International Journal of Multidisciplinary Research and Growth Evaluation.

Using the Bologna track In Imam Ja`afar Alsadiq University requires the compatibility of traditional and E-Learning

Abduljaleel Mohammed Hamad Alrobaiei [1*], Rosul A Mohammed [2]

[1] Department of Computer Technology Engineering, Technical Colledge, Imam Ja'far Alsadiq University (IJSU), Iraq
[2] Renewable Energy Sciences Department, Energy and Environmental Sciences Colledge, Al-Karkh University of Science, Iraq

* Corresponding Author: **Abduljaleel Mohammed Hamad Alrobaiei**

Article Info

Abstract

The current research aims to study the impact of Bologna Path in 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 the compatibility of traditional and e-learning.

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 requires the compatibility of traditional and e-learning ?

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] studiey 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.
2. 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.
3. 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 and the results indicated that the application of the Bologna Track increases the following and comminications with teacher.

4. 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 theindicators 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[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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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

11. .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.

12. 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.

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 [9]. 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 requires the compatibility of traditional and e-learning!?". 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 [13]

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. Result

Table 1: Descriptives

Using the Bologna track requires the compatibility of traditional and e-learning				Statistic	std error
number	I do n`t agree at all	Mean		38.5000	15.69235
		95% Confidence Interval for Mean	Lower Bound	-11.4401	
			Upper Bound	88.4401	
		5% Trimmed Mean		38.1111	
		Median		35.0000	
		Variance		985.000	
		Std. Deviation		31.38471	
		Minimum		4.00	
		Maximum		80.00	
		Range		76.00	
		Interquartile Range		58.50	
		Skewness		.650	1.044
		Kurtosis		1.564	
	I do n`t agree	Mean		46.3333	2.619
		95% Confidence Interval for Mean	Lower Bound	3.4985	9.95546
			Upper Bound	89.1682	
		5% Trimmed Mean		-	
		Median		43.0000	
		Variance		297.333	
		Std. Deviation		17.24336	
		Minimum		31.00	
		Maximum		65.00	
		Range		34.00	
		Interquartile Range		-	
		Skewness		.837	1.225
		Kurtosis		-	
	unaligned	Mean		61.5000	7.57472
		95% Confidence Interval for Mean	Lower Bound	45.6459	
			Upper Bound	77.3541	
		5% Trimmed Mean		62.1667	
		Median		65.5000	
		Variance		1147.526	
		Std. Deviation		33.87516	
		Minimum		3.00	
		Maximum		108.00	

Table 2: Descriptives

Using the Bologna track requires the compatibility of traditional and e-learning				Statistic	STD Error
		Range		105.00	
		Interquartile Range		63.25	
		Skewness		-.155	.512
		Kurtosis		-1.351	.992
	I agree	Mean		66.5833	6.62036
		95% Confidence Interval for Mean	Lower Bound	52.8880	
			Upper Bound	80.2786	
		5% Trimmed Mean		67.5093	
		Median		76.5000	
		Variance		1051.906	
		Std. Deviation		32.43310	
		Minimum		7.00	
		Maximum		109.00	
		Range		102.00	
		Interquartile Range		56.25	
		Skewness		-.459	.472
		Kurtosis		-1.117	.918
	I completely agree	Mean		49.5172	3.93514
		95% Confidence Interval for Mean	Lower Bound	41.6373	
			Upper Bound	57.3972	
		5% Trimmed Mean		49.1437	
		Median		50.0000	
		Variance		898.149	
		Std. Deviation		29.96913	
		Minimum		1.00	
		Maximum		107.00	
		Range		106.00	
		Interquartile Range		52.50	
		Skewness		.078	.314
		Kurtosis		-1.124	.618

Table 3: M-Estimators

		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	35.0000	34.2487	35.0000	34.3161
	I do n't agree	44.9903	45.4400	46.3333	45.4357
	unaligned	62.7994	62.1243	61.8182	62.1222
	I agree	70.9788	70.2363	69.0879	70.2067
	I completely agree	48.9349	49.2652	49.1730	49.2688

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: Percentiles

		Using the Bologna track requires the compatibility of traditional and e-learning	Percentiles		
			5	10	25
Weighted Average (Definition 1)	number	I do n't agree at all	4.0000	4.0000	11.0000
		I do n't agree	31.0000	31.0000	31.0000
		unaligned	3.3500	11.3000	33.5000
		I agree	8.5000	15.0000	36.5000
		I completely agree	4.8500	8.9000	20.7500
Tukey's Hinges	number	I do n't agree at all			18.0000
		I do n't agree			37.0000
		unaligned			34.0000
		I agree			39.0000
		I completely agree			21.0000

Table 5: Percentiles

		Using the Bologna track requires the compatibility of traditional and e-learning	Percentiles		
			50	75	90
Weighted Average (Definition 1)	number	I do n't agree at all	35.0000	69.5000	.
		I do n't agree	43.0000	.	.
		unaligned	65.5000	96.7500	102.8000
		I agree	76.5000	92.7500	105.0000
		I completely agree	50.0000	73.2500	92.1000
Tukey's Hinges	number	I do n't agree at all	35.0000	59.0000	
		I do n't agree	43.0000	54.0000	
		unaligned	65.5000	96.5000	
		I agree	76.5000	91.5000	
		I completely agree	50.0000	73.0000	

Percentiles

		Using the Bologna track requires the compatibility of traditional and e-learning	Percentiles
			95
Weighted Average (Definition 1)	number	I do n't agree at all	.
		I do n't agree	.
		unaligned	107.7500
		I agree	108.2500
		I completely agree	98.3000
Tukey's Hinges	number	I do n't agree at all	
		I do n't agree	
		unaligned	
		I agree	
		I completely agree	

Table 6: Extreme values[a]

				Case Number	Values
number	I do n`t agree at all	Highest	1	80	80
			2	38	38
		Lowest	1	4	4
			2	32	32
	I do n`t agree	Highest	1	65	65
		Lowest	1	31	31
	unaligned	Highest	1	108	108
			2	103	103
			3	101	101
			4	99	99
			5	97	97
		Lowest	1	3	3
			2	10	10
			3	23	23
			4	26	26
			5	33	33
	I agree	Highest	1	109	109
			2	106	106
			3	104	104
			4	102	102
			5	100	100
		Lowest	1	7	7
			2	13	13
			3	17	17
			4	25	25
			5	28	28
	I completely agree	Highest	1	107	107
			2	105	104
			3	98	98
			4	95	95
			5	93	93
		Lowest	1	1	1
			2	2	2

Table 7

Extreme Values[a]

Using the Bologna track requires the compatibility of traditional and e-learning	Case Number
3	5
4	6
5	8

Extreme Values[a]

Using the Bologna track requires the compatibility of traditional and e-learning	Value
3	5.00
4	6.00
5	8.00

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

Figure(4-1)

Figure (4-5)
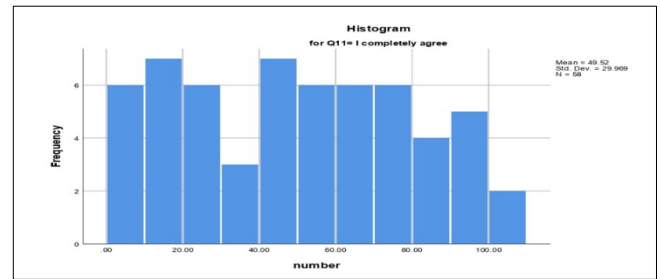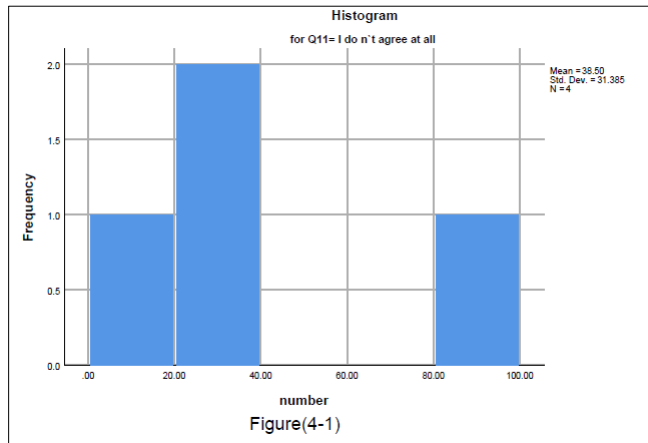
5. Conclusion

The data extracted from the survey analysis on the impact of implementing the Bologna track requires compatibility between traditional and e-learning methods reflects a range of opinions regarding the compatibility between the two systems.

1. General Trends in Opinions

The results show a wide distribution of responses regarding the assumption that implementing the Bologna track requires compatibility between traditional and e-learning methods. The average responses ranged from 38.5 for those who strongly disagree to 66.58 for those who agree, while the highest level of agreement was among the "Completely Agree" group, with a mean of 49.52 and a standard deviation of 29.96.

2. Variability in Responses

The disagreeing categories (*I don't agree at all, I don't agree*) recorded relatively low mean values, indicating a smaller proportion of respondents opposing the integration of traditional and e-learning methods.

In contrast, the categories "Agree" and "Completely Agree" had the highest mean values (66.58 and 49.52, respectively), indicating a general tendency to support the compatibility of both systems.

3. Data Distribution and Descriptive Statistics

The distribution curves (Histograms) and statistical dispersions suggest a varied pattern, reflecting a range of opinions among participants.

There was a slight negative skew (-0.155 to -0.459) in some categories, indicating that most responses tended toward higher values (agreement).

Kurtosis values (-1.351 to -1.124) suggest a flatter distribution than normal, indicating diverse participant opinions without a strong concentration around a single point.

4. Extreme Values and Their Impact

Some extreme values were recorded (such as 108 and 109 in the "Agree" and "Completely Agree" categories), indicating strong approval cases that could influence the mean. However, these values did not significantly alter the overall trend of responses.

5. The Need for Organizational Changes in Universities

Regarding the **implementation of the Bologna track and**
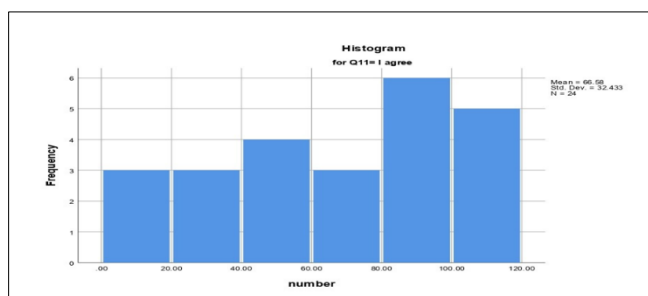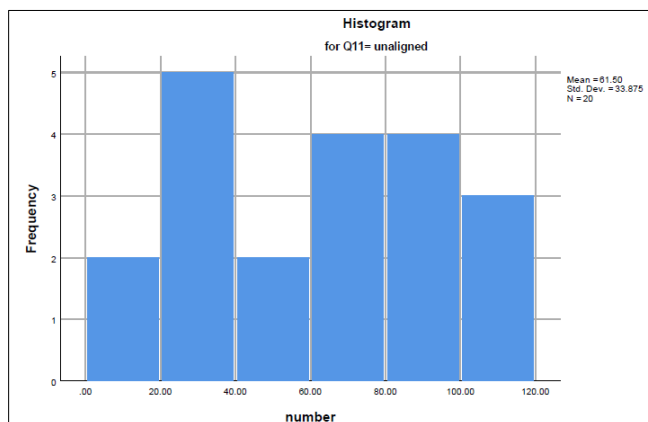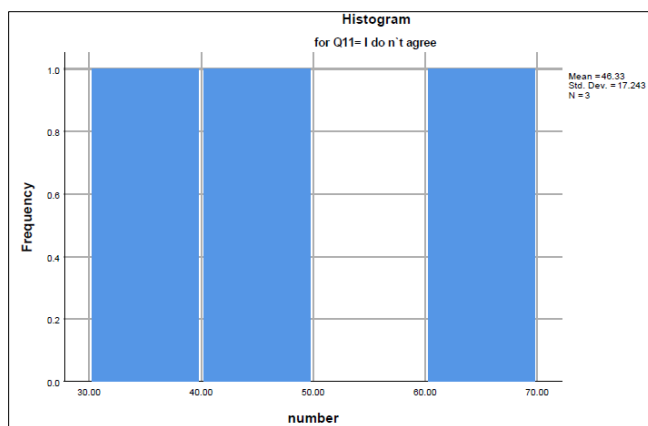
the required organizational changes in universities, the data indicates that a significant percentage of participants believe structural and administrative changes are necessary. The number of those who "Completely Agree" reached 44 out of 88 respondents, representing approximately 50% of the sample.

References

1. Abduljaleel M. Hamad. Using the Bologna track requires training students to use the computer program dedicated to this. Int J Multidiscip Res Growth Eval. 2025;6(2):600–610. E-ISSN:2582-7138.

2. Abdaljalil M. Hamad, Rusol A. Mohammed. Despite the weakness of the internet infrastructure, this does not prevent the access of educational content to students by using the Bologna path at Imam Ja`afar Alsadiq University. Int J Eng Sci. 2025 Jan-Feb;6(1):2030–2037. ISSN(e):2319–1813; ISSN(p):2319–1805.

3. Abdaljalil M. Hamad, Rusol A. Mohammed. Study the impact of Bologna track on student's following and communication with teachers. Int J Eng Sci. 2024;13(10):118–127. ISSN(e):2319–1813; ISSN(p):2319–1805.

4. Abdaljalil M. Hamad. Study the impact of Bologna track on the learning proficiency of students at Imam Ja`afar Alsadiq University. Int J Eng Sci. 2024;13(10):1–11. ISSN(e):2319–1813; ISSN(p):2319–1805.

5. Abdaljalil M. Hamad. Using SPSS program to analyze students' opinions about the Bologna process helping complete their teaching activities faster than the traditional method. Int J Eng Sci. 2024;13(8):152–163. ISSN(e):2319–1813; ISSN(p):2319–1805.

6. Abdaljalil M. Hamad. A survey study on the academics' views towards the usefulness of the Bologna process at Imam Ja`afar Alsadiq University. Int J Eng Sci Invention. 2024;13(8):34–42. ISSN(e):2319–6734; ISSN(p):2319–6726.

7. Canmei Xu, *et al*. Cultural universality and specificity of teacher-student relationship: a qualitative study in Belgian, Chinese, and Italian primary school teachers. Front Psychol J. 2023 Nov 14;14. Section: Educational Psychology.

8. Li Jiahui. A research on relationship between student-centered approach and student competence development in higher education: case studies in China and Italy. Res Unipd J. 2023 Jun 6. Italy.

9. Anna Di Norcia, *et al*. The student's drawing of teacher's pictorial value as a predictor of the student–teacher relationship and school adjustment. Front Psychol J. 2022 Oct 28;13. Section: Educational Psychology. Italy.

10. Abdaljalil M. Hamad, Rusol A. Mohammed. Using the Bologna path at Imam Ja`afar Alsadiq University requires students learn new skills. Int J Multidiscip Res Growth Eval. 2025;6(2):204–212. E-ISSN:2582-7138.

11. Abduljaleel M. Hamad, Rusol A. Mohammed. The Bologna track can be used alongside traditional education without intersecting: at Imam Ja`afar Alsadiq University. Int J Multidiscip Res Growth Eval. 2024 Nov-Dec;5(6):1252–1260. E-ISSN:2582-7138.

12. Abduljaleel M. Hamad. Strengthening the teacher-student relationship by using the Bologna process at Imam Ja`afar Alsadiq University. Int J Multidiscip Res Growth Eval. 2024 Nov-Dec;5(6):773–781. E-ISSN:2582-7138.

13. Arvind Krishna. IBM SPSS Statistics computer program. IBM Company; USA; 2024.