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The Implementation of the Bologna Process Requires Organizational Changes at the Imam Ja`afar Alsadiq University

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Abstract
The current research aims to study the impact of Bologna Path in the implementation of organizational changes according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna path requires changes in the organization.

Keywords: Bologna path, Imam Ja`afar Alsadiq University, Technical Colledge, SPSS

1. Introduction

1.1. The nature of the problem

What are the point views of the first-stage students of the Department of Communications Technology Engineering at the Technical College at Imam Ja'far Alsadiq University (pbuh) on using the Bologna Path in the implementation of organizational changes?

1.2. Previous work

There are more alot of previous works about the students` views on bologna path, some of them are

1. Abdaljalil M. Hamad & Rusol A. Mohammed [1], studied the impact of Bologna Path in the access of educational content to students despite the weakness of the internet infrastructure according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna path does n`t prevent the access of educational content to students despite the weakness of the internet infrastructure.
2. Abdaljalil M. Hamad [1], Studied the Impact of Bologna Track on the following and Communication With Teachers at Imam Ja`afar Alsadiq university. The research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one question, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna Track increases the following and comminications with teacher.
3. Abdaljalil M. Hamad [2], Studied the Impact of Bologna Process on the learning proficiency of students at Imam Ja`afar Alsadiq university. The research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one question, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna process increases the students` learning proficiency.

4. Abdaljalil M. Hamad [3], studied if the Bologna process helps to complete teaching activities faster than the traditional method according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna process helps students to complete teaching activities faster than the traditional method.
5. Abdaljalil M. Hamad [4], studied if the Bologna process is useful in education according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna process is useful in education for students.
6. Canmei Xu *@ et al*. [5], studied the cultural universality and specificity of teacher-student relationship in Belgian, Chinese, and Italian primary school teachers, the manifestations of TSR varied across countries, highlighting the influence of cultural factors such as cultural norms, collectivistic versus individualistic values, and the perceived legitimacy of teacher authority. These findings shed light on the complexities of TSR across countries and emphasize the significance of culturally sensitive approaches in fostering positive TSR in education.
7. Li, Jiahul [6], deduces the student-centered concepts, summarizes teachers' practical experiences in promoting students' competency development, and analyzes the role of activities, delivery, assessment, and institutional support, developing a holistic understanding. The findings provide nuanced theoretical insights into the global literature on "how to foster the students with competence during the student-centered course" and offer practical suggestions for realizing the effective student-centered approach in the institutional course.
8.Anna Di Norcia, *@ et al*. [7], employ the scale of Value from Pictorial Assessment of Interpersonal Relationships (PAIR) to investigate the links between the importance attributed by primary students to their teachers and two independent measures of scholastic wellbeing, provided by teachers and parents. the recognition of the teacher's role as an authority figure does not hinder a warm student–teacher relationship and impacts positively on school adjustment. In situations of Distress, dependent pupils showed a diminished appreciation of the teacher's importance, possibly as a result of a defensive stance.
9. Abduljaleel M. Hamad [9], studied the impact of Bologna Path in the new student`s skills required, according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna path requires students to learn new skills
10. Abdaljalil M. Hamad & Rosul A. Mohammed [10], Studied the Impact of Bologna Track on using alongside traditional education without intersecting at Imam Ja`afar Alsadiq university. The research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one question, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna Track can be used alongside traditional education without intersecting.
11. Abduljaleel M. Hamad [11], studied the impact of Bologna Track in strengthening the teacher-student relationship according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (IJSU) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of on equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna process increases the strength of teacher-student relationship.
12. Abdaljalil M. Hamad & Rusol A. Mohammed [12], studied the impact of Bologna Path in training students to use the computer program dedicated to this,according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna path requires students training to use the computer program dedicated to this.
13. Abdaljalil M. Hamad & Rusol A. Mohammed [13], studied the impact of Bologna Path in the compatibility of traditional and e-learning, according to the openions of students of the Technical College at Imam Ja'far Alsadiq University (Ijsu) - Baghdad - Iraq, the research sample consisted of (109) male and female students from the Department of Communications Technology Engineering, and a questionnaire was prepared for that consisted of one equestion, and the indicators of their validity and stability were verified, then the data were processed statistically using the statistical SPSS computer program, and the results indicated that the application of the Bologna path requires a compatibility of traditional and e-learning.

1.3 Purpose and the contribution

The researcher in the current research aims to identify the consideration of students of the first stage in the Department of Communication Technology Engineering about the training students requires the compatibility of traditional and e-learning, when using Bologna Path in university education, as the first experience in Iraq, and this research will contribute to promoting the use of this process or not in the future.

2. Theoritical Part

2.1 Bologna Path

Imam Ja`far Alsadiq University (IJSU) is a public university in Iraq that has started implementing the Bologna Track in 2023. On June 19, 1999, educational ministers from 29 different European nations signed an agreement in the Italian

city of Bologna that would become known as the Bologna track [8]. The process seeks to promote a higher education system in Europe that is both internationally competitive and globally appealing.

2.2 Methodology

In this study, a questionnaire was used. It had only one question, it was "Does using the Bologna track require training students to use the computer program dedicated to this!?". This question was take from some quastionnaires ordinary used to test the activities of any university education process.

2.3. Participants of the Study

109 student of both genders (male and female) in communications technical engineering department of technical colledge at Imam Ja`afar Alsadiq university involved in the study during the academic year 2023- 2024. All the participants were engaged in Bologna path; and consented to respond the question in the study.

2.4 Data collection and data analysis

A survey was used to gather the necessary information. Data were examined using a 5-point Likert scale (I do n`t agree at all, I do n`t agree, unaligned, I agree, I completely agree) that was derived from the researcher-created scale.

2.5 SPSS computer Program

The IBM® SPSS® software platform offers advanced statistical analysis, a vast library of machine learning algorithms, text analysis, open-source extensibility, integration with big data and seamless deployment into applications. Its ease of use, flexibility and scalability make SPSS accessible to users of all skill levels. What's more, it's suitable for projects of all sizes and levels of complexity, and can help in finding new opportunities, improve efficiency and minimize risk [14]

3. Practical Part

A questionnaire was prepared in the previously mentioned way, and it was distributed to the students of the first stage in the Department of Communications Technology Engineering, and after filling it out by them, it was entered into the SPSS program for statistical analysis, according to the following steps:

1. The SPSS computer program is excuted.
2. Clicks File, then New, then Data, then Save, and the results file is named result pdf.
3. Select Variable view and the required information is filled in the name field. Let the name is "Q".
4. In the label list, the question is written.
5. From the value menu, click on value labels and write the 1st option (1. I do not agree at all). Then click add.
6. Then click on Repeat the process for the rest of the choices (2. I do not agree), (3. Unaligned), (4. I agree) and (5. I completely agree). Then click OK.
7. Click Variable view, and write the selection number of all participants (109).
8. Click on the question, select the question, click on the arrow to transfer the question to the other side, click statistics.
9. Point the options, then continue
10. Click charts, then point the histograms, then show normal curve on histograms, then continue
11. Choose analyze, then descriptive statistics, then explore
12. Choose number, then click on the arrow to transfer the number to the dependent list, then choose the question, then click the 2nd arrow to transfer the question to the factor list, then click statistics, the explore interface will occure.
13. Point all options, then continue
14. Return to explore list, choose plots, another interface will occure, select some options, then continue, then OK.
15. All results will occure.

4. Results

Table 1:

The implementation of the Bologna process requires organizational cha nges at the university

Case Processing Summary

	The implementation of the Bologna process requires organizational changes at the university	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
number	I do n`t agree at all	7	100.0%	0	0.0%	7	100
	I do n`t agree	10	100.0%	0	0.0%	10	100
	unaligned	26	100.0%	0	0.0%	26	100
	I agree	21	100.0%	0	0.0%	21	100
	I completely agree	44	100.0%	0	0.0%	44	100
	6.00	1	100.0%	0	0.0%	1	100

Table 2:
Descriptives[a]

	The implementation of the Bologna process requires organizational changes at the university			Statistic	STD Error
number	I do n`t agree at all	Mean		66.1429	13.89661
		95% Confidence Interval for Mean	Lower Bound	32.1391	
			Upper Bound	100.1466	
		5% Trimmed Mean		66.9921	
		Median		82.0000	
		Variance		1351.810	
		Std. Deviation		36.76696	
		Minimum		13.00	
		Maximum		104.00	
		Range		91.00	
		Interquartile Range		79.00	
		Skewness		-.695	0.794
		Kurtosis		-1.335	1.587
	I do n`t agree	Mean		67.8000	9,41606
		95% Confidence Interval for Mean	Lower Bound	46.4994	
			Upper Bound	89.1006	
		5% Trimmed Mean		68.0000	
		Median		67.0000	
		Variance		886.622	
		Std. Deviation		29.77620	
		Minimum		26.00	
		Maximum		106.00	
		Range		80.00	

Table 3:
Descriptives[a]

The implementation of the Bologna process requires organizational changes at the university			Statistic	STD Error
	Interquartile Range		60.75	
	Skewness		-.097	0.687
	Kurtosis		-1.670	1.334
unaligned	Mean		63.4615	5.52567
	95% Confidence Interval for Mean	Lower Bound	52.0812	
		Upper Bound	74.8419	
	5% Trimmed Mean		63.6453	
	Median		62.5000	
	Variance		793.858	
	Std. Deviation		28.17549	
	Minimum		14.00	
	Maximum		108.00	
	Range		94.00	
	Interquartile Range		51.25	
	Skewness		.002	0.456
	Kurtosis		-1.252	0.887
I agree	Mean		56.9524	7.16954
	95% Confidence Interval for Mean	Lower Bound	41.9970	
		Upper Bound	71.9078	
	5% Trimmed Mean		57.0635	
	Median		61.0000	
	Variance		1079.448	
	Std. Deviation		32.85495	
	Minimum		3.00	
	Maximum		109.00	
	Range		106.00	
	Interquartile Range		61.50	
	Skewness		-.179	0.501
	Kurtosis		-1.158	0.972
I completely agree	Mean		44.0682	4.62590
	95% Confidence Interval for Mean	Lower Bound	34.7392	
		Upper Bound	53.3972	
	5% Trimmed Mean		43.2121	
	Median		42.5000	
	Variance		941.553	

Table 4:

The implementation of the Bologna process requires organizational changes at the university		Statistic	STD Error
	Std. Deviation	30.68474	
	Minimum	1.00	
	Maximum	107.00	
	Range	106.00	
	Interquartile Range	53.50	
	Skewness	.338	0.357
	Kurtosis	-1.048	0.702

Descriptives[a]

a,number is constant when The implementation of the Bologna process requires organizational changes at the university =6.00 it has been omitted

Std. Error

Table 5:

Percentiles[a]

		The implementation of the Bologna process requires organizational changes at the university	Percentiles 50	75	90	Percentiles 95
Weighted Average (Definition 1)	number	I do n't agree at all	82.0000	99.0000	.	
		I do n't agree	67.0000	97.5000	105.6000	
		unaligned	62.5000	89.2500	101.9000	106.6000
		I agree	61.0000	85.5000	101.2000	108.4000
		I completely agree	42.5000	71.7500	92.5000	97.2500
Tukey's Hinges	number	I do n't agree at all	82.0000	92.0000		
		I do n't agree	67.0000	96.0000		
		unaligned	62.5000	89.0000		
		I agree	61.0000	83.0000		
		I completely agree	42.5000	71.5000		

a:number is constant when the implementation of the Bologna process requires organizational changes at the university=6.00 it has been omitted.

Percentiles[a]

Table 6:

Descriptives[a]

The implementation of the Bologna process requires organizational changes at the university		Std Error	Statistic
	Std. Deviation		30.68474
	Minimum		1.00
	Maximum		107.00
	Range		106.00
	Interquartile Range		53.50
	Skewness	0.357	.338
	Kurtosis	0.702	-1.048

a: number is constant when the implementation of the Bologna process requires organizational changes at university =6.00 it has been omitted

Table 7:

Descriptives[a]

M-Estimators[e]

	The implementation of the Bologna process requires organizational changes at the university	Huber's M-Estimator[a]	Tukey's Biweight[b]	Hampel's M-Estimator[c]	Andrews' Wave[d]
number	I do n't agree at all	74.2294	73.7346	71.1319	73.6474
	I do n't agree	68.1183	68.0124	67.8000	68.0132
	unaligned	63.3467	63.3930	63.6609	63.3910
	I agree	58.4516	57.9491	57.2911	57.9496
	I completely agree	42.1069	42.5520	43.0524	42.5563

a. The weighting constant is 1.339.

b. The weighting constant is 4.685.

c. The weighting constants are 1.700, 3.400, and 8.500

d. The weighting constant is 1.340*pi.

e. number is constant when The implementation of the Bologna process requires organizational changes at the university = 6.00. It has been omitted.

Percentiles[a]

		The implementation of the Bologna process requires organizational changes at the university	Percentiles 5	10	25
Weighted Average (Definition 1)	number	I do n't agree at all	13.0000	13.0000	20.0000
		I do n't agree	26.0000	26.7000	36.7500
		unaligned	17.8500	27.1000	38.0000
		I agree	3.4000	8.6000	24.0000
		I completely agree	2.5000	5.5000	18.2500
Tukey's Hinges	number	I do n't agree at all			40.0000
		I do n't agree			38.0000
		unaligned			39.0000
		I agree			31.0000
		I completely agree			18.5000

Table 8:

Percentiles[a]

		The implementation of the Bologna process requires organizational changes at the university	Percentiles 50	75	90	95
Weighted Average (Definition 1)	number	I do n't agree at all	82.0000	99.0000	.	
		I do n't agree	67.0000	97.5000	105.6000	
		unaligned	62.5000	89.2500	101.9000	106.6000
		I agree	61.0000	85.5000	101.2000	108.4000
		I completely agree	42.5000	71.7500	92.5000	97.2500
Tukey's Hinges	number	I do n't agree at all	82.0000	92.0000		
		I do n't agree	67.0000	96.0000		
		unaligned	62.5000	89.0000		
		I agree	61.0000	83.0000		
		I completely agree	42.5000	71.5000		

a. number is constant when the implementation of the Bologna process requires organizational changes at the university=6.00 it has been omitted

Table 9:

Extreme Values[a,b]

	The implementation of the Bologna process requires organizational changes at the university			Case Number	Value
number	I do n`t agree at all	Highest	1	105	104
			2	99	99
			3	85	85
		Lowest	1	13	13
			2	20	20
			3	60	60
	I do n`t agree	Highest	1	106	106
			2	102	102
			3	96	96
			4	87	87
			5	77	77
		Lowest	1	26	26
			2	33	33
			3	38	38
			4	56	56
			5	57	57
	unaligned	Highest	1	108	108
			2	104	104
			3	101	101
			4	100	100
			5	97	97
		Lowest	1	14	14
			2	25	25
			3	29	28
			4	28	28
			5	34	34
	I agree	Highest	1	109	109
			2	103	103
			3	94	94
			4	91	91
			5	88	88
		Lowest	1	3	3
			2	7	7

Table 10:

Extreme Values[a,b]

The implementation of the Bologna process requires organizational changes at the university			Case number	Value
I completely agree	Highest	1	107	107.00
		2	98	98.00
		3	95	95.00
		4	93	93.00
		5	92	92.00
	Lowest	1	1	1.00
		2	2	2.00
		3	4	4.00
		4	5	5.00
		5	6	6.00

a. The requested number of extreme values exceeds the number of data points. A smaller number of extremes is displayed.

b. number is constant when The implementation of the Bologna process requires organizational changes at the university = 6.00. It has been omitted.

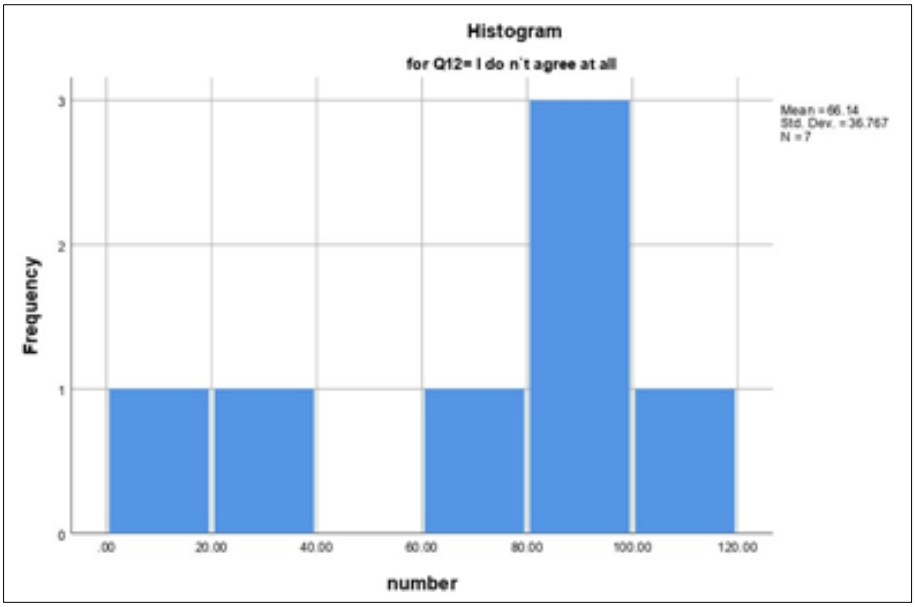
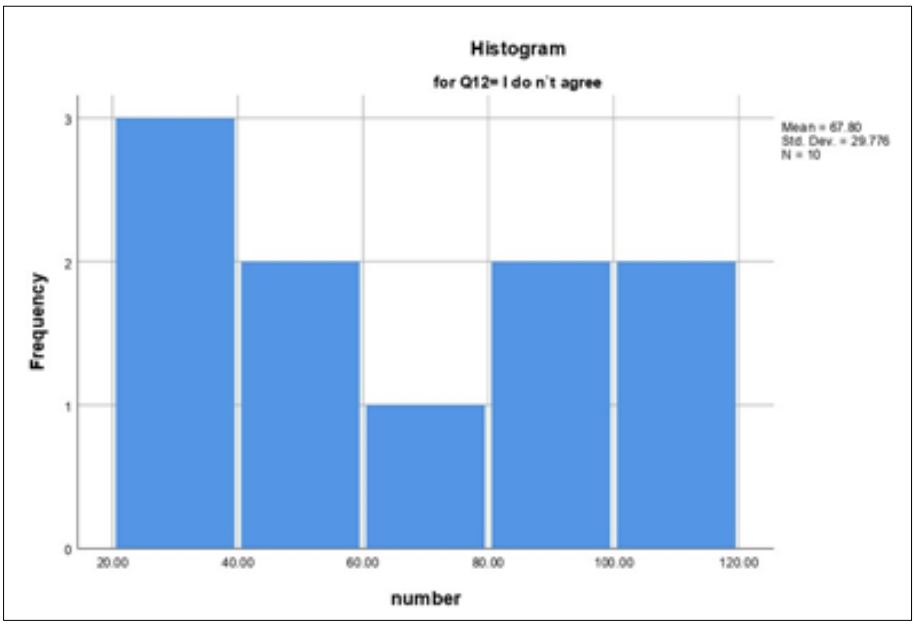


Fig 1:


Histogram
for Q12= I do n't agree
Mean = 67.80
Std. Dev. = 29.776
N = 10
Frequency
number
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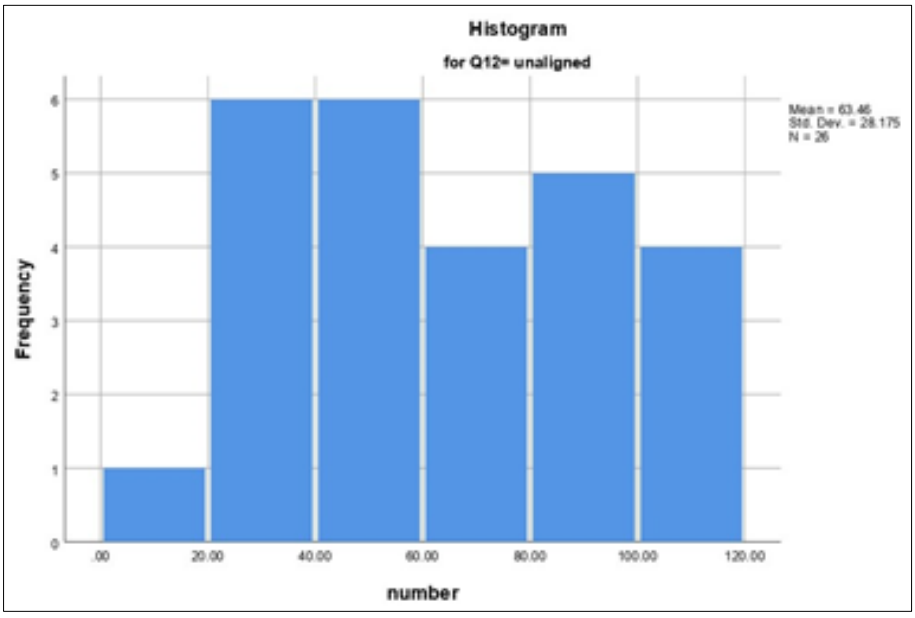
2
3
20.00
40.00
60.00
80.00
100.00
120.00

Fig 2:


Histogram
for Q12= unaligned
Mean = 63.46
Std. Dev. = 28.175
N = 26
Frequency
number
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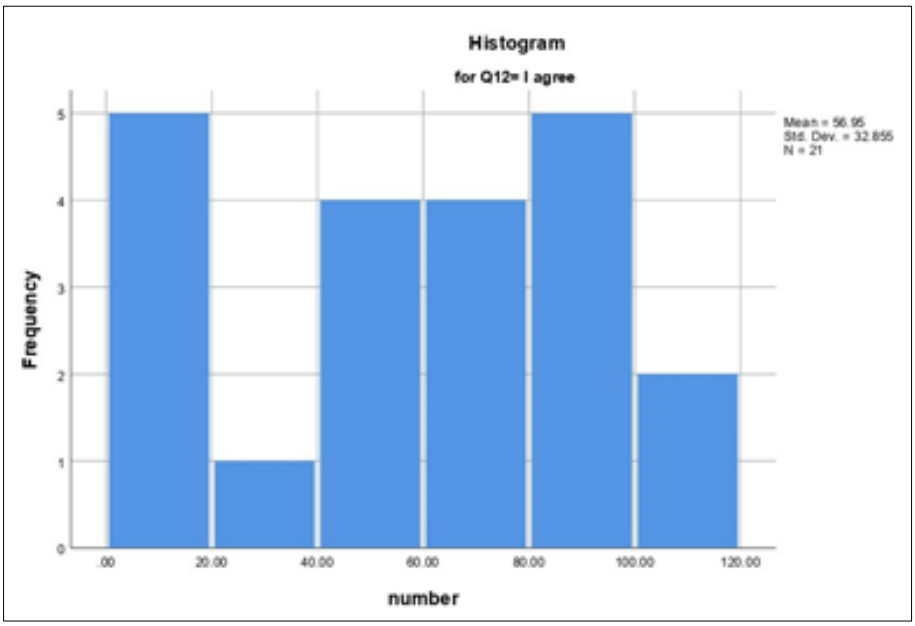
2
3
4
5
6
.00
20.00
40.00
60.00
80.00
100.00
120.00

Fig 3:


Histogram
for Q12= I agree
Mean = 56.95
Std. Dev. = 32.855
N = 21
Frequency
number
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3
4
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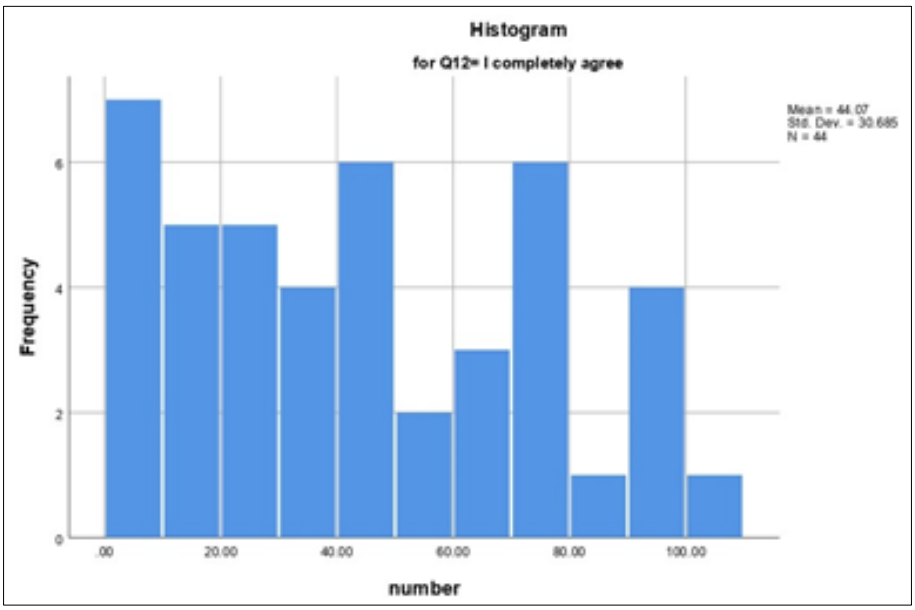
.00
20.00
40.00
60.00
80.00
100.00
120.00

Fig 4:


Histogram
for Q12= I completely agree
Mean = 44.07
Std. Dev. = 30.685
N = 44
Frequency
number
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2
4
6
.00
20.00
40.00
60.00
80.00
100.00

Fig 5:

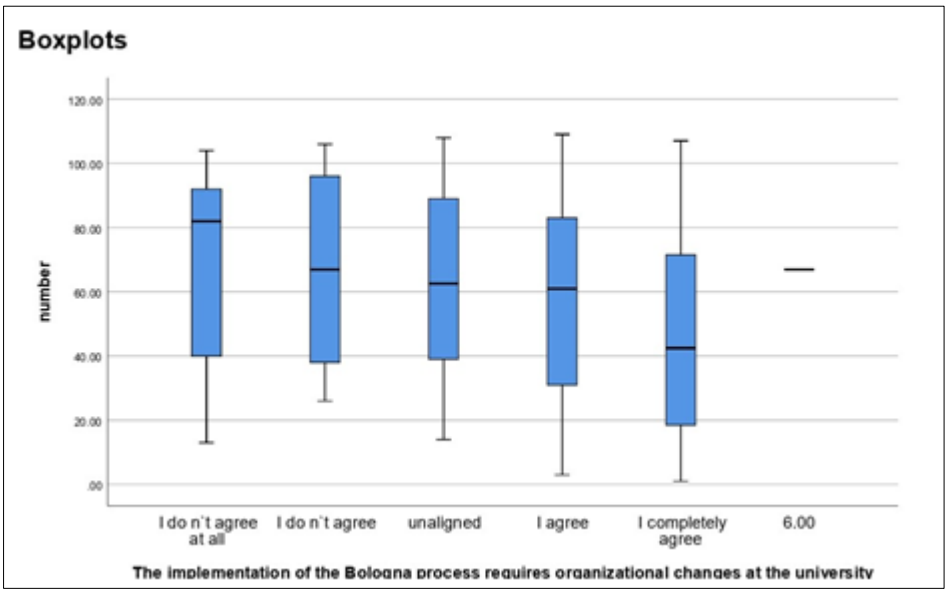

Fig 6:

5. Conclusion

The results indicate that implementing the Bologna Process requires significant organizational changes within universities. This is reflected in the participants' responses, which varied in their opinions on this issue.

1. Analysis of response distribution

The data shows that a large proportion of participants either fully or partially agree that implementing the Bologna Process necessitates organizational changes. This is evident from the high approval rates in the following categories: "I completely agree" & "I agree"

On the other hand, the percentage of those who disagreed ("I do not agree at all" and "I do not agree") was much lower, indicating a general consensus on the importance of organizational adjustments to align higher education systems with the requirements of the Bologna Process.

2. Variation in agreement levels

Analyzing the mean and standard deviation of the responses reveals some variability in participants' support for the idea. While the "I completely agree" category had a high mean score, some participants remained neutral or disagreed, suggesting that certain institutions face challenges in adopting the required reforms.

3. Statistical analysis of data

- **Means and confidence intervals:** Statistical measures, such as confidence intervals for the means, indicate a slight but statistically significant variation among different response categories.
- **Overall Distribution:** Histograms show that the majority lean toward agreement, but there is variability among participants regarding the degree of agreement.
- **Skewness & Kurtosis:** The values indicate that the distribution is slightly skewed towards higher agreement scores, reflecting a general inclination to support the need for organizational changes.

4. Potential implementation challenges

Despite the broad agreement on the need for organizational changes, the presence of a minority of participants who disagreed highlights potential challenges such as:

- Resistance to change within certain educational institutions.
- The need for additional investments to facilitate the transition to the Bologna system.
- Differences in infrastructure and available resources among universities, making implementation uneven.

Conclusions and recommendations

These results reinforce the idea that adopting the Bologna Process in universities requires substantial organizational adjustments to achieve the desired objectives. Based on this, the following recommendations are proposed:

- **Providing training and support programs for faculty and administrative staff** to ensure a full understanding of the Bologna requirements and their significance.
- **Conducting further studies on the reasons behind resistance to change** in some institutions and developing practical solutions to address them.
- **Enhancing technological and organizational infrastructure** to facilitate the integration of traditional and e-learning methods, which aligns with one of the key findings of this research.
- **Engaging all stakeholders** (students, faculty members, administrators, and policymakers) in decision-making to ensure a smooth transition to the Bologna system.

Overall, this study supports the necessity of organizational changes as a fundamental part of implementing the Bologna Process while recognizing the challenges that may hinder the practical application of the proposed reforms.

References

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