

Your temporary usage period for IBM SPSS Statistics will expire in 3498 days.

```
* =====.
* P-P Plot Normality Check - SPSS Syntax FIXED VERSION.
* OnlineInternetCafe.com workflow.
*
* IMPORTANT FIX:
* Your uploaded SPSS output showed G1, G2, and G3 as 649 missing values.
* That means SPSS imported the CSV with the wrong delimiter.
* The uploaded student file is comma-separated, so this version uses /DELIMITERS=", ".
*
* Folder:
* D:\low kda score priority basis posts\first post\P P Plot Normality Check
*
* Dataset expected:
* student-por.csv
*
* Main variable:
* G3
* =====.
```

```
SET UNICODE=ON.
SET DECIMAL=DOT.
SET PRINTBACK=ON.
SET TVARS=LABELS.
SET TNUMBERS=BOTH.
SET MPRINT=ON.
```

```
56 0 M>
* -----.
57 0 M> * -----.
* 1. IMPORT DATA - COMMA-SEPARATED VERSION.
58 0 M> * 1. IMPORT DATA - COMMA-SEPARATED VERSION.
* If you later use the original UCI semicolon version, change /DELIMITERS=", "
to /DELIMITERS=";".
59 0 M> * If you later use the original UCI semicolon version, change /DELIMITERS=", "
to /DELIMITERS=";".
* -----.
60 0 M> * -----.

61 0 M>
```

```

GET DATA
62 0 M> GET DATA
    /TYPE=TXT
63 0 M>     /TYPE=TXT
    /FILE='D:\low kda score priority basis posts\first post\P P Plot Normality C
heck\student-por.csv'
64 0 M>     /FILE='D:\low kda score priority basis posts\first post\P P Plot
Normality Check\student-por.csv'
    /ENCODING='UTF8'
65 0 M>     /ENCODING='UTF8'
    /DELCASE=LINE
66 0 M>     /DELCASE=LINE
    /DELIMITERS=","
67 0 M>     /DELIMITERS=","
    /QUALIFIER='"'
68 0 M>     /QUALIFIER='"'
    /ARRANGEMENT=DELIMITED
69 0 M>     /ARRANGEMENT=DELIMITED
    /FIRSTCASE=2
70 0 M>     /FIRSTCASE=2
    /VARIABLES=
71 0 M>     /VARIABLES=
        school A2
72 0 M>         school A2
        sex A1
73 0 M>         sex A1
        age F8.0
74 0 M>         age F8.0
        address A1
75 0 M>         address A1
        famsize A3
76 0 M>         famsize A3
        Pstatus A1
77 0 M>         Pstatus A1
        Medu F8.0
78 0 M>         Medu F8.0
        Fedu F8.0
79 0 M>         Fedu F8.0
        Mjob A12
80 0 M>         Mjob A12
        Fjob A12
81 0 M>         Fjob A12

```

reason A12  
82 0 M> reason A12  
guardian A8  
83 0 M> guardian A8  
traveltime F8.0  
84 0 M> traveltime F8.0  
studytime F8.0  
85 0 M> studytime F8.0  
failures F8.0  
86 0 M> failures F8.0  
schoolsup A3  
87 0 M> schoolsup A3  
famsup A3  
88 0 M> famsup A3  
paid A3  
89 0 M> paid A3  
activities A3  
90 0 M> activities A3  
nursery A3  
91 0 M> nursery A3  
higher A3  
92 0 M> higher A3  
internet A3  
93 0 M> internet A3  
romantic A3  
94 0 M> romantic A3  
famrel F8.0  
95 0 M> famrel F8.0  
freetime F8.0  
96 0 M> freetime F8.0  
goout F8.0  
97 0 M> goout F8.0  
Dalc F8.0  
98 0 M> Dalc F8.0  
Walc F8.0  
99 0 M> Walc F8.0  
health F8.0  
100 0 M> health F8.0  
absences F8.0  
101 0 M> absences F8.0  
G1 F8.0  
102 0 M> G1 F8.0

```

      G2 F8.0
103  0 M>      G2 F8.0
      G3 F8.0.
104  0 M>      G3 F8.0.

105  0 M>
CACHE.
106  0 M>  CACHE.
EXECUTE.
107  0 M>  EXECUTE.

108  0 M>
DATASET NAME PP_Plot_Normality_Check WINDOW=FRONT.
109  0 M>  DATASET NAME PP_Plot_Normality_Check WINDOW=FRONT.

110  0 M>
* -----
111  0 M>  * -----
* 2. VARIABLE LABELS AND VALUE LABELS.
112  0 M>  * 2. VARIABLE LABELS AND VALUE LABELS.
* -----
113  0 M>  * -----

114  0 M>
VARIABLE LABELS
115  0 M>  VARIABLE LABELS
      school 'Student school'
116  0 M>      school 'Student school'
      sex 'Student sex'
117  0 M>      sex 'Student sex'
      age 'Student age'
118  0 M>      age 'Student age'
      address 'Home address type'
119  0 M>      address 'Home address type'
      famsize 'Family size'
120  0 M>      famsize 'Family size'
      Pstatus 'Parents cohabitation status'
121  0 M>      Pstatus 'Parents cohabitation status'
      Medu 'Mother education level'
122  0 M>      Medu 'Mother education level'
      Fedu 'Father education level'
123  0 M>      Fedu 'Father education level'

```

Mjob 'Mother job'  
124 0 M> Mjob 'Mother job'  
Fjob 'Father job'  
125 0 M> Fjob 'Father job'  
reason 'Reason for choosing school'  
126 0 M> reason 'Reason for choosing school'  
guardian 'Student guardian'  
127 0 M> guardian 'Student guardian'  
traveltime 'Home to school travel time'  
128 0 M> traveltime 'Home to school travel time'  
studytime 'Weekly study time'  
129 0 M> studytime 'Weekly study time'  
failures 'Number of past class failures'  
130 0 M> failures 'Number of past class failures'  
schoolsup 'Extra educational support from school'  
131 0 M> schoolsup 'Extra educational support from school'  
famsup 'Family educational support'  
132 0 M> famsup 'Family educational support'  
paid 'Extra paid classes'  
133 0 M> paid 'Extra paid classes'  
activities 'Extra-curricular activities'  
134 0 M> activities 'Extra-curricular activities'  
nursery 'Attended nursery school'  
135 0 M> nursery 'Attended nursery school'  
higher 'Wants higher education'  
136 0 M> higher 'Wants higher education'  
internet 'Internet access at home'  
137 0 M> internet 'Internet access at home'  
romantic 'In a romantic relationship'  
138 0 M> romantic 'In a romantic relationship'  
famrel 'Quality of family relationships'  
139 0 M> famrel 'Quality of family relationships'  
freetime 'Free time after school'  
140 0 M> freetime 'Free time after school'  
goout 'Going out with friends'  
141 0 M> goout 'Going out with friends'  
Dalc 'Workday alcohol consumption'  
142 0 M> Dalc 'Workday alcohol consumption'  
Walc 'Weekend alcohol consumption'  
143 0 M> Walc 'Weekend alcohol consumption'  
health 'Current health status'  
144 0 M> health 'Current health status'

```

absences 'Number of school absences'
145 0 M> absences 'Number of school absences'
G1 'First period grade'
146 0 M> G1 'First period grade'
G2 'Second period grade'
147 0 M> G2 'Second period grade'
G3 'Final grade'.
148 0 M> G3 'Final grade'.

149 0 M>
VALUE LABELS sex
150 0 M> VALUE LABELS sex
'F' 'Female'
151 0 M> 'F' 'Female'
'M' 'Male'.
152 0 M> 'M' 'Male'.

153 0 M>
VALUE LABELS school
154 0 M> VALUE LABELS school
'GP' 'Gabriel Pereira'
155 0 M> 'GP' 'Gabriel Pereira'
'MS' 'Mousinho da Silveira'.
156 0 M> 'MS' 'Mousinho da Silveira'.

157 0 M>
VALUE LABELS address
158 0 M> VALUE LABELS address
'U' 'Urban'
159 0 M> 'U' 'Urban'
'R' 'Rural'.
160 0 M> 'R' 'Rural'.

161 0 M>
VALUE LABELS famsize
162 0 M> VALUE LABELS famsize
'LE3' 'Less than or equal to 3'
163 0 M> 'LE3' 'Less than or equal to 3'
'GT3' 'Greater than 3'.
164 0 M> 'GT3' 'Greater than 3'.

165 0 M>

```

```

VALUE LABELS Pstatus
166 0 M> VALUE LABELS Pstatus
      'T' 'Living together'
167 0 M>      'T' 'Living together'
      'A' 'Apart'.
168 0 M>      'A' 'Apart'.

169 0 M>
VALUE LABELS schoolsup famsup paid activities nursery higher internet romantic
170 0 M> VALUE LABELS schoolsup famsup paid activities nursery higher inter
net romantic
      'yes' 'Yes'
171 0 M>      'yes' 'Yes'
      'no' 'No'.
172 0 M>      'no' 'No'.

173 0 M>
VARIABLE LEVEL
174 0 M> VARIABLE LEVEL
      school sex address famsize Pstatus Mjob Fjob reason guardian schoolsup famsu
p paid activities nursery higher internet romantic (NOMINAL)
175 0 M>      school sex address famsize Pstatus Mjob Fjob reason guardian sch
oolsup famsup paid activities nursery higher internet
              romantic (NOMINAL)
      age Medu Fedu travelttime studytime failures famrel freetime goout Dalc Walc
health absences G1 G2 G3 (SCALE).
176 0 M>      age Medu Fedu travelttime studytime failures famrel freetime goou
t Dalc Walc health absences G1 G2 G3 (SCALE).

177 0 M>
EXECUTE.
178 0 M> EXECUTE.

179 0 M>
* -----.
180 0 M> * -----.
* 3. CRITICAL IMPORT CHECK.
181 0 M> * 3. CRITICAL IMPORT CHECK.
* These values should NOT be missing.
182 0 M> * These values should NOT be missing.
* Expected:
183 0 M> * Expected:

```

```

* G1 mean about 11.3991
184 0 M> * G1 mean about 11.3991
* G2 mean about 11.5701
185 0 M> * G2 mean about 11.5701
* G3 mean about 11.9060
186 0 M> * G3 mean about 11.9060
* G3 SD about 3.2307
187 0 M> * G3 SD about 3.2307
* -----
188 0 M> * -----

189 0 M>
DISPLAY DICTIONARY.
190 0 M> DISPLAY DICTIONARY.

```

## File Information

### Notes

Output Created		03-JUN-2026 21:51:11
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		DISPLAY DICTIONARY.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.04

[PP\_Plot\_Normality\_Check]

### Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
school	1	Student school	Nominal	Input	2	Left
sex	2	Student sex	Nominal	Input	1	Left
age	3	Student age	Scale	Input	8	Right
address	4	Home address type	Nominal	Input	1	Left
famsize	5	Family size	Nominal	Input	3	Left
Pstatus	6	Parents cohabitation status	Nominal	Input	1	Left
Medu	7	Mother education level	Scale	Input	8	Right
Fedu	8	Father education level	Scale	Input	8	Right
Mjob	9	Mother job	Nominal	Input	12	Left
Fjob	10	Father job	Nominal	Input	12	Left
reason	11	Reason for choosing school	Nominal	Input	12	Left
guardian	12	Student guardian	Nominal	Input	8	Left
traveltime	13	Home to school travel time	Scale	Input	8	Right
studytime	14	Weekly study time	Scale	Input	8	Right
failures	15	Number of past class failures	Scale	Input	8	Right
schoolsup	16	Extra educational support from school	Nominal	Input	3	Left
famsup	17	Family educational support	Nominal	Input	3	Left

## Variable Information

Variable	Print Format	Write Format
school	A2	A2
sex	A1	A1
age	F8	F8
address	A1	A1
famsize	A3	A3
Pstatus	A1	A1
Medu	F8	F8
Fedu	F8	F8
Mjob	A12	A12
Fjob	A12	A12
reason	A12	A12
guardian	A8	A8
traveltime	F8	F8
studytime	F8	F8
failures	F8	F8
schoolsup	A3	A3
famsup	A3	A3

### Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
paid	18	Extra paid classes	Nominal	Input	3	Left
activities	19	Extra-curricular activities	Nominal	Input	3	Left
nursery	20	Attended nursery school	Nominal	Input	3	Left
higher	21	Wants higher education	Nominal	Input	3	Left
internet	22	Internet access at home	Nominal	Input	3	Left
romantic	23	In a romantic relationship	Nominal	Input	3	Left
famrel	24	Quality of family relationships	Scale	Input	8	Right
freetime	25	Free time after school	Scale	Input	8	Right
goout	26	Going out with friends	Scale	Input	8	Right
Dalc	27	Workday alcohol consumption	Scale	Input	8	Right
Walc	28	Weekend alcohol consumption	Scale	Input	8	Right
health	29	Current health status	Scale	Input	8	Right
absences	30	Number of school absences	Scale	Input	8	Right
G1	31	First period grade	Scale	Input	8	Right
G2	32	Second period grade	Scale	Input	8	Right
G3	33	Final grade	Scale	Input	8	Right

## Variable Information

Variable	Print Format	Write Format
paid	A3	A3
activities	A3	A3
nursery	A3	A3
higher	A3	A3
internet	A3	A3
romantic	A3	A3
famrel	F8	F8
freetime	F8	F8
goout	F8	F8
Dalc	F8	F8
Walc	F8	F8
health	F8	F8
absences	F8	F8
G1	F8	F8
G2	F8	F8
G3	F8	F8

Variables in the working file

## Variable Values

Value	Label	
school	GP	Gabriel Pereira
	MS	Mousinho da Silveira
sex	F	Female
	M	Male
address	R	Rural
	U	Urban
famsize	GT3	Greater than 3
	LE3	Less than or equal to 3
Pstatus	A	Apart
	T	Living together
schoolsup	no	No
	yes	Yes
famsup	no	No
	yes	Yes
paid	no	No
	yes	Yes
activities	no	No
	yes	Yes
nursery	no	No
	yes	Yes
higher	no	No
	yes	Yes
internet	no	No
	yes	Yes
romantic	no	No
	yes	Yes

```

191 0 M>
DESCRIPTIVES VARIABLES=G1 G2 G3
192 0 M>  DESCRIPTIVES VARIABLES=G1 G2 G3
        /STATISTICS=MEAN STDDEV MIN MAX.
193 0 M>    /STATISTICS=MEAN STDDEV MIN MAX.

```

## Descriptives

## Notes

Output Created		03-JUN-2026 21:51:12
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=G1 G2 G3 /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

## Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
First period grade	649	0	19	11.40	2.745
Second period grade	649	0	19	11.57	2.914
Final grade	649	0	19	11.91	3.231
Valid N (listwise)	649				

```

194 0 M>
FREQUENCIES VARIABLES=G1 G2 G3
195 0 M> FREQUENCIES VARIABLES=G1 G2 G3
/STATISTICS=MEAN STDDEV MEDIAN SKEWNESS SESKEW KURTOSIS SEKURT MINIMUM MAXIMUM
UM
196 0 M> /STATISTICS=MEAN STDDEV MEDIAN SKEWNESS SESKEW KURTOSIS SEKURT M
INIMUM MAXIMUM
/ORDER=ANALYSIS.

```

197 0 M> /ORDER=ANALYSIS.

## Frequencies

### Notes

Output Created		03-JUN-2026 21:51:12
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=G1 G2 G3 /STATISTICS=MEAN STDDEV MEDIAN SKEWNESS SESKEW KURTOSIS SEKURT MINIMUM MAXIMUM /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

### Statistics

		First period grade	Second period grade	Final grade
N	Valid	649	649	649
	Missing	0	0	0
Mean		11.40	11.57	11.91
Median		11.00	11.00	12.00
Std. Deviation		2.745	2.914	3.231
Skewness		-.003	-.360	-.913
Std. Error of Skewness		.096	.096	.096
Kurtosis		.037	1.662	2.712
Std. Error of Kurtosis		.192	.192	.192
Minimum		0	0	0
Maximum		19	19	19

### Frequency Table

		First period grade				
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	0	1	.2	.2	.2	
	4	2	.3	.3	.5	
	5	5	.8	.8	1.2	
	6	9	1.4	1.4	2.6	
	7	33	5.1	5.1	7.7	
	8	42	6.5	6.5	14.2	
	9	65	10.0	10.0	24.2	
	10	95	14.6	14.6	38.8	
	11	91	14.0	14.0	52.9	
	12	82	12.6	12.6	65.5	
	13	72	11.1	11.1	76.6	
	14	71	10.9	10.9	87.5	
	15	35	5.4	5.4	92.9	
	16	22	3.4	3.4	96.3	
	17	16	2.5	2.5	98.8	
	18	7	1.1	1.1	99.8	
	19	1	.2	.2	100.0	
	Total		649	100.0	100.0	

### Second period grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	7	1.1	1.1	1.1
	5	3	.5	.5	1.5
	6	7	1.1	1.1	2.6
	7	16	2.5	2.5	5.1
	8	40	6.2	6.2	11.2
	9	72	11.1	11.1	22.3
	10	83	12.8	12.8	35.1
	11	103	15.9	15.9	51.0
	12	86	13.3	13.3	64.3
	13	80	12.3	12.3	76.6
	14	54	8.3	8.3	84.9
	15	38	5.9	5.9	90.8
	16	25	3.9	3.9	94.6
	17	20	3.1	3.1	97.7
	18	14	2.2	2.2	99.8
	19	1	.2	.2	100.0
	Total	649	100.0	100.0	

### Final grade

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	0	15	2.3	2.3	2.3	
	1	1	.2	.2	2.5	
	5	1	.2	.2	2.6	
	6	3	.5	.5	3.1	
	7	10	1.5	1.5	4.6	
	8	35	5.4	5.4	10.0	
	9	35	5.4	5.4	15.4	
	10	97	14.9	14.9	30.4	
	11	104	16.0	16.0	46.4	
	12	72	11.1	11.1	57.5	
	13	82	12.6	12.6	70.1	
	14	63	9.7	9.7	79.8	
	15	49	7.6	7.6	87.4	
	16	36	5.5	5.5	92.9	
	17	29	4.5	4.5	97.4	
	18	15	2.3	2.3	99.7	
	19	2	.3	.3	100.0	
	Total		649	100.0	100.0	

198 0 M>

\* -----.

199 0 M>

\* 4. MAIN SPSS P-P PLOTS FOR G1, G2, AND G3.

200 0 M> \* 4. MAIN SPSS P-P PLOTS FOR G1, G2, AND G3.

\* -----.

201 0 M>

202 0 M>

P PLOT VARIABLES=G1 G2 G3

203 0 M> P PLOT VARIABLES=G1 G2 G3

/DISTRIBUTION=NORMAL

204 0 M> /DISTRIBUTION=NORMAL

/FRACTION=BLOM

205 0 M> /FRACTION=BLOM

/TIES=MEAN

206 0 M> /TIES=MEAN

```

/NOSTANDARDIZE
207  0 M>    /NOSTANDARDIZE
        /TYPE=P-P
208  0 M>    /TYPE=P-P
        /PLOT=BOTH
209  0 M>    /PLOT=BOTH
        /NOLOG.
210  0 M>    /NOLOG.

```

## PPlot

### Notes

Output Created		03-JUN-2026 21:51:12
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
	Date	<none>
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	For a given sequence or time series variable, cases with missing values are not used in the analysis. Cases with negative or zero values are also not used, if the log transform is requested.

## Notes

Syntax		PLOT VARIABLES=G1 G2 G3  /DISTRIBUTION=NORMA L /FRACTION=BLOM /TIES=MEAN /NOSTANDARDIZE /TYPE=P-P /PLOT=BOTH /NOLOG.
Resources	Processor Time	00:00:07.16
	Elapsed Time	00:00:03.39
Use	From	First observation
	To	Last observation
Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = CURRENT
	Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots	MXAUTO = 16
	Maximum Number of Lags Per Cross-Correlation Plots	MXCROSS = 7
	Maximum Number of New Variables Generated Per Procedure	MXNEWVAR = 60
	Maximum Number of New Cases Per Procedure	MXPREDICT = 1000
	Treatment of User-Missing Values	MISSING = EXCLUDE
	Confidence Interval Percentage Value	CIN = 95
	Tolerance for Entering Variables in Regression Equations	TOLER = .0001
	Maximum Iterative Parameter Change	CNVERGE = .001
	Method of Calculating Std. Errors for Autocorrelations	ACFSE = IND
Length of Seasonal Period	Unspecified	

## Notes

	Variable Whose Values Label Observations in Plots	Unspecified
	Equations Include	CONSTANT

## Model Description

Model Name		MOD_1
Series or Sequence	1	First period grade
	2	Second period grade
	3	Final grade
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Standardization		Not applied
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method		Blom's
Rank Assigned to Ties		Mean rank of tied values

Applying the model specifications from MOD\_1

## Case Processing Summary

		First period grade	Second period grade	Final grade
Series or Sequence Length		649	649	649
Number of Missing Values in the Plot	User-Missing	0	0	0
	System-Missing	0	0	0

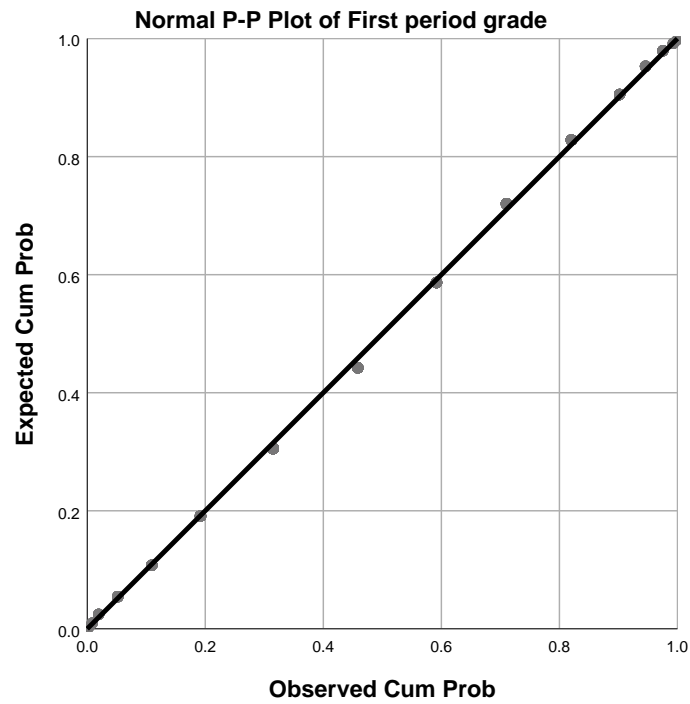
The cases are unweighted.

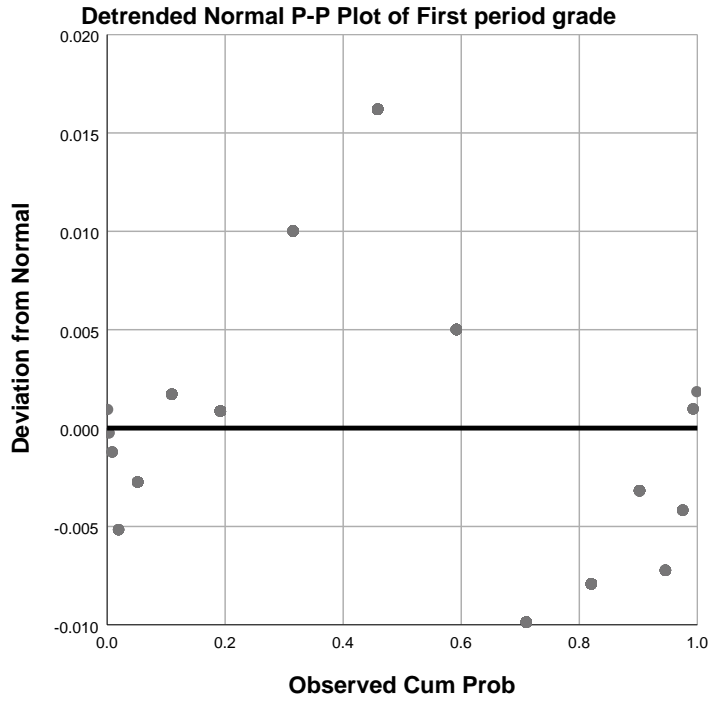
### Estimated Distribution Parameters

		First period grade	Second period grade	Final grade
Normal Distribution	Location	11.40	11.57	11.91
	Scale	2.745	2.914	3.231

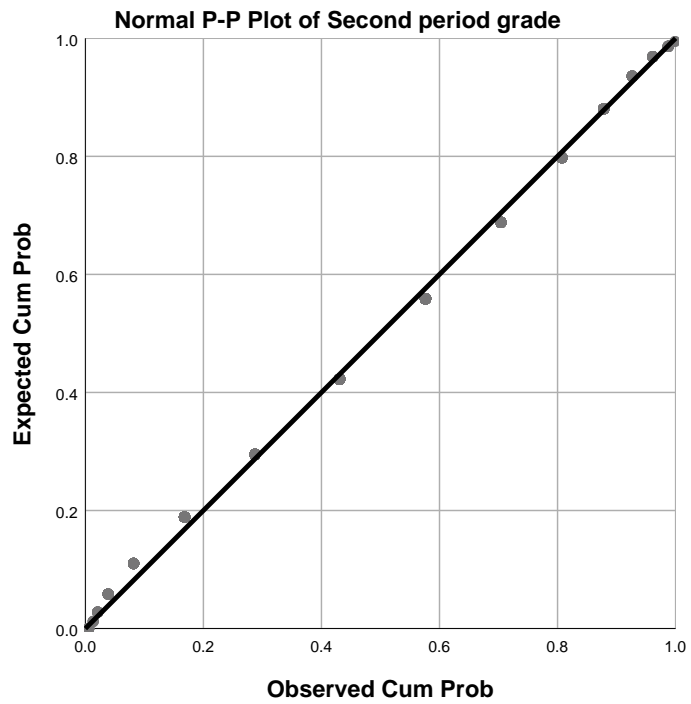
The cases are unweighted.

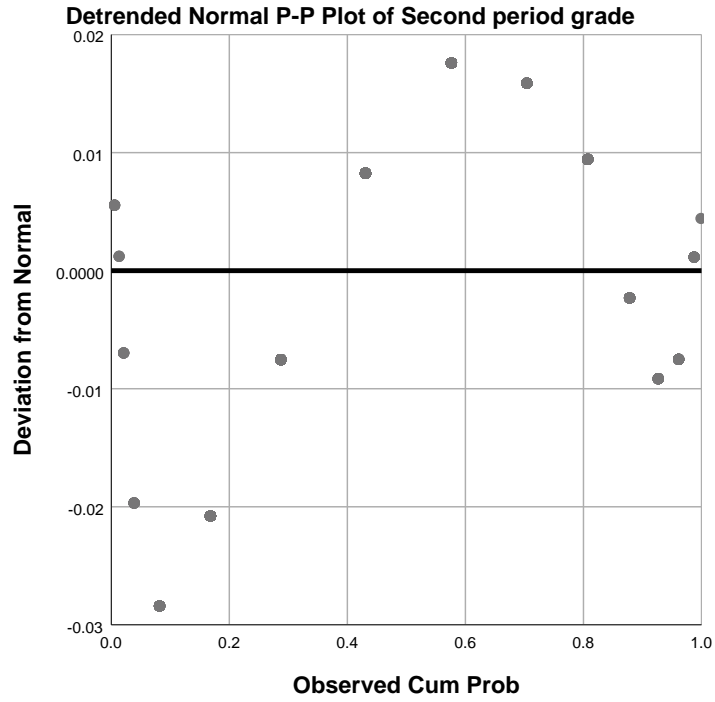
### First period grade



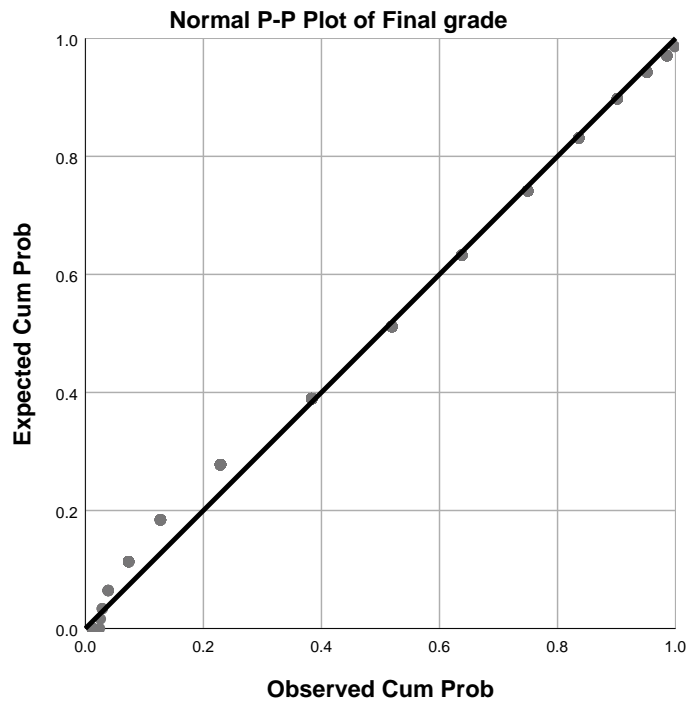


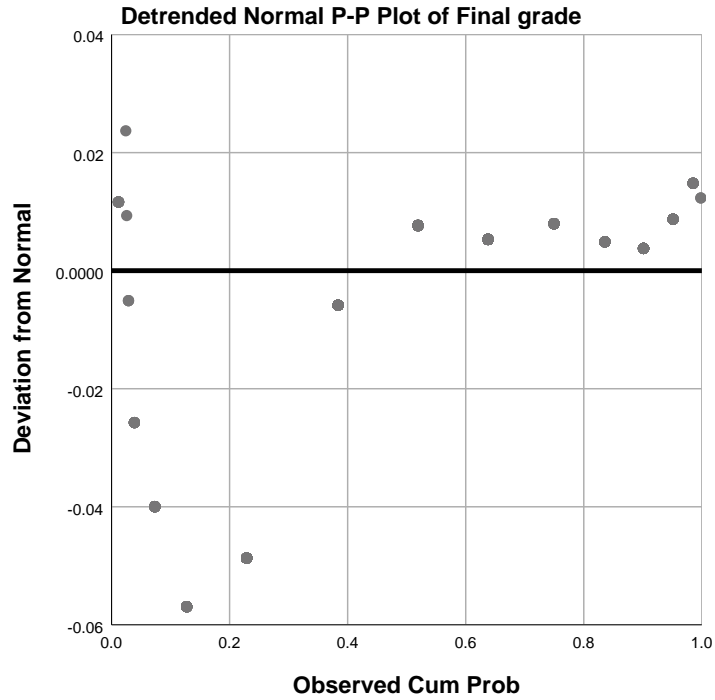
**Second period grade**





**Final grade**





```

211  0 M>
* -----
212  0 M> * -----
* 5. SUPPORTING Q-Q PLOT FOR G3.
213  0 M> * 5. SUPPORTING Q-Q PLOT FOR G3.
* -----
214  0 M> * -----

215  0 M>
PLOT VARIABLES=G3
216  0 M> PLOT VARIABLES=G3
/DISTRIBUTION=NORMAL
217  0 M> /DISTRIBUTION=NORMAL
/FRACTION=BLOM
218  0 M> /FRACTION=BLOM
/TIES=MEAN
219  0 M> /TIES=MEAN
/NOSTANDARDIZE
220  0 M> /NOSTANDARDIZE
/TYPE=Q-Q
221  0 M> /TYPE=Q-Q
/PLOT=BOTH
222  0 M> /PLOT=BOTH

```

/NOLOG.  
 223 0 M> /NOLOG.

## PPlot

### Notes

Output Created		03-JUN-2026 21:51:15
Comments		
Input	Data	D:\low kda score priority basis posts\first post\P P Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
	Date	<none>
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	For a given sequence or time series variable, cases with missing values are not used in the analysis. Cases with negative or zero values are also not used, if the log transform is requested.
Syntax		PLOT VARIABLES=G3  /DISTRIBUTION=NORMAL /FRACTION=BLOM /TIES=MEAN /NOSTANDARDIZE /TYPE=Q-Q /PLOT=BOTH /NOLOG.
Resources	Processor Time	00:00:00.59
	Elapsed Time	00:00:00.55
Use	From	First observation
	To	Last observation

## Notes

Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = CURRENT
	Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots	MXAUTO = 16
	Maximum Number of Lags Per Cross-Correlation Plots	MXCROSS = 7
	Maximum Number of New Variables Generated Per Procedure	MXNEWVAR = 60
	Maximum Number of New Cases Per Procedure	MXPREDICT = 1000
	Treatment of User-Missing Values	MISSING = EXCLUDE
	Confidence Interval Percentage Value	CIN = 95
	Tolerance for Entering Variables in Regression Equations	TOLER = .0001
	Maximum Iterative Parameter Change	CNVERGE = .001
	Method of Calculating Std. Errors for Autocorrelations	ACFSE = IND
	Length of Seasonal Period	Unspecified
	Variable Whose Values Label Observations in Plots	Unspecified
	Equations Include	CONSTANT

## Model Description

Model Name	MOD_2	
Series or Sequence	1	Final grade
Transformation	None	
Non-Seasonal Differencing	0	
Seasonal Differencing	0	
Length of Seasonal Period	No periodicity	
Standardization	Not applied	
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method	Blom's	
Rank Assigned to Ties	Mean rank of tied values	

Applying the model specifications from MOD\_2

## Case Processing Summary

		Final grade
Series or Sequence Length		649
Number of Missing Values in the Plot	User-Missing	0
	System-Missing	0

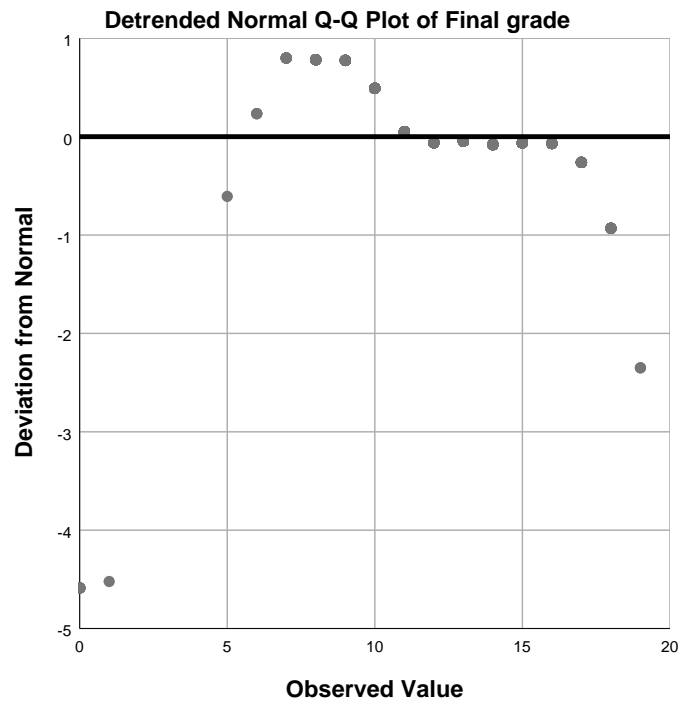
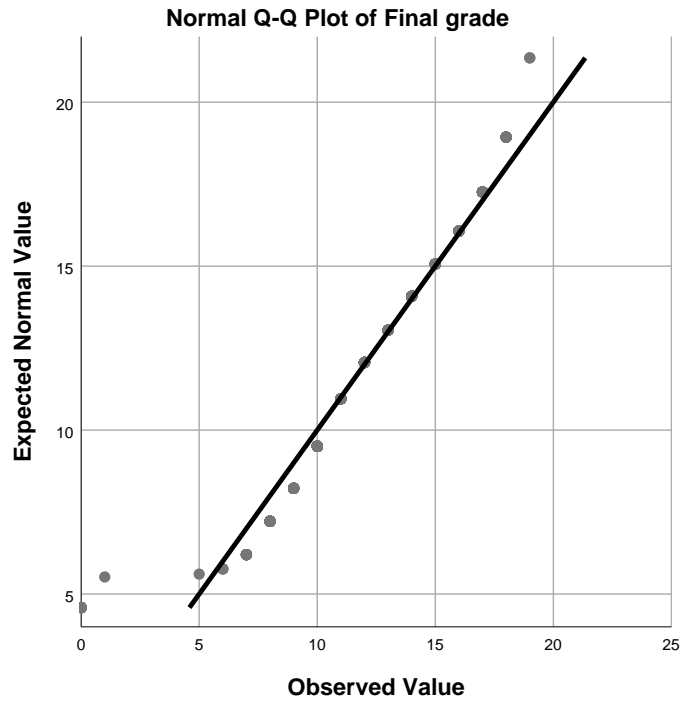
The cases are unweighted.

## Estimated Distribution Parameters

		Final grade
Normal Distribution	Location	11.91
	Scale	3.231

The cases are unweighted.

## Final grade



224 0 M>

\* -----

225 0 M>

\* -----

\* 6. NORMALITY TESTS, HISTOGRAMS, NORMAL PLOTS, AND DESCRIPTIVES.

```

226 0 M> * 6. NORMALITY TESTS, HISTOGRAMS, NORMAL PLOTS, AND DESCRIPTIVES.
* EXAMINE provides descriptives, histograms, normal plots, and tests of normal
ity.
227 0 M> * EXAMINE provides descriptives, histograms, normal plots, and tes
ts of normality.
* -----.
228 0 M> * -----.

229 0 M>
EXAMINE VARIABLES=G1 G2 G3
230 0 M> EXAMINE VARIABLES=G1 G2 G3
/PLOT BOXPLOT STEMLEAF NPLOT HISTOGRAM
231 0 M> /PLOT BOXPLOT STEMLEAF NPLOT HISTOGRAM
/COMPARE GROUPS
232 0 M> /COMPARE GROUPS
/STATISTICS DESCRIPTIVES
233 0 M> /STATISTICS DESCRIPTIVES
/CINTERVAL 95
234 0 M> /CINTERVAL 95
/MISSING LISTWISE
235 0 M> /MISSING LISTWISE
/NOTOTAL.
236 0 M> /NOTOTAL.

```

## Explore

## Notes

Output Created		03-JUN-2026 21:51:16
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=G1 G2 G3 /PLOT BOXPLOT STEMLEAF NPLOT HISTOGRAM /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:03.06
	Elapsed Time	00:00:02.83

## Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
First period grade	649	100.0%	0	0.0%	649	100.0%
Second period grade	649	100.0%	0	0.0%	649	100.0%
Final grade	649	100.0%	0	0.0%	649	100.0%

## Descriptives

		Statistic	Std. Error
First period grade	Mean	11.40	.108
	95% Confidence Interval for Mean	Lower Bound	11.19
		Upper Bound	11.61
	5% Trimmed Mean	11.39	
	Median	11.00	
	Variance	7.536	
	Std. Deviation	2.745	
	Minimum	0	
	Maximum	19	
	Range	19	
	Interquartile Range	3	
	Skewness	-.003	.096
	Kurtosis	.037	.192
Second period grade	Mean	11.57	.114
	95% Confidence Interval for Mean	Lower Bound	11.35
		Upper Bound	11.79
	5% Trimmed Mean	11.60	
	Median	11.00	
	Variance	8.489	
	Std. Deviation	2.914	
	Minimum	0	
	Maximum	19	
	Range	19	
	Interquartile Range	3	
	Skewness	-.360	.096
	Kurtosis	1.662	.192
Final grade	Mean	11.91	.127
	95% Confidence Interval for Mean	Lower Bound	11.66
		Upper Bound	12.16
	5% Trimmed Mean	12.06	
	Median	12.00	
	Variance	10.437	
	Std. Deviation	3.231	
	Minimum	0	
Maximum	19		

## Descriptives

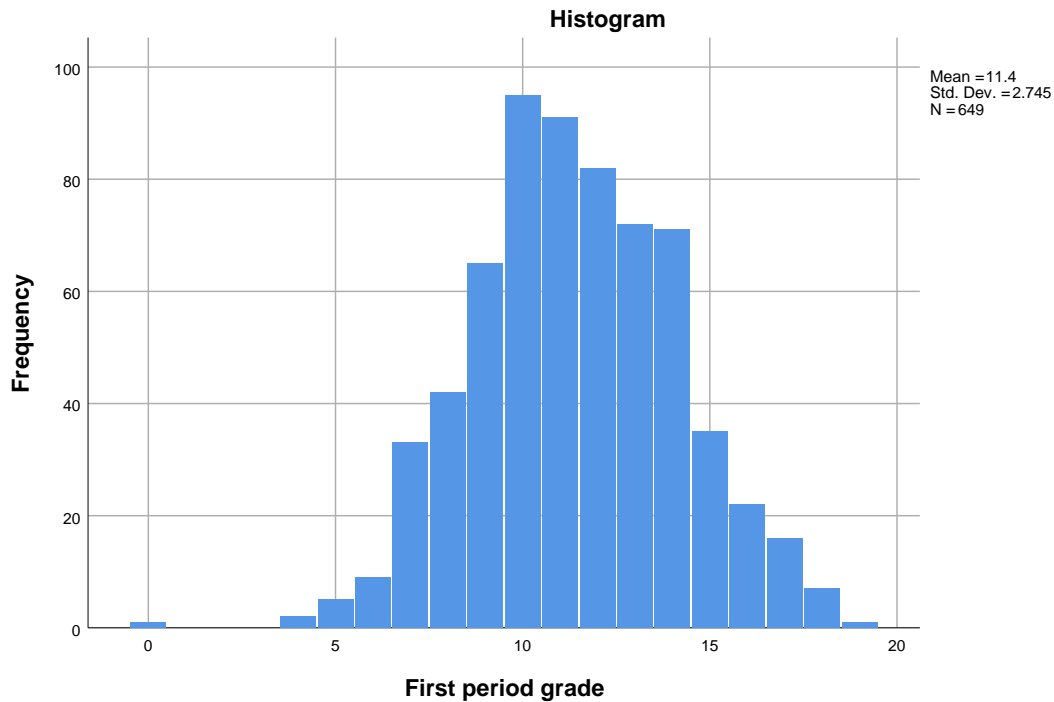
	Statistic	Std. Error
Range	19	
Interquartile Range	4	
Skewness	-.913	.096
Kurtosis	2.712	.192

## Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
First period grade	.086	649	.000	.986	649	.000
Second period grade	.088	649	.000	.962	649	.000
Final grade	.124	649	.000	.926	649	.000

a. Lilliefors Significance Correction

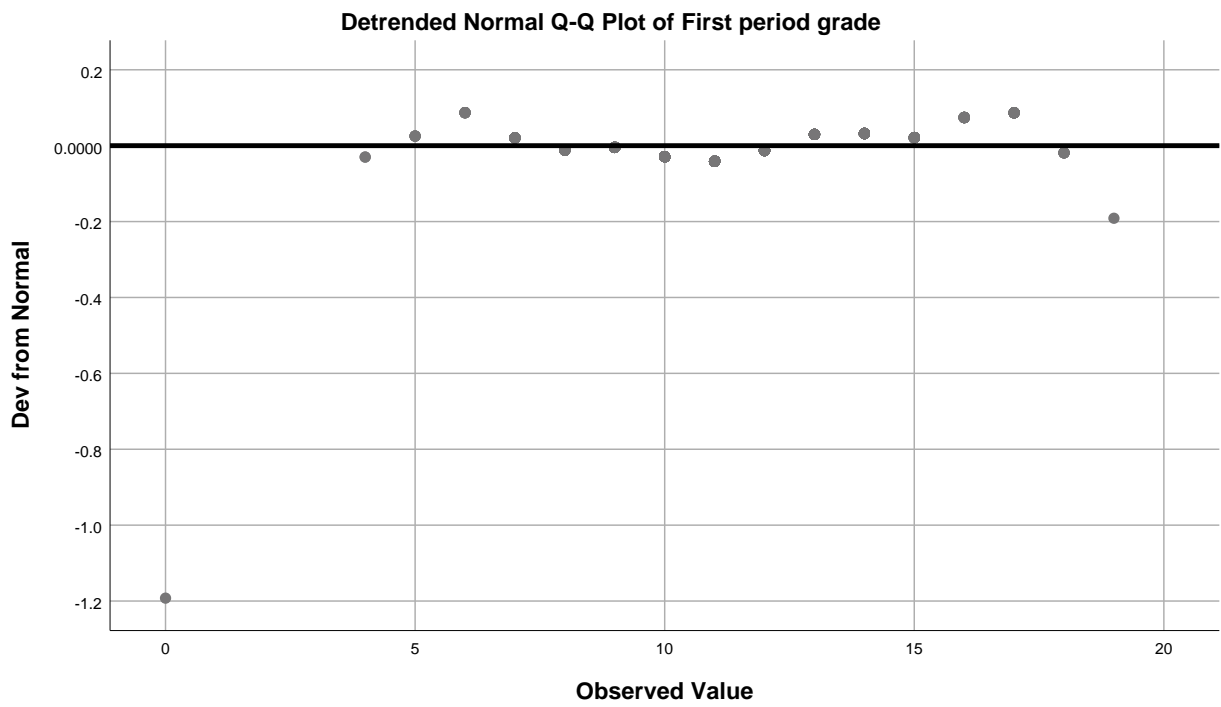
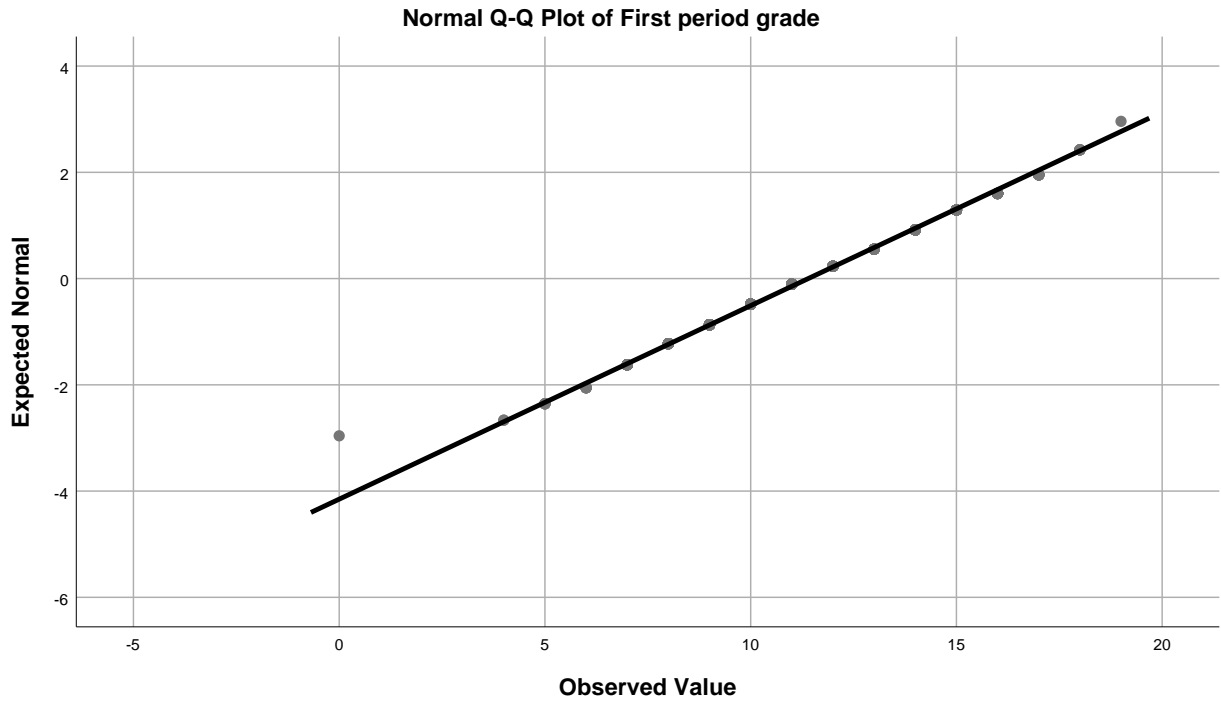
## First period grade

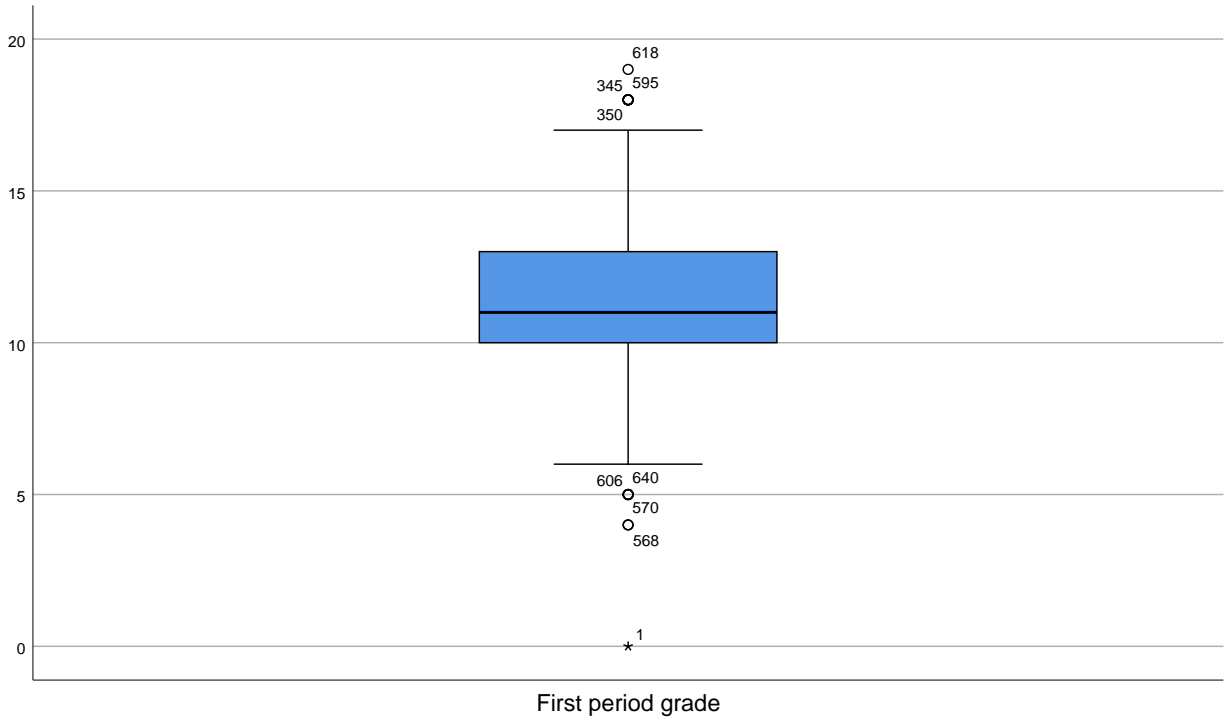


First period grade Stem-and-Leaf Plot

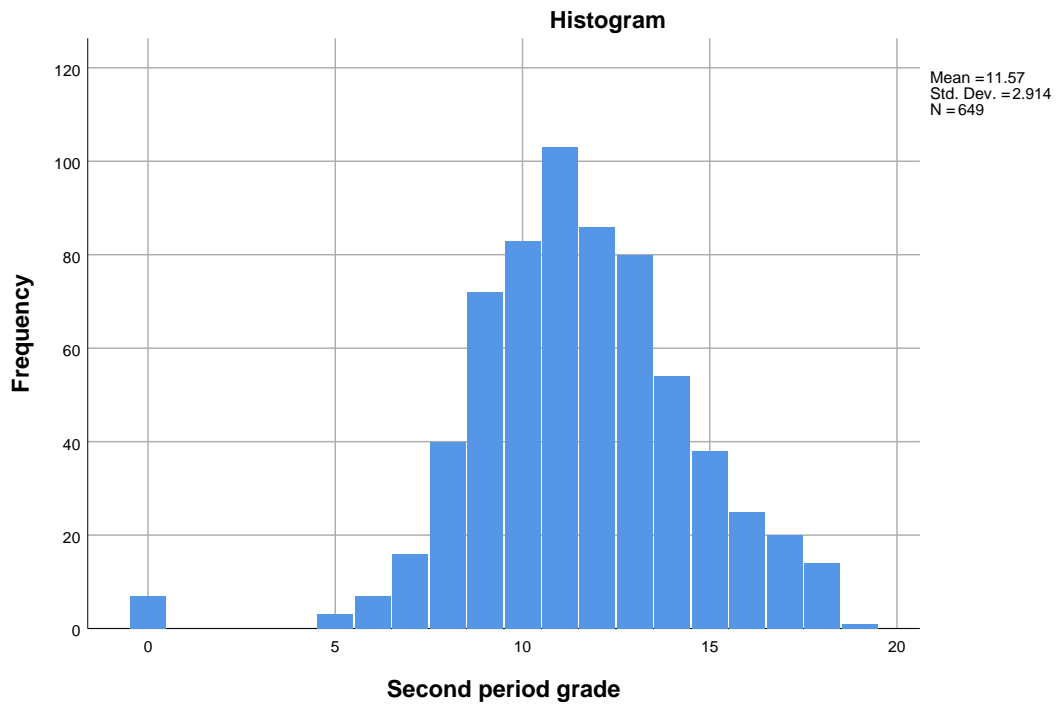
Frequency      Stem & Leaf





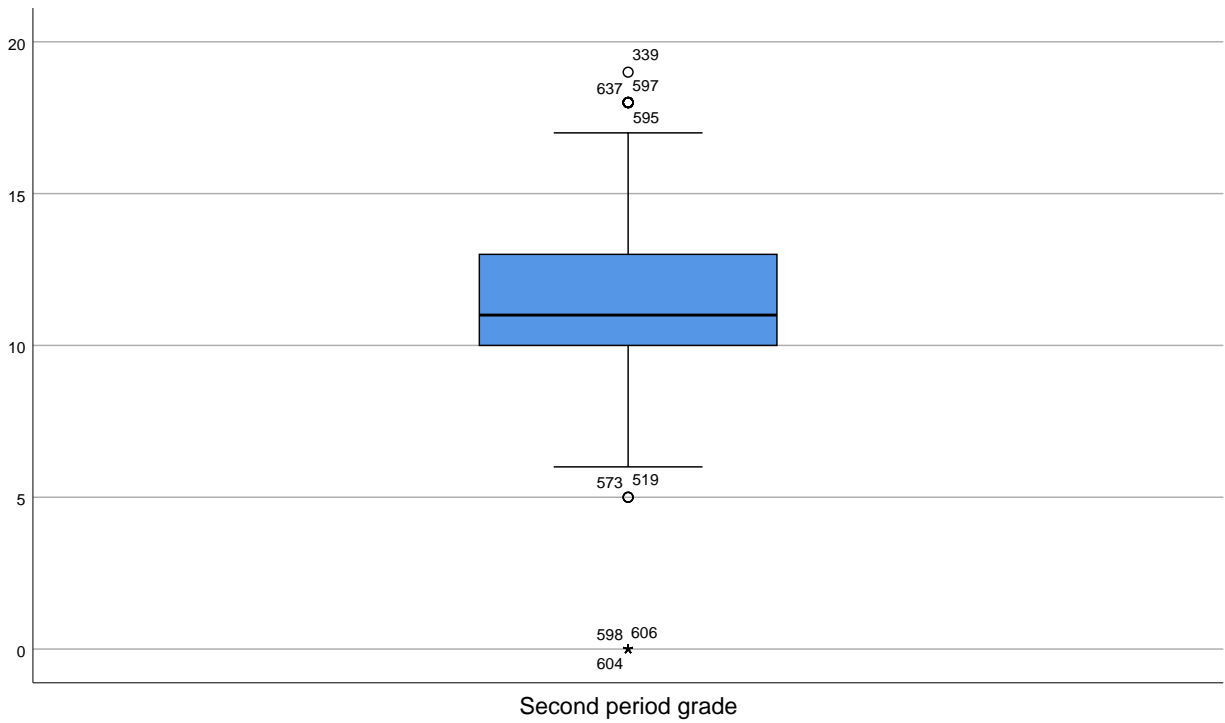
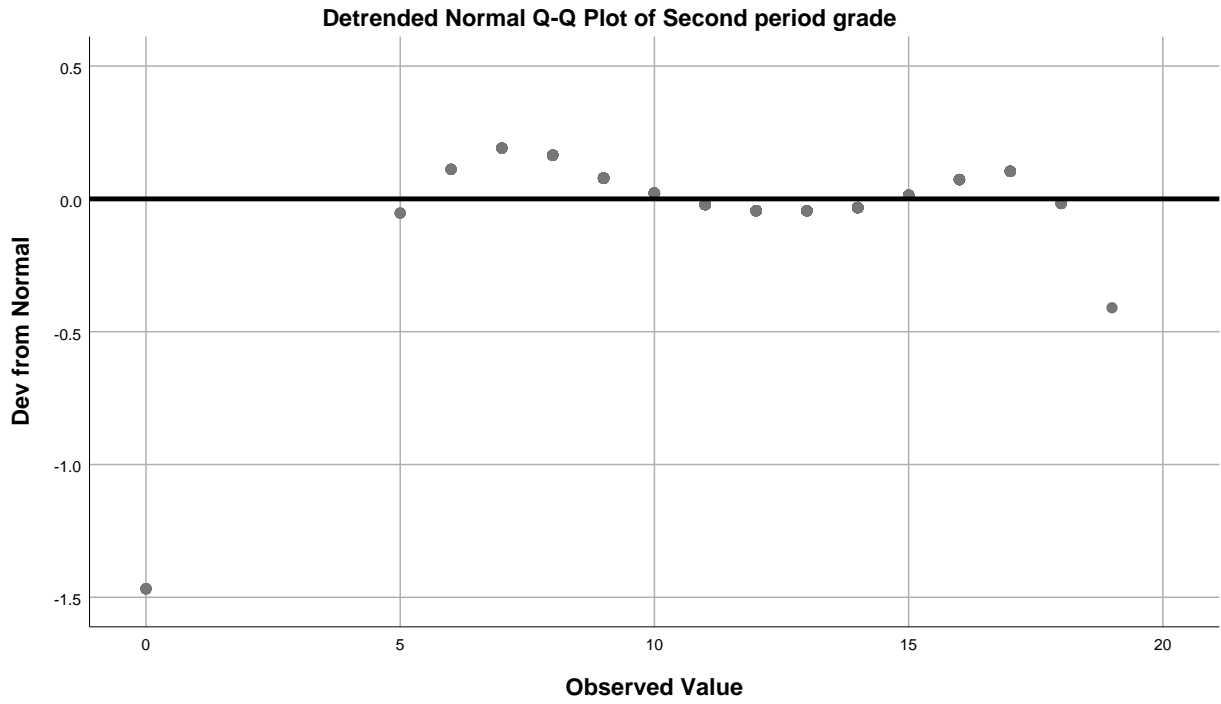


## Second period grade



Second period grade Stem-and-Leaf Plot

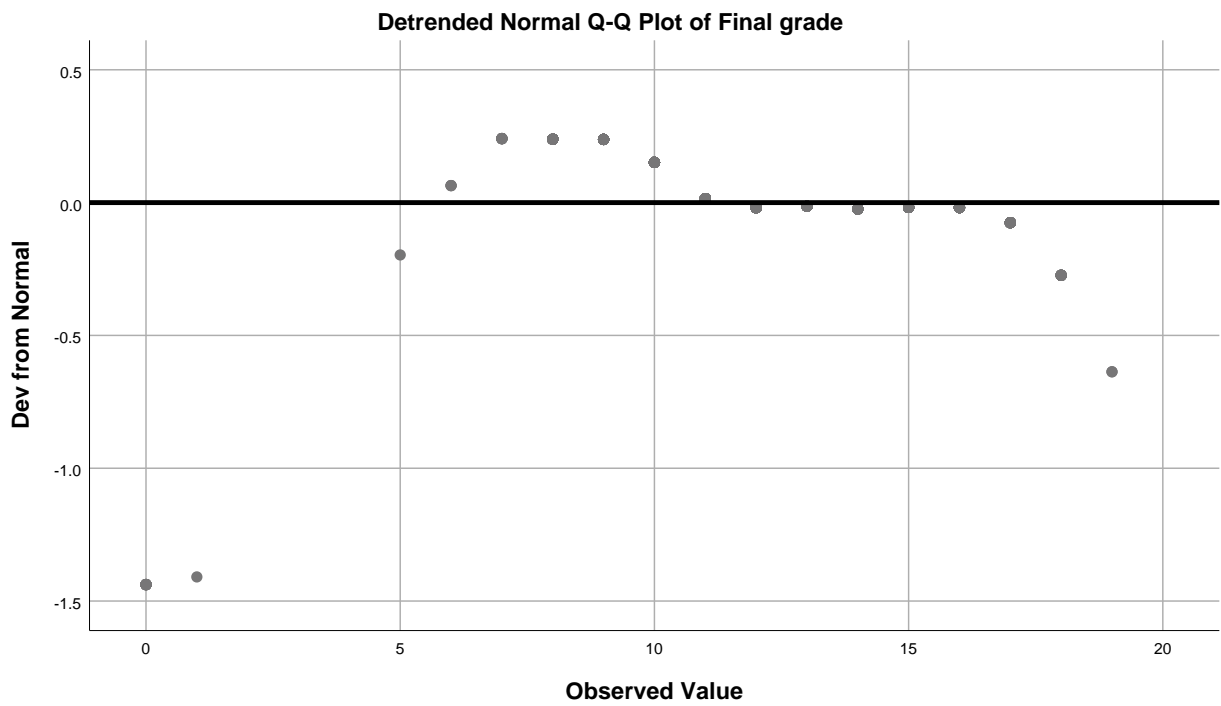
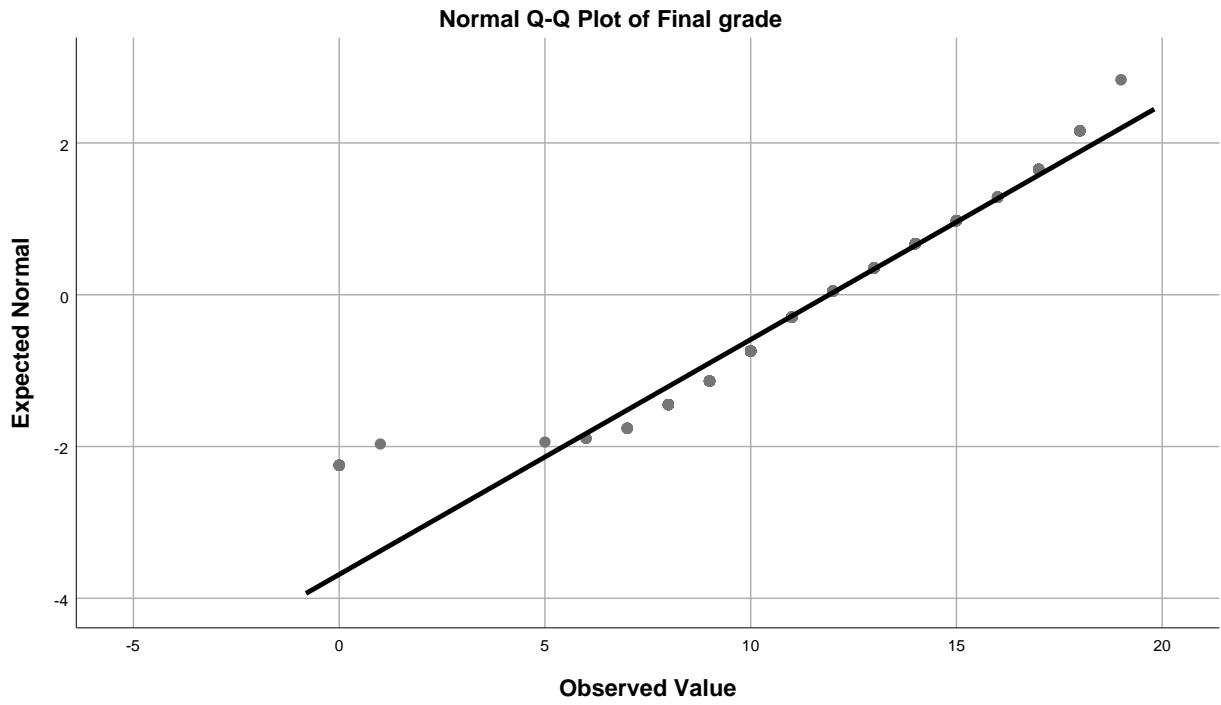


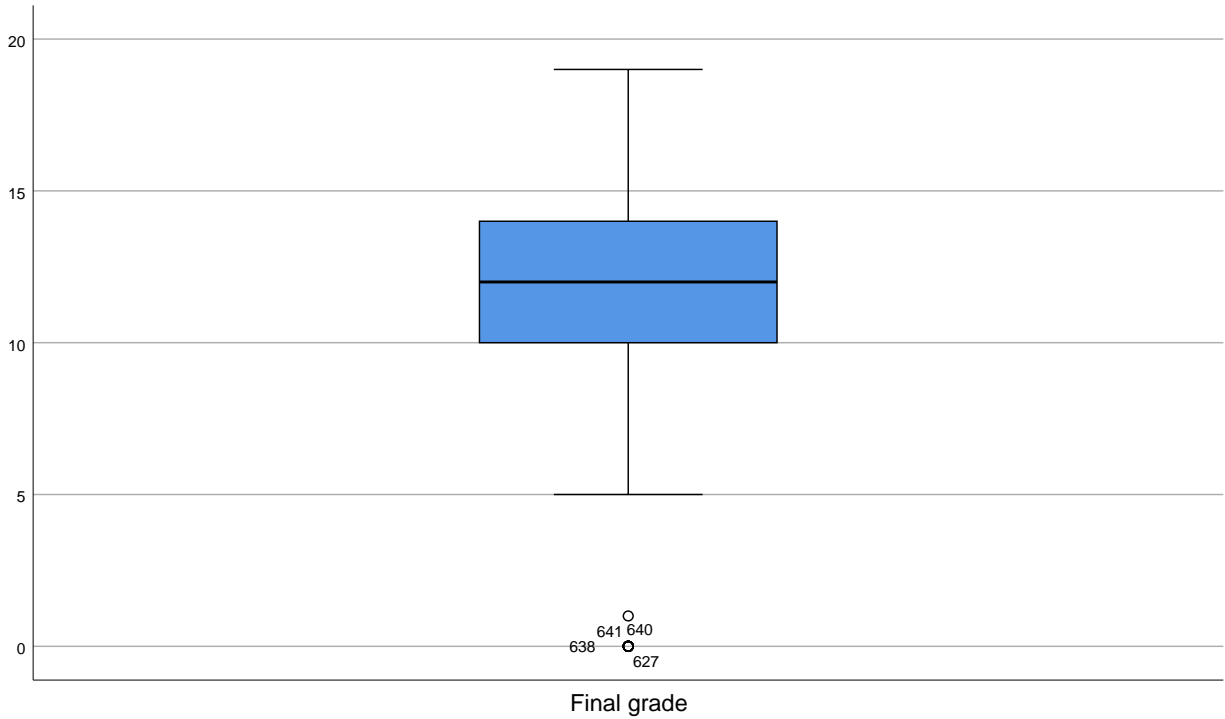


**Final grade**



& denotes fractional leaves.





```

237  0 M>
* -----
238  0 M> * -----
* 7. GROUPED NORMALITY CHECKS BY SCHOOL.
239  0 M> * 7. GROUPED NORMALITY CHECKS BY SCHOOL.
* -----
240  0 M> * -----

241  0 M>
EXAMINE VARIABLES=G3 BY school
242  0 M>  EXAMINE VARIABLES=G3 BY school
        /PLOT BOXPLOT NPLOT HISTOGRAM
243  0 M>      /PLOT BOXPLOT NPLOT HISTOGRAM
        /COMPARE GROUPS
244  0 M>      /COMPARE GROUPS
        /STATISTICS DESCRIPTIVES
245  0 M>      /STATISTICS DESCRIPTIVES
        /CINTERVAL 95
246  0 M>      /CINTERVAL 95
        /MISSING LISTWISE
247  0 M>      /MISSING LISTWISE
        /NOTOTAL.
248  0 M>      /NOTOTAL.

```

## Explore

### Notes

Output Created		03-JUN-2026 21:51:19
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=G3 BY school /PLOT BOXPLOT NPLOT HISTOGRAM /COMPARE GROUPS /STATISTICS DESCRIPTIVES /INTERVAL 95 /MISSING LISTWISE...
Resources	Processor Time	00:00:01.83
	Elapsed Time	00:00:01.72

## Student school

### Case Processing Summary

	Student school	Cases				
		Valid		Missing		Total
		N	Percent	N	Percent	N
Final grade	GP Gabriel Pereira	423	100.0%	0	0.0%	423
	MS Mousinho da Silveira	226	100.0%	0	0.0%	226

### Case Processing Summary

	Student school	Cases
		Total Percent
Final grade	GP Gabriel Pereira	100.0%
	MS Mousinho da Silveira	100.0%

### Descriptives

	Student school	Statistic		
Final grade	GP Gabriel Pereira	Mean	12.58	
		95% Confidence Interval for Mean	Lower Bound	12.33
			Upper Bound	12.83
		5% Trimmed Mean	12.62	
		Median	13.00	
		Variance	6.894	
		Std. Deviation	2.626	
		Minimum	0	
		Maximum	19	
		Range	19	
		Interquartile Range	3	
		Skewness	-.336	
		Kurtosis	1.388	
		Final grade	MS Mousinho da Silveira	Mean
95% Confidence Interval for Mean	Lower Bound			10.15
	Upper Bound			11.15
5% Trimmed Mean	10.85			
Median	11.00			
Variance	14.699			
Std. Deviation	3.834			
Minimum	0			

### Descriptives

Student school		Std. Error			
Final grade	GP Gabriel Pereira	Mean	.128		
		95% Confidence Interval for Mean	Lower Bound		
			Upper Bound		
		5% Trimmed Mean			
		Median			
		Variance			
		Std. Deviation			
		Minimum			
		Maximum			
		Range			
		Interquartile Range			
		Skewness	.119		
		Kurtosis	.237		
		MS Mousinho da Silveira	MS Mousinho da Silveira	Mean	.255
				95% Confidence Interval for Mean	Lower Bound
Upper Bound					
5% Trimmed Mean					
Median					
Variance					
Std. Deviation					
Minimum					

### Descriptives

Student school	Statistic	
	Maximum	19
	Range	19
	Interquartile Range	4
	Skewness	-.828
	Kurtosis	1.778

## Descriptives

Student school	Std. Error
Maximum	
Range	
Interquartile Range	
Skewness	.162
Kurtosis	.322

## Tests of Normality

	Student school	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk	
		Statistic	df	Sig.	Statistic	df
Final grade	GP Gabriel Pereira	.092	423	.000	.965	423
	MS Mousinho da Silveira	.147	226	.000	.905	226

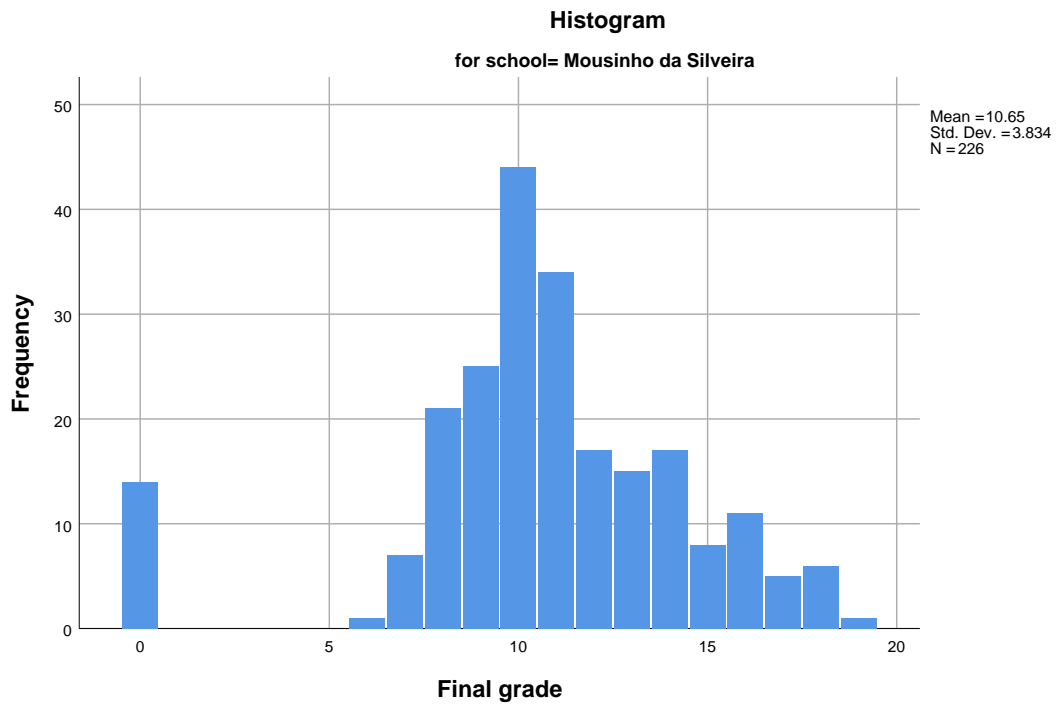
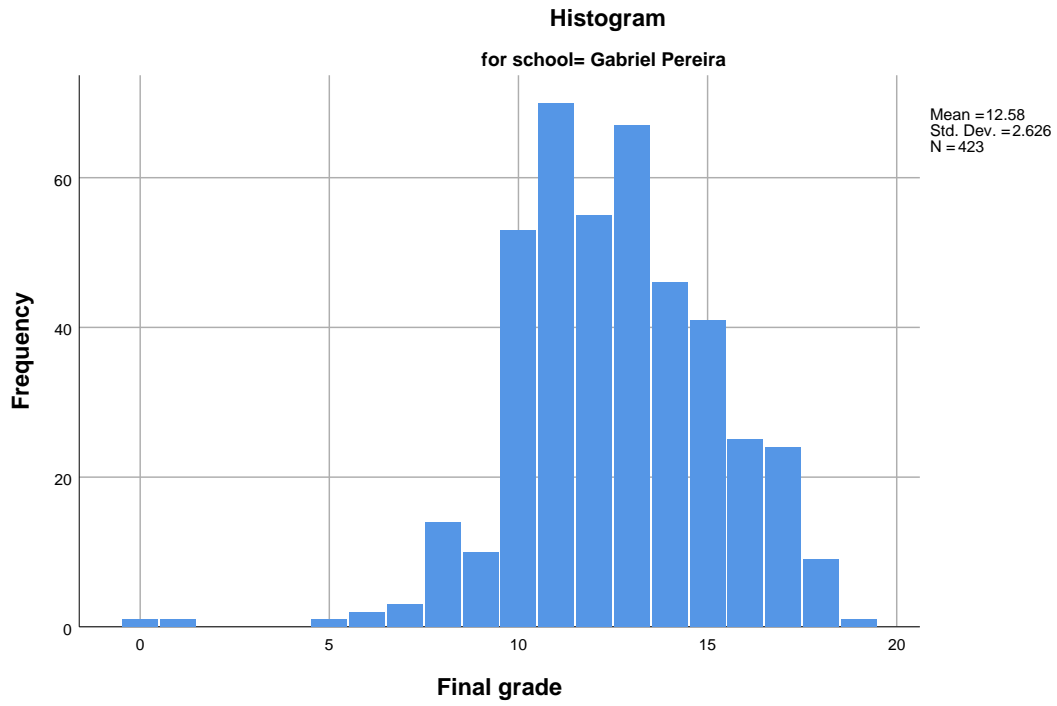
## Tests of Normality

	Student school	Shapiro-...
		Sig.
Final grade	GP Gabriel Pereira	.000
	MS Mousinho da Silveira	.000

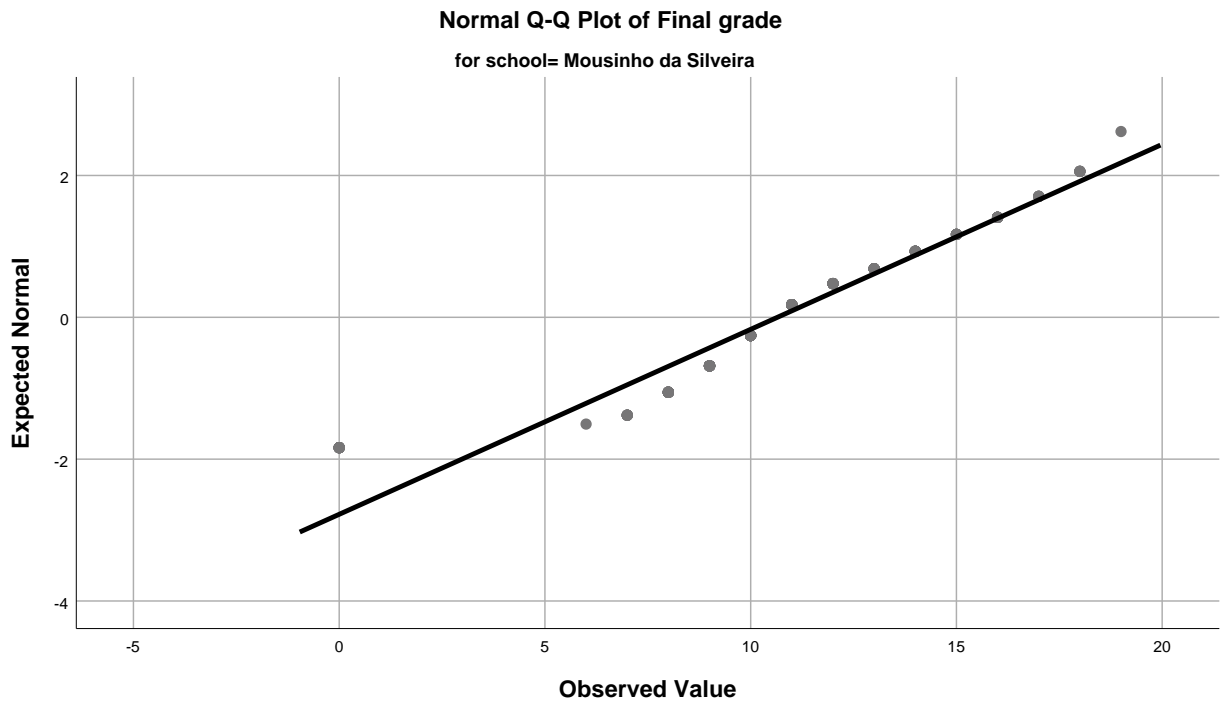
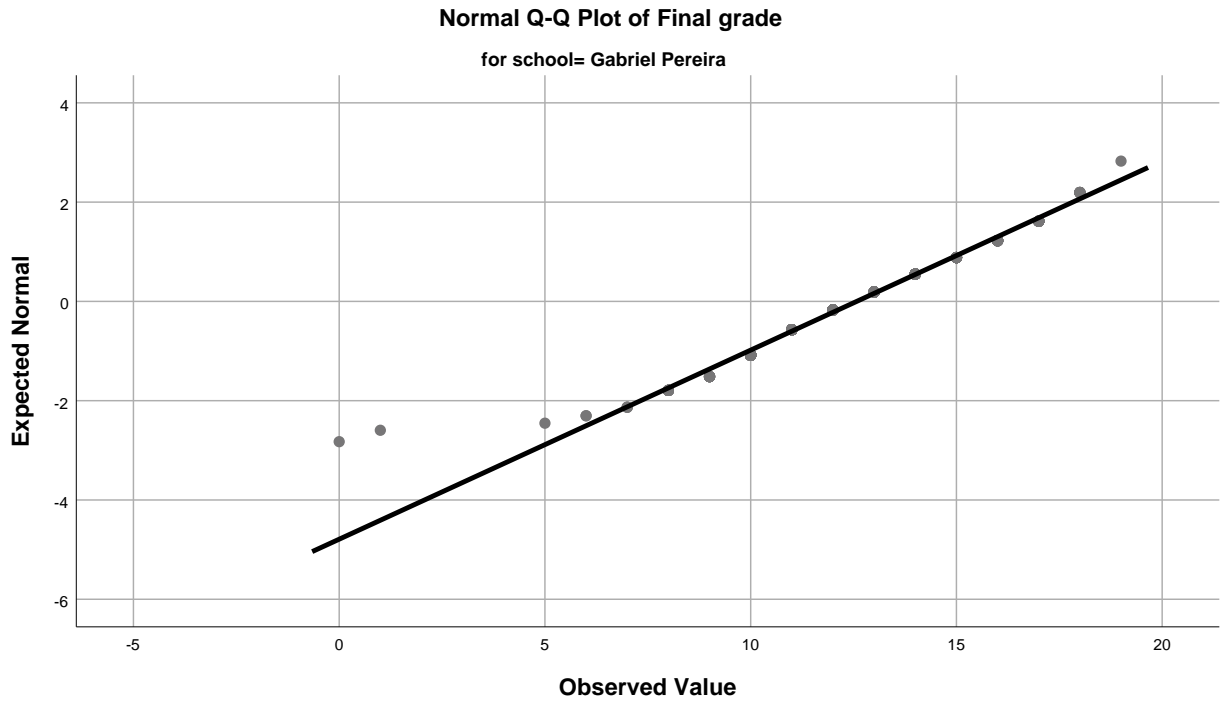
a. Lilliefors Significance Correction

**Final grade**

**Histograms**



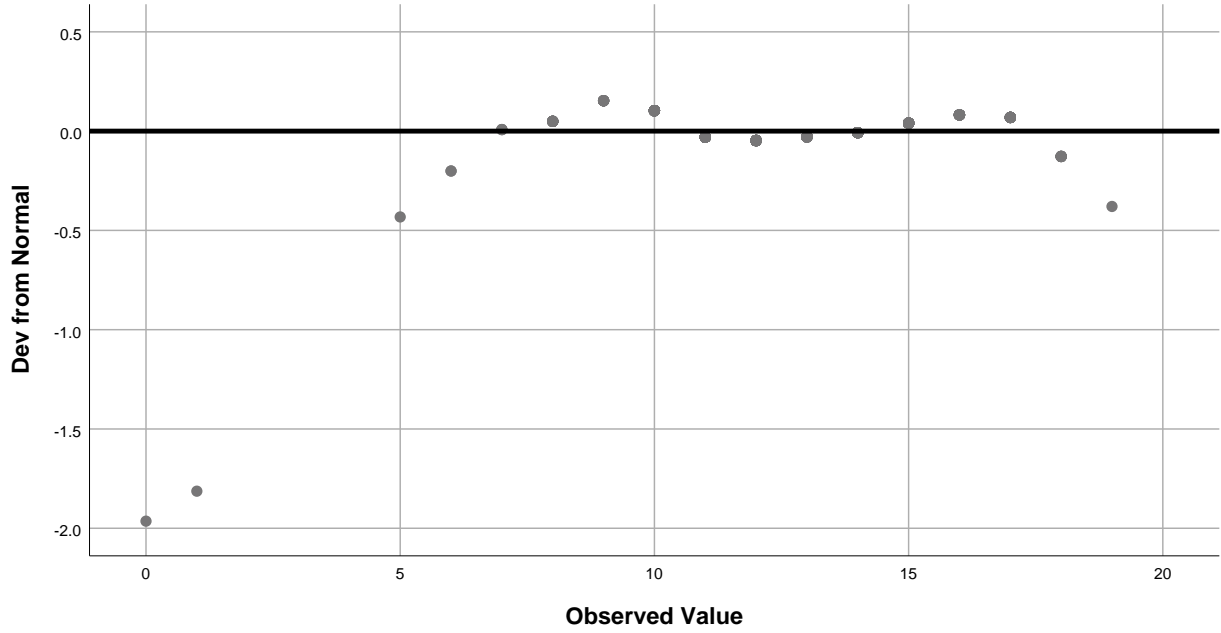
## Normal Q-Q Plots



**Detrended Normal Q-Q Plots**

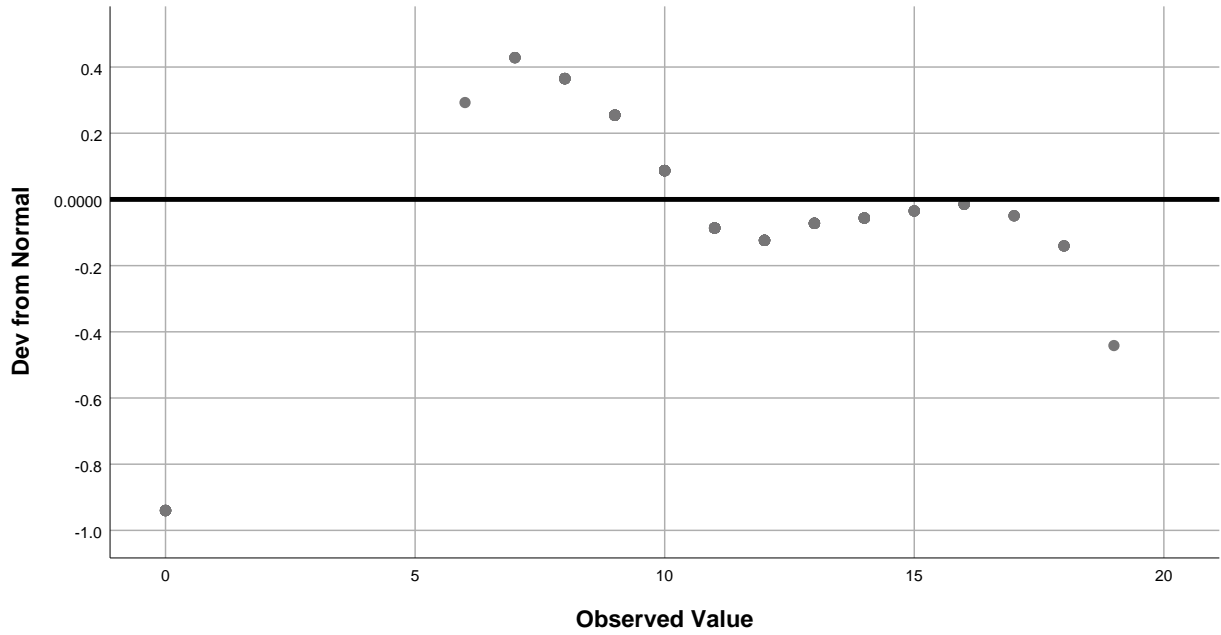
**Detrended Normal Q-Q Plot of Final grade**

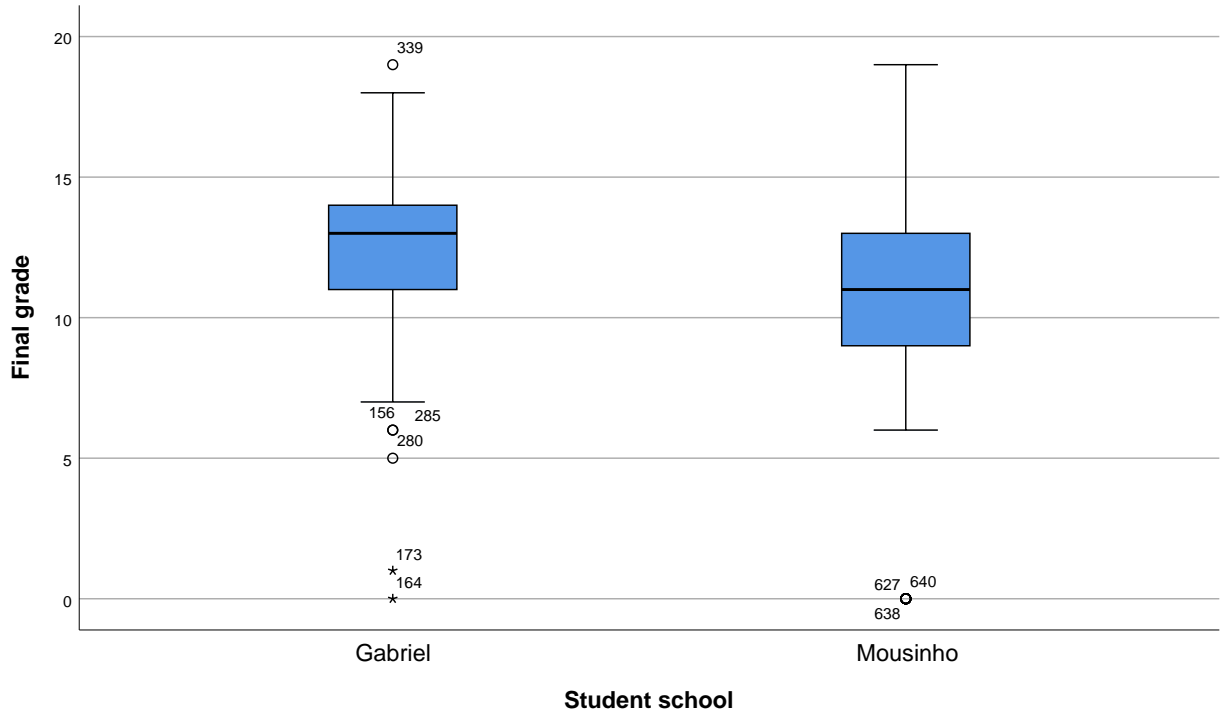
for school= Gabriel Pereira



**Detrended Normal Q-Q Plot of Final grade**

for school= Mousinho da Silveira





```

249  0 M>
SORT CASES BY school.
250  0 M>  SORT CASES BY school.
SPLIT FILE LAYERED BY school.
251  0 M>  SPLIT FILE LAYERED BY school.

252  0 M>
PLOT VARIABLES=G3
253  0 M>  PLOT VARIABLES=G3
        /DISTRIBUTION=NORMAL
254  0 M>        /DISTRIBUTION=NORMAL
        /FRACTION=BLOM
255  0 M>        /FRACTION=BLOM
        /TIES=MEAN
256  0 M>        /TIES=MEAN
        /NOSTANDARDIZE
257  0 M>        /NOSTANDARDIZE
        /TYPE=P-P
258  0 M>        /TYPE=P-P
        /PLOT=BOTH
259  0 M>        /PLOT=BOTH
        /NOLOG.
260  0 M>        /NOLOG.

```

# PPlot

## Notes

Output Created		03-JUN-2026 21:51:20
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	Student school
	N of Rows in Working Data File	649
	Date	<none>
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	For a given sequence or time series variable, cases with missing values are not used in the analysis. Cases with negative or zero values are also not used, if the log transform is requested.
Syntax		<pre> PLOT VARIABLES=G3 /DISTRIBUTION=NORMAL /FRACTION=BLOM /TIES=MEAN /NOSTANDARDIZE /TYPE=P-P /PLOT=BOTH /NOLOG. </pre>
Resources	Processor Time	00:00:01.61
	Elapsed Time	00:00:01.16
Use	From	First observation
	To	Last observation
Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = CURRENT

## Notes

Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots	MXAUTO = 16
Maximum Number of Lags Per Cross-Correlation Plots	MXCROSS = 7
Maximum Number of New Variables Generated Per Procedure	MXNEWVAR = 60
Maximum Number of New Cases Per Procedure	MXPREDICT = 1000
Treatment of User-Missing Values	MISSING = EXCLUDE
Confidence Interval Percentage Value	CIN = 95
Tolerance for Entering Variables in Regression Equations	TOLER = .0001
Maximum Iterative Parameter Change	CNVERGE = .001
Method of Calculating Std. Errors for Autocorrelations	ACFSE = IND
Length of Seasonal Period	Unspecified
Variable Whose Values Label Observations in Plots	Unspecified
Equations Include	CONSTANT

## Model Description

Model Name	MOD_3	
Series or Sequence	1	Final grade
Transformation	None	
Non-Seasonal Differencing	0	
Seasonal Differencing	0	
Length of Seasonal Period	No periodicity	
Standardization	Not applied	
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method	Blom's	
Rank Assigned to Ties	Mean rank of tied values	

Applying the model specifications from MOD\_3

## Case Processing Summary

Student school		Final grade	
GP Gabriel Pereira	Series or Sequence Length	423	
	Number of Missing Values in the Plot	User-Missing	0
		System-Missing	0
MS Mousinho da Silveira	Series or Sequence Length	226	
	Number of Missing Values in the Plot	User-Missing	0
		System-Missing	0

The cases are unweighted.

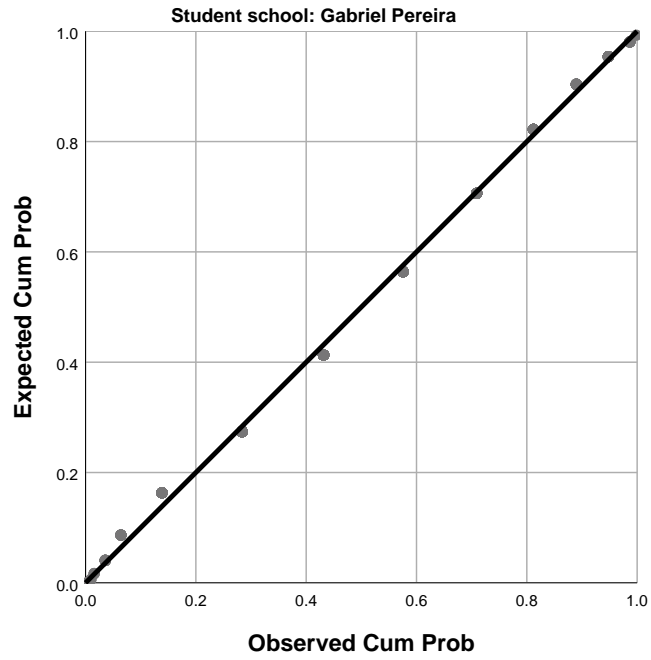
## Estimated Distribution Parameters

Student school		Final grade	
GP Gabriel Pereira	Normal Distribution	Location	12.58
		Scale	2.626
MS Mousinho da Silveira	Normal Distribution	Location	10.65
		Scale	3.834

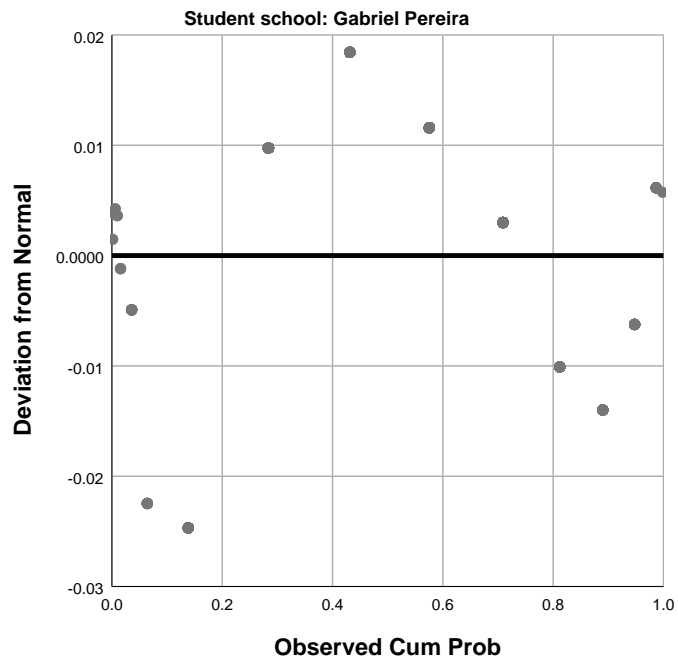
The cases are unweighted.

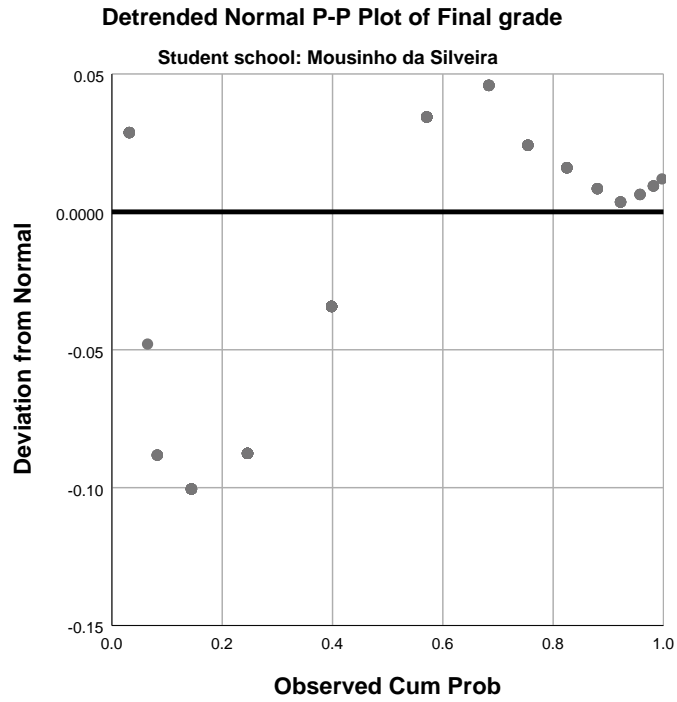
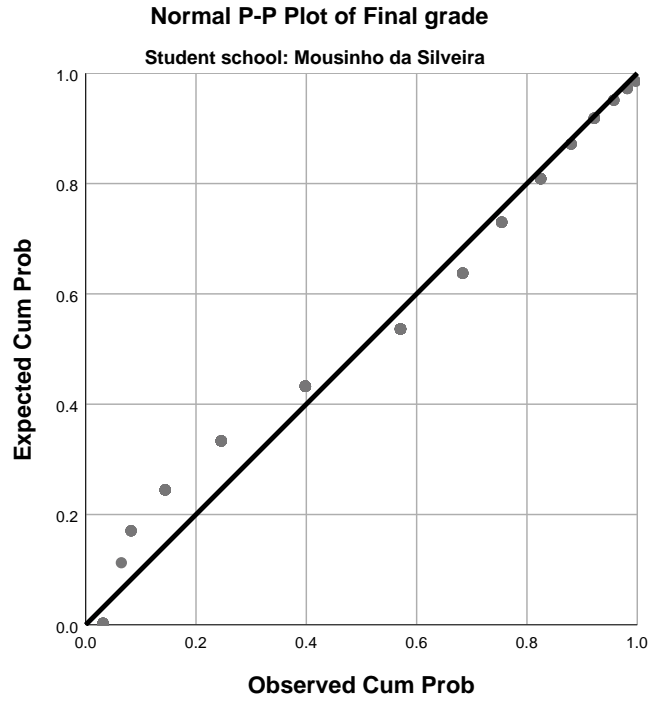
## Final grade

### Normal P-P Plot of Final grade



### Detrended Normal P-P Plot of Final grade





```

261  0 M>
SPLIT FILE OFF.
262  0 M> SPLIT FILE OFF.

```

```

263  0 M>
* -----
264  0 M> * -----
* 8. GROUPED NORMALITY CHECKS BY SEX.
265  0 M> * 8. GROUPED NORMALITY CHECKS BY SEX.
* -----
266  0 M> * -----

267  0 M>
EXAMINE VARIABLES=G3 BY sex
268  0 M> EXAMINE VARIABLES=G3 BY sex
      /PLOT BOXPLOT NPLOT HISTOGRAM
269  0 M>   /PLOT BOXPLOT NPLOT HISTOGRAM
      /COMPARE GROUPS
270  0 M>   /COMPARE GROUPS
      /STATISTICS DESCRIPTIVES
271  0 M>   /STATISTICS DESCRIPTIVES
      /CINTERVAL 95
272  0 M>   /CINTERVAL 95
      /MISSING LISTWISE
273  0 M>   /MISSING LISTWISE
      /NOTOTAL.
274  0 M>   /NOTOTAL.

```

## Explore

## Notes

Output Created		03-JUN-2026 21:51:22
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=G3 BY sex /PLOT BOXPLOT NPLOT HISTOGRAM /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:04.13
	Elapsed Time	00:00:01.84

## Student sex

### Case Processing Summary

	Student sex	Valid		Cases Missing		Total	
		N	Percent	N	Percent	N	Percent
Final grade	F Female	383	100.0%	0	0.0%	383	100.0%
	M Male	266	100.0%	0	0.0%	266	100.0%

## Descriptives

Student sex		Statistic	Std. Error		
Final grade	F Female	Mean	12.25	.160	
		95% Confidence Interval for Mean	Lower Bound	11.94	
			Upper Bound	12.57	
		5% Trimmed Mean	12.37		
		Median	12.00		
		Variance	9.760		
		Std. Deviation	3.124		
		Minimum	0		
		Maximum	19		
		Range	19		
		Interquartile Range	4		
		Skewness	-.857	.125	
		Kurtosis	2.683	.249	
	M Male	Mean	11.41	.204	
		95% Confidence Interval for Mean	Lower Bound	11.01	
			Upper Bound	11.81	
		5% Trimmed Mean	11.60		
		Median	11.00		
		Variance	11.027		
		Std. Deviation	3.321		
Minimum		0			
Maximum		19			
Range		19			
Interquartile Range		3			
Skewness		-.980	.149		
Kurtosis		2.803	.298		

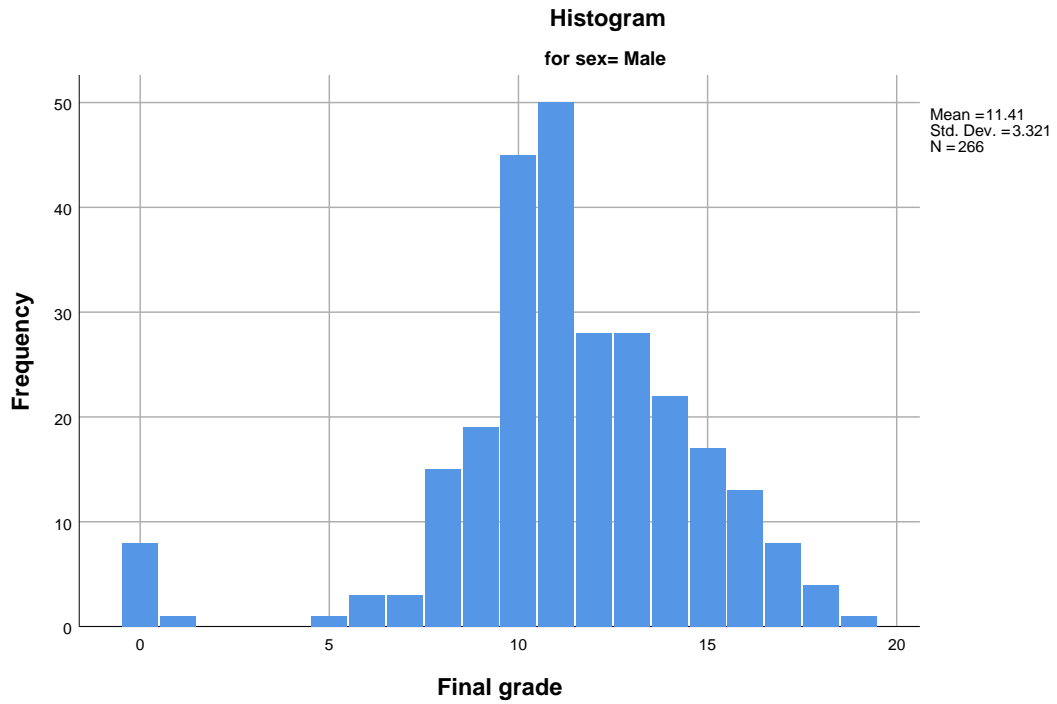
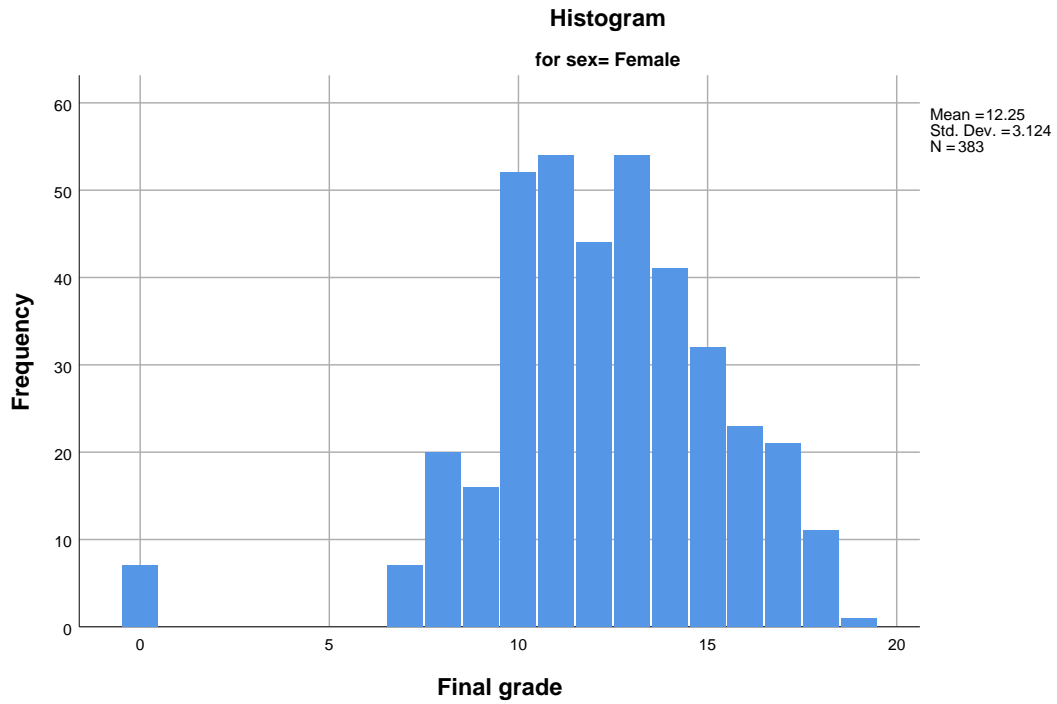
## Tests of Normality

	Student sex	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Final grade	F Female	.105	383	.000	.934	383	.000
	M Male	.148	266	.000	.913	266	.000

a. Lilliefors Significance Correction

**Final grade**

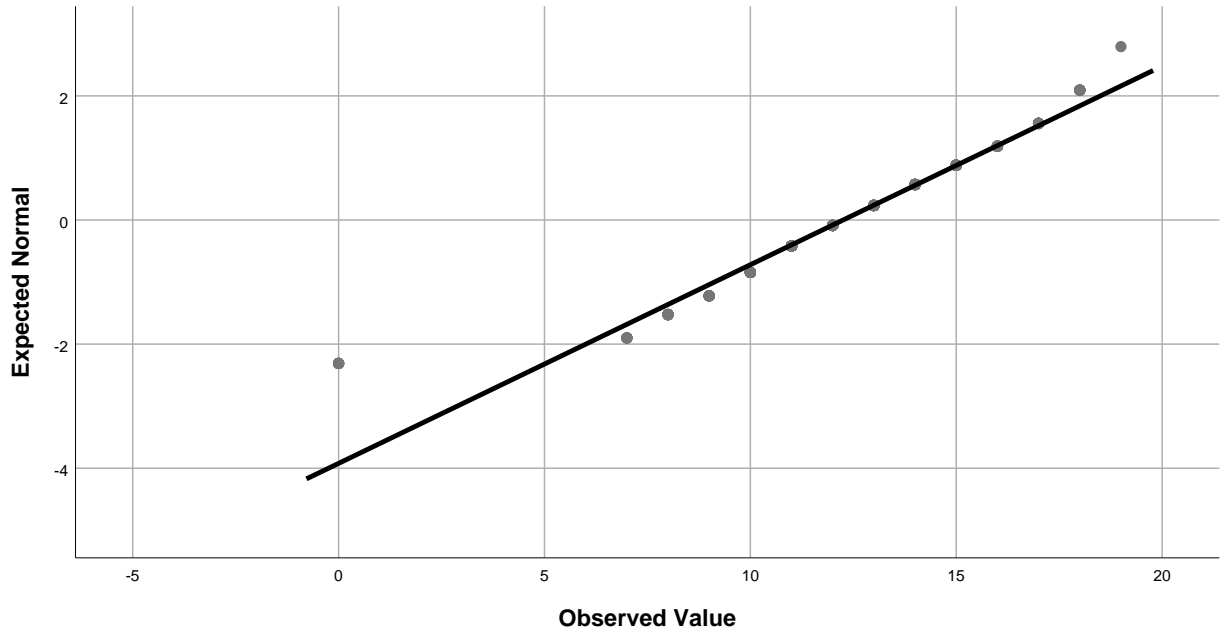
# Histograms



# Normal Q-Q Plots

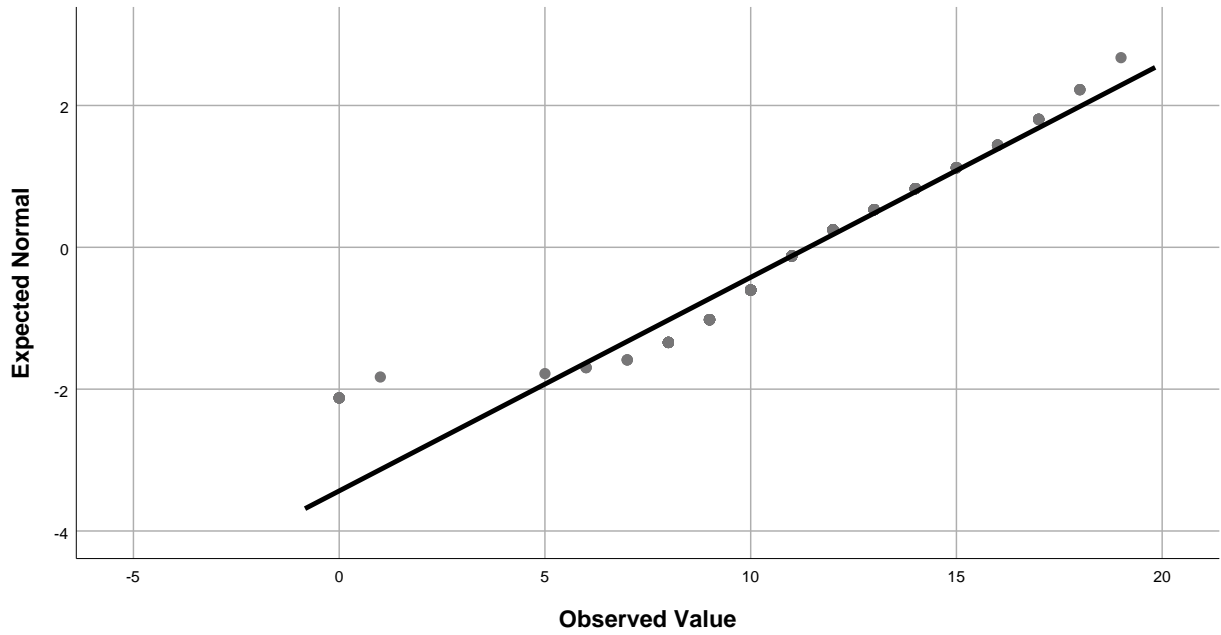
Normal Q-Q Plot of Final grade

for sex= Female



Normal Q-Q Plot of Final grade

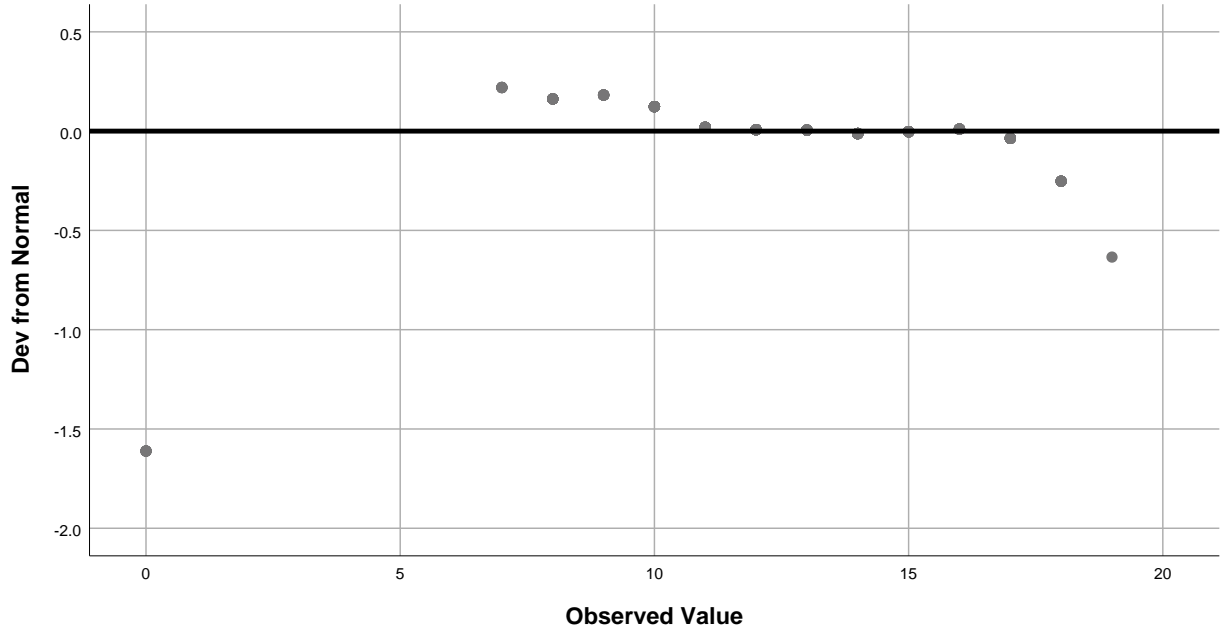
for sex= Male



### Detrended Normal Q-Q Plots

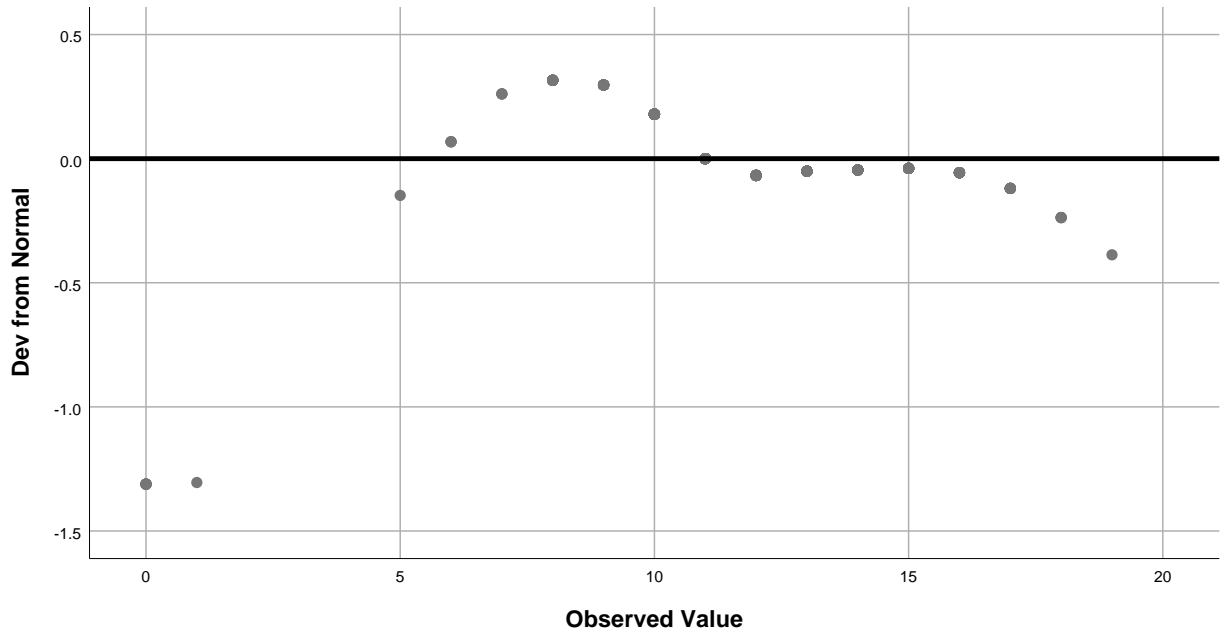
**Detrended Normal Q-Q Plot of Final grade**

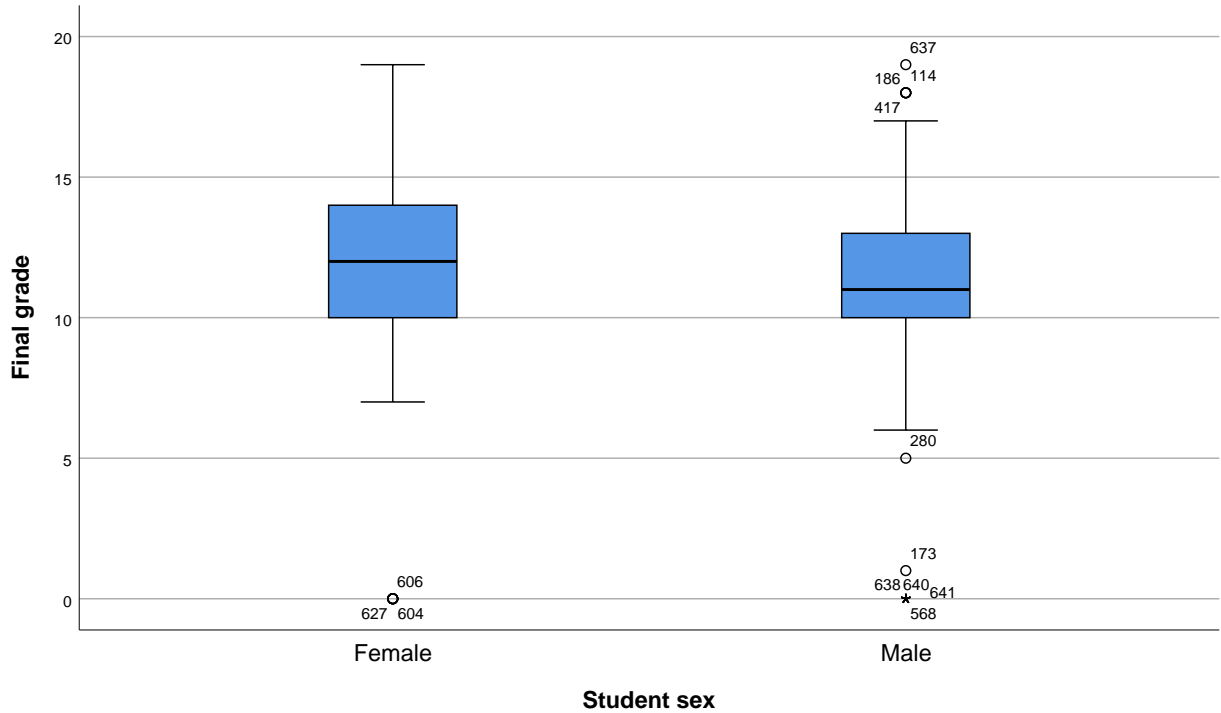
for sex= Female



**Detrended Normal Q-Q Plot of Final grade**

for sex= Male





```

275  0 M>
SORT CASES BY sex.
276  0 M>  SORT CASES BY sex.
SPLIT FILE LAYERED BY sex.
277  0 M>  SPLIT FILE LAYERED BY sex.

278  0 M>
PLOT VARIABLES=G3
279  0 M>  PLOT VARIABLES=G3
        /DISTRIBUTION=NORMAL
280  0 M>        /DISTRIBUTION=NORMAL
        /FRACTION=BLOM
281  0 M>        /FRACTION=BLOM
        /TIES=MEAN
282  0 M>        /TIES=MEAN
        /NOSTANDARDIZE
283  0 M>        /NOSTANDARDIZE
        /TYPE=P-P
284  0 M>        /TYPE=P-P
        /PLOT=BOTH
285  0 M>        /PLOT=BOTH
        /NOLOG.
286  0 M>        /NOLOG.

```

# PPlot

## Notes

Output Created		03-JUN-2026 21:51:23
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	Student sex
	N of Rows in Working Data File	649
	Date	<none>
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	For a given sequence or time series variable, cases with missing values are not used in the analysis. Cases with negative or zero values are also not used, if the log transform is requested.
Syntax		PLOT VARIABLES=G3  /DISTRIBUTION=NORMAL /FRACTION=BLOM /TIES=MEAN /NOSTANDARDIZE /TYPE=P-P /PLOT=BOTH /NOLOG.
Resources	Processor Time	00:00:02.30
	Elapsed Time	00:00:01.13
Use	From	First observation
	To	Last observation
Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = CURRENT

## Notes

Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots	MXAUTO = 16
Maximum Number of Lags Per Cross-Correlation Plots	MXCROSS = 7
Maximum Number of New Variables Generated Per Procedure	MXNEWVAR = 60
Maximum Number of New Cases Per Procedure	MXPREDICT = 1000
Treatment of User-Missing Values	MISSING = EXCLUDE
Confidence Interval Percentage Value	CIN = 95
Tolerance for Entering Variables in Regression Equations	TOLER = .0001
Maximum Iterative Parameter Change	CNVERGE = .001
Method of Calculating Std. Errors for Autocorrelations	ACFSE = IND
Length of Seasonal Period	Unspecified
Variable Whose Values Label Observations in Plots	Unspecified
Equations Include	CONSTANT

## Model Description

Model Name	MOD_4	
Series or Sequence	1	Final grade
Transformation	None	
Non-Seasonal Differencing	0	
Seasonal Differencing	0	
Length of Seasonal Period	No periodicity	
Standardization	Not applied	
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method	Blom's	
Rank Assigned to Ties	Mean rank of tied values	

Applying the model specifications from MOD\_4

## Case Processing Summary

Student sex		Final grade	
F Female	Series or Sequence Length	383	
	Number of Missing Values in the Plot	User-Missing	0
		System-Missing	0
M Male	Series or Sequence Length	266	
	Number of Missing Values in the Plot	User-Missing	0
		System-Missing	0

The cases are unweighted.

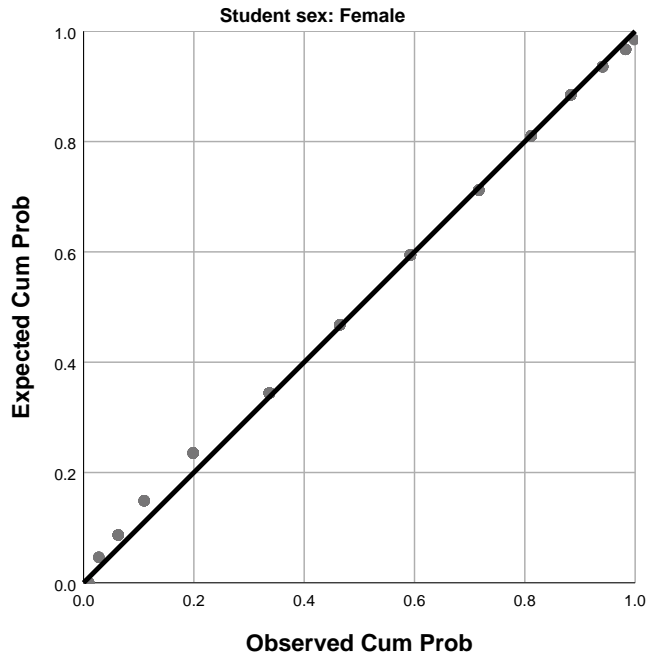
## Estimated Distribution Parameters

Student sex		Final grade	
F Female	Normal Distribution	Location	12.25
		Scale	3.124
M Male	Normal Distribution	Location	11.41
		Scale	3.321

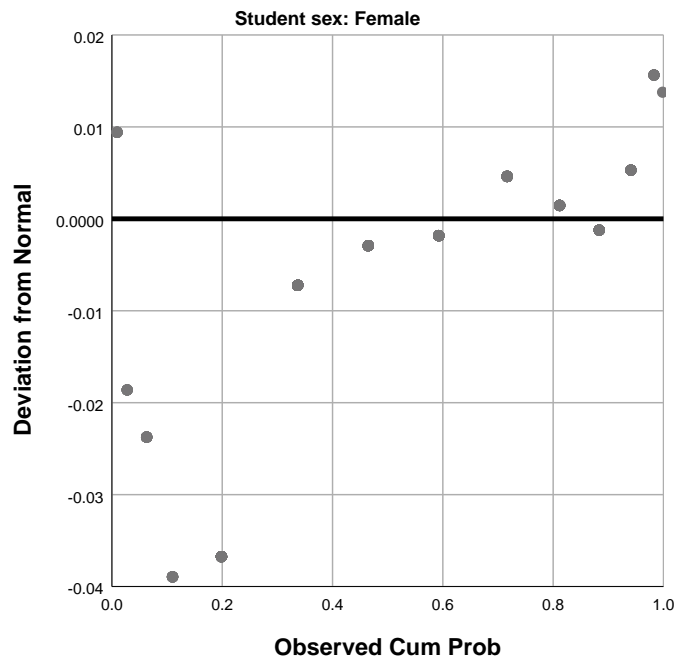
The cases are unweighted.

## Final grade

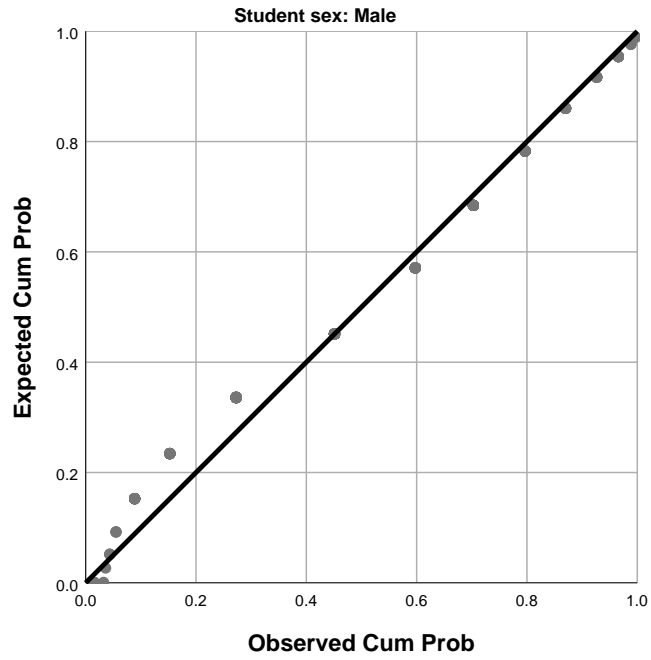
Normal P-P Plot of Final grade



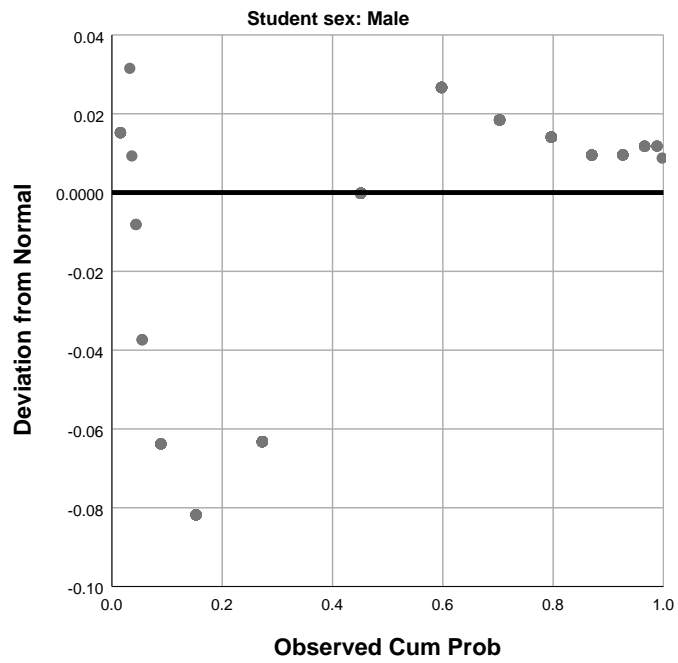
Detrended Normal P-P Plot of Final grade



Normal P-P Plot of Final grade



Detrended Normal P-P Plot of Final grade



```
287 0 M>  
SPLIT FILE OFF.  
288 0 M> SPLIT FILE OFF.
```

```

289  0 M>
* -----
290  0 M> * -----
* 9. REGRESSION RESIDUAL NORMALITY CHECK.
291  0 M> * 9. REGRESSION RESIDUAL NORMALITY CHECK.
* Fixed subcommand order.
292  0 M> * Fixed subcommand order.
* SPSS should save residuals as PPRESID.
293  0 M> * SPSS should save residuals as PPRESID.
* -----
294  0 M> * -----

295  0 M>
REGRESSION
296  0 M> REGRESSION
    /MISSING LISTWISE
297  0 M>     /MISSING LISTWISE
    /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
298  0 M>     /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
    /CRITERIA=PIN(.05) POUT(.10)
299  0 M>     /CRITERIA=PIN(.05) POUT(.10)
    /DEPENDENT G3
300  0 M>     /DEPENDENT G3
    /METHOD=ENTER G1 G2 studytime absences failures
301  0 M>     /METHOD=ENTER G1 G2 studytime absences failures
    /SAVE RESID(PPRESID).
302  0 M>     /SAVE RESID(PPRESID).

```

## Regression

## Notes

Output Created		03-JUN-2026 21:51:25
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA COLLIN TOL /CRITERIA=PIN(.05) POUT(.10) /DEPENDENT G3 /METHOD=ENTER G1 G2 studytime absences failures /SAVE RESID...
Resources	Processor Time	00:00:00.09
	Elapsed Time	00:00:00.08
	Memory Required	6000 bytes
	Additional Memory Required for Residual Plots	0 bytes
Variables Created or Modified	PPRESID	Unstandardized Residual

### Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	Number of past class failures, Number of school absences, Weekly study time, Second period grade, First period grade <sup>b</sup>	.	Enter

a. Dependent Variable: Final grade

b. All requested variables entered.

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 <sup>a</sup>	.851	.849	1.254

a. Predictors: (Constant), Number of past class failures, Number of school absences, Weekly study time, Second period grade, First period grade

b. Dependent Variable: Final grade

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5752.587	5	1150.517	731.966	.000 <sup>b</sup>
	Residual	1010.679	643	1.572		
	Total	6763.267	648			

a. Dependent Variable: Final grade

b. Predictors: (Constant), Number of past class failures, Number of school absences, Weekly study time, Second period grade, First period grade

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.155	.259		-.600	.549
	First period grade	.139	.036	.119	3.849	.000
	Second period grade	.886	.034	.799	26.107	.000
	Weekly study time	.097	.062	.025	1.564	.118
	Number of school absences	.023	.011	.034	2.165	.031
	Number of past class failures	-.218	.091	-.040	-2.402	.017

### Coefficients<sup>a</sup>

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	First period grade	.245	4.078
	Second period grade	.248	4.028
	Weekly study time	.923	1.084
	Number of school absences	.967	1.034
	Number of past class failures	.835	1.198

a. Dependent Variable: Final grade

### Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Eigenvalue	Condition Index	(Constant)	Variance Proportions	
					First period grade	Second period grade
1	1	4.371	1.000	.00	.00	.00
	2	.920	2.180	.00	.00	.00
	3	.562	2.788	.00	.00	.00
	4	.112	6.250	.01	.01	.02
	5	.027	12.747	.97	.05	.09
	6	.008	23.890	.01	.94	.90

## Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Variance Proportions		
		Weekly study time	Number of school absences	Number of past class failures
1	1	.01	.02	.01
	2	.00	.03	.69
	3	.01	.88	.12
	4	.95	.02	.00
	5	.03	.05	.18
	6	.00	.00	.00

a. Dependent Variable: Final grade

## Residuals Statistics<sup>a</sup>

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.28	19.57	11.91	2.980	649
Residual	-9.072	5.807	.000	1.249	649
Std. Predicted Value	-3.902	2.572	.000	1.000	649
Std. Residual	-7.236	4.632	.000	.996	649

a. Dependent Variable: Final grade

```

303 0 M>
EXECUTE.
304 0 M> EXECUTE.

305 0 M>
VARIABLE LABELS PPRESID 'Unstandardized residual from regression model predicting G3'.
306 0 M> VARIABLE LABELS PPRESID 'Unstandardized residual from regression model predicting G3'.

307 0 M>
DESCRIPTIVES VARIABLES=PPRESID
308 0 M> DESCRIPTIVES VARIABLES=PPRESID
      /STATISTICS=MEAN STDDEV MIN MAX.
309 0 M>      /STATISTICS=MEAN STDDEV MIN MAX.

```

## Descriptives

## Notes

Output Created		03-JUN-2026 21:51:25
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=PPRESID /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.02

## Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Unstandardized residual from regression model predicting G3	649	-9.07158	5.80683	.0000000	1.24887559
Valid N (listwise)	649				

```

310  0 M>
PLOT VARIABLES=PPRESID
311  0 M>  PLOT VARIABLES=PPRESID
        /DISTRIBUTION=NORMAL
312  0 M>    /DISTRIBUTION=NORMAL
        /FRACTION=BLOM
313  0 M>    /FRACTION=BLOM
        /TIES=MEAN
314  0 M>    /TIES=MEAN

```

```

/NOSTANDARDIZE
315  0 M>    /NOSTANDARDIZE
        /TYPE=P-P
316  0 M>    /TYPE=P-P
        /PLOT=BOTH
317  0 M>    /PLOT=BOTH
        /NOLOG.
318  0 M>    /NOLOG.

```

## PPlot

### Notes

Output Created		03-JUN-2026 21:51:25
Comments		
Input	Data	D:\low kda score priority basis posts\first post\P P Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
	Date	<none>
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	For a given sequence or time series variable, cases with missing values are not used in the analysis. Cases with negative or zero values are also not used, if the log transform is requested.

## Notes

Syntax		PLOT VARIABLES=PPRESID  /DISTRIBUTION=NORMAL /FRACTION=BLOM /TIES=MEAN /NOSTANDARDIZE /TYPE=P-P /PLOT=BOTH /NOLOG.
Resources	Processor Time	00:00:01.69
	Elapsed Time	00:00:00.87
Use	From	First observation
	To	Last observation
Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = CURRENT
	Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots	MXAUTO = 16
	Maximum Number of Lags Per Cross-Correlation Plots	MXCROSS = 7
	Maximum Number of New Variables Generated Per Procedure	MXNEWVAR = 60
	Maximum Number of New Cases Per Procedure	MXPREDICT = 1000
	Treatment of User-Missing Values	MISSING = EXCLUDE
	Confidence Interval Percentage Value	CIN = 95
	Tolerance for Entering Variables in Regression Equations	TOLER = .0001
	Maximum Iterative Parameter Change	CNVERGE = .001
	Method of Calculating Std. Errors for Autocorrelations	ACFSE = IND
Length of Seasonal Period	Unspecified	

## Notes

	Variable Whose Values Label Observations in Plots	Unspecified
	Equations Include	CONSTANT

## Model Description

Model Name		MOD_5
Series or Sequence	1	Unstandardized residual from regression model predicting G3
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Standardization		Not applied
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method		Blom's
Rank Assigned to Ties		Mean rank of tied values

Applying the model specifications from MOD\_5

## Case Processing Summary

		Unstandardized residual from regression model predicting G3
Series or Sequence Length		649
Number of Missing Values in the Plot	User-Missing	0
	System-Missing	0

The cases are unweighted.

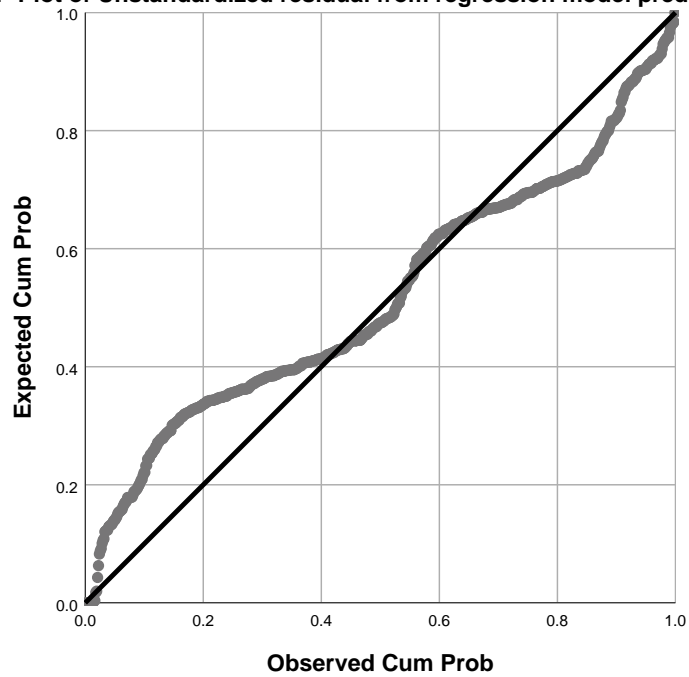
## Estimated Distribution Parameters

		Unstandardized residual from regression model predicting G3
Normal Distribution	Location	.0000000
	Scale	1.24887559

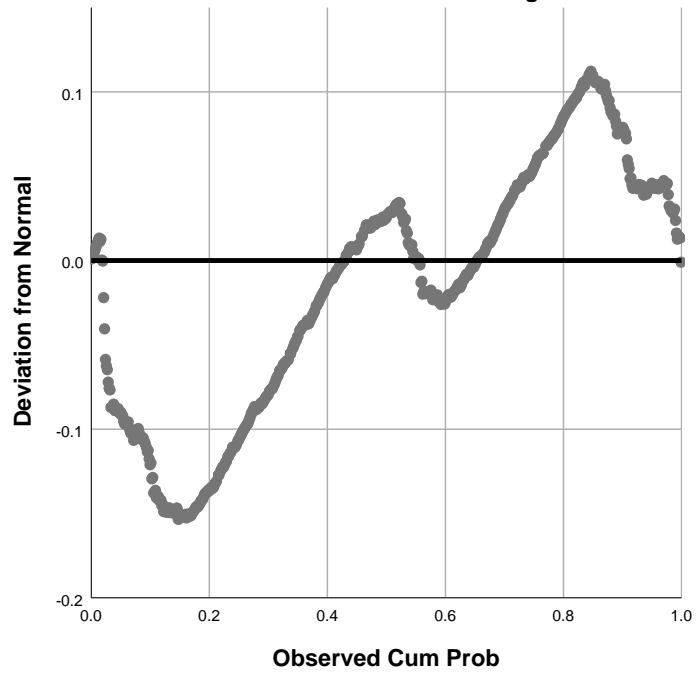
The cases are unweighted.

## Unstandardized residual from regression model predicting G3

Normal P-P Plot of Unstandardized residual from regression model predicting G3



Detrended Normal P-P Plot of Unstandardized residual from regression model predicting G3



```
319 0 M>
EXAMINE VARIABLES=PPRESID
320 0 M> EXAMINE VARIABLES=PPRESID
      /PLOT BOXPLOT NPLOT HISTOGRAM
321 0 M>      /PLOT BOXPLOT NPLOT HISTOGRAM
      /COMPARE GROUPS
322 0 M>      /COMPARE GROUPS
      /STATISTICS DESCRIPTIVES
323 0 M>      /STATISTICS DESCRIPTIVES
      /CINTERVAL 95
324 0 M>      /CINTERVAL 95
      /MISSING LISTWISE
325 0 M>      /MISSING LISTWISE
      /NOTOTAL.
326 0 M>      /NOTOTAL.
```

## Explore

## Notes

Output Created		03-JUN-2026 21:51:26
Comments		
Input	Data	D:\low kda score priority basis posts\first post\PP Plot Normality Check\student-por.csv
	Active Dataset	PP_Plot_Normality_Check
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		<pre> EXAMINE VARIABLES=PPRESID /PLOT BOXPLOT NPLOT HISTOGRAM /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. </pre>
Resources	Processor Time	00:00:02.06
	Elapsed Time	00:00:01.01

## Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Unstandardized residual from regression model predicting G3	649	100.0%	0	0.0%	649	100.0%

### Descriptives

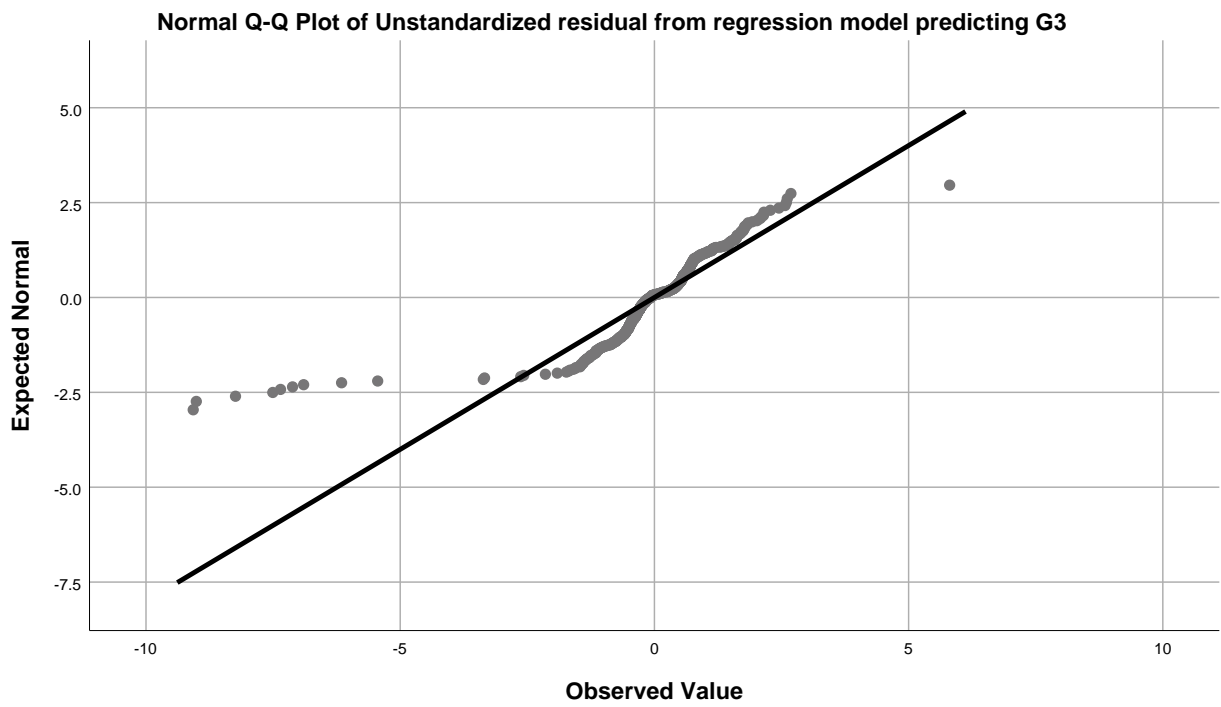
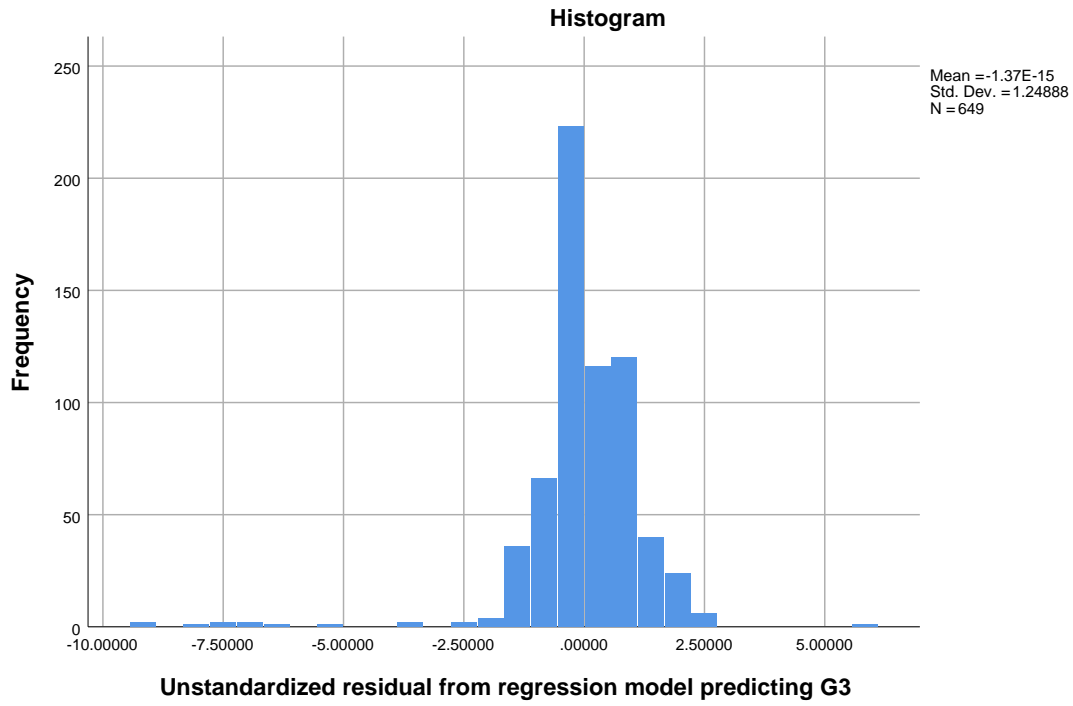
		Statistic	Std. Error	
Unstandardized residual from regression model predicting G3	Mean	.0000000	.04902266	
	95% Confidence Interval for Mean	Lower Bound	-.0962624	
		Upper Bound	.0962624	
	5% Trimmed Mean	.0694870		
	Median	-.0796204		
	Variance	1.560		
	Std. Deviation	1.24887559		
	Minimum	-9.07158		
	Maximum	5.80683		
	Range	14.87841		
	Interquartile Range	1.09849		
	Skewness	-2.844	.096	
	Kurtosis	18.545	.192	

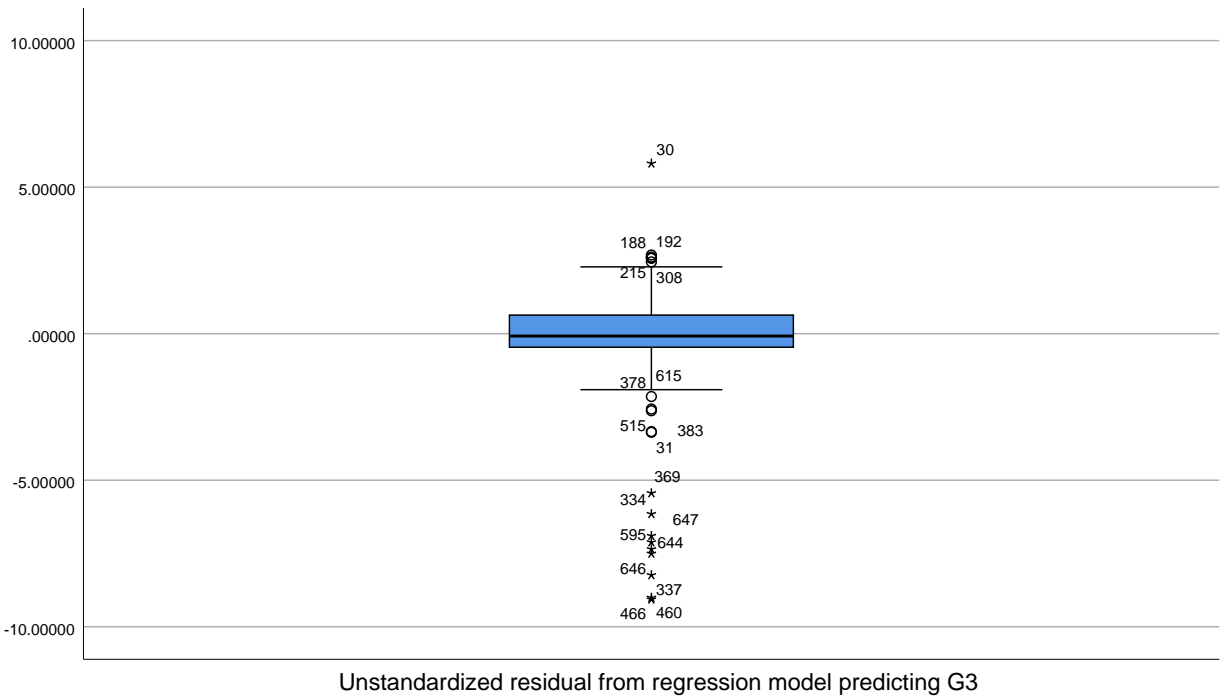
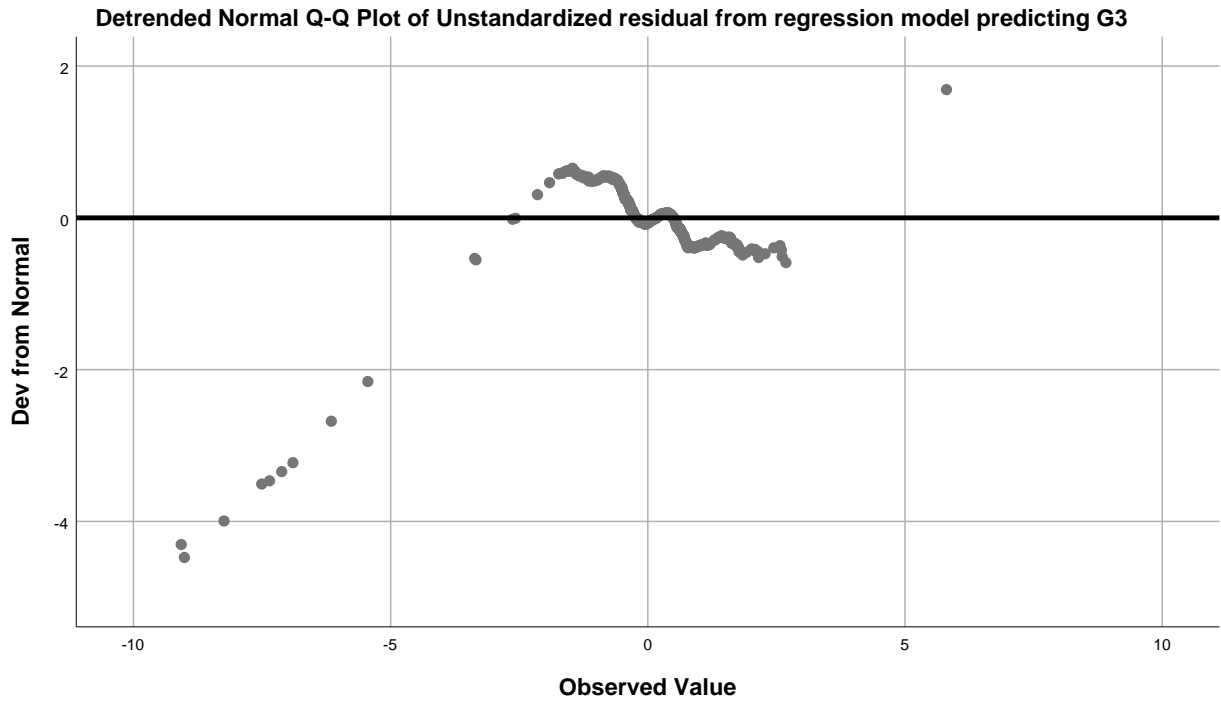
### Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized residual from regression model predicting G3	.154	649	.000	.757	649	.000

a. Lilliefors Significance Correction

### Unstandardized residual from regression model predicting G3





```

327  0 M>
* -----
328  0 M>  * -----
* 10. SAVE SPSS OUTPUT FILE AND EXPORT PDF.

```

```
329 0 M> * 10. SAVE SPSS OUTPUT FILE AND EXPORT PDF.
* Removed /EMBEDBOOKMARKS and /EMBEDFONTS because your SPSS version rejected them.
330 0 M> * Removed /EMBEDBOOKMARKS and /EMBEDFONTS because your SPSS version rejected them.
* -----.
331 0 M> * -----.

332 0 M>
OUTPUT SAVE
333 0 M> OUTPUT SAVE
  OUTFILE='D:\low kda score priority basis posts\first post\P P Plot Normality
  Check\SPSS_pp_plot_normality_check_output_FIXED.spv'.
334 0 M>   OUTFILE='D:\low kda score priority basis posts\first post\P P Plot
  Normality Check\SPSS_pp_plot_normality_check_output
  _FIXED.spv'.

335 0 M>
OUTPUT EXPORT
336 0 M> OUTPUT EXPORT
  /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING
337 0 M>   /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING
```