Curiosity Project: Student Pilot Data Analysis (22-Oct-25)

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The raw data from the student pilot test contained 267 responses. After removing those who did not consent to participate, Aidan's test responses, and respondents who do not reside in the U.S., the final sample size is 263 respondents.

The random assignment to conditions appears to have worked fine. The number of respondents per condition ranged from 56 to 63 (Table 1 and Table 2).

Cleaned the items `Q25_1` through `Q25_4` (astronomy) and `Q46_1` through `Q46_4` (rain/geosmin) and determined the Cronbach's alpha (astronomy: Cronbach's $\alpha = .92$; rain/geosmin: Cronbach's $\alpha = .93$). Combined items in two mean indices.

Table 1: Number of respondents in the control and experimental conditions for the astronomy issue.

	Freq	% Valid	% Valid Cum.	% Total	% Total Cum.
No curious, resolution	63	26.2	26.2	24.2	24.2
No curious, no resolution	60	25.0	51.2	23.1	47.3
Curious, resolution	61	25.4	76.7	23.5	70.8
Curious, no resolution	56	23.3	100.0	21.5	92.3
Total	260	100.0	100.0	100.0	100.0

Table 2: Number of respondents in the control and experimental conditions for the rain/geosmin issue.

	Freq	% Valid	% Valid Cum.	% Total	% Total Cum.
No curious, resolution	60	24.9	24.9	23.1	23.1
No curious, no resolution	60	24.9	49.8	23.1	46.2
Curious, resolution	62	25.7	75.5	23.8	70.0
Curious, no resolution	59	24.5	100.0	22.7	92.7
Total	260	100.0	100.0	100.0	100.0

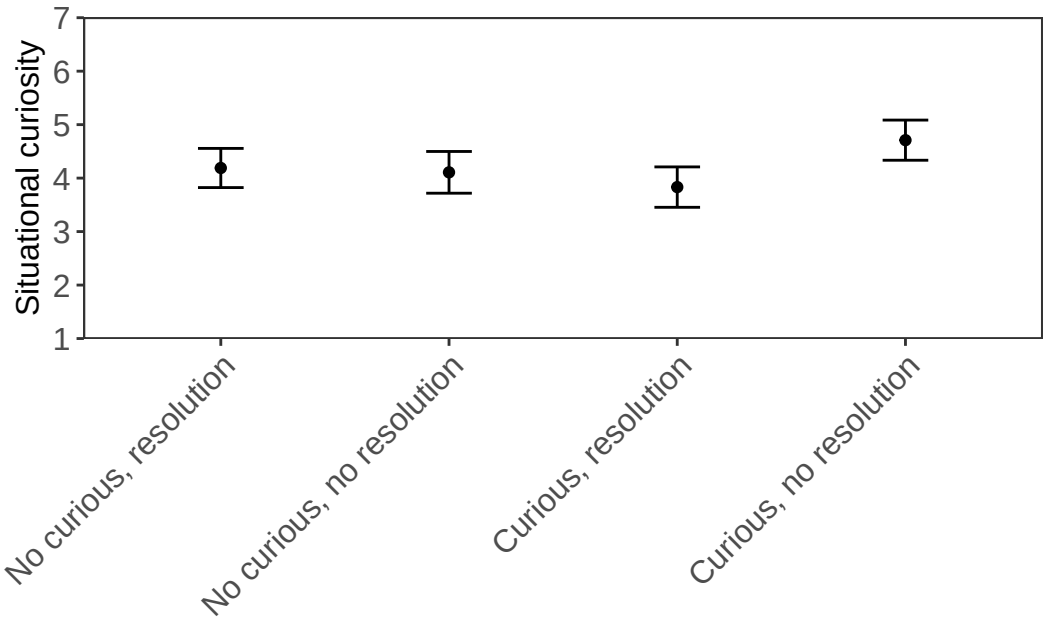

Figure 1: Mean of situational curiosity by experimental condition for the astronomy issue.

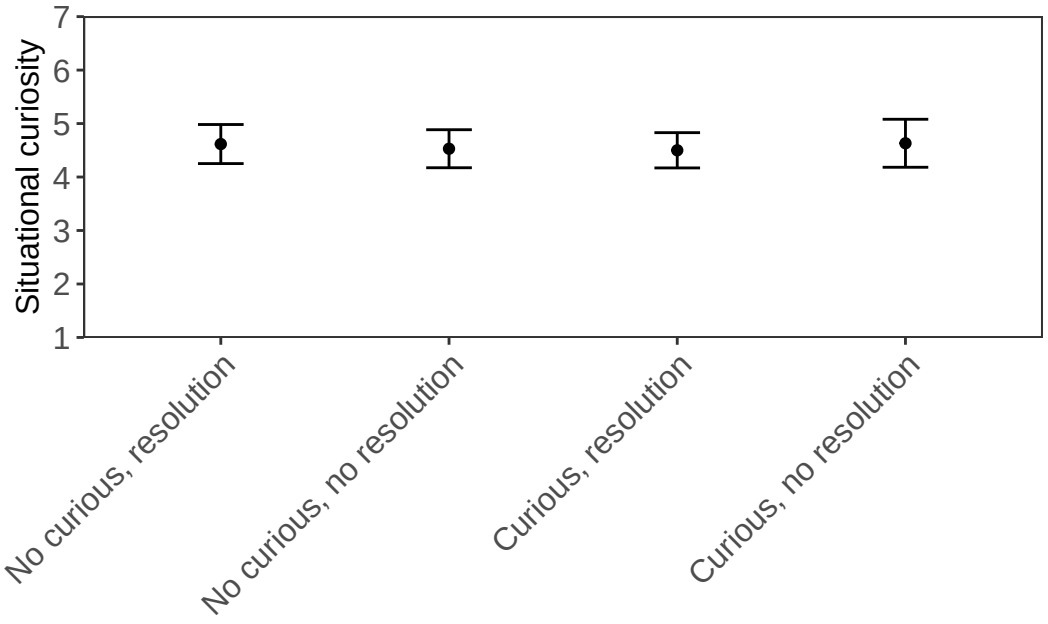

Figure 2: Mean of situational curiosity by experimental condition for the rain/geosmin issue.

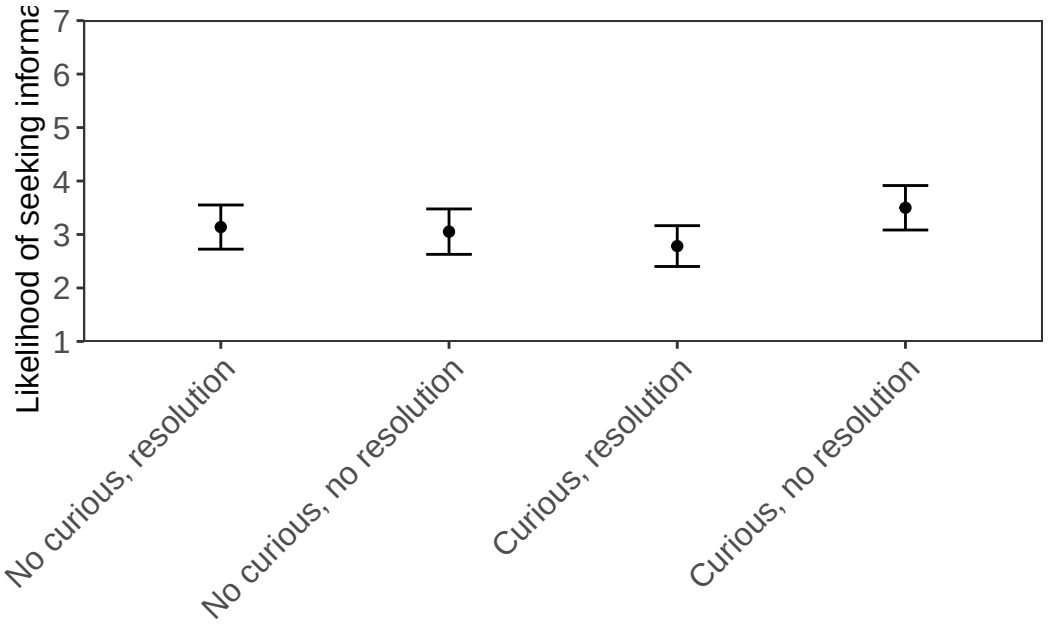

Figure 3: Mean of information seeking by experimental condition for the astronomy issue.

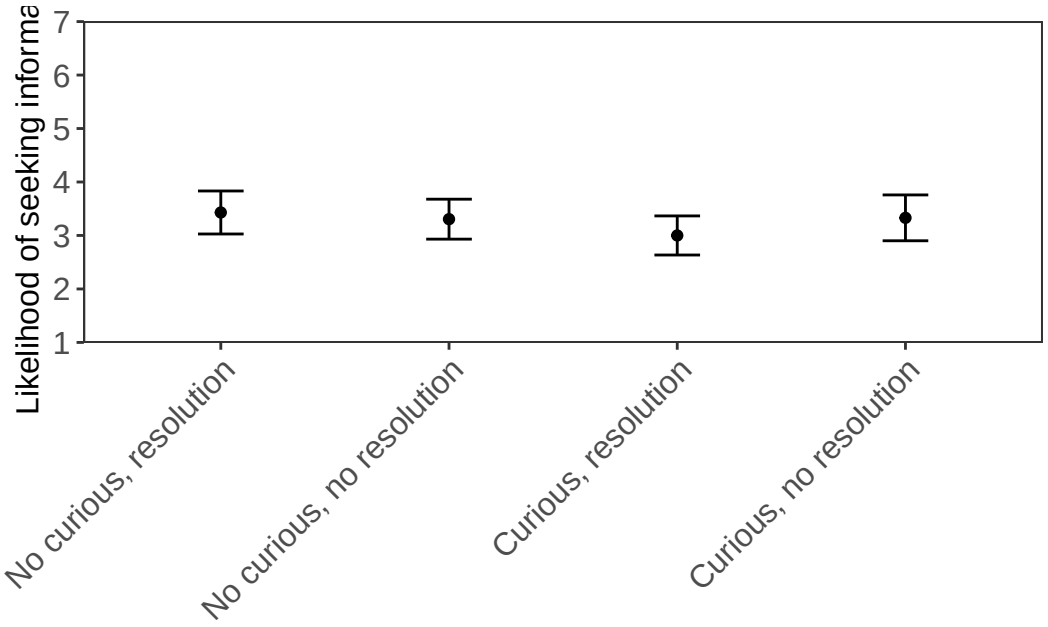

Figure 4: Mean of information seeking by experimental condition for the rain/geosmin issue.

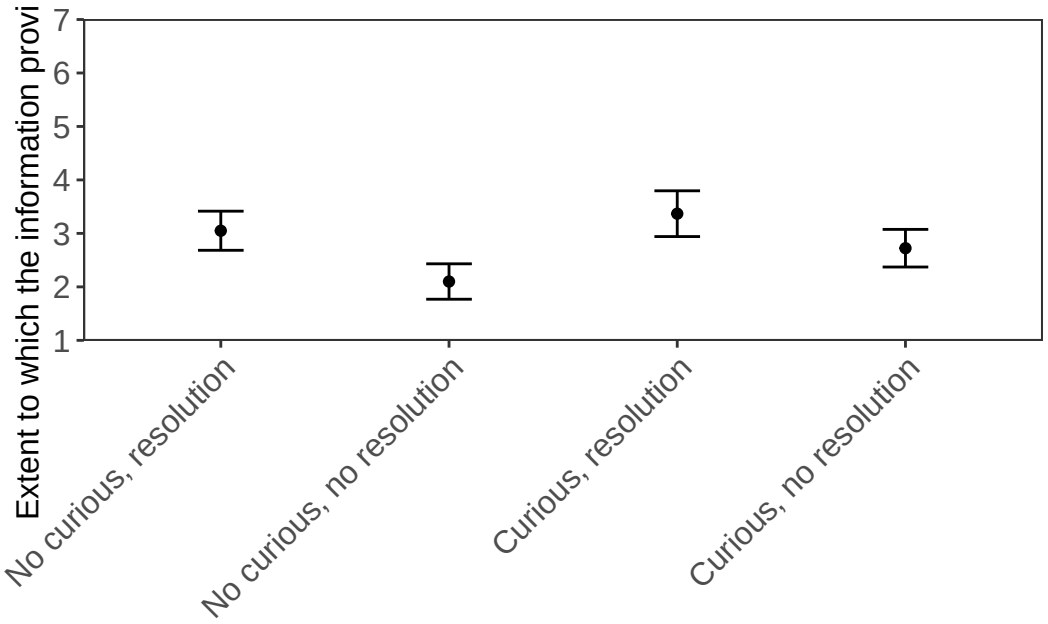

Figure 5: Mean of index tapping the extent to which the information provided closure by experimental condition for the astronomy issue.

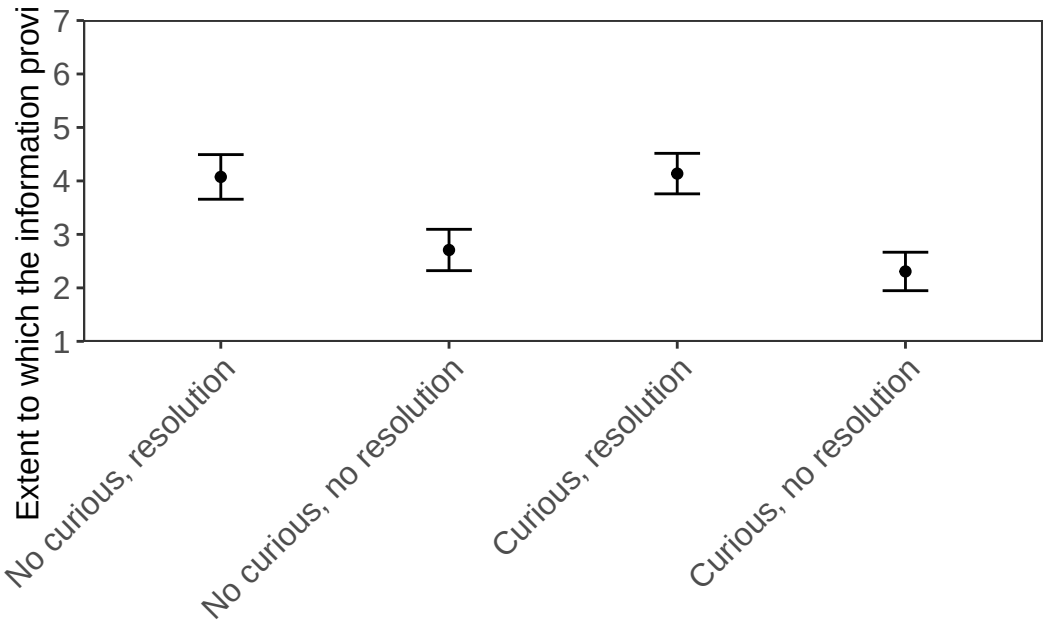

Figure 6: Mean of index tapping the extent to which the information provided closure by experimental condition for the rain/geosmin issue.

Table 3: OLS regression predicting situational curiosity for the astronomy conditions.

Observations	235
Dependent variable	asitcur
Type	OLS linear regression

F(2,232)	1.91
R^2	0.02
Adj. R^2	0.01

	Est.	S.E.	t val.	p
(Intercept)	4.36	0.17	26.37	0.00
acuriousCurious	0.09	0.19	0.45	0.65
aresoResolution	-0.37	0.19	-1.91	0.06

Standard errors: OLS

Table 4: OLS regression predicting situational curiosity for the rain/geosmin conditions.

Observations	237
Dependent variable	rsitcur
Type	OLS linear regression

F(2,234)	0.06
R^2	0.00
Adj. R^2	-0.01

	Est.	S.E.	t val.	p
(Intercept)	4.60	0.16	28.21	0.00
rcuriousCurious	-0.06	0.19	-0.34	0.73
rresoResolution	-0.01	0.19	-0.07	0.95

Standard errors: OLS

Table 5: OLS regression predicting likelihood of seeking information for the astronomy conditions.

Observations	235
Dependent variable	ainfoseek
Type	OLS linear regression

F(2,232)	1.31
R^2	0.01
Adj. R^2	0.00

	Est.	S.E.	t val.	p
(Intercept)	3.24	0.18	18.33	0.00
acuriousCurious	0.06	0.21	0.28	0.78
aresoResolution	-0.33	0.21	-1.60	0.11

Standard errors: OLS

Table 6: OLS regression predicting likelihood of seeking information for the rain/geosmin conditions.

Observations	237
Dependent variable	rinfoseek
Type	OLS linear regression

F(2,234)	0.73
R^2	0.01
Adj. R^2	-0.00

	Est.	S.E.	t val.	p
(Intercept)	3.42	0.17	20.01	0.00
rcuriousCurious	-0.22	0.20	-1.09	0.28
rresoResolution	-0.10	0.20	-0.48	0.63

Standard errors: OLS

Table 7: OLS regression predicting the extent to which the information provided closure for participants in the astronomy conditions.

Observations	235
Dependent variable	aclosure
Type	OLS linear regression

F(2,232)	12.58
R^2	0.10
Adj. R^2	0.09

	Est.	S.E.	t val.	p
(Intercept)	2.17	0.16	13.52	0.00
acuriousCurious	0.47	0.19	2.50	0.01
aresoResolution	0.80	0.19	4.27	0.00

Standard errors: OLS

Table 8: OLS regression predicting the extent to which the information provided closure for participants in the rain/geosmin conditions.

Observations	237
Dependent variable	rclosure
Type	OLS linear regression

F(2,234)	35.86
R^2	0.23
Adj. R^2	0.23

	Est.	S.E.	t val.	p
(Intercept)	2.58	0.17	15.47	0.00
rcuriousCurious	-0.20	0.19	-1.04	0.30
rresoResolution	1.62	0.19	8.42	0.00

Standard errors: OLS