



Examining Dependent and Independent Variables in Design: Impacts of Research Plans on Scientific Theses (1971-2013)

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Abstract

The research problem:

How to describe and classify the studied phenomenon in the field of "design" major and which means the dependent and independent variables and how close to or far from the research plans.

The research Aims:

1. To disclose the nature of the dependent variables and the role of the independent variables affecting them,
2. To reveal the nature of the independent variables and the role of the dependent variables that are affected by them,
3. To indicate the relationship between the dependent and independent variables and between research plans of "design" specialty.

Keywords - field , Means, Dependent, Reveal, relationship

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Research hypotheses :

1. There is a positive relationship between the dependent variables and the independent variables affecting them,
2. There is a positive relationship between the independent variables and the dependent variables that are affected by them, and
3. There is a positive relationship between the dependent and independent variables, and between research plans of "design" specialty.

The research sample:

It consists of all theses in the field of design majoring in art education faculty (Helwan university), Faculty of Specific Education (Ain Shams university) in the period of time from 1971 to 2013.

Research Methodology:

It is the descriptive survey methodology.

The research results :1. The researcher arrives to 5 dependent variables where the first variable contains 12 sub-variable, and the second one contains 2 sub-variables,

2. The researcher arrives to 34 independent variables, and

3. The researcher has come up with the relationship of each of the dependent and independent variables and vice versa , then the relationship between them (dependent and independent) with axes and points of research as well as research plans in each of the Faculty of Art Education (Helwan university) and the Faculty of Specific Education (Ain Shams university).

Scientific research is defined as an activity aimed at obtaining generalizable knowledge, by verifying the validity of hypotheses related to the relationship between two or more variables or the differences on these variables. (Ali Maher Khattab, 2008)

This definition confirms the importance of internal honesty and the consequent external honesty as the definition referred to obtaining generalizable knowledge and can not generalize knowledge or results only if there is a choice of a representative sample of the original community on which the results will be circulated, as well as the availability of codified research tools any honest measure what was designed for, as well as fixed, as the title of any research indicates that the determination of hypotheses depends on the number of relationships and the quality of these relationships between variables, Or by the number of differences suggested by those relationships between the variables in this heading.

The researcher believes that the "title of the thesis" or the title of the research Title of the Research In its fullest form, it includes a set of variables, and explains the type of relationships between these variables, and accordingly we can determine through any title of the following message: (Mustafa Mohamed Abdel Aziz, 2015)

- I- What are the dependent variables, the independent variables, and the number of each.
- II- The nature of the relationships between dependent and independent variables, their quality, differences, and in favor of whom and how many of these relationships or differences.
- III- What extraneous variables exist and the researcher did not pay attention to them to isolate, stabilize or take into account when conducting research.
- IV- The number of goals, which is determined by the number of relationships or differences between variables.
- V- The number and quality of hypotheses in terms of their emergence and formulations in light of the number of relationships and the number of objectives.
- VI- The number and type of procedures that will be carried out in order to verify the hypotheses.
- VII- The number and quality of statistical operations according to the number of relationships or differences between variables.
- VIII- Classification of results in light of the number of assignments.
- IX- The identification of the research problem is also based on the type and number of variables present in the title.
- X- The theoretical framework is not cut-and-paste operations in the sense that we write in each variable separately, but we write about the relationship between each variable with the other, and as much as the type and number of variables are the paragraphs and topics of the theoretical framework.

Therefore, we cannot put the title of any research or thesis until it has made it completely clear to the researcher what he wants to do", as the title must be accurate and consistent with the content of the research without tedious lengthening or abbreviating abbreviation. (Saleh bin Hamad Al-Assaf, 1995)

The title must also "describe the objectives of the study with the utmost clarity and be formulated in sound and clear language", (Ali Maher Khattab, 2008)

despite the above, the researcher found (and this is not one of the objectives of the current research) when examining the titles of the theses the following:

- (I) The existence of one of the variables without the presence of the other, with which any relationship or differences are performed.
- (II) The generality of the variables is not defined depending on the fact that the limits of the search determine these variables that are characterized by generality.
- (III) The existence of variables without a general definition or procedural definition and without a measurement tool associated with them and such variables: "enrichment", "development", and if there is a measurement tool, it measures other characteristics such as the foundations and elements of the design and not "enrichment" or "development".

From the above, it appears to us the importance of the title of the thesis or research, especially if it is formulated in a formulation that takes into account the foundations previously talked about, in determining the variables of the research and their relationships, and then it must be clarified what the variable and its types:

Variable :

Summarizes "Ali Maher Khattab" The variable is defined as "a property that exists to varying degrees between the vocabulary of a particular population or a sample of it", and that any property can take varying degrees or values in a group of vocabulary called "variable". (Ali Maher Khattab, 2008)

This definition confirms the above that the variable as long as it takes degrees it is measurable, and therefore tools are available to measure it, and the title cannot include a variable that cannot be observed or cannot be measured or difficult to measure as previously explained by the researcher in my variable: enrichment / development).

Types of variables:

Dependent variables:

Ali Maher Khattab pointed out that:

A - means the phenomenon or property that is affected by the change in the independent variable.

B - are those variables that change as a result of the change in the independent variable. (Ali Maher Khattab, 2008)

Example: Academic achievement in mathematics represents the dependent variable that is attributed to its impact or change as a result of the different methods of teaching mathematics, which is the independent variable, and in the current research the dependent variable represents those results and goals that we want to achieve through some independent variables.

Saleh Al-Assaf pointed out:¹

- (I) It is the phenomenon that exists, disappears, or changes when the researcher applies the independent variable, or removes it or changes it.
- (II) It is that aspect of an individual's behavior that is measured after the introduction of experimental treatment.
- (III) It is that aspect that is sensitive enough to the effects of the experimental variable (Saleh bin Ahmed Al-Assaf, 1995).
- (IV) It is the result on which the effect of applying the independent variable is measured. (Jawdat Shaker Mahmoud, 2007)

Independent Variable:

- I- It is the factor that is intentionally used in the situation, and the researcher puts it under observation to ensure its relationship with the dependent variable and its impact on it.
 - II- It is the conditions or alerts that the researcher addresses or puts under his control².
 - III- It is the factor or because that is applied for the purpose of determining its impact on the results.
- As for Maher Khattab, his views can be summarized as follows:

- I- It means the variables that the researcher addresses with treatment and change to study and serve the objectives of the research and their impact on other variables - one or more variables - called dependent variables.
- II- Usually, they are called experimental variables. (Ali Maher Khattab, 2008)

A - Active Variables:

These variables are called experimental variables. Experimental Variables. These variables can be addressed by the researcher by change or treatment. Examples of these variables include teaching method, reinforcement, and group size.

B - Non-processable variables: Assigned Variables:

These variables are called measured variables. Measured Variables These variables are also called. Attributed Variables Any variables that relate to the characteristics of individuals and these variables can not be addressed by the researcher change or treatment, and examples of these variables gender, economic and social level, and breed.

Extraneous variables:

- I- They are variables that affect the search results.
- II- The researcher does not care about her because she is unknown to him.
- III- When the researcher pays attention to them, and takes them into account when designing his experimental methodology, they are called control variables, which are independent variables that do not fall within the experimental treatment, but are part of the experimental design. (Jawdat Shaker Mahmoud, 2007)

As for "Ali Maher Khattab", he indicates that the extraneous variables are characterized by:

- I- Its effect overlaps with the effect of the independent variable on performance on the dependent variable.
- II- They are independent variables that are not related to the objectives of the study, so they are extraneous and need to be controlled or isolated their impact on the dependent variable. Then he adds, "Ali Maher Khattab" about the variables of the settings the following. (Ali Maher Khattab, 2008)

Control variables:

- I- They need to be adjusted or fixed in order to isolate their impact or make it equal to the study group.
- II- They can be classified into two general categories of variables:

1 - Qualitative variables:

They are taxonomic variables that include a series of separate categories, which are not subject to order among themselves, through which individuals are classified into separate and independent categories according to the type of trait or characteristic measured.

2 - Quantitative variables: Quantitative Variables:

It refers to those variables that include categories including a natural order subject to a rule greater than or less than in the measured property. These variables differ in which the categories differ among themselves in the degree of existence or quantity, or frequency of the existence of the adjective

Quantitative variables are divided into two types of variables:

- I- Ranked variables that have the property of arrangement, which allows the arrangement of individuals without describing the degree, quantity or amount of repetition of the measured trait, such as the birth order of the child in the family.

II- Scalar variables allow the description of the amount of frequency, degree, or quantity of existence of the measured trait such as weight and height.

What determines the type of variable (dependent or independent):

"Ali Maher Khattab" mentions in the same reference the following:

It should be noted that it is not the nature of the variable that makes the variable independent or dependent, but the way it is used. The dependent variable in one study may become an independent variable in another study (Kerlinger, 1973) , (Adas, 1992). Achievement in high school may be used as an independent variable (predictive variable) to predict academic achievement in college as a dependent variable (the variable to be predicted). It may be used as a dependent variable in one study, and it may be used as an independent variable in another. One study may aim to identify the determinants of group cohesion, and another study may aim to identify the consequences of group cohesion."

In the current research, art may play, for example, the role of the independent variable if the scientific study will use it as an influential factor in the development of some types of behavior, but if the scientific study is heading towards development in the field of art through some independent variables, it will be "artistic expression here or the field of art is the dependent variable."

Research problem:

The problem of the current research is summarized in the description and classification of the studied phenomenon in the field of design specialization and means dependent variables and independent variables, as it appears in the overall titles of scientific theses in the period from 1971 AD – 2013, in this area mentions "Fath al-Bab Abdel Halim Sayed" that "the classification of any group of things means placing them in varieties arranged on a special basis, so that they facilitate their knowledge, and distinguish their members and varieties, as easy to use, and we resort to classification in our scientific life whenever necessary, the merchant classifies his goods, and has many books classified to make it easier for him to refer to and use. (Fath al-Bab Abdel Halim Sayed, 1983)

The problem of the current research goes beyond the classification processes to find the mutual relationships between the dependent and independent variables, and the extent of their distance and proximity to the research plans in both the Faculty of Art Education, Helwan University, and the Faculty of Specific Education at Ain Shams University through the titles of scientific theses in the specialty of "design".

Research Objectives:

- 1- Revealing the nature of the dependent variables, and the role of the independent variables affecting them in the field of specialization "design" as they appear in the titles of scientific theses.
- 2- Revealing the nature of the independent variables, and the dependent variables that affected them in the field of specialization "design" as they appear in the titles of scientific theses.
- 3- Reveal the relationship between dependent and independent variables, and between the research plans of the design major.

Research hypotheses:

- 1- There is a positive relationship between the dependent variables and the independent variables affecting them in the field of specialization "design" as they appear in the titles of scientific theses.
- 2- There is a positive relationship between the independent variables, and the dependent variables that were affected by them, in the field of specialization "design" as shown in the titles of scientific theses.
- 3- There is a positive relationship between dependent and independent variables, and between the research plans of the design major.

The importance of research:

- 1- Describe the phenomenon in question in terms of its nature, the degree of its existence, i.e. the existing situation in relation to one or more variables.

- 2- Knowing some detailed facts about the reality of the studied phenomenon, which enables the researcher to provide a comprehensive description and accurate diagnosis of that reality.
- 3- Providing detailed facts about the reality of the phenomenon enables researchers to know the trends or direction of research work present, or to develop methods or plans to improve the existing conditions in the future.
- 4- Benefit from the results in making any decision regarding research in the field of design or similar matters.
- 5- The possibility of making evaluative judgments on this reality.
- 6- Determine the efficiency of the existing situation by comparing it to previously prepared levels, standards, or criteria.

Research Sample:

The current research sample is determined by the total master's and doctoral theses in the Faculty of Art Education, Helwan University, and the Department of Art Education, Faculty of Specific Education, Ain Shams University, in the field of design since the following:

- 1- The first master's thesis on 1/11/1971 in the name of / Laila Ahmed Hassan Allam until the last master's thesis discussed in 2013.
- 2- The first doctoral thesis on 15/11/1978 in the name of Zainab Raafat Al-Sajini until the last doctoral thesis discussed in 2013.

The number of theses subject to the current research reached (289) messages representing the research sample as follows:

Research Methodology:

- I- The current research follows the survey research methodology and is one of the types of descriptive research, and is defined as "an organized, codified and arranged method of collecting accurate, clear and specific data and information for an existing situation that must be subjected to study and research. (Jawdat Shaker Mahmoud, 2007)

It is the type of research by which all research members or a large sample of them are questioned (in the current research, the researcher deals with all the research vocabulary, i.e. all the titles of the theses in the field of specialization).

As long as the current research sample includes all the titles of master's and doctoral theses from the first theses until the end of 2013 (which is the beginning of work in the current research), the current research follows the comprehensive survey approach and the studies that follow this approach are "research studies characterized by the comprehensiveness of the subject to be studied in that they are not restricted to one quality of data and information (any type of variables). (Saleh bin Hamad Al-Assaf, 1995). Rather, it covers multiple and varied aspects at the same time, as in the case of the original community survey (as in the current research). (census Survey) (Jawdat Shaker Mahmoud, 2007)

The survey research aims to:

- 1- Identify the current state of the research community for one or more variables.
- 2- Identify the problems experienced by the research community.
- 3- Justify current situations and practices.
- 4- Develop smarter plans to improve social, economic or educational conditions or processes.
- 5- Determine the efficiency of the existing situation by comparing it to previously prepared levels, standards, or criteria. (Van Dalen, 1973).
- 6- Identify what others do in the same situation of problems or circumstances to benefit from their experiences in improving the current situation and in making plans and making decisions in the future. (Lissas, S, & Michael, W.Hamd Bool, 1981)

Related studies:

Within the limits of the researcher's knowledge, the subject of the current research did not address its subject, objectives, hypotheses and methodology, any research or research project, and what the researcher was able to reach in this subject was a research paper Introduction to the discussion panel with a pre-doctoral thesis entitled: "A preliminary analytical study of master's research in the field of design" (Abeer Adel Sayed Mohamed, Iman Kamel Ghanem, 1997).

This study dealt with master's theses only and the Faculty of Art Education and in the time period of 1975 – 1997, and classified master's research in terms of research fields and reached the following areas in table (a) and in the order accompanying them.

Table A

Percentage	Number of research in the field of research	Research Areas Classified
29.8%	17	1- The field of design of decorative panels
19.3%	11	2- Advertising & Poster Design
29.8%	17	3- The field of the art of writings
12.2%	7	4- The field of design and its relationship to design approaches and methods
8.7%	5	5- The field of design elements and foundations

From the previous table, it can be seen that the number of sample research was (57) research in the master's only, then the research paper classified the master's research in terms of available values and reached the following values and in the order accompanying them as in table (b).

Table b

Percentage	Number of research	Values
14.1%	17	1- Heritage Values
6.6%	8	2- Values related to modern and contemporary art schools
36.7%	44	3- Plastic and aesthetic values
27.5%	33	4- Educational values
4.1%	5	5- Social and environmental values
8.2%	10	6- Values inspired by nature
2.5%	3	7- Values related to modern theories in design

From the previous table, it can be seen that the number of sample research was (110) research and by comparing the number of sample in the "research areas" in table (a) we must wonder what is the actual and real number of the sample of this research, and therefore its credibility becomes questionable, what if the sample was equal in both "research areas in table (a)" and values in table (b) were we getting the same results? The doubt increases when we know that the sample was (56) message title only, which concludes that some messages were placed in more than one position or classification, and the explanation for this is that the researchers did not put differences between the types of variables if they were dependent or independent, which will classify the messages accordingly.

Research Procedures:

1- Collecting scientific material through lists of scientific theses titles in the libraries of the Faculty of Art Education at Helwan University, and the Faculty of Specific Education at Ain Shams University.

- 2- Classification of scientific material in lists that show:
 - I- The number of each message title.
 - II- The year in which the thesis was discussed.
 - III- Message title.
 - IV- Researcher name.
 - V- Names of supervisors.
 - VI- Dependent variable.
 - VII- Independent variable.

Variables may be classified into dependent, or independent depending on its role in the title of each message, and one variable can play the role of the dependent variable in the title of a message and play the role of independent variables in another message, which determines the type of variable is not its nature but the way it is used (as already mentioned before).

3- Calculating the frequencies and then the percentages of each dependent variable and arranging these dependent variables, which generally reached five main types, including (22) sub-variables that were summarized in the total table in the results to the number of 17 sub-variables for the similarity of each other.

4- Classification of headings under each dependent variable into subheadings: first, second... etc. according to independent variables.

5- Classification of headings under each sub-heading with the clarification of independent variables in tables amounted to 46 tables The researcher has designed a final total table in which the independent variables are vertically shown, offset in the horizontal axis above the table dependent variables with the mention of frequencies, percentages and arrangement for each of the two variables (note the results of the research).

6- Research results and discussion: in which the researcher clarifies the path or direction of scientific research in the field of design through the mutual relationships between dependent and independent variables and the extent of their proximity or distance from research plans.

7- Recommendations.

Results:

The following is a presentation of the results reached by the researcher in the light of the previous steps.

able (2) A statement of the five main variables reached by the current study, the number of sub-variables for each main variable, the number of messages that fall under it, its percentage of the total number of messages "research sample", and its ranking in relation to the other dependent variables

Dependent variables	% of total messages	Number of messages	Subdependent variable numbers for each main child variable	Number of subvariables for each main dependent variable	The five main dependent variables	M
The first	61.59	178	From 1-12	12	Areas for design applications	1
Second	25.61	74	From 13-14	2	Design and pedagogical aspect	2
Third	4.84	14	From 15-18	4	Disclosure of relationships, capabilities and characteristics	3

Fourth	4.49	13	From 19-21	3	Achieve some design aesthetics	4
V	3.46	10	22	1	Developing a plastic vocabulary	5
		289 messages	Total number of messages	22	Total number	

Table (3)

Statement of the sub-variables of the first main dependent variable, the number of its messages and the percentage in light of the total messages and the order of each subvariable of the sub-variables of the first main dependent variable

% of the total messages of the research sample	Order	Number of messages	For the first main dependent variable: "Design Application Areas"	M
24.67	7	71	Decorative design in general	First of all
14.53	2	42	Decorative painting	secondly
8.65	3	25	Advertising Poster	thirdly
2.77	5	8	Logo	fourthly
0.35	8	1	Mark	fifthly
4.49	4	13	Illustrations	sixthly
1.04	6	3	Stories	seventhly
0.69	7	2	Postage stamp	Viii
0.69	7 m	2	Offers	Ix
2.77	5 m	8	Murals	X
0.69	7pm	2	playing	eleven
0.35	8m	1	Contemporary Arabic Calligraphy	twelve
61.59	Ranking relative to total messages	178	Total number of messages	

Table (4)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
First: The first sub-dependent variable (for the first main dependent variable) Decorative design in general ((71) messages) by 61.59%

Message Numbers	Number of messages	Independent variables of the first sub-dependent variable (for the first main dependent variable)	M
(1- 6) ,(7-8) ,(9-14)	14	System (Foundamentals) - theories and constructivism	1
(15-28)	14	Artistic thought and some artistic methods	2
(29-42)	14	Benefiting from ancient Egyptian art	3
(43-51)	9	Islamic Art	4
(52-58)	7	Heritage in general	5
(59-64)	6	Some elements and foundations of design	7

(65-68)	4	Calligraphy / Arabic calligraphy / writings	7
(69-71)	3	Structural elements	8
	71	Total number	

Table (13)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Second: The second sub-dependent variable (for the first main dependent variable) The decorative painting (42 letters) by 14.9%

MESSAGE Numbers	Number of messages	Independent variables of the second sub-dependent variable (for the first main dependent variable)	M
(72-85)	14	Systems (Foundamentals)	1
(86-94)	9	Contemporary Art	2
(95-101)	7	Ancient Egyptian Art	3
(102-106)	5	Popular Field	4
(107-110)	4	Islamic Art	5
(111-113)	3	Experimental approaches	6
	42	Total number	

Table (20)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Third: the sub-dependent variable "third" (for the first main dependent variable) Advertising poster (25 messages) 12.11%

MESSAGE Numbers	Number of messages	Independent variables of the third sub-dependent variable (for the first primary dependent variable)	M
(114-118)	5	Artistic Heritage	1
(119)	1	Natural form	2
(120)	1	The formal perception in children's drawings	3
(121 - 123)	3	Multimedia	4
(124)	1	Contemporary Art	5
(125- 130)	6	Design elements and foundations	6
(131 - 133)	3	Thought and art	7
(134 - 138)	5	The educational aspect	8
	25	Total number	

Table (22)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Fourth: The sub-dependent variable "IV" (for the first main dependent variable): "logo" (number of messages 8) by 2.77%

Message Numbers	Number of messages	Independent variables of the fourth sub-dependent variable (for the first main dependent variable)	M
(139 - 141)	3	Artistic Heritage	1

(142)	1	Cultural variables	2
(143 - 144)	2	Design elements and foundations	3
(145-146)	2	Thought and strategies	4
	8	Total number	

Table (25)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Sixth: the sub-dependent variable "sixth" (for the first main dependent variable) illustrations (13 messages)

MESSAGE Numbers	Number of messages	Independent variables of the sixth subvariable (for the first main dependent variable)	M
(148 - 152)	5	Artistic Heritage	1
(153)	1	Foundations and elements of design (movement)	2
(154-160)	7	Courses	3
		Total number	

Table (27)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Seventh: the sub-dependent variable "seventh" (for the first main dependent variable): stories (3 letters) by 1.04%

MESSAGE Numbers	Number of messages	vocabulary	M
(161-162)	2	Ancient Egyptian Art	1
(163)	1	Characteristics of psychological and artistic development of a child 97 years	2
	3	Total number	

Table (29)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Eighth: the sub-dependent variable "eighth" (for the first main dependent variable) postage stamp (2 messages) by 0.69

MESSAGE Numbers	Number of messages	Independent variables of the "eighth" subvariable (for the first main dependent variables)	M
(164-165)	2	In terms of heritage	1
	2	Total number	

Table (31)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Eighth: the sub-dependent variable "ninth" (for the first main dependent variable) offers (2 messages) by 0.69

MESSAGE Numbers	Number of messages	Independent variables of the subvariable "function" (for the first main dependent variable)	M
(166)	1	In terms of display windows	1
(167)	1	In terms of display panels	2

	2	Total number	
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Table (33)

The first main dependent variable: Fields for design applications (178 messages) continued by 61.59%
Tenth: the sub-dependent variable "tenth" (for the first main dependent variable) murals (8 messages) by 2.77%

MESSAGE Numbers	Number of messages	Independent variables of the "tenth" variable (for the first main dependent variable)	M
(168)	1	Ancient Egyptian Art	1
(169-170)	2	Islamic Art	2
(171)	1	Contemporary Art	3
(172- 173)	2	environment	4
(174)	1	Architectural theories	5
(175)	1	Digital Arts	6
	8	Total number	

Table (35)

The first main dependent variable: Fields for design applications (178 messages) by 61.59%
Eleven: the sub-dependent variable "eleventh" (for the first main dependent variable) play (2 messages) by 0.69%

MESSAGE Numbers	Number of messages	Independent variables of the "eleventh" subvariable (the first main dependent variable)	M
	2	In terms of pedagogical aspects	1
	2	Total number	

This ended with the presentation of the results of the first main dependent variable "Fields for Design Applications (178 messages) by 61.59%, which included (12) sub-variables. The following is the beginning of Table (38) The researcher begins to present the results of the other four main dependent variables.

Table (38)

The second main dependent variable: design and the educational aspect (74 messages) by 25.61%

Percentage	Order	Number of messages	Sub-dependent variables	M
519	The first	15	Behavioral Development	1
20.42	Second	59	Entrances to teaching	2
25.61		74		

Table (39)

The second main dependent variable: design and the educational aspect (74 messages) by 25.61%

First: the first dependent variable: (for the second main dependent variable) behavioral development (15 messages)

MESSAGE Numbers	Number of messages	Independent variables of the first sub-variable (for the second main dependent variable) Behavioral development	M
(179-182)	4	Preparing designs	1
(183-184)	2	Preparing programs for children and adolescents	2
(185-187)	3	Islamic Art	3
(188)	1	Combining some art models	4
(189)	1	Ancient Egyptian Art	5
(190-192)	3	Some geometric shapes	6
(193)	1	Problem-solving skills	7
	15	Total number	

The second basic dependent variable: design and the educational aspect (74 messages) by 25.61%

Second: The second dependent variable: entrances to teaching (for the second main dependent variable) (59 messages) by 20.24%

MESSAGE Numbers	Number of messages	Independent variables of the second sub-variable (of the main subvariable)	M
(194-197)	4	Ancient Egyptian Art	1
(198-206)	9	Islamic Art	2
(207-209)	3	Arabic Calligraphy	3
(210-216)	7	Contemporary Art	4
(217 – 225)	9	Folk Art	5
(226 – 231)	6	Systems (in nature)	6
(232 – 245)	14	Design Systems & Building	7
(246-247)	2	Artistic thought (symbolic values and metaphysical thought)	8
(248)	1	Courses (Geography)	9
(249 – 252)	4	Digital Arts Technological Media	10
	59	Total number	

Table (43)

The third main dependent variable: detection of relationships, capabilities and characteristics (14 messages) by 4.84%

MESSAGE Numbers	Number of messages	Independent variables of the third main dependent variable	M
(253)	1	Detecting interrelationships between forms and bodies (experimentation)	1
(254-255)	2	Raw material capabilities	2
(256 – 259)	4	Computer capabilities	3
(260-266)	7	Characteristics of some works of art	4
	14	Total number	

Table (45)

The fourth main dependent variable: achieving some design aesthetics (13 messages) by 4.498%

MESSAGE Numbers	Number of messages	Independent variables of the fourth main dependent variable	M
(267)	1	Ancient Egyptian Art	1
(268-270)	3	Islamic Art	2
(271-276)	6	Some design elements	3
(277)	1	Overlay (systems - theories and constructivism)	4
(278)	1	Theatrical performance	5
(279)	1	Graphic Recruitment	6
	13	Total number	

Table (47)

The fifth main dependent variable: the introduction of formative vocabulary (10 letters) by 3.46%

MESSAGE Numbers	Number of messages	Independent variables of the fifth main dependent variable	M
(280-281)	2	Computer use (digital arts and media)	1
(282-285)	4	Egyptian and Arab personality traits	2
(286)	1	Random division (systems - theories and plants)	3
(287)	1	Lotus flower (natural forms systems)	4
(288)	1	Popular Symbols (Popular Domain)	5
(289)	1	Entrances to the development (experimental entrances)	6
	10	Total number	

From the above: The results of the current research that followed the comprehensive survey approach were presented through the previous tables and as follows:

- I- Presenting the overall results of the main dependent variables and their sub-variables (17 variables after merging the similar variables), and the total independent variables after deleting the recurring in them when displaying the tables of the dependent variables, which became (34) independent variables in a vertical column, through Table (49).
- II- Discussing the overall results in the light of horizontal / vertical relations "any relationship of each of the dependent variables with independent variables through the number of occurrences, and the following table (49) was presented to discuss the results.

Research results and discussion:

First results:

The search results associated with the first hypothesis states:

There is a positive relationship between dependent variables and the independent variables affecting them in the field of specialization "design" as they appear in the titles of scientific theses.

From the previous table (49), the following results are clear:

The dependent variables used in scientific theses in the field of "design specialization", which number five main variables, and their relationship to the independent variables, The number of messages that fall under the first dependent variable (178 messages) by (61.59%) of the total messages representing the current research sample (289 messages), and ranked first among the five main dependent variables, and this variable included (12) sub-variables in descending order as follows*:

* The researcher did not adopt when presenting the results the order of the sub-variables of the first dependent variable as stated in the initial tables, and a commitment to display them. in descending order through the frequencies obtained and therefore percentages.

First: "Decorative Design in General": (71 messages) (25%) It ranked first among the sub-variables of the first dependent variable. In it, it was not clear how precisely the dependent variable was formulated, and the researchers only mentioned the development, development or enrichment of the design in general without mentioning any focus on any aspect of the design.

From the previous table (49), it is noted that in order to achieve development in the field of design in general, the researchers used a set of independent variables numbering (9):

Systems, theories, constructivism (14 letters), ancient Egyptian art (14 letters), artistic thought, some artistic styles (10 letters), Islamic art (9 letters), heritage in general (7 letters), some elements and foundations of design (6 letters), Arabic calligraphy, calligraphy in general and writings (4 letters), characteristics of some works and artistic styles (4 letters), and finally plant elements (3 letters).

The researcher repeats here that the independent variables were formulated more accurately than the dependent variables formulated in the word "design" without clarifying any focus on any aspect of the design, and therefore it is difficult in this case to determine which of the tools we will measure this property or the dependent variable "design".

In conclusion, to obtain development in the field of design in general (dependent variable), the researchers used (9) independent variables as previously explained and did not address the rest of the independent variables (25) (see Table 49).

Second: Decorative painting: (42 messages) by (14.53%) It ranked second among the sub-variables of the first dependent variable, and it has a clear formulation of the dependent variable (decorative painting), and from Table (49) it is noted that in order to achieve development in the field of decorative painting, researchers benefited from a set of independent variables numbering (6):

"Systems, Theories and Constructivism" (14 letters), ancient Egyptian art (7 letters), Islamic art (4 letters), contemporary art (9 letters), the popular field (5 letters), experimental approaches (3 letters), and the conclusion that to obtain development in the decorative painting (as a dependent variable), the researchers used only (6) independent variables, and did not address the rest of the independent variables (28) (see Table 49).

Third: The advertising poster: (25 messages) by (8.65%), and the advertising poster as a dependent variable ranked third among the sub-variables of the first dependent variable, and it has a clear formulation of the dependent variable (advertising poster), and from Table (49) it is noted that in order to achieve development in the field of advertising poster, the researchers benefited in their (25) messages with a set of independent variables numbering (8):

"Artistic thought and some artistic styles (3 letters), heritage in general (5 letters), some elements and foundations of design (6 letters), contemporary art (one letter), natural forms and systems (one message), formal perception in children's drawings (one letter), multimedia (3 letters), and the educational aspect (5 letters).

In conclusion, in order to obtain development in the "advertising poster" (as a dependent variable), the researchers used in their 25 letters only (8) independent variables, and did not address the rest of the 26 independent variables (see Table 49).

Fourth: Illustrations: (13 letters) by (4.49%) The illustrations as a dependent variable ranked fourth among the sub-variables of the first dependent variable through frequencies and percentages (this differs from their ranking in sixth in the initial tables).

From Table (49) it is noted that in order to achieve the development of illustrations, the researchers benefited in their 13 letters with a set of independent variables numbering (3):

"Heritage in General" (5 letters), "Some elements and foundations of design" (one letter), and "Curricula" (7 letters).

In conclusion, in order to obtain development in "illustrations" (as a dependent variable), the researchers used in their 13 letters (3) independent variables at the top of which were educational curricula, and at the same time did not address the rest of the 31 independent variables (see Table 49).

Fifth: Logo: (8 messages) by (2.77%) The "logo" as a dependent variable ranked fifth among the sub-variables of the first dependent variable through frequencies and percentages (this differs from its ranking in the fourth in the initial tables).

This sub-variable "logo" is clearly formulated and away from generality, and from Table (49) it is noted that in order to achieve the development of the "logo", the researchers benefited in their (8) letters with a set of independent variables numbering (4):

"Heritage in general" (3 letters), some "elements and foundations of design" (2 letters), "cultural variables" (one message), and "Thought and strategies" (2 letters).

In conclusion, to obtain development in the "logo" (as a dependent variable), the researchers used and benefited in their (8) letters with (4) independent variables only, and at the same time did not address the rest of the independent variables (3). (See Table 49).

Sixth: "Murals": (8 messages) by (2.77%) "Murals" as a dependent variable ranked fifth repeated, as they are equal to "logo" in the same number of messages, within the sub-variables of the first dependent variable through frequencies and percentages (this differs from its order in the tenth of the initial tables).

From Table (49) it is noted that in order to achieve the development of "murals", the researchers benefited in their (8) letters with a set of independent variables numbering (6):

"Systems, Theories and Constructivism" (one letter), "Ancient Egyptian Art" (one letter), "Islamic art" (2 letters), "Contemporary Art" (one letter), "The Environment" (2 letters), "Digital Arts and Media" (one letter).

In conclusion, to obtain development in the "murals" (as a dependent variable), the researchers used in their (8) letters (6) independent variables only, and did not address at the same time the rest of the independent variables (28). (See Table 49).

Seventh: "Stories": (3 messages) by (1.4%) "Stories" as a dependent variable ranked sixth among the sub-variables of the first dependent variable through frequencies and percentages (this is not similar to their ranking in "seventh" in the initial tables).

This sub-variable "stories" is clearly formulated that moves away from generality, and from Table (49) it is noted that in order to achieve the development of "stories", the researchers used in their (3) letters a set of independent variables numbering (2):

"Ancient Egyptian Art" (2 letters), "Characteristics of psychological and artistic development" (one letter).

In conclusion, the stories as a dependent variable did not search only in (3) messages only, and the researchers used them and benefited from (2) independent variables only, and did not address the number (32) and they are the rest of the independent variables used in the current research. (See Table 49).

Eighth: "Postage stamp": (2 messages) by (0.69%) The "postage stamp" as a dependent variable ranked seventh among the sub-variables of the first dependent variable through frequencies and percentages (this is not similar to its order in "eighth" in the primary tables).

From Table (49) it is noted that in order to achieve development in the "postage stamp", the researchers used in their letters (2 letters) only one source, i.e. only one independent variable, which is "heritage in general", and did not address the use of the rest of the independent variables used in the current research (33) (see Table 49).

Ninth: "Offers": (2 messages) by (0.69%) "Presentations" as a dependent variable ranked "seventh bis" (7 m) among the sub-variables of the first dependent variable, through frequencies and percentages (this is not similar to their ranking in "ninth" in the initial tables).

The formulation of the dependent variable within the two messages is specific, and from Table (49) it is noted that in order to achieve development in the "presentations", the researchers used in their letters (2 messages) the number (2) of (2) independent variables, namely "display windows" (one message), "display panels" (one message), thus leaving the rest of the independent variables used in the current research (32) without benefiting from them (see Table 49).

Tenth: "Play" (2 messages) by (0.69%) "Play" as a dependent variable ranked seventh bis (7 m) among the sub-variables of the first dependent variable, through frequencies and percentages (this is not similar to its order in "eleven" in the initial tables).

The formulation of the dependent variable within the two messages is specific, and from Table (49) it is noted that in order to achieve development in "play" the researchers used (2 messages) with only one independent variable is the "educational aspect", and the number (33) independent variables (they are the rest of the independent variables in the current research) were left without benefit. (See Table 49).

Eleven: Mark" (one message) by (0.35%) The "mark" as a dependent variable ranked eighth (8) among the sub-variables of the first dependent variable, through frequencies and percentages (this is not the same as its ranking in "fifth" in the initial tables).

The formulation of this dependent variable is specific, and through Table (49) it is noted that the researcher with this only message that used this dependent variable in order to achieve his goal of "mark" used one independent variable is "aesthetic and functional aspects" among (34) independent variables, the last of which was used by researchers in the current research. (See Table 49).

Twelve: "Contemporary Arabic Calligraphy" (one message) by (0.35%) "Contemporary Arabic Calligraphy" as a dependent variable ranked eighth bis (8 m) among the 12 sub-variables of the first dependent variable, through frequencies and percentages (this is not similar to its ranking in the initial tables where it ranked eleventh).

The formulation of this dependent variable is specific, and through Table (49) it is noted that the researcher with this only message that used this dependent variable in order to achieve his goal of "contemporary Arabic calligraphy" used one independent variable is "systems, theories and constructivism" among (34) other independent variables are what the researchers used in the current research. (See Table 49).

The number of messages that fall under the second main dependent variable (74 messages) by (25.61%) of the total messages representing the current research sample (289 messages).

It ranked second among the five main dependent variables and this variable included (1) sub-variables in descending order as follows:

First: "Entrances to teaching": (59 messages) by (20.42%) It ranked first among the sub-variables of the second dependent variable, and through Table (49) it is noted that (8) independent variables were used in order to prepare entrances for teaching:

"Systems, Theories and Constructivism" (14 letters), "Islamic Art" (9 letters), "Popular Domain" (9 letters), "Contemporary Art" (7 letters), "Ancient Egyptian Art" (4 letters), "Digital Arts" (4 letters), "Calligraphy/Arabic Calligraphy/Writings" (3 letters), "Artistic thought and some artistic styles" (2 letters), and "Educational Courses" (one letter).

From the above, it is also noted that the researchers did not benefit from (26) independent variables, which are the rest of the independent variables in the current research.

Second: Behavioral Development: (15 messages) by (5.19%) Behavioral development ranked second among the sub-variables of the second dependent variable, and through Table (49) it is noted that (7) independent variables have been used in order to achieve behavioral development, namely:

"Preparing Designs" (4 letters), "Islamic Art" (3 letters), "Some elements and foundations of design" (3 letters), "Preparing programs" (2 letters), "Ancient Egyptian Art" (one message), "Combining some art styles" (one message), and "Problem-solving skills" (one message).

From the above, it is also noted that the researchers did not benefit from (27) independent variables, which are the rest of the independent variables in the current research

The number of messages that fall under the third main dependent variable (14 messages) by (4.84%) of the total messages representing the current research sample (289 messages), and ranked third among the

five main dependent variables, and this variable did not include other sub-dependent variables as in the first and second main variables previously presented.

From Table (49), it is noted that (4) independent variables were used in order to "detect relationships, capabilities and characteristics" and these independent variables are:

"Characteristics of Some Works and Art Styles" (7 letters), "Digital Arts and Media" (4 letters), "Potential of Materials" (2 letters), and finally "Experimentation" (one message) The 14 researchers who dealt with this dependent variable did not address 30 independent variables included in the current researcher (see Table 49)

The number of messages that fall under the fourth main dependent variable (13 messages) by (4.49%) of the total messages representing the current research sample (289 messages), and ranked fourth among the five main dependent variables, and this variable did not include other sub-dependent variables as in the first and second main variables previously presented.

Through Table (49), it is noted that (6) independent variables were used in order to "achieve some design aesthetics", and these independent variables are:

"Some Elements and Foundations of Design" (6 letters), "Islamic Art" (3 letters), "Systems, Theories and Constructivism" (one letter), "Ancient Egyptian Art" (one letter), "Theatrical Performance" (one letter), and "Graphic Employment" (one letter).

The 13 researchers who dealt with this dependent variable did not address 28 independent variables included in the current research (see Table 49).

The number of messages that fall under the fifth and last main dependent variable (10 messages) by (3.46%) of the total messages representing the current research sample (289 messages) and ranked fifth among the five main dependent variables, and this variable did not include sub-dependent variables as in the first and second main variables previously presented.

Through Table (49), it is noted that (6) independent variables have been used in order to achieve the "development of formative vocabulary" and these independent variables are:

"Egyptian and Arab Personality Traits" (4 letters), "Digital Arts and Media" (2 letters), "Systems, Theories and Constructivism" (one message), "Popular Domain" (one message), "Experimental Approaches" (one message), and "Natural Forms (Systems)" (one message).

The 10 researchers who dealt with this dependent variable did not address 28 independent variables included in the current research (see Table 49).

Comment:

After examining the previous results associated with dependent variables and their relationship to independent variables, there is a suggestion that we should take care as specialists in the field of design with all dependent variables that did not receive high percentages, and to achieve this, the dependent variables can be rearranged again so that the order is ascending instead of descending. In this case, the dependent variables that did not receive large percentages appear at the top of the ranking, so they take the lead when choosing new research in the field of specialization "design".

Second results: The results of the research associated with the second hypothesis and states:

"There is a positive correlation between the independent variables, and the dependent variables that have been affected by them, in the field of specialization of 'design' as shown in the titles of scientific theses.

From Table (49) it is clear that:

The number of independent variables that the researchers resorted to to achieve their dependent variables reached (34) independent variables, the following is a presentation of these independent variables in descending order:

1- "Systems, theories and constructiviMessage ": This variable ranked "first" as it was used in the number (46) messages by (15.92%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following "seven" variables:

Decorative design in general (14 letters), decorative painting (14 letters), teaching skills (14 letters), murals (one message), contemporary Arabic calligraphy (one message), achieving some design aesthetics (one message), and developing plastic vocabulary (one message).

2- "Ancient Egyptian Art": This variable ranked "second", as it was used in the number (30) messages by (10.38%) of the total messages of the current research sample, which is (289) messages, and this independent variable has contributed to achieving the following "seven" (7) dependent variables:

Decorative design in general (14 letters), decorative painting (7 letters), teaching skills (4 letters), stories (two letters), murals (one message), behavioral development (one message), and achieving some design aesthetics (one message).

3- "Islamic Art": This variable ranked "second" (repeated) as it was used in the number (30) messages by (10.38%) of the total messages of the current research sample, which is (289) messages, and this independent variable has contributed to achieving the following "six" (6) dependent variables:

Decorative design in general (9 letters), teaching skills (9 letters), decorative painting (4 letters), behavioral development (3 letters), realization of some design aesthetics (3 letters) and murals (2 letters).

4- "Some elements and foundations of design": This variable ranked "third" as it was used in the number (24) messages by (8.30%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following six (6) dependent variables:

Decorative design in general (6 messages), advertising poster (6 messages), achieving some design aesthetics (6 messages), behavioral development (3 messages), logo (2 messages), illustrations (1 message).

5- "Heritage in general": This variable ranked "fourth" as it was used in (22) messages by (7.61%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following five (5) dependent variables:

Decorative design in general (7 letters), advertising poster (5 letters), illustrations (5 letters), logo (3 letters), postage stamp (2 letters).

6- "Contemporary Art": This variable ranked "fifth", as it was used in the number (18 messages) by (6.23%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following four (4) dependent variables:

Decorative painting (9 letters), teaching skills (7 letters), advertising poster (one letter), murals (one letter).

7- "Artistic thought and some artistic methods": This variable ranked "sixth" where it was used This independent variable was behind the achievement of the following three (3) dependent variables:

Design, theories and constructivism (10 letters), advertising poster (3 letters), teaching skills (2 letters).

8- "Popular Field": This variable ranked "sixth bis" (6 m), where it was used in the number (15) messages by (5.19%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following three (3) dependent variables:

Teaching skills (9 letters), decorative painting (5 letters), and the development of plastic vocabulary (one message).

9- Digital Arts and Media: This variable ranked "seventh" (7), as it was used in (11) messages by (3.81%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following four (4) dependent variables:

"Teaching Skills" (4 letters), "Revealing relationships, potentials and characteristics" (4 letters), "Developing a plastic vocabulary" (2 letters), and murals (one message).

10- Characteristics of some works and artistic styles: This variable ranked "seventh bis" (7 m), where it was used in the number (11) messages by (3.81%) of the total messages of the current research sample, which is (289) messages, and this independent variable was behind the achievement of the following two (2) dependent variables:

"Disclosure of relationships, capabilities and characteristics" (7 letters), "Decorative design in general" (4 letters).

11- Educational Courses: This variable ranked eighth (8) where it was used in the number (8) messages by (2.77%) of the total messages of the current research sample, which is (289) messages, and this

independent variable was behind the achievement of the two dependent variables (2). These are: illustrations (7 letters) and teaching skills (one letter).

12- Calligraphy / Arabic calligraphy / writings: This variable ranked ninth (9) as it was used (289) messages, and this independent variable was behind the achievement of only two (2) variables of the associated variables: decorative design in general (4 letters), and teaching skills (3 letters).

13- The educational aspect: This variable ranked ninth bis (9 m), where it was used in the number (7) messages by (2.42%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only two variables (2) of the associated variables: advertising poster (5 messages), play (2 messages).

14- Experimental entries: This variable ranked tenth (10) as it was used in the number (4) messages only by (1.38%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only two variables (2) of the associated variables: decorative painting (3 letters), and the development of formative vocabulary (one message).

15- Preparing designs: This variable ranked tenth bis (10 m), where it was used in the number (4) messages only by 1.38% of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only one dependent variable: "behavioral development (4 messages).

16 - Egyptian and Arab personality traits: This variable ranked tenth bis (10 m) where it was used in the number (4) messages only by (1.38%) of the total messages of the current research sample (289) message, and this independent variable was behind the achievement of one dependent variable only: "the development of vocabulary formation (4 letters).

17- Plant elements: This variable ranked eleventh (11) as it was used in (3) messages only by (1.04%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only one dependent variable: "Decorative design in general" (3 messages).

18- Multimedia: This variable ranked eleventh bis (11 m), where it was used in the number of (3) messages only by (1.04%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only one dependent variable: "advertising poster" (3 messages).

19- Natural forms (systems): This variable ranked twelfth (12) as it was used in the number (2) message only by (0.69%) of the total messages of the current research sample (289) message, and this independent variable was behind the achievement of two dependent variables: the advertising poster (one message), and "the development of formative vocabulary" (one message).

20- Thought and Strategies: This variable ranked twelfth bis (12 m), where it was used in the number (2) messages only by (0.69%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of one dependent variable (1) only is the "logo".

21- Environment: This variable ranked twelfth bis (12 m), where it was used in the number (2) messages only by (0.69%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of one dependent variable (1) only is "murals".

22- Preparation of programs: This variable ranked twelfth bis (12 m), where it was used in the number (2) messages only by (0.69%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only one dependent variable (1) is "behavioral development".

23- Raw material potential: This variable ranked twelfth bis (12 m), where it was used in the number (2) messages only by (0.69%) of the total messages of the current research sample (289) messages, and this independent variable was behind the achievement of only one dependent variable (1) is "disclosure of relationships, capabilities and properties".

24- The formal perception in children's drawings: This variable came in the thirteenth and last place (13) and then the number of (10) independent variables in the same order (13), where it was used in the number (one message) (1) by 0.35%, to be behind the achievement of one dependent variable (1) is the "advertising poster".

25- Cultural variables: This variable participated in the thirteenth place, so its order is (13 m), and it was used in (one message) only (1) by (0.35%), to be behind the achievement of one dependent variable (1) is the "logo".

26- Aesthetic and functional aspects: This variable participated in the thirteenth place, so its rank is (13 m), and it was used in (one message) only (1) by (0.35%), to be behind the achievement of one dependent variable (1) is the "mark".

27 - characteristics of psychological and artistic development: This variable participated in the thirteenth place and therefore its rank (13 m), and was used in (one message) only (1) by (0.35%), to be behind the achievement of one dependent variable (1) is: "stories".

28- Display windows: This variable participated in the thirteenth place, so its ranking is (13 m), and it was used in (one message) only (1) by (0.35%) to be behind the achievement of one dependent variable (1): "offers".

29- Display panels: This variable participated in the thirteenth place, so its order was (13 m), and it was used in (one message) only (1) by (0.35%) to be behind the achievement of one dependent variable (1): "offers".

30- Combining some artistic styles: This variable participated in the thirteenth place, so its order (13 m) and was used in (one message) only (1) by (0.35%) to be behind the achievement of one dependent variable (1): "behavioral development".

31- Problem-solving skills: This variable participated in the thirteenth place, so its rank (13 m) and was used in (one message) only (1), by (0.35%) to be behind the achievement of one dependent variable is "behavioral development".

32- Experimentation: This variable participated in the thirteenth place, so its rank (13 m) and was used in (one message) only (1), by (0.35%) to be behind the achievement of one dependent variable is "disclosure of relationships, capabilities and characteristics".

33- Theatrical presentation: This variable participated in the thirteenth place, so its rank (13 m) and was used in (one message) only (1) by (0.35%) to be behind the achievement of one dependent variable is "achieving some design aesthetics".

34- Graphic Employment: This variable participated in the thirteenth place, so its ranking (13 m) and was used in (one message) only (1) by (0.35%) to be behind the achievement of one dependent variable is "achieving some design aesthetics".

Comment:

After examining the previous results associated with independent variables, and their relevance to dependent variables, a suggestion is that we should take care as design specialists of all independent variables that have not received high percentages.

To achieve this, independent variables can be rearranged again so that the order is ascending rather than descending. In this case, independent variables that did not receive large percentages appear at the top of the ranking, so they take the lead when selecting new research in the field of specialization "design".

Third results: The results of the research associated with the third hypothesis states:

"There is a positive correlation between dependent and independent variables, and between the research plans of the "design" discipline.

First of all: Areas of the research plan of the Department of Art Education A strategic model for the research topics of the design subject, Department of Art Education, Ain Shams University, and its relationship to the variables of scientific theses.

1- Research Points:

A- Decorative design and its relationship to nature.

B- Design and ancient Egyptian artistic heritage.

c. Design, modern fields, and contemporary arts.

D- Aesthetic and plastic values and the development of innovative capabilities in the field of design.

2- Classification of previous research points into dependent and independent variables: The researcher believes that the previous research points can be classified into the following dependent variables and independent variables as in Table (50):

Table (50)

Independent variable	Dependent variable		M
Nature	Design	Decorative design	A
Ancient Egyptian artistic heritage	Decorative	Design	in
Modern Fields/Contemporary Arts	Innovative	Design	C
Aesthetic and plastic values		Innovative Design	D

From the previous table (50), it is clear that:

1- As for the variables of the research plan at Ain Shams University in light of the researcher's findings:

The dependent variables were confined to the term "design", or decorative design or innovative design, and these terms as a dependent variable are not specified as a clear procedural definition that can be measured, and this is what the researcher also noted when he found that the first sub-dependent variable of the first main dependent variable that he reached in the current research is: "Design in general", and repeated wording in the number (71) message by (24.67%) of the number of messages of the research sample (289) message, and the wording is supposed to be determined: Design what: decorative painting, covers, advertising... etc. and the follower of the dependent variables reached by the current research finds (5) main dependent variables The first main variable contains (12) sub-dependent variables, and the second main variable contains (2) sub-dependent variables, meaning that the dependent variables have a total of (17) as in Table (49), which is the decorative design in general (71) messages by (25%) The decorative painting (42 messages) by (14.53%), the advertising poster (25 messages) by (8.65%), and illustrations (13 messages) by 4.49%, logo (8 letters) (2.77%), murals (8 letters) (2.77%), stories (3 letters) (1.04%), postage stamp (2 letters) (0.69%), mark (1 message) (0.35%), contemporary Arabic calligraphy (one message) (0.35%), entrances to teaching (59 messages) (20.42%), behavioral development (15 messages) 5.19%), detection of relationships, capabilities and characteristics (14 messages) (4.84%), achieving some design aesthetics (13 messages) (4.49%), and developing Plastic vocabulary (10 letters) by (3.46%).

Comment:

The research plan in the Department of Art Education, Faculty of Specific Education, Ain Shams University, must contain all dependent variables and are characterized as specific, diverse (as previously presented), formulated in procedural formulation.

2- For the independent variables in the research plan at Ain Shams University in light of the researcher's findings:

The independent variables in the research plan at the Faculty of Specific Education at Ain Shams University can be classified into five independent variables (see Table 50) as number (c) in the table contains two variables, all of which were reached by the researcher in his current research, and a number of independent variables remain that the researcher found and did not refer to the research plan, such as: Islamic art (30 messages) by (10.38) Some elements and foundations of design (24 messages) by (8.30%), the popular field (15 messages) by (5.19%), and experimental approaches (4 messages) by (1.38%), the formal perception in children's drawings (one letter) by (0.35%), the educational aspect (7 letters) by (2.42%), educational courses (8 letters) by (2.77%), and the preparation of programs (2 letters) by (0.69%).

Comment:

The research plan in the Department of Art Education at the Faculty of Specific Education at Ain Shams University must contain more independent variables, although they are generally formulated.

Second: The areas of the research plan for the Department of "Decorative Designs" at the Faculty of Art Education, Helwan University and their relationship to the variables of scientific theses.

1 - Research points (4 axes):

The second axis: theories, design schools and modern and contemporary trends 1- Studies in design schools and modern and contemporary trends and benefit from them (3 PhD - 2 Master). 2- Environmental design and design values in the environment and the Egyptian street (3 PhD - 2 Master). 3- Design between heritage and contemporary (3 PhD – 2 Masters). 4- The film image and its impact on contemporary design (2 PhD - 2 Masters). 5- Design, scientific theories and openness to cultural variables (2 PhD – 1 Master). 6- Design phenomena and values in the light of scientific research and theories (2 PhD – 1 Master). 7- Design in the light of visual perception variables (2 PhD - 2 Master). 8- Trends of modern and contemporary experimental thought in visual arts (2 PhD - 2 Masters). 9- Design and Contemporary Conceptual Art (3 PhD – 2 Masters). 10- Philosophical thought and analytical and experimental perspective of nature and its applications in decorative and graphic design (2 PhD - 1 Master).	The first axis: Developing courses in the field of design in the light of contemporary theories and trends 1- Introducing new courses in the field of decorative designs (3 PhD - 2 Masters). 2- Design of courses and e-books in the field of graphic and decorative designs (2 PhD - 2 Master) 3- Design and the problems and issues of education in the basic stages. (2 PhD – 2 Masters). 4- Design and its applications in field education (1 PhD - 2 Master). 5- Employing modern technologies and media in the field of graphic and decorative designs (1 PhD - 3 Master). 6- Designing educational toys for pre-school children and basic education (1 PhD – 2 Masters). 7- Beautification of educational institutions in light of the link with the environment and the rooting of identity (2 PhD - 3 Master). 8- Employing the aesthetic and plastic components of Arab and foreign calligraphy in design and publications (1 PhD – 3 Master).
Fourth Theme: Design in the Light of Renewable Materials and Media 1- Experimentation and synthesis of raw materials and renewable materials in the field of design and decorative painting (1 PhD - 2 Master). 2- Design and manual treatments are the basis for building experience in design (1 PhD – 2 Master). 3- Employing electronic technologies and their renewable media in the field of advertising	Third Theme: Design and Partnership Community 1- The aesthetics of design and its role in public awareness and general culture (1 PhD - 2 Master). 2- The culture of sign and image between East and West (2 PhD – 1 Master). 3- Design and field community problems and issues (2 PhD – 3 Master).

communication (2 PhD - 2 Masters).	4- Studies in the needs of the labor market and related institutions and bodies (2 PhD - 2 Master).
4- Design of contemporary graphic publications "logo, mark, poster and advertising). (2 PhD - 3 Masters)	5- Studies in folklore and national heritage in renewed and contemporary visions (2 PhD - 2 Masters).
5- Preparing and directing the educational and cultural book and its illustrations using contemporary techniques (1 PhD - 3 Master).	6- Design of virtual museums (2 PhD).
6- Employing digital programs in the field of graphic design, advertising and decorative painting (1 PhD - 2 Master).	7- Beautification of buildings, bridges and squares and facing visual pollution (1 PhD - 2 Master).
7- Design and Electronic Arts (2 PhD - 2 Masters).	8- Studies for people with special needs and gifted people and the development of creativity and innovation (2 PhD - 2 Masters).
8- An experimental study in fixed and mobile design. (2 PhD - 1 Master).	9- Analytical and comparative studies of the arts of different civilizations (1 PhD - 2 Masters).
9- Interactive design using modern technologies. (2 PhD - 2 Masters).	10- Design and Sustainable Development (2 Masters).
	11- Design and Development of Small Projects (2 Masters).

Commentary on the four main axes of the research plan, where "design" played the role of the dependent variable in axes 1, 2, 4 while it played the role of the independent variable in axis No. 3, and the following is a comment on these axes:

For the first theme: "Developing courses in the field of design in the light of contemporary theories and trends"

A- It is noted that the design here is the dependent variable, while the independent variable is found in "Contemporary Theories and Trends".

B- It is also noted that the scientific theses (research sample) stated these independent variables such as:

* "Systems, Theories and Constructivism" (46) theses (15.92%) and the first place.

* "Contemporary Art" (18 letters) with a percentage of 6.23% and fifth place.

* "Educational Courses" (8 letters) by (2.77%) and the eighth ranking.

C- The researcher believes that the research points for this axis (first) included topics far from the title of the axis itself, and these points are numbers (5), (7), and (8):

No. (5) we recommend that it fall under the fourth axis "Design in the light of renewable materials and media", as it talks about "employing modern technologies and media in the field of graphic and decorative designs".

No. (7) talks about "beautifying educational institutions in light of the link to the environment and rooting identity" and therefore it is suitable to fall under the third axis: "Design and community partnership".

As for the number (8), it talks about "employing the aesthetic and plastic elements of Arab and foreign calligraphy in design and prints", and it could have fallen under the number (1), or (2), which talk about new courses in the field of decorative designs.

D- In the end, this axis is the only one most relevant to the field of application of design in the field of education.

For the second theme: "Theories, design schools and modern and contemporary trends"

A- It is noted that there are independent variables (schools / directions, ...) and there are no dependent variables such as the design or any branch of it, such as decorative painting or murals, for example.

B- The title of the second axis is similar to the title of the first axis, as both titles included a similar independent variable, which is "contemporary theories and trends", but the first axis included a dependent variable, "courses in the field of design", and the second axis did not include any dependent variable, and this was left to the research points it contains in order to clarify some of these dependent variables.

C- The follower of the research points included in this axis finds that there are dependent variables that came implicitly in the formulations, including the following examples:

* Research point No. (1): "and benefit from it" was mentioned as the dependent variable.

* Research point No. (2): The design came as a dependent variable of an independent variable, the environment.

* Research point No. (4): The design came as a dependent variable of an independent variable is the film image.

D- Compared to the variables stated in the current research sample, the researcher believes that all research points that fall under the second axis have been represented in the titles of the research sample messages in an implicit or explicit manner.

For the third theme: "Design and Community Partnership":

A- It is noted here that "design" is the independent variable, and that the community partnership is the one that includes the variable or dependent variables, with design here is the influential factor in the research points that fall under the third axis, such as: - Public awareness - general culture - solving the problems and issues of society in the field, and the needs of the labor market - designing virtual museums, developing innovation, dealing with people with special needs, and developing small projects).

B- The researcher did not notice the achievement of this axis to a sufficient extent in the scientific theses of the current research sample, as the environment as an independent year was represented only in the number (2 theses) by (0.69%) of the number of theses of the research sample.

Therefore, the researcher believes that this axis will be activated more in future research.

For the fourth theme: "Design in the light of renewable materials and media".

A- It is noted that the design in the title of this axis also played the role of the dependent variable, while the independent variable is the raw materials and renewable media.

B- The follower of the research points that fall under the fourth axis finds that the design has maintained its role as a dependent variable affected by a set of independent variables such as:

- Synthesis of hand-treated materials, employment of electronic technologies and their renewable media, employment of digital programs, modern technologies...

C- Looking at the results reached by the researcher in the current research related to this axis, it is clear that:

* "Experimental entries" (4 messages) by (1.38%) and the tenth rank.

* "Multimedia" (3 messages) by (1.04%) and eleventh rank.

* "Digital Arts and Media" (11 messages) with a percentage of (3.81) and seventh place.

* "Raw Potential (2 letters) (0.69%) and twelfth rank.

* "Graphic Recruitment" (one message) by (0.35% and the thirteenth and last rank.

D- In light of the above, we find that (21) messages have dealt with the fourth axis, i.e. (7.27%), and this percentage does not represent 25%, considering that the fourth axis represents 25% of the research plan, and the researcher believes that attention should be paid to this axis in future studies.

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