level of significance (0.05≥∝), between the average scores of the experimental and control group students., in the pre- and post-applications of the Life Skills Scale, for the benefit of the experimental group. This finding is consistent with many previous studies (including Abu al-Hamael, 2013; Klopp, 2013). And the study of Abdul Majeed and Sawadi (2019), which finds that there are statistically significant differences between the averages of the scores of the control and experimental groups, in the life skills scale and its aspects in the dimensional application, for the benefit of the experimental group, as well as agreed with the study of Bassiouni et al. (2021), which reached the effectiveness of the training program for mathematics teachers at the primary stage, on the development

of life skills among their students, and the study of Matar (2020) to study the effectiveness of a proposed training program in realistic assessment, todevelop the skills of measuring learning outcomes, The teachers of the basic stage and the life skills of their students, and the study of Al-Sufyani and Al-Dhubyani (2021), which found a positive impact of using enrichment activities based on the STEM approach, on the development of scientific concepts and life skills. The results of the research also agreedwith the study of Al-Banna (2021), which linked the development of the curriculum according to the requirements of the knowledge economy andits impact on the development of life skills, and the study of Saeed Hassan (2021), which used a program based on the theory of multiple intelligences to develop achievement, life skills and attitude towards matter, and the study of Al-Jubeir and Al-Fayez (2021), which used an enrichment program based on constructivist theory and its effectiveness in developing life skills, and the current research also agreed with the study of Al-Muwajda (2023) in the result of skills at the macro level, He differed with her in the results of the sub-skills, as their results showed statistically significant differences at the macro level, and in all sub-skills, and the current research differed from previous studies in its objectives and field, where it studied the effectiveness of a training program based on learning communities in developing the competencies of the knowledge economy for teachers and life skills for their students.

The researcher explains this result for the following reasons:

- Professional learning communities were implemented during the program at the level of trainees as team members, developing and establishing a theoretical plan based on the field reality and its problems for teachers, discussing their colleagues in the executive plans, participating in setting goals, vision and mission, and then transferring the experience to their schools, which led to clarity of the picture in front of the trainees, and benefiting from the experiences of all members of the group.

- The use of the training program based on the dimensions of professional learning communities, leads to positive participation, and motivates teachers to exert more effort, thus increasing the level of creativity and functional innovation, and the use of the training program based on the dimensions of professional learning communities is one of the most important incentives to participate in the educational environment, and can easily monitor the progress of students, And to know the extent to which they understand and absorb the skills they learn.

- The program provides students with active and real participation in the educational process, due to the link to reality, and the acquisition of skill through educational situations in which the student becomes an active party, and what the student learns is more like a real experience, which will remain in her memory for longer periods, in addition to that the use of this program leads to an increase in the level of their information about the facts, and about the relationships between events and life situations that It also helps in the formation of a creative thinking skill, leading students to new discoveries and methods.

The results showed that the training program based on the dimensions of professional learning communities has a moderate effectiveness for some life skills for female students, represented in the development of health and preventive skills in the personal field, environmental skills in the social field, and the development of creative thinking skills in the cognitive mental field, where this result can be attributed to the following:

- With regard to health and preventive skills in the personal sphere, which includes indicators such as the keenness to perform sports and eat a variety of healthy food, the decline in their skills coincides with the decline in the environment and health in the area of the social competencies of female teachers, and this correlation is an indicator of the lack of interest in healthy food and its diversity, as is also evident in school canteens, The food they provide is unhealthy, as well as the lack of exercise in schools due to the lack of adequate equipment.

- With regard to the result of environmental skills in the social field, it may be attributed to the lack of practical application of what is being studied theoretically, which leads to a weak link between what the student learns in the curriculum, especially the science curriculum, and its application in daily life, such as paying attention to planting and caring for plants, as well as rationalizing water and energy consumption

at this age stage, and this result differs with the study of Al-Muwajda (2023), where the skills of dealing with the environment were high.

- With regard to creative thinking skills, the low results in his skills in relation to the results related to problem-solving and critical thinking skills may be attributed to the fact that problem-solving and critical thinking skills in the science curriculum are among the skills that learners train on during classes, due to their suitability to the nature of the scientific content in the science curriculum, while creative thinking skills need more time and follow-up, The results of the research agreed with the study of Gul (2022), who showed that the skill of creative thinking is one of the finest human activities, and it is a skill that has no limits, and needs further development and development.

Search results.

The research reached the following results:

- The research showed that there are statistically significant differences at the level of significance ($0.05 \geq \propto$), between the average scores of the experimental group students, in the pre- and post-applications of the life skills scale, in favor of the post-application.

- The research indicated that there are statistically significant differences, at the level of significance ($0.05 \geq \propto$), between the average scores of the experimental and control group students, in the dimensional application of the life skills scale, in favor of the experimental group.

- The research showed that the percentage of adjusted gain for some life skills among female students was greater than the value set by Black, which is (1.20), and some of them are greater than (1.00) and less than (1.20), which shows the effectiveness ranging from medium to large, to use the training program based on the dimensions of professional learning communities, in the development of life skills, among female teacher students to whom the training program was applied.

Research recommendations

In light of its findings, the research recommends:

- Focus on teaching models and strategies that make the learner an active reflective thinker, and allow him to participate freely during the educational process.

- Training teachers in the primary and other stages to develop the life skills of learners, and activating community partnership programs with community institutions.

- Providing a rich classroom environment that supports the educational process by providing the necessary tools, materials and devices to conduct practical experiments and use modern technologies in education.

Research Proposals

In light of the current research findings, the following future studies may be proposed:

- Conducting a similar study to examine the impact of using the training program based on the dimensions of professional learning communities in the educational process, on other dependent variables, such as attitudes, values, motivation for achievement, survival of the impact of learning, and investigating its results in other educational stages.

- Conducting surveys on the obstacles that prevent the use of the training program based on the dimensions of professional learning communities in the educational process to identify these obstacles and try to .develop appropriate solutions to them

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