



## The Bologna path is the appropriate system to carry out the student's work effectively at the Imam Ja`afar Alsadiq University

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### Abstract

The current research aims to study the impact of Bologna Path as an appropriate system to carry out the student's work effectively according to the opinions 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 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 path is the appropriate system to carry out the student's work effectively.

**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 as an appropriate system to carry out the student's work effectively?

#### 1.2 Previous Work

There are a lot of previous works about the students' views on Bologna Path, some of them are :

1. Abdaljalil M. Hamad & Rusol A. Mohammed <sup>[1]</sup>, studied the impact of Bologna Path in training students to use the computer program dedicated to this, according to the opinions 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 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 path requires students training to use the computer program dedicated to this.
2. Abdaljalil M. Hamad & Rusol A. Mohammed <sup>[2]</sup>, studied the impact of Bologna Path in the access of educational content to students despite the weakness of the internet infrastructure according to the opinions 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 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 path does not prevent the access of educational content to students despite the weakness of the internet infrastructure.
3. Abdaljalil M. Hamad <sup>[3]</sup>, 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 communications with teacher.
4. Abdaljalil M. Hamad <sup>[4]</sup>, 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.
  5. Abdaljalil M. Hamad <sup>[5]</sup>, studied if the Bologna process helps to complete teaching activities faster than the traditional method according to the opinions 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.
  6. Abdaljalil M. Hamad <sup>[6]</sup>, studied if the Bologna process is useful in education according to the opinions 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.
  7. Canmei Xu @ *et al.* <sup>[7]</sup>, 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.
  8. Li, Jiahul <sup>[8]</sup>, 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.
  9. Anna Di Norcia, @ *et al.* <sup>[9]</sup>, 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.
  10. Abduljaleel M. Hamad <sup>[10]</sup>, studied the impact of Bologna Path in the new student's skills required, according to the opinions 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 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 path requires students to learn new skills
  11. Abdaljalil M. Hamad & Rosul A. Mohammed <sup>[11]</sup>, 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.
  12. Abduljaleel M. Hamad <sup>[12]</sup>, studied the impact of Bologna Track in strengthening the teacher-student relationship according to the opinions 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 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 strength of teacher-student relationship.
  13. Abdaljalil M. Hamad & Rusol A. Mohammed <sup>[14]</sup>, studied the impact of Bologna Path in the compatibility of traditional and e-learning, according to the opinions 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 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 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 appropriation of Bologna Path to carry out the student`s work effectively, 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. Theoretical 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 “Do you believe that the Bologna process is the appropriate system to carry out your work effectively!?” This question was taken from some questionnaires 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 college 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 executed.
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 1<sup>st</sup> 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 2<sup>nd</sup> arrow to transfer the question to the factor list, then click statistics, the explore interface will occur.
13. Point all options, then continue
14. Return to explore list, choose plots, another interface will occur, select some options, then continue, then OK.
15. All results will occur.

**3. Results**

**I believe that the Bologna process is the appropriate system to carry out my work effectively**

Table(4-1)  
Case Processing Summary

	I believe that the Bologna process is the appropriate system to carry out my work effectively	Cases				Total N
		Valid		Missing		
		N	Percent	N	Percent	
number	I do n` t agree at all	3	100.0%	0	0.0%	3
	I do n` t agree	2	100.0%	0	0.0%	2
	unaligned	19	100.0%	0	0.0%	19
	I agree	22	100.0%	0	0.0%	22
	I completely agree	63	100.0%	0	0.0%	63

Case Processing Summary

	I believe that the Bologna process is the appropriate system to carry out my work effectively	Cases	
		Total Percent	
number	I do n` t agree at all	100.0%	
	I do n` t agree	100.0%	
	unaligned	100.0%	
	I agree	100.0%	
	I completely agree	100.0%	

**Table (4-2)  
Descriptives**

I believe that the Bologna process is the appropriate system to carry out my work effectively		Statistic	Std Error		
number	I do n't agree at all	Mean	38.6667	10.91380	
		95% Confidence Interval for Mean	-8.2916		
		Lower Bound			
		Upper Bound	85.6250		
		5% Trimmed Mean	.		
		Median	32.0000		
		Variance	357.333		
		Std. Deviation	18.90326		
		Minimum	24.00		
		Maximum	60.00		
		Range	36.00		
		Interquartile Range	.		
		Skewness	1.390		1.225
		Kurtosis	.		
			I do n't agree		Mean
95% Confidence Interval for Mean	-367.0110				
Lower Bound					
Upper Bound	497.0110				
5% Trimmed Mean	.				
Median	65.0000				
Variance	2312.000				
Std. Deviation	48.08326				
Minimum	31.00				
Maximum	99.00				
Range	68.00				
Interquartile Range	.				
Skewness	.				
Kurtosis	.				
unaligned				Mean	51.1053
		95% Confidence Interval for Mean	36.9946		
		Lower Bound			
		Upper Bound	65.2160		
		5% Trimmed Mean	51.2281		
		Median	52.0000		
		Variance	857.099		
		Std. Deviation	29.27626		
		Minimum	2.00		
		Maximum	98.00		

**Table (4-3)  
Descriptives**

I believe that the Bologna process is the appropriate system to carry out my work effectively		Statistic	Std Error		
	I agree	Range	96.00	6.32192	
		Interquartile Range	43.00		
		Skewness	-.150		0.524
		Kurtosis	-1.089		
		Mean	68.1364		4.08872
		95% Confidence Interval for Mean	54.9892		
		Lower Bound			
		Upper Bound	81.2835		
		5% Trimmed Mean	69.5000		
		Median	70.5000		
		Variance	879.266		
		Std. Deviation	29.65242		
		Minimum	3.00		
		Maximum	108.00		
		Range	105.00		
Interquartile Range	47.00				
Skewness	-.561	0.491			
Kurtosis	-.317				
	I completely agree	Mean	52.0159	0.953	
		95% Confidence Interval for Mean	43.8426		
		Lower Bound			
		Upper Bound	60.1891		
		5% Trimmed Mean	51.6490		
		Median	48.0000		
		Variance	1053.209		
		Std. Deviation	32.45319		
		Minimum	1.00		
		Maximum	109.00		
		Range	108.00		
		Interquartile Range	60.00		
		Skewness	.142		0.302
		Kurtosis	-1.276		

**Table (4-4)**  
**M-Estimators**

I believe that the Bologna process is the appropriate system to carry out my work effectively		Huber's M-Estimator <sup>a</sup>	Tukey's Biweight <sup>b</sup>	Hampel's M-Estimator <sup>c</sup>	Andrews' Wave <sup>d</sup>
number	I do n't agree at all	33.3499	30.2904	34.7715	30.0220
	I do n't agree	65.0000	65.0000	65.0000	65.0000
	unaligned	52.1847	52.3748	52.1530	52.2577
	I agree	71.1477	71.0828	70.5569	71.0562
	I completely agree	50.9837	51.2616	51.5663	51.2620

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.

**Table (4-5)**  
**Percentiles**

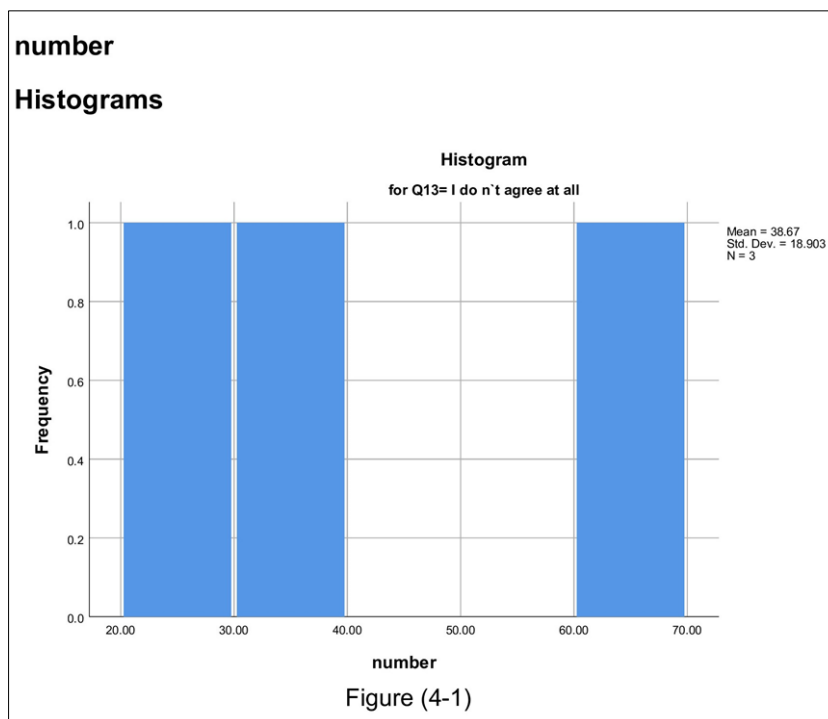
I believe that the Bologna process is the appropriate system to carry out my work effectively		Percentiles			
		5	10	25	
Weighted Average (Definition 1)	number	I do n't agree at all	24.0000	24.0000	24.0000
		I do n't agree	31.0000	31.0000	31.0000
		unaligned	2.0000	8.0000	28.0000
		I agree	4.8000	18.9000	50.7500
		I completely agree	5.2000	9.4000	22.0000
Tukey's Hinges	number	I do n't agree at all			28.0000
		I do n't agree			31.0000
		unaligned			31.0000
		I agree			53.0000
		I completely agree			22.5000

**Table (4-5) Continue**  
**Percentiles**

I believe that the Bologna process is the appropriate system to carry out my work effectively		Percentiles				
		50	75	90	95	
Weighted Average (Definition 1)	number	I do n't agree at all	32.0000	.	.	
		I do n't agree	65.0000	.	.	
		unaligned	52.0000	71.0000	89.0000	
		I agree	70.5000	97.7500	103.7000	107.4000
		I completely agree	48.0000	82.0000	95.6000	105.6000
Tukey's Hinges	number	I do n't agree at all	32.0000	46.0000		
		I do n't agree	65.0000	99.0000		
		unaligned	52.0000	70.5000		
		I agree	70.5000	97.0000		
		I completely agree	48.0000	81.5000		

**Table (4-6)  
Extreme Values<sup>a</sup>**

I believe that the Bologna process is the appropriate system to carry out my work effectively		Case Number		Value
number	I do n't agree at all	Highest	1 60	60.00
		Lowest	1 24	24.00
	I do n't agree	Highest	1 99	99.00
		Lowest	1 31	31.00
unaligned	Highest	1	98	98.00
		2	89	89.00
		3	86	86.00
		4	84	84.00
		5	71	71.00
	Lowest	1	2	2.00
		2	8	8.00
		3	11	11.00
		4	18	18.00
		5	28	28.00
I agree	Highest	1	108	108.00
		2	104	104.00
		3	103	103.00
		4	102	102.00
		5	100	100.00
	Lowest	1	3	3.00
		2	15	15.00
		3	29	28.00
		4	39	39.00
		5	44	44.00
I completely agree	Highest	1	109	109.00
		2	107	107.00
		3	106	106.00
		4	105	104.00
		5	101	101.00
	Lowest	1	1	1.00
		2	4	4.00
		3	5	5.00
		4	6	6.00
		5	7	7.00



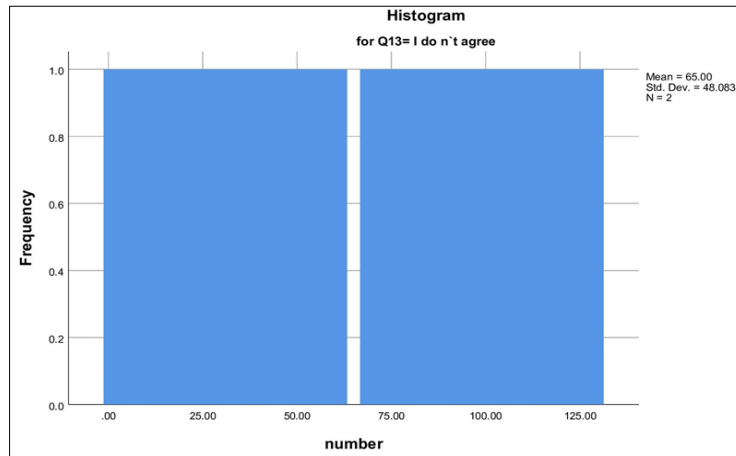


Figure (4-2)

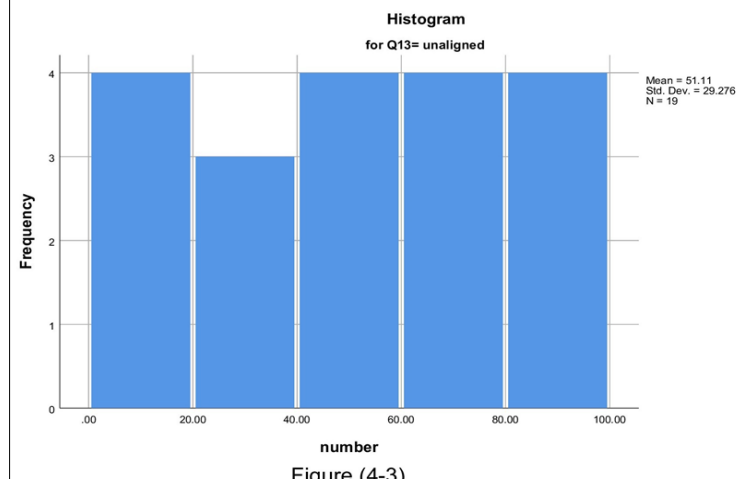
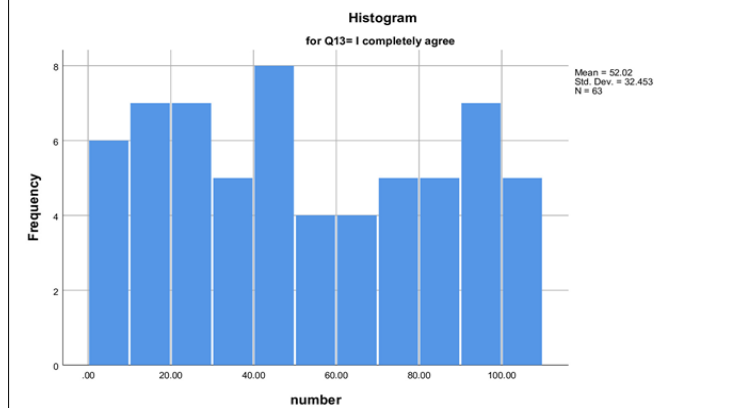
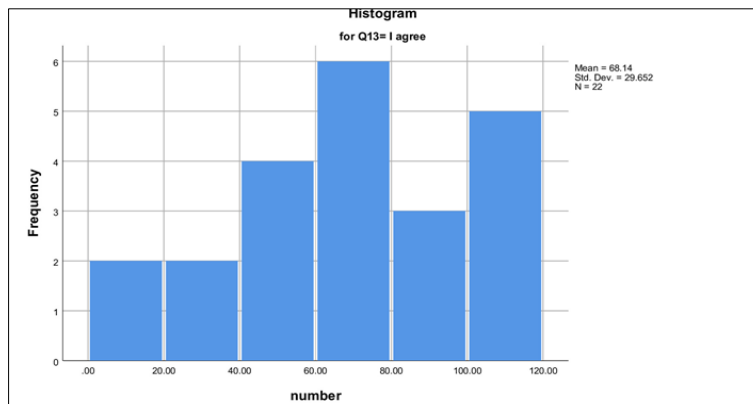


Figure (4-3)



**Stem-and-Leaf Plots**

number Stem-and-Leaf Plot for  
Q13= I do n't agree at all

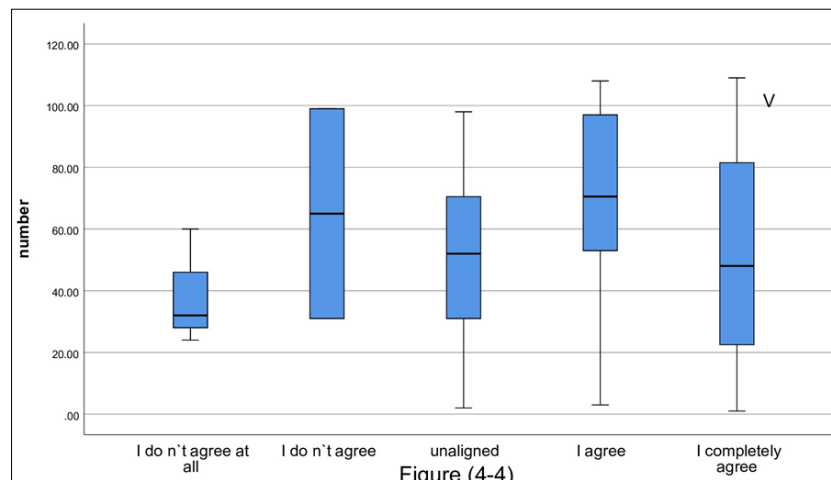


Figure (4-4)

## 5. Conclusion

The provided data explores respondents' agreement with the statement:

"I believe that the Bologna process is the appropriate system to carry out my work effectively."

The responses are categorized into five levels of agreement, with descriptive statistics, percentiles, and visualizations (histograms) for each group. Below is a structured discussion of the findings from a researcher's and educator's perspective.

### 1. Key Findings

- Overall Agreement: The majority of respondents (63 out of 109) \*completely agree\* that the Bologna process supports their work, while only 5 (3 + 2) \*disagree\* or \*strongly disagree\*.
- Distribution:
  - Completely agree: 57.8%
  - Agree: 20.2%
  - Unaligned: 17.4%
  - Disagree: 4.6%
- Implication: Strong institutional support for the Bologna system, but a small dissenting minority warrants attention.
- -Descriptive Statistics:
  - Means:
    - \*Completely agree\*: 52.02 ( $\pm 32.45$  SD)
    - \*Agree\*: 68.14 ( $\pm 29.65$  SD)
    - \*Unaligned\*: 51.11 ( $\pm 29.28$  SD)
    - \*Disagree\*: 65.00 ( $\pm 48.08$  SD)
  - Notable Trends:
    - The \*agree\* group has the highest mean score (68.14), suggesting nuanced positive perceptions.
    - High standard deviations (e.g., 48.08 for \*disagree\*) indicate variability within groups, possibly due to small sample sizes (e.g., only 2–3 respondents in some categories).
    - Extreme Values:
      - Outliers exist across groups (e.g., scores of 1 and 109 in the \*completely agree\* group), suggesting polarized views or measurement noise (e.g., Likert scale interpretation issues).

### 2. Strengths of the Data

- Comprehensive Reporting: The analysis includes

measures of central tendency (mean, median), dispersion (SD, range), skewness/kurtosis, and robust estimators (M-estimators), enhancing interpretability.

- Visualizations: Histograms clearly show distribution shapes (e.g., bimodal trends in \*unaligned\* and \*agree\* groups).
- Percentiles: Highlight score distributions (e.g., 25th percentile for \*completely agree\* is 22, indicating some low-scoring outliers).

### 3. Limitations

- Small Subgroup Samples: Only 2–3 respondents in \*disagree\* categories limit statistical power and generalizability.
- Data Spread: Wide ranges (e.g., 2–98 for \*unaligned\*) suggest potential response biases or unclear survey wording.
- Negative Skewness: In the \*agree\* group ( $-0.561$ ), most responses cluster toward higher scores, but extreme lows (e.g., 3/108) may reflect conflicting perceptions.

### 4. Implications

- For Policy: Strong support for the Bologna process aligns with its goals of standardization and mobility, but dissenters may need targeted support (e.g., training on Bologna tools).
- For Research: Investigate why \*agree\* scores (68.14) exceed \*completely agree\* (52.02). Is there ambivalence about specific Bologna components (e.g., credit systems)?
- For Teaching: Use Bologna frameworks (e.g., ECTS) more transparently to address \*unaligned\* respondents' uncertainty.

### 5. Future Directions

- Larger Samples: Replicate with balanced groups to validate trends.
- Qualitative Follow-Up: Interview dissenters to identify pain points (e.g., administrative burdens).
- Comparative Studies: Contrast perceptions across disciplines/institutions.

### Conclusion

The data reveals robust but not unanimous support for the Bologna process, with variability suggesting nuanced stakeholder experiences. Addressing outliers and small-

sample limitations could refine interventions to enhance Bologna implementation.

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