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Developing the enlightening cognitive dimension mixed with academic ability in the philosophy subject among general school students

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Abstract

This research aimed to develop the enlightening cognitive dimension mixed with the academic ability through an electronic program based on philosophical enlightenment. This program was prepared in a way that is based on philosophical enlightenment, as the program's construction depends on the philosophers of the Enlightenment era and their most important enlightening views. The researcher chose seven philosophers, each philosopher representing his era and enlightening ideas. The researcher took into account the diversity of the philosophical aspects of these philosophers. The program included the following aspects: the rational aspect represented by (Spinoza - Socrates - Descartes - Al-Ghazali), the ideal aspect represented by (Hegel), the social aspect represented by (Rousseau), and the experimental aspect represented by (John Locke). The study also focused on identifying the most important dimensions of academic ability that must be developed among first-year general school students. The study adopted the experimental approach and the study community consisted of (65) male and female students for the control and experimental groups from the students of Jalal Khader General School in the Sadat Education Administration in Menoufia Governorate. The research tools were represented in two tools (the academic ability test mixed with the philosophical vision - the academic ability observation card mixed with the philosophical vision). The research results showed the effectiveness of the electronic program based on philosophical enlightenment in developing academic ability mixed with philosophical vision.

Keywords: *Philosophical enlightenment - academic ability - cognitive dimension*

Introduction

Philosophy is a modern necessity and an educational intellectual method in light of the scientific and technological revolutions that we are experiencing in the current era to avoid the abundance and spread of wrong perceptions of matters and intellectual fallacies that are necessitated by current events, because the cultural and civilizational arena is like an empty field, these ideas, terms, and intellectual and cultural issues are among the things that concern the future of the individual and society and urge us to point them out and work to remove the ambiguity and falsehood that taints them. Philosophy is a subject of using the mind, research, investigation and analysis that leads man to his intellectual awakening to deal with facts according to his ideas and beliefs on a sound intellectual and educational basis. It directs him towards using the mind in a scientific and educational manner because the truth is perceived by more than one mind, regardless of its degree of intelligence, and it makes him independent in his way of thinking and opens up ways for him to obtain appropriate solutions. The term "Enlightenment" refers to the eighteenth century in European philosophy, which resulted from a historical cultural movement that defended rationalism and its

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principles as a means of establishing a system of knowledge, values, and ethics.

The thinkers of the eighteenth century pointed out that traditional religiosity had become an obstacle in the way of progress and creativity. Therefore, the conflict between the clergy and the Enlightenment was not limited to religious beliefs and their interpretation only, but rather to the essence and content of phenomena and issues. Therefore, the philosophers of the Enlightenment did not try to fight religion, but rather to re-establish it in a more profound way. Here, the Age of Enlightenment is the age of scientific and philosophical renaissance (Hesham Saleh: 2005, 149).

Therefore, the Age of Enlightenment is not a product of the moment, but rather the result of conflicts that lasted between philosophers and thinkers in pursuit of an intellectual renaissance that would lead to the enlightenment of society. It is an intellectual, social, and philosophical movement that dominated Europe during the eighteenth century, from which emerged the (Age of Enlightenment), known as the "Human Renaissance Movement."

Kant (1724-1804), one of the most famous thinkers of the Enlightenment, says: "Man's attainment of enlightenment is his emergence from the deficiency for which he is responsible, which means his inability to use his reason without the guidance of others. And man himself is responsible for this state of deficiency when the reason for that is not a deficiency in reason but a deficiency in the firmness and courage to use it without the guidance of others (Kant/ T. Mahmoud Bin Jama'a: 2005, 85).

Thus, the philosophy of Enlightenment emphasized the value of reason and enlightenment, rejecting all assumptions and all that was traditional theology attributed to divine providence, as natural reason is sufficient to lead us to knowledge. Hence, the distinctive feature of the Enlightenment philosophy was the rational character that makes the individual capable of analysis, criticism, and avoiding submission to everything that is hostile to him, and makes the person believe in continuous and comprehensive progress, and gives the person optimism, confidence, and the full possibility of achieving his own happiness (Abdul Latif Al-Sheikh Tawfiq: 2005, 6-8).

Hence, it can be said that Enlightenment is close to thinking and philosophy, including its methods and approaches to understanding, innovation and renewal, because the victory of Enlightenment over superstitions and dependency led to the emergence of freedom, science and reason, and Enlightenment became a term used to refer to the intellectual and social movements that prevailed in Europe in the Age of Enlightenment to break away from the authority of the Church.

So, to enable general school students to reach the highest level of philosophical enlightenment followed by the mental enlightenment required for the student's mentality. Therefore, the current research seeks to prepare a program based on philosophical enlightenment for general school students, because philosophy is one of the curricula that contributes effectively to achieving enlightenment in all its forms; and in view of the importance of the Enlightenment era and the most important enlightenment ideas that influenced its era and other eras. Academic ability mixed with philosophical vision can contribute to achieve the level of philosophical enlightenment that the current research seeks to achieve among general school students.

Academic ability is a fundamental and main axis in the social learning theory and is related to the individual, his beliefs, self-efficacy, motivation and personal achievements because the individual behaves and performs tasks based on his belief in the abilities he has by exerting his utmost effort to accomplish and achieve success (F. Pajares; 2005: 451). After reviewing the literature and sources that dealt with academic ability and analyzing them, then determining the dimensions of academic ability to include:

- The cognitive dimension, which includes skills (generality of academic ability - strength of competence and perseverance in education - academic context - self-evaluation - knowledge and understanding)
- The skill dimension includes skills (academic achievement - organization and time management - communication skills and effective communication - research skills)
- The emotional dimension includes skills (confidence in the ability to achieve - self-regulation of education - social and emotional flexibility - behavioral ability - social skills)

It is important to develop and enhance academic ability and academic achievement in the individual's life, especially during adolescence, during which many mental and physiological changes occur, which play a role in developing and shaping the individual's mentality, mental level, and academic ability. The role of the family appears through economic, social and moral resources, which in turn affect the students' experiences and the level of their academic abilities. The family has a direct impact on its

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method and strategies that motivate its children to develop their performance and raise their efficiency, and thus it is reflected on the individual by preparing positive individuals in the academic and social fields (Shunk & Meece: 2005: 79-82).

Since philosophy is concerned with presenting topics that are characterized by arousing the student's passion for research and investigation, topics that require different viewpoints and complex mental analyses that benefit the student in his ease of dealing with reality and its various events through thinking and using the mind, thinking is a tool for employing philosophy, as it is a natural function of man because he is not affected by material factors. therefore, thinking and philosophy are proportional in their degree of approach and presentation of the problem and its solution, and are not separate from the individual's experience and its integration with reality to produce a creative product. In turn, they progress with the individual in his mental level from the lowest to the highest according to the degree of complexity and abstraction in the tasks required of him (Mr. Breik: 2014, 20).

Philosophy is a set of opinions and viewpoints resulting from the ideas and opinions of philosophers and thinkers who played the greatest role in the development and continuation of philosophy. (Some do not have their own vision) It constitutes an integrated system of concepts, ideas, theories, laws and judgments. Hence, it can be said that vision is the point of view or the way in which an individual sees the phenomena and issues that he is exposed to. Naturally, vision is related to the nature of the individual and what he acquires of ideas, feelings, ambitions, customs, traditions and values during his life. It differs according to the individual's environment, upbringing and the way in which he sees and analyzes things, and in turn affects the nature of his thinking, decisions and opinions (Nasr al-Din bin Saray: 2015, 30-31).

The philosophical vision is not limited to adopting the opinions of philosophers and thinkers, but our ideas and way of thinking can be consistent and we can derive ideas and opinions that rise to the level of the philosophical vision and are linked to society and are characterized by rationality and logic sufficient to express the nature of the individual and his life. If the philosophical vision is the product of the effort and struggle of philosophers and thinkers, then the individual's life, experiences, feelings, ambitions, aspirations, and perceptions within society play an effective role in establishing, building, and developing the individual's philosophical vision.

Based on the above, the main question of the research was determined as: "How can we develop academic ability mixed with philosophical vision through an electronic program based on philosophical enlightenment?" Hence the title of the current research (Developing academic ability mixed with philosophical vision in light of an electronic program based on philosophical enlightenment among general school students).

The research problem

The research problem came in light of the researcher's exposure to many previous studies and research that dealt with the development of academic ability. The researcher conducted a survey study at Al-Khattaba General School affiliated with the Sadat Education Administration in Menoufia Governorate, by attending for four consecutive days in order to determine the extent of the availability of academic ability dimensions among first-year general school students. The sample consisted of (40)male and female first general grade students. The researcher depended on the study of (Asmaa Shaloush, 2020), the study of (Al-Jawhara Muhammad Nasser, 2020), and the study of (Yahya Abdel Khaleq, 2020 ; Kamel, M. 2024). This confirms the existence of a weakness in the level of first general grade students in the academic ability aspects. So, philosophical enlightenment is considered necessary to achieve the level of academic ability required for general school students.

The Research Questions

The problem of the current research was identified in the following main question:

How can we develop the enlightening cognitive dimension associated with academic ability through a program based on philosophical enlightenment among high school students?

The following sub-questions branch out from it:

1) What are the most important aspects of academic ability that should be developed among general school students?
2) What are the most important aspects of philosophical enlightenment that can be relied upon in building the proposed program?
3) What is the proposed vision for a program based on philosophical enlightenment to develop academic ability mixed with a philosophical vision?
4) What is the effectiveness of the proposed program in developing academic ability mixed with philosophical vision among general school students?

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5) What is the correlation between the aspects of academic ability in the post-application of the experimental group?

The Research Hypotheses:

1) There is no statistically significant difference at a significance level (≤ 0.05) between the average scores of the students in the control group and the experimental group in the pre- and post-tests of the academic ability test mixed with the philosophical vision.
2) There is no statistically significant difference at the level (0.05≥α) between the average scores of the experimental group students in the pre- and post-application of the academic ability test in the total score and in its components.
3) There is no statistically significant difference at the level (0.05≥α) between the average scores of the experimental group students in the pre- and post-application of the academic ability observation card in the total score and in its components.
4) There is no statistically significant difference at a significance level of (0.05≥ α) between the average scores of the experimental group students in the repeated measurements (first measurement, second measurement, third measurement) in the academic ability observation card in the total score.
5) There is no statistically significant correlation at a significance level of (0.05≥ α) between the scores of the experimental group students in the academic ability test and their scores in the academic ability observation card in the post-application.

The Research Methodology

The current research will use both methods:

- **The descriptive approach**: To review the educational literature and analyze previous research and studies to write the theoretical framework and interpret the results, and clarify the position of the current research on previous studies and the extent of agreement or disagreement with them.
- **Experimental approach**: Based on the quasi-experimental design with two groups, control and experimental (pre-post) to measure the effect of the independent variable (the electronic program based on philosophical enlightenment) on the dependent variable (developing academic ability mixed with philosophical vision among general school students).

The main research group was selected from (65) male and female students who were selected from Jalal Khader General School and were divided into two groups:

- **The control group**: It consisted of (35) male and female students other than the exploratory research sample, from the students of Jalal Khader General School in class (1/4) who studied using the traditional method.
- **The experimental group**: consisted of (30) male and female students from Jalal Khader General School in the (1/3) semester who studied the content of the proposed electronic program.

Since developing academic ability is the main goal of the proposed electronic program based on philosophical enlightenment, the researcher prepared research tools to be used in demonstrating the effectiveness of the electronic program, represented in:

- **First: Academic Ability Test** "Situational Test" Academic Ability Test "Situational Test" to be used in demonstrating the effectiveness of the proposed electronic program. The test was prepared according to the following steps:
  - **A- Determining the objective of the test**: This test aims to measure the extent of development of academic ability skills among first-year general school students after studying a proposed program based on philosophical enlightenment.
  - **B- Determining the dimensions of the test**: In light of the dimensions of academic ability that were prepared in advance and which included three main dimensions, each dimension has appropriate sub-skills branching out from it, which are: the cognitive dimension, which includes the skills (generality of academic ability - strength of competence and perseverance in education - academic context - self-evaluation - knowledge and understanding). The skill dimension includes the skills (academic achievement - organization and time management - communication skills and effective communication - research skills), and the emotional dimension includes the skills (confidence in the ability to achieve - self-regulation of education - social and emotional flexibility - behavioral ability - social skills).

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C- **Formulating test situations**: The researcher prepared a set of situations revolving around the previous fourteen skills, each situation includes four responses, one of which expresses academic ability skills.

D- **Presenting the test to the judges**: The researcher presented the test to the judges to ensure the validity of the test as a tool for measuring academic ability skills.

E- **Description of the Academic Ability Skills Test**: The test contained (42) situations, three situations for each skill, distributed as follows:

Table (1) shows the test situations and their distribution across the dimensions of academic ability.

N	Dimensions of Academic ability	Number of skills	situations distribution
1	Cognitive dimension	Five skills	2-3-9-10-11-12-13-16-26-28-30-35-38-41
2	Skill dimension	Four skills	1-4-8-17-19-21-25-27-29-32-33-34
3	Emotional dimension	Five skills	20-22-23-24-31-5-7-14-15-18-36-37-39-40-42

Test piloting: The researcher applied the academic ability test mixed with the initial philosophical vision to a pilot group of (30) male and female students in the first general grade at Jalal Khader General School for Boys and Girls, where the test was applied in the academic year 2024/2025.

This is after using the scores obtained by the researcher from applying the test to calculate each of the following:

- Test stability coefficient.
- Ease and discrimination coefficients for each of the test items.
- Determining the test time.

Test Reliability: It means that the test gives the same or similar results if it is applied again under the same conditions and on the same sample. The researcher used the test-retest method, and to calculate the test reliability, Pearson's correlation equation was applied to the scores obtained by the researcher by applying the academic ability test twice in a row and with a time interval of (12) days on the exploratory group. Table (2) shows this:

Table(2)Results of the reliability coefficients for the academic ability test

Levels	Reliability Coefficient
- Cognitive dimension	0.872
- Skill dimension	0.834
- Emotional dimension	0.891
-Total score of the academic ability test:	0.907

From the table it is clear that the values of the reliability coefficients are suitable for testing academic ability, and indicate a good degree of reliability of the test and its validity for application.

Calculating the ease and difficulty coefficients and discrimination coefficients for the test items:-

The ease and difficulty coefficients and discrimination coefficients of the test items were calculated through the pilot experiment as well, with the aim of eliminating the test items whose difficulty coefficient is less than (0.20) and greater than (0.80). The ease coefficient was calculated through the equation

- **The ease coefficient of the question = the number of correct answers ÷ the number of correct and incorrect answers**

Table (3) Ease, difficulty and discrimination coefficients for the academic ability test items

N	Ease factor	Difficulty factor	Discrimination Coefficient	N	Ease factor	Difficulty factor	Discrimination Coefficient
1	0.76	0.24	0.182	22	0.48	0.52	0.250
2	0.68	0.32	0.218	23	0.28	0.72	0.202
3	0.40	0.60	0.240	24	0.56	0.44	0.246
4	0.48	0.52	0.250	25	0.56	0.44	0.246
5	0.40	0.60	0.240	26	0.40	0.60	0.240
6	0.52	0.48	0.249	27	0.64	0.36	0.230
7	0.56	0.44	0.246	28	0.24	0.76	0.182
8	0.48	0.52	0.250	29	0.56	0.44	0.246
9	0.64	0.36	0.230	30	0.48	0.52	0.249
10	0.72	0.28	0.202	31	0.32	0.68	0.217
11	0.48	0.52	0.250	32	0.60	0.40	0.240
12	0.56	0.44	0.246	33	0.60	0.40	0.240
13	0.28	0.72	0.202	34	0.36	0.64	0.230

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14	0.52	0.48	0.249	35	0.48	0.52	0.250
15	0.56	0.44	0.246	36	0.40	0.60	0.240
16	0.56	0.44	0.246	37	0.60	0.40	0.240
17	0.48	0.52	0.249	38	0.36	0.64	0.230
18	0.68	0.32	0.218	39	0.56	0.44	0.246
19	0.28	0.72	0.202	40	0.60	0.40	0.240
20	0.80	0.20	0.160	41	0.52	0.48	0.249
21	0.24	0.76	0.182	42	0.24	0.76	0.182

The ease factors for all test items ranged between (0.24 -0.80), the average ease coefficients for the test was (0.48) and the difficulty coefficients for the test items ranged between (0.20-0.76) where the average difficulty coefficients for the test was (0.52), which are acceptable values to keep the test items unchanged. The discrimination coefficient was calculated by finding the product of the ease coefficient × the difficulty coefficient.

The previous table showed that the academic ability test items have a discrimination value ranging between (0.160-0.250), with an average value of (0.231), which are acceptable values through which the test can be used as a tool to measure academic ability.

- **Determining the test time**

The test time was estimated by calculating the time each student took to answer the test questions, then calculating the average time taken by all students over the total number of students in the survey group. The researcher found that the appropriate time to answer the test questions in their final form is (40) minutes.

Second: The academic ability observation card combined with the philosophical vision. The card aimed to observe and measure the academic ability combined with the philosophical vision among first-year secondary school students through the following procedures:

A) Determining the dimensions of the card: The dimensions of the card were determined by reviewing the literature, research and previous studies that dealt with the philosophical vision and determining these dimensions as areas for evaluation, taking into account placing observable behaviors in front of each dimension of the card.

Second: The academic ability observation card mixed with the philosophical vision. The card aimed to observe and measure the academic ability combined with the philosophical vision among first-year secondary school students through the following procedures:

A- Determining the dimensions of the card: The dimensions of the card were determined by reviewing the literature, research and previous studies that dealt with the philosophical vision and determining these dimensions as areas for evaluation, taking into account placing observable behaviors in front of each dimension of the card.

B- Formulating the card phrases: The card phrases were formulated in the form of a report, numbering (40) phrases, and the observing teacher must determine the degree of their availability in the student on a scale (high - medium - low) and place a mark in front of the phrase to determine the choice he deems appropriate.

C- Card correction method: The statements are given grades (3-2-1) in return for the responses (high - medium - low) in order, so the maximum grade is (140 points) and the minimum grade is (40 points).

D- Card adjustment: The availability of the card's validity and reliability indicators was verified as follows:

Validity of the Academic Ability Observation Card combined with the Philosophical Vision:

Validity of the card refers to its ability to measure what it was designed to measure, and there are several main methods to ensure validity by using apparent validity through presentation to arbitrators, and the current study represented the following methods:

Apparent validity (arbitrators' validity):

The scale was presented in its initial form (Appendix 6) to a group of (17) arbitrators from the faculty members (Appendix 1) - to express their opinions and observations on the paragraphs of the card, in terms of the appropriateness and clarity of the paragraph, and the extent to which each paragraph belongs to the dimension to which the paragraph belongs, and to suggest ways to improve it by adding, rephrasing, deleting, or otherwise, as they see fit.

The Research results:

To test the validity of the first hypothesis, which states: There is no statistically significant difference at the level ($0.05 \geq \alpha$) between the average scores of students in the experimental and control groups in the post-application of the academic ability test in the total score and in the dimensions that comprise it.

To verify the validity of this hypothesis, the researcher used the "t" test and the "t" test for independent samples (Independent Samples Test) was used to reveal the significance of the difference between the averages (using

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the Spss.V23 program) and this is explained through the following table:-

Table (4): Means, standard deviations and "t" values for the scores of the experimental and control group students in the post-application of the academic ability test

To test academic ability	Measurements	Number of students	Total score	Arithmetic mean	Standard deviation	Degrees of freedom	"T" value	Significance level
The Cognitive dimension	Experimental	30	15	13.	.92	58	35,9	Function at significance level (0.01)
	Control	30		4.9	.94			
The skill dimension	Experimental	30	12	10.8	.87		23.1	Function at significance level (0.01)
	Control	30		4.3	1.2			
The emotional dimension	Experimental	30	15	13.70	.95		29.4	Function at significance level (0.01)(
	Control	30		5.30	1.2			
Total score for the test	Experimental	30	42	38.16	2.1		39.1	Function at significance level (0.01)
	Control	**30**		**14.56**	**2.5**			

Significant differences at the level (0.01)

It is clear from Table (5) that there are statistically significant differences in the results of the experimental and control groups in the post-measurement of the academic ability test in favor of the students of the experimental group, as the value of t for the total score of the test reached (39.188) and its statistical significance was (0.000). This is a value less than the significance level specified in the study (0.01), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed the students of the control group in the post-application of the ability test compared to the students of the control group. The arithmetic mean value of the experimental group's scores in the post-application was (42/38.16) compared to the pre-application (42/14.56). In favor of the experimental group.

As is clear from the previous table, there are statistically significant differences between the results of the experimental and control groups in the post-application of the academic ability test in the cognitive dimension, as the value of t in the cognitive dimension reached (35.99) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed the students of the post-application in comparison to the students of the control group in the cognitive dimension.

As is clear from the previous table, there are statistically significant differences between the results of the experimental and control groups in the post-application of the academic ability test in the skill dimension, as the value of t in the skill dimension reached (23.109) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed the students of the control group in the post-application in the skill dimension.

As is clear from the previous table, there are statistically significant differences between the results of the experimental and control groups in the post-application of the academic ability test in the cognitive dimension, as the value of t in the emotional dimension reached (29.487) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed in the post-application in the emotional dimension.

The difference between the average scores of the experimental group students compared to the control group students in the post-application of the academic ability test in the total score and in the sub-dimensions can be explained through the following graph in Figure (5):

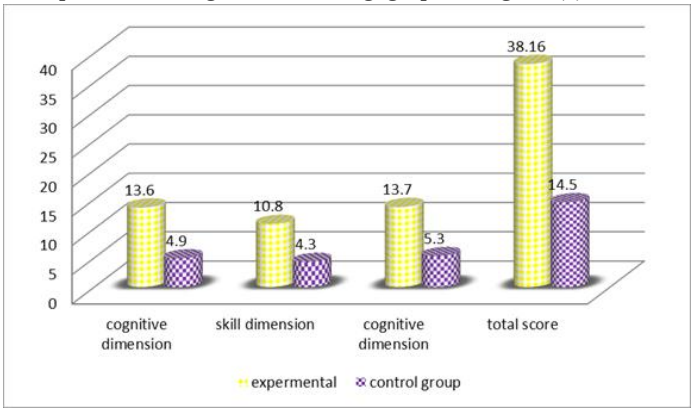

Figure (5): Graphical representation of the average scores of students in the experimental and control groups in the post-application of the academic ability test.

The size of the effect and its significance in the academic ability test

It is clear from the above that there are differences between the average scores of the students of the

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experimental and control research groups, but this does not indicate the size of the effect of using the proposed program in developing academic ability combined with a philosophical vision among secondary school students. Therefore, the size of the effect was calculated (using the SPSS.v21 program) by entering the scores of the students of the two research groups in the post-application of the academic ability test and calculating the size of the effect "η2" and the results were as follows:

Table (5): Effect size and significance in the academic ability test.

For the academic ability test	""η value	""η2 value	""η2 Significance
Cognitive dimension	.978	.957	**Large effect size**
Skill dimension	.950	.902	**Large effect size**
Cognitive dimension	.968	.937	
Total test score	.982	.964	**Large effect size**

From the previous table, it is clear that using the proposed program in developing academic ability mixed with the philosophical vision has a large impact on geographical cognitive flexibility in the overall test score and in each of the sub-dimensions, and that the difference between the two groups is a real difference and that it is a result of using the proposed program without other factors. This interpretation is based on what was mentioned by (Yahya Hayati Nassar, 2006, 54) in the significance of the impact size degrees as follows:

1- If the value of η^2 = 0.01 to less than 0.06, the effect size is small, and therefore in this case the experiment or survey should be repeated to confirm whether there is an effect or whether the result is of practical significance.
2- If the value of η^2 = 0.06 to less than 0.14, the effect size is medium, which indicates that the experiment or survey will produce results of practical significance.
3- If the value of η^2 = 0.14 or more, the effect size is large, as the results are of practical significance and importance.

It is clear from the previous table that the value of Eta square for the results of the experimental and control groups in the post-application scores of the academic ability test = 0.96, and this result exceeded the value indicating the educational importance of statistical results in psychological and educational research, which is (0.14), meaning that there is a large, strong and educationally important effect size for applying the proposed program in developing academic ability mixed with a philosophical vision among General School Students.

To test the validity of the second hypothesis of the research hypotheses, which states: There is no statistically significant difference at the level (0.05≥α) between the average scores of the students of the experimental group in the pre- and post-application of the academic ability test in the total score and in the dimensions that comprise it.

To verify the validity of this hypothesis, the researcher used the paired-Samples T Test to detect the significance of the difference between the means (using the Spss.V23 program). The effect size was also calculated (using Cohen's equation) Cohen's d = M1 - M2 / σpooled where σpooled

d = 0.20 indicates a small effect; (d = 0.20)
d = 0.50 indicates a medium effect; (d = 0.50)
d = 0.80 indicates a large effect; (d = 0.80).

This is explained by the following table:

Table (7): Means, standard deviations and "t" values for the scores of the experimental group students in the pre- and post-application of the academic ability test.

To test academ	Measur	N	Total	M	SD	DF	"t"	Sig	Effect	Significance of
Cognitive dimension	Pre	30	15	4.93	1.014	29	34,82	Function at significance level (0.01(	6.36	Large effect size
	Post	30		13.63	.927					
Skill dimension	Pre	30	12	4.53	1.27		20.23	Function at significance level (0.01(	35,3	Large effect size
	Post	30		10.83	.874					
Emotional dimension	Pre	30	15	5.43	1.430		26.94	Function at significance level (0.01(	4,91	Large effect size
	Post	30		13.70	.952					
Total score for the test	Pre	30	42	14.90	2.630		35.39	Function at significance level (0.01(	6.46	Large effect size
	Post	30		38.16	2.134					

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Significant differences at the level (0.01)

It is clear from Table (7) that there are statistically significant differences in the results of the post-measurement of the academic ability test among the students of the experimental group, as the value of t for the total score of the test reached (35.39) and its statistical significance was (0.000), which is a value less than the significance level specified in the study (0.01). Which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed in the post-application of the ability test, and the arithmetic mean value of the experimental group's scores in the post-application was (42/38.16) compared to the pre-application (42/14.9). In favor of the post-application.

As is clear from the previous table, there are statistically significant differences between the results of the pre- and post-tests of the academic ability test in the cognitive dimension, as the value of t in the cognitive dimension reached (34.82) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed in the post-application in the cognitive dimension.

As is clear from the previous table, there are statistically significant differences between the results of the pre- and post-measurements of the academic ability test in the skill dimension, as the value of t in the skill dimension reached (20.23) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group excelled in the post-application in the skill dimension.

As is clear from the previous table, there are statistically significant differences between the results of the pre- and post-measurements of the academic ability test in the cognitive dimension, as the value of t in the emotional dimension reached (26.94) and its statistical significance was (0.000), which means that it is significant at the significance level (0.01), and thus the students of the experimental group outperformed in the post-application in the emotional dimension.

The difference between the average scores of the experimental group students in the pre-post application of the academic ability test in the total score and in the sub-dimensions can be explained through the following graph in Figure (6):

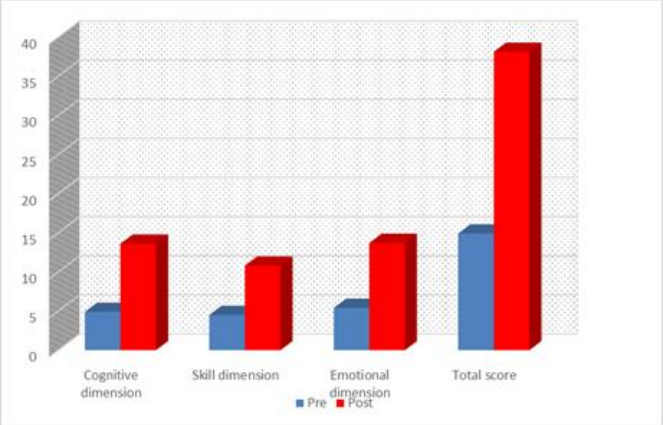

Figure (6): Graphical representation of the average scores of the experimental group students in the two applications (pre- and post-) of the academic ability test and in the sub-dimensions of academic ability.

As shown in Table (7), the value of (effect size) for the results of the experimental group in the pre- and post-application scores of the academic ability test in the sub-dimensions of academic ability. The effect size in the cognitive dimension reached (6.36), the effect size in the skill dimension reached (33.5), the effect size in the emotional dimension reached (4.91), and the effect size in the total score of the test reached (6.46). This result exceeded the value indicating the educational importance of statistical results in psychological and educational research and its amount (0.5), meaning that there is a large effect size for using the proposed program in developing academic ability mixed with a philosophical vision among general school students.

The effectiveness of the proposed program in developing academic ability mixed with philosophical vision among general school students.

To measure the effectiveness of the proposed program in developing academic ability mixed with philosophical vision among general school students, Black's gain equation was used to compare the average scores of the experimental group students in the pre- and post-applications of the academic ability test in the sub-dimensions of academic ability, according to the following equation:

Ratio Modified Gain= $\frac{X-Y}{Z} + \frac{X-Y}{Z-Y}$

X: Average of students' scores in the post-test.

Y: Average of students' scores in the pre-test.

Z: Maximum value of the score.

Black indicates that the independent variable has an effect on the dependent variable when the ratio of the gain

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rate falls within the range of (1-2) for effectiveness (Ezzat Abdel Hamid, 2011, 297).

The following table shows the effectiveness of using the proposed program in developing academic ability mixed with philosophical vision among general school students.

Table (8): Calculating the effectiveness of using the proposed program in developing academic ability combined with philosophical vision among students in the experimental group using the modified gain equation (for Black).

To test the academic	Groups	Total	Average pre-	Average post-applicat	Modified Gain	Effectiveness
Cognitive dimension	Experimental	15	4.93	13.63	1,44	There is effectiveness
Skill dimension	Experimental	12	4.53	10.83	1.36	There is effectiveness
Emotional dimension	Experimental	15	5.43	13.70	1.41	There is effectiveness
Total score	Experimental	42	14.90	38.16	1.40	There is effectiveness

The previous table shows the effectiveness of using the proposed program in developing academic ability mixed with philosophical vision among general school students in the overall score and in the sub-dimensions.

Discussion and interpretation of the results:

The previous results indicate the effectiveness of the electronic program based on philosophical enlightenment in developing the academic ability mixed with the philosophical vision of first-year general school students, which indicates the positive effect of the proposed program based on philosophical enlightenment in increasing students' motivation and stimulating their ability to learn philosophy on the experimental group students, unlike the control group students who studied in the usual way. From the above, we conclude the following: -

- Using the electronic program based on philosophical enlightenment contributed to transforming the student's role from a recipient of knowledge to research, obtaining information, and presenting it in their own style and philosophical vision, and building their own cognitive aspect, which led to making the student an effective element that creates knowledge in themselves.
- The videos, images and articles used in the proposed program have been carefully and precisely selected to be easy and simple, which is appropriate for the level of students, as well as to be interesting and motivate students to learn philosophy, as well as to make the educational process easy and simple.
- The relationship between academic ability skills mixed with the philosophical vision acquired from teaching the electronic program based on philosophical enlightenment, such as research and exploration of information, discussion and presentation of results, led to students acquiring the desire to learn, love the educational material, and their tendency to apply academic ability skills in their daily lives to overcome the problems they face.

Procedures for implementing the field study in the research:

Several steps were followed in implementing the field study experiment, which were as follows

1- Determining the experimental design for the research:

The experimental design was used with two groups (control and experimental) with pre- and post-measurement. The researcher performed the following:

- Randomly selecting the research sample.
- Dividing it into two groups: a control and an experimental group.
- Pre-administering the research instrument (academic ability test) to both groups.
- Applying the observation card to the experimental group (Philosophical Vision Observation Card) at the beginning of the application (first iteration.(
- Applying the experiment to the experimental group (teaching the proposed electronic program.(
- Applying the observation card to the experimental group (Philosophical Vision Observation Card) two weeks after the application (second iteration).
- Applying the observation card (Philosophical Vision Observation Card) to the experimental group after a month and a half of application (third iteration.(
- Applying the research tool (Academic Ability Test) to the control and experimental groups.
- Conducting appropriate statistical analysis to determine the significance of the differences between the mean scores of the two groups

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before and after the study, to determine the effect of the independent variable.

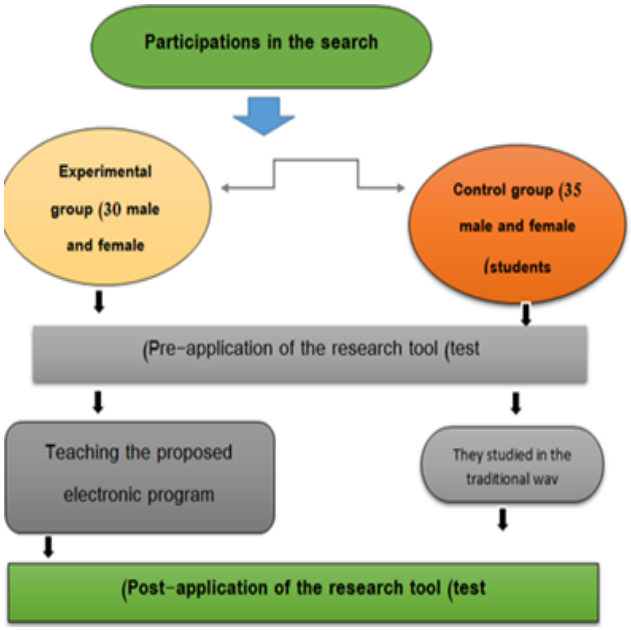

Figure (4) Experimental Research Design

2- Research Population and Group:

The original research population consists of secondary school students (first-year secondary school students) in the Sadat Education Administration for the academic year (2024-2025) in the first semester.

- Research Group:-

A. **Exploratory Sample:**

The survey sample consisted of (30) male and female students. This sample is not the main research sample. The research tool (the Academic Ability Test) was applied to them to verify the psychometric properties of the test and scale. This was done at Jalal Khedr Secondary School, affiliated with the Sadat Education Administration, on Monday, October 7, 2024, for the (1/5) class.

B. The primary research sample:

The primary research sample consisted of (65) male and female students selected from Jalal Khader Secondary School and divided into two groups:

The control group: It consisted of (35) male and female students other than the exploratory research sample, from Jalal Khader Secondary School students in the (1/4) class who studied using the traditional method.

The experimental group: consisted of (30) male and female students from Jalal Khader Secondary School in the (1/3) class who studied the content of the proposed electronic program.

C. Study Procedures:

The following is a presentation of the field steps for implementing the study experiment:

Pre-application:

The study tools were applied to the experimental group and the control group on October 9, 2024, in the fourth semester. The tools were then applied to the experimental group in the third semester to assess the students' initial level. The academic ability test was corrected, and procedures were followed to determine the equivalence of the two groups by examining the results of the pre-test, To ensure the equivalence of the two research groups (experimental and control groups) and to control the effect of the pre-test academic ability as follows:

1- Equivalence in the academic ability test by pre-measurement:

The researcher administered the pre-measurement of the academic ability test to the control and experimental groups to ensure the equivalence of the experimental and control groups in the pre-measurement. The results were as shown in the following Table (4):

Table (4) (t) test to clarify the significance of the differences between the averages of the experimental and control groups in the pre-application of the academic ability test.

To test academic ability	measures	Number of students	total score	arithmetic mean,	standard deviation,	degrees of freedom	t-value,	significance level
Cognitive Dimension	Experimental	30	15	4.9	1.01483	58	1.383	**Not significant at the 0.05 level**
	Control	30		4.5	1.3			
Skill Dimension	Experimental	30	12	4.5	1.2		.188	**Not significant at the 0.05 level**
	Control	30		4.4	1.45			
The emotional dimension	Experimental	30	15	5.4	1.4		.849	**Not significant at the 0.05 level**
	Control	30		5.1	1.6			
Total Test Score	Experimental	30	42	14.9	2.6		1.126	**Not significant at the 0.05 level**
	Control	**30**		**14.**	**3.0**			

Looking at the previous table (4), it is clear that there are no statistically significant differences at the significance level (0.05) between the students of the experimental and control groups in the pre-application of the academic ability test in the total score and in the sub-dimensions that comprise it, as the value of (t) in the total score

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reached (1.12), and it was not significant at the significance level (0.05) specified in the current research, which shows the equivalence of the two groups in the test in general and in the dimensions that comprise it, and thus equivalence was achieved in the pre-measurement and that any differences that will appear in the results of the post-application of the academic ability test used in the current research will only have an effect on the experimental treatment, which is (the proposed training program).

- **Basic Experimental Procedures:**

- Before beginning the research, the students' internet skills were verified. The researcher ensured that all students possessed basic internet skills before beginning the research experiment. During the reserve classes, the researcher briefed the students on how to access the website, its components, and how to navigate it. She also explained what was required of them when using the interactive website to obtain knowledge and information. A WhatsApp group was created to facilitate communication between the researcher and the students, and to resolve any problems or questions they encountered while completing the activities. Worksheets were also sent and exchanged between the students and between the students and the researcher.
- The researcher taught the content of the electronic program based on philosophical enlightenment to the experimental group using the website through the smart board in the classroom according to the timetable set for the philosophy course, with one class inside the school and two classes from home (online) through communication between the students and the researcher via the WhatsApp group prepared for this purpose and by meeting in an educational group using the Zoom program.
- During the educational sessions, the researcher taught the students the proposed online program content over three weekly sessions, plus a refresher session to provide feedback on what was learned and prepare for subsequent lessons. The researcher followed up with the students during their studies, working to resolve any problems they encountered on the website or answer any questions they had.
- The process of teaching the content of the electronic program based on philosophical enlightenment to the experimental group began, while the control group was simultaneously taught using the traditional method, on Monday, October 9, 2024. The researcher adhered to the timeline designed for the content of the proposed electronic program. The implementation took two full months, with three classes per week: one class in school and two classes via Zoom.
- The researcher applied the philosophical vision observation card with the help of the philosophy teacher at the school to avoid biasing the results of the research. The teacher was present with the researcher in the classroom during the application and followed up on the students and recorded the results based on the dimensions specified in the observation card, so that it was applied three times (the first repetition at the beginning of the application - the second repetition in the middle of the application - the third repetition at the end of the application).

- **The most important observations the researcher noted during the application:**

- The students enjoyed the philosophy class, especially when working in groups, navigating through the website pages, and completing the activities required for each lesson, whether individually or collectively.
- The students noted the difference between traditional study and studying via the program's website, which helped boost their motivation to complete the activities.
- The website, with its links and sites different from the traditional curriculum, made it easier to access information and increased their desire to study philosophy.
- The students' work in groups helped improve their performance in obtaining information, writing it in a Word document, and sending it to the researcher. They also evaluated themselves by completing a performance evaluation table via the interactive website between the student and the researcher, which led to a fruitful success of the research experiment.
- Students' desire to study philosophy, learn about philosophers and their ideas, and relate them to their daily lives stems from their lack of boredom during class or boredom with the content presented to them. The researcher reminded the researcher of the class time or communicated with her via the study group on WhatsApp.

- **Research recommendations and suggestions**

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1) Holding training courses for philosophy teachers on the stages and steps of teaching according to electronic programs, as an attempt to keep pace with technological and scientific development in the educational process and advance society.
2) Providing all means of support and encouragement for philosophy teachers in the educational field to adopt the ideas of the Enlightenment eras and use them in developing various mental processes.
3) Including curricula with activities based on research and investigation from the Internet; because of their positive impact in directing learners towards the optimal use of the Internet in light of the tremendous technological development.
4) Designing educational research sites that work to provide students with knowledge and skills related to educational materials; to benefit from them in the processes of searching and investigating information.
5) Providing philosophy curricula with topics and issues that call for using the mind and avoiding intellectual stagnation, as academic ability is developed.
6) The necessity of paying attention to electronic programs for their effective role in creating a new generation that keeps pace with technological and scientific development and achieves its desired goals in a positive way through dialogue and developing their academic abilities, commitment, participation and interest in academic work

Ethical Approval Declaration

"All procedures involving human participants in this study were conducted in accordance with the ethical standards set by applicable research guidelines and the principles of the 1964 Declaration of Helsinki and its subsequent amendments. Ethical approval was secured before the commencement of data collection."

Funding: -

This study did not receive any external funding.

Data availability:-

The datasets generated and analysed during the current study will be available from the author upon reasonable request.

Consent for publication:-

I hereby provide consent for the publication of the manuscript detailed above.

Competing interests:-

The authors declare no competing interests.

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