

## **Future Thinking of University Students**

By

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### **Abstract**

The current research aims to identify the following: 1. The degree of future thinking among university students 2. The significance of the statistical differences for the future thinking of university students according to the variables of gender (male - female) and specialization (scientific - human) In order to achieve the objectives of the current research, the researcher has adopted MacLeod's Future Thinking Scale (2005), and the statistical analysis sample consisted of (400) students from Wasit University distributed over (4) faculties of scientific and humanitarian specializations for the academic year (2021-2022) who were chosen. The stratified random method and the proportional method, and the data were collected and processed statistically, and the following results were reached: 1. The university students have a high future thinking 2. There are no statistically significant differences in students' future thinking according to the variables of gender (male - female) and specialization (scientific - human).

**Keywords:** forward thinking, university students

### **First: the research problem**

The educational reality today is witnessing great challenges, and they are challenges that researchers in the educational field expect to increase in the coming years, and what is required is to create a student who possesses the skills and mechanisms that will help him to overcome or confront these challenges and problems and deal with them in proportion to the nature of this problem, but the reality indicates a dispute. This is through the traditional practices of the student in terms of memorization and indoctrination, which has become an educational ritual in most educational institutions. Low future thinking, in turn, makes the student frustrated and unable to open up to experiences and pessimistic about the future. These negative and other effects will lead the student to weak activity and motivation, not to mention his negative perceptions that will be formed The future thinking is the motivator for the student, and it is the thinking that enables the student to form skills that help him to anticipate and prevent crises, set goals and devise future treatments through a strategy and vision of the present (Al-Feki, 2008: 5).

This made the researcher feel that the cause of the problem suffered by most students in general and university students in particular, as they lack awareness, planning and future thinking, and their inability to take future decisions in various areas of life. The reason for this is that they are not educated in a way that depends on using their abilities to organize their own learning process, that is, they use deaf preservation of information even without realizing its meaning and effects in most cases.

In light of the foregoing, the problem of the current research is determined by the university students' lack of knowledge of future thinking, which prompted the researcher to do this study, and accordingly, the current research came as a scientific attempt to answer the following question:

*(What is the level of future thinking among university students)*

*Second, the importance of research*

The scientific and technological revolution led to a transformation in human life and the manifestations of his civilization, as education is the main driver of this revolution, in addition to the interest of both developed and developing countries with students and devoting efforts and allocating funds to the education sector because of its importance in providing society with educated individuals, so they took care of the student segment because it is a natural wealth. If we want the progress and development of countries, we must look to the minds of students and support them with care, attention and development for the advancement of society (Al-Bataineh, 2007: 41).

The study of Macleod and Salaminiou (Macleod & Salaminiou, 2001), which aimed to know the relationship between forward thinking and cases of depression during the study, referred to the psychological processes resulting from future expectations, as they provide us with evidence about potential therapeutic interventions to improve feelings of psychological well-being in troubled people and reduce feelings of psychological well-being in troubled people. Feelings of stress (Macleod & Salaminiou, 2001:101).

Given the importance of future thinking, the United States Committee on Education Policy declared in 1961 that the primary goal of education is to develop the ability to think about the future among students, as well as a growing interest in future studies. Including the "Seventh International Conference on Thinking and Future Studies in 1997" in Singapore, which recommended attention to preparing a generation capable of facing the challenges of the future (Nawfal, 1997: 220).

*Third: Research Objectives*

The current research aims to identify:

- 1- The degree of future thinking among university students.
- 2-The significance of the statistical differences of future thinking among university students according to the variables of gender (male-female) and specialization (scientific-human).

*Fourth: The limits of the research*

The current research is determined by the students of Wasit University for scientific and humanitarian specializations for the morning study of both sexes for males and females for the academic year (2021-2022).

*Future Thinking*

defined by: **Macleod (2005):** It is "the individual's ability to think about oneself and future events through the individual's imagining of himself in the future, planning and building mental representations about the future and addressing his future expectations" (Macleod, 2005; 357).

*Theoretical definition*

The researcher has adopted MacLeod's (2005) theoretical definition in order to adopt MacLeod's theory as a theoretical framework for the current research.

### *procedural definition*

It is the total score that the sample members will obtain when answering the paragraphs of the future-thinking scale prepared for that purpose

## **The second chapter**

### *theoretical framework and previous studies*

#### *The concept of futuristic thinking emergence and development*

The emergence of futuristic thinking dates back to the beginning of the current century, through techniques related to the emergence and development of science in general, and future sciences in particular, and in (1943) is the first appearance of the German scientist Ossip Flechtheim and his use of the term “future thinking” for the first time, and the foundations of the French philosopher Gaston Burger was the first center for futuristic thought studies in (1961) and the British scientist Denis Gabor published his well-known writing, *Inventing the Future*, then the Seventh International Conference on Futuristic Thinking was held in Paris in 1965, at the invitation of the scientist Bertrandi, and in 1967 The American scientist Cornish founded the first group for futuristic thinking, which included ten thousand members, and the association published a book entitled “The Orientalism of the Future” and then in different countries of the world, many research centers were established for future thinking (Toffler, 1970:21).

After that, studies began to appear increasingly, and the psychologist MacLeod and his colleagues wrote more about him in the light of the innovation of the task of thinking about the future, which requires the individual to have the ability to think about future experiences that are likely to occur, and he found in the study of MacLeod and his colleagues that there is a theoretical overlap between Future thinking and the dimensions of optimism and pessimism, as optimism enhances both motivation and successful performance, while pessimism decreases both motivation and successful performance in thinking about the future (Macloed et al, 1997; 972).

#### *Theories that dealt with future thinking with interpretation*

##### *Andrew Macleod's 2005 theory*

MacLeod is one of the most important psychologists and the most prominent professor of clinical psychology at the University of Royal Holloway in London, and he is one of those who care a lot about people’s thinking about the future. planning for himself, and predicting the events that happen to him, whether in the family or the study, as well as predicting the roles he will play in the future and the gains he will achieve, and how to remove the obstacles that will stand in his way. and events that do not exist in the external world (Macloed, 1994, p: 633).

MacLeod indicated that individuals have a tendency to achieve their future goals as it is a necessity for their psychological well-being. It allows the emergence of a feeling of psychological well-being based on the individual’s expectation of positive results that may occur in the future, and this feeling gives individuals comfort and reassurance and their ability to direct their focus and attention towards preoccupation and striving to achieve valuable goals that they believe are likely to occur and achieve in the future through planning (Macloed & Clare, 2007, p: 360).

Through his study, MacLeod found that future thinking is closely related to the age stage. Adolescents and young people face a number of duties and normative rules set by parents, peers, and teachers. Young people are more motivated to make decisions according to

their future thinking, such as decisions related to their universities, their lifestyle, and their life partners, which It decisively affects their later lives, and this may lead to the emergence of some types of behavior in young people when the future results are disappointing, such as drug addiction, suicide attempt, and delinquency. p:79).

#### ***Previous studies that dealt with forward thinking***

***Study (Al-Momeni and Naim, 2013)***, which aimed to reveal the level of future thinking among the students of the University of Jordan, and the results showed that the level of future thinking among university students was low among the least motivated students. (Al-Momeni and Naim, 2013, 173-185)

***Aziz's study (2018)*** indicated that the goal orientations and their relationship to the future thinking skills of university students were known, and the sample reached (400) male and female students. For each skill "expectation, prediction, mental perception", and there are statistically significant differences for the gender variable for the two skills "expectation, prediction" in favor of males, and there are also statistically significant differences for the variable of the study stage for the skill "expectation" and in favor of the fourth stage, there is a positive correlation between goal orientations and future thinking skills (Dear,2018)

## **Chapter Three (Research Methodology and Procedures)**

### ***First: Research Methodology***

The researcher has adopted the descriptive associative approach, which is based on the observation and interpretation of the phenomenon, being an appropriate approach to the nature of the objectives of the current research.

### ***Second: Research Population***

The research community means all individuals or elements that share one or more characteristics that distinguish it from the rest of the societies through which the researcher seeks to generalize the results of the study (Al-Jabri and Sabri, 2013: 178).

### ***Third: Research Sample***

The sample is a model that includes a part of the units of the original community concerned with research and study and is representative of it. Choosing the sample is necessary because it enriches the researcher to study all the units of the original community and its vocabulary (Kandilji, 113:1993).

### ***Fourth: Research Instruments***

The accuracy and validity of the research information and the reliability of its results depend on the tool on which it is relied on in collecting the information. Daoud and Abdel Rahman, 1990:22) In order to verify the objectives of the current research, the researcher adopted MacLeod's Forward-Thinking Scale (2005).

### ***Future Thinking Scale***

Before adopting any scale to define future thinking among university students, the researcher reviewed the literature and previous studies that were concerned with identifying future thinking. A paragraph divided into three areas, represented in the first field planning for the future, consisting of (14) paragraphs, the second field future expectations, consisting of (16) paragraphs, and the third field building mental representations about the future, consisting of (14) paragraphs.

### ***The validity of the paragraphs of the scale***

The researcher presented the future thinking scale to a group of arbitrators with solid

scientific titles, who are specialized in educational and psychological sciences, in order to estimate the validity of the paragraphs, with the proposal of appropriate modifications.

***Experience the clarity of the instructions and paragraphs of the scale***

For the purpose of identifying the clarity of the scale's instructions, the researcher applied the scale to a sample of (40) male and female students, who were chosen randomly.

***Experimenting with the statistical analysis of the paragraphs of the future thinking scale***

In order to be able to analyze the paragraphs of the future thinking scale, we must do the following:

***A- Contrasted Groups***

It is the first step in this procedure by withdrawing a random sample from the research community, where the sample amounted to (400) male and female students from the departments of the faculties of Wasit University. Descending form (Al-Zobaie et al., 1981: 74).

It turns out that all paragraphs are distinct because their calculated t-values are higher than the tabular t-value of (1.96) at the level (0.05) and the degree of freedom (214) except for paragraph (26).

***B- The relationship of the paragraph's score with the total score of the scale***

This procedure is called internal consistency, which indicates the extent to which the content of each paragraph is consistent with the total content of the scale. p; 286).

***Validity of the paragraphs of the future thinking scale using the method of the relationship of the degree of the paragraph with the total degree of the scale***

	Correlat ion Paragr aph	Indicat ion coefficie nt value									
Signific ant	0.39	34	Signific ant	0.23	23	Signific ant	0.39	12	Signific ant	0.38	1
Signific ant	0.36	35	Signific ant	0.40	24	Signific ant	0.39	13	Signific ant	0.40	2
Signific ant	0.31	36	Signific ant	0.39	25	Signific ant	0.45	14	Signific ant	0.37	3
Signific ant	0.38	37	omitted in the distinction		26	Signific ant	0.48	15	Signific ant	0.17	4
Signific ant	0.23	38	Signific ant	0.35	27	Signific ant	0.45	16	Signific ant	0.41	5
Signific ant	0.28	39	Signific ant	0.43	28	Signific ant	0.39	17	Signific ant	0.43	6
Signific ant	0.45	40	Signific ant	0.42	29	Signific ant	0.40	18	Signific ant	0.41	7
Signific ant	0.44	41	Signific ant	0.40	30	Signific ant	0.20	19	Signific ant	0.39	8
Signific ant	0.20	42	Signific ant	0.40	31	Signific ant	0.35	20	Signific ant	0.38	9
Signific ant	0.29	43	Signific ant	0.43	32	Signific ant	0.43	21	Signific ant	0.25	10
Signific ant	0.44	44	Signific ant	0.44	33	Signific ant	0.38	22	Signific ant	0.50	11

### ***C- Relationship of the degree of the field to the other fields of the scale***

This procedure is directed towards answering an important question: Do the domains of the scale really measure what the scale aims for? Are these areas linked together in a coherent manner, so that they all represent future thinking? They all measure the homogeneity of the scale factors and help determine the area of behavior to be measured (Anastasi, 1976; p 155).

#### ***The validity of the future thinking scale using the domain-to-domain relationship method and other domains***

<b>Future thinking</b>	<b>Building mental representations</b>	<b>future expectations</b>	<b>Planning for the future</b>	<b>the field the field</b>
<b>0.79</b>	<b>0.41</b>	<b>0.53</b>	<b>1</b>	<b>Planning for the future</b>
<b>0.87</b>	<b>0.58</b>	<b>1</b>	<b>--</b>	<b>future expectations</b>
<b>0.79</b>	<b>1</b>	<b>--</b>	<b>--</b>	<b>Building mental representations</b>

### ***D- Standard characteristics (psychometrics) of the Forward-Thinking Scale***

#### ***Face Validity***

This was done by presenting the scale to experts and arbitrators in the field of education and psychology.

## **Construct Validity**

It was extracted by the method of the two extreme samples, the relationship of the paragraph with the total degree of the scale, the relationship of the paragraph with the total degree of the field, the relationship of the degree of the field with other fields, and confirmatory factor analysis.

#### ***Scale stability***

The stability was extracted using the alpha-Cronbach equation and the test and retest method (0,85), which is a good and acceptable value.

### ***Chapter Four (presentation and interpretation of results)***

#### ***The first goal: the degree of future thinking among university students.***

To achieve this goal, the researcher applied the future thinking scale to the research sample members of (400) male and female students, and the results showed that their average score on the scale amounted to (159.70) degrees and a standard deviation of (19.55) degrees, and when balancing this average with the hypothetical average ( ) For the scale of (129) degrees, and using the t-test for one sample, it was found that the difference was statistically significant and in favor of the arithmetic mean, as the calculated t-value of (31.41) was higher than the tabular t-value of (1.96) with a degree of freedom (399) and a level of freedom (399). significance (0.05).

#### ***The t-test for the difference between the sample mean and the hypothetical mean of the Forward-Thinking Scale***

<b>Indication level</b>	<b>Freedom Degree</b>	<b>Tabular T-value</b>	<b>Calculated T-value</b>	<b>hypothetical mean</b>	<b>Standard deviation</b>	<b>SMA</b>	<b>Sample volume</b>
<b>Significant</b>	<b>399</b>	<b>1.96</b>	<b>31.41</b>	<b>129</b>	<b>19.55</b>	<b>159.70</b>	<b>400</b>

It is clear from the results of the first goal presented in the table above that the future

thinking of the research sample is higher than the hypothetical average of the scale scores, that is, the university students enjoy a high level of future thinking. This result can be explained in light of what was put forward by Andrew MacLeod's theory, as MacLeod indicated through his study that future thinking is closely related to the age stage. According to their future thinking such as decisions about their universities, lifestyle, and life partners that decisively influence their later life (Macloed & Byrne, 1996: 79).

And the study (Haveren, 2004), which indicated that future thinking has a relationship with the type of thinking for events, whether positive or negative for the student, and that it has an impact on forming a feeling of satisfaction, distinction and success among students.

## The second objective

*The significance of the statistical differences for future thinking among university students according to the variables of gender (male-female) and specialization (scientific-human).*

To achieve this goal, the researcher extracted the values of Pearson's correlation coefficients for future thinking for males and females separately, and then the researcher used the Z test for Pearson's correlation coefficient to reveal the significance of the differences.

*The results of the statistical test for differences in future thinking according to the gender variable*

Indication level(0.05)	tabular z value	Calculated Z value	The standard value of the correlation coefficient Zr	correlation coefficient r	N. O	Gender	Variable
Non-significant	1.96	0.24	0.46	0.43	217	Male	Future thinking
			0.436	0.41	183	Female	

The result of the above table indicates that there is no statistically significant difference in future thinking according to gender (males/females), because the calculated value is less than the tabular value of (1.96) at the (0.05) level.

As for the specialization, and to achieve this goal, the researcher extracted the values of the Pearson correlation coefficients for future thinking for the scientific and human specialization, each separately.

*The results of the statistical test for differences in the relationship between forward thinking according to the specialization variable*

Indication leve(0.05)	tabular z value	Calculated Z value	The standard value of the correlation coefficient Zr	correlation coefficient r	N. O	Major	Variable
Non-significant	1.96	1.67	0.523	0.48	222	scientific	Future thinking
			0.354	0.34	178	Humanitarian	

The result of the above table indicates that there is no statistically significant difference in future thinking by specialization, because the calculated value is less than the tabular value of (1.96) at the level (0.05). The researcher sees, through the results of the above table, that the absence of statistically significant differences according to the variable of specialization (scientific - human) is due to the fact that future thinking does not develop and is formed by factors of abstract scientific thinking, or that the type of curricula have a role in shaping future thinking as a variable depends in the basic form On the individual's motivation and ability to

think and obtain information, not specialization.

## **Recommendations**

Based on the results of the current research, the researcher recommends the following:

1. Benefiting from the future thinking scale, which the researcher adopted according to the theory (MacLeod 2005) as a modern tool to identify and measure future thinking, especially that the scale was developed for Iraqi university students.
2. Organizing lectures and workshops explaining the importance of future thinking for students and how to develop it.

### ***Suggestions:***

The Suggestions: With the results of her current research, the researcher proposes to do the following studies

1. Conducting studies similar to the current study on different age groups.
2. Conducting a training study to develop the future thinking skills of university students.

## **Sources and references**

1. Batayneh, Osama Muhammad (2007) Psychology of the Abnormal Child, 1st Edition, Al Masirah House for Publishing and Distribution, Amman, Jordan.
2. El-Feki, Ibrahim (2008): The Power of Thinking Series, Al-Raya Publishing House, Cairo, Egypt.
3. Kandilji, Amel Ibrahim (1993): Scientific Research and the Use of Information Sources, Al-Mustansiriya University, Baghdad.
4. Al-Momeni, Muhammad Ahmad and Naim, Mazen Mahmoud (2013): Future thinking among the students of the University of Jordan, Volume (9), Issue (2), 173-185.
5. Nofal, Muhammad Nabil (1997): Visions of the Future: Society and Education in the Twenty-first Century, The Arab Journal for Development, Towards Future Visions for Education in the Twenty-first Century, Special Issue, Volume Seven, Issue One (220).
6. Watfa, Ali and Majidel, Abdullah (1996): The structure of interactive communication between students and teachers at the University of Damascus, Maad Publishing House, Syria.
7. Aziz, Zahra Hazem (2018): Goal orientations and their relationship to future thinking skills among university students, an unpublished master's thesis, College of Education for Girls, University of Baghdad.
8. Al-Zawba'i, Abdul-Jalil and Bakr, Muhammad Elias and Al-Kinani, Ibrahim Abdul-Hassan (1981): Psychological Tests and Measures, Ministry of Higher Education and Scientific Research, University of Mosul
9. Van Dalen, Duo U LDB (1985): Research Methods in Education and Psychology, translated by Nabil Nofal and others. 3rd floor, Anglo-Egyptian Library, Cairo - Egypt.
10. Daoud, Aziz Hanna and Abdul Rahman, Anwar Hussein (1990): Introduction to Research Methods, Higher Education Press, Baghdad - Iraq.
11. Al-Jabri, Kazem Karim and Sabri, Daoud Abdel Salam (2013): Scientific Research Methods, House of Books and Documents, Baghdad - Iraq.
12. Anastasi A (1976): Psychological Testing. New York the Macmillan, Company. ASCD, Alexandria, VA.

13. MacLeod, Andrew. K., & Clare Conway (2007): Well-being and positive future thinking for the self-versus others, *Cognition and emotion*, 21 (5), 1114\_1124.
14. MacLeod., Byrne, A., & Valentine, J. D. (1996): The specificity of autobiographical memory and imageability of the future, *Memory& Cognition*, 24(1), 116–125.
15. Macleod, (2005): Well-being and the anticipation of future positive experiences: The role of income, social networks, and planning ability, *Cognition and emotion* 19 (3), 357-374.
16. Lindquist, E.F., (1957): *Statistical analysis in educational research*, Boston, Mifflin. No.3, p.p.69-76.
17. MacLeod, Andrew. K., & Salaminiou, E. (2001): Reduced positive future-thinking in depression: Cognitive and affective factors. *Cognition and Emotion*, 15(1), 99-107.
18. Toffler, A. (1970): "Future School", New York, Random House.