

International Conference on Educational Measurement and Evaluation (ICEME) 2023

Learning loss during emergency remote instruction: What do test scores say?

Jonna Marie A. Lim, PhD
Faculty, De La Salle University, Manila
Department of English and Applied Linguistics

FACT

We lost so much during the pandemic.

HEADLINES

Private school students suffered learning loss during pandemic

Elizabeth Marcelo - The Philippine Star 

March 13, 2023 | 12:00am



<https://www.philstar.com/headlines/2023/03/13/2251243/private-school-students-suffered-learning-loss-during-pandemic>

- A study by USC and Thames assessed 3,600 private school students in Grades 1-12 using the Philippine Assessment for Learning Loss Solutions (PALLS),
- The average scores for **science** and **math** were **54.1%** and **47.5%**, respectively, below the passing rate of 60%.
- English was the only subject with a passing average score of 61.5%.

- The Philippines had the highest level of learning poverty before the pandemic, with 90.9% of children aged 10 not able to read.
- We also had the longest period of school closures due to the COVID19 (UNICEF, UNESCO and World Bank, 2022; World Bank et al., 2022a).

What I mean by learning loss?

- “Learning loss” is described as declines in student knowledge and skills (Pier, Hough, Christian, Bookman, Wilkenfeld, & Miller, 2021).
- Learning loss happens when students do not learn at the same rate as they did in previous years
- Thus, comparing students’ performance pre- pandemic and during-pandemic SY will give us a clearer picture of the impact of remote emergency instruction to student learning progress

Emergency remote instruction

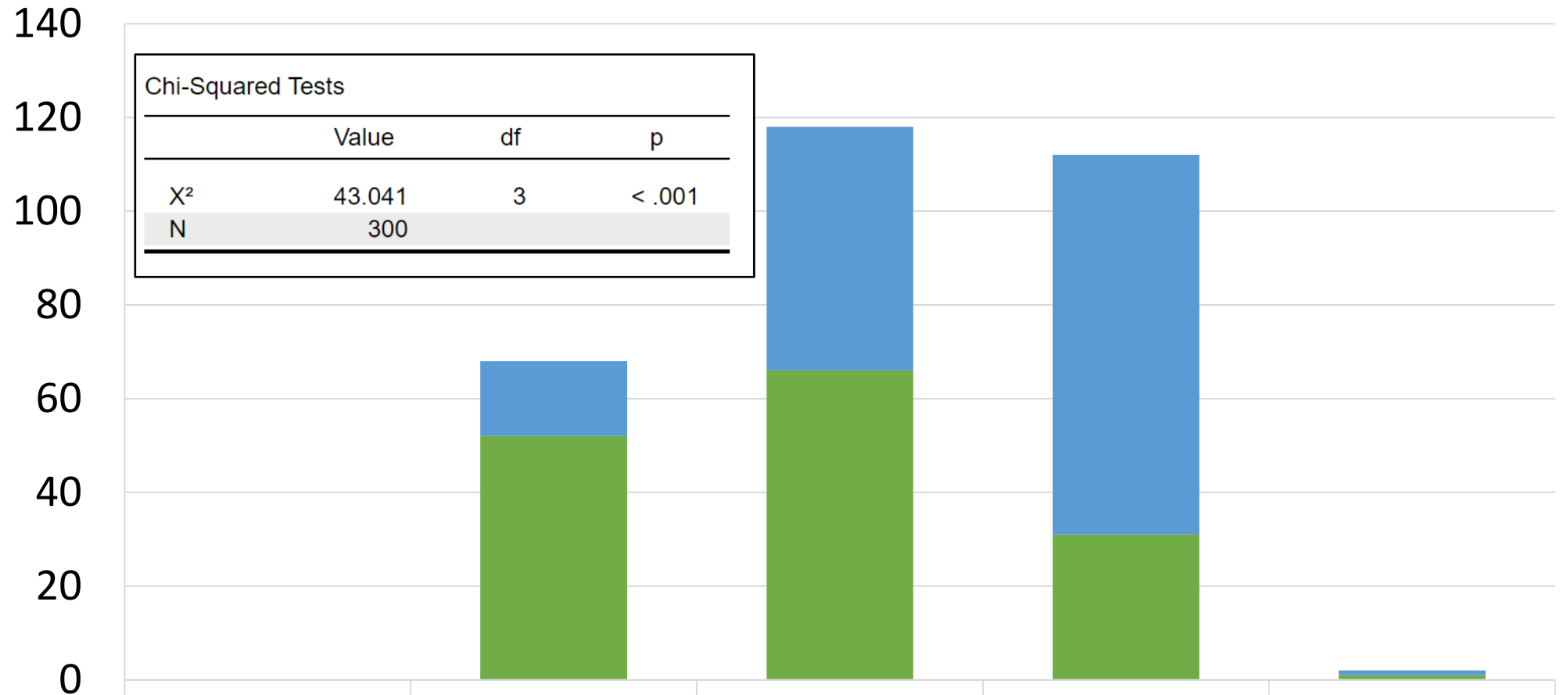
- ERI is a temporary shift of instructional delivery due to crisis circumstances, like the COVID19 pandemic.
- Remote/ online instruction = combination of synchronous and asynchronous sessions; less contact time

The Current Study

- Determine the actual impact of remote emergency instruction to student learning progress in Math, Science, and English
- Grade 10 completers' achievement test results (school closure and student proficiency levels)
- Two cohorts: Pre-pandemic cohort and During-pandemic cohort
- Secondary private school in Metro Manila
- Statistical test used: Chi Square
- **Proficiency Levels:** Advanced (80-100%), Proficient (60-79%), Approaching Proficiency (40-59%), Developing (20-39%), Beginning (0-19%)

Learning Areas	Content Areas
Math	Patterns & Algebra Geometry Statistics and Probability
Science	Living Things & their Environment Matter Force, Motion & Energy Earth & Space
English	Grammar Reading

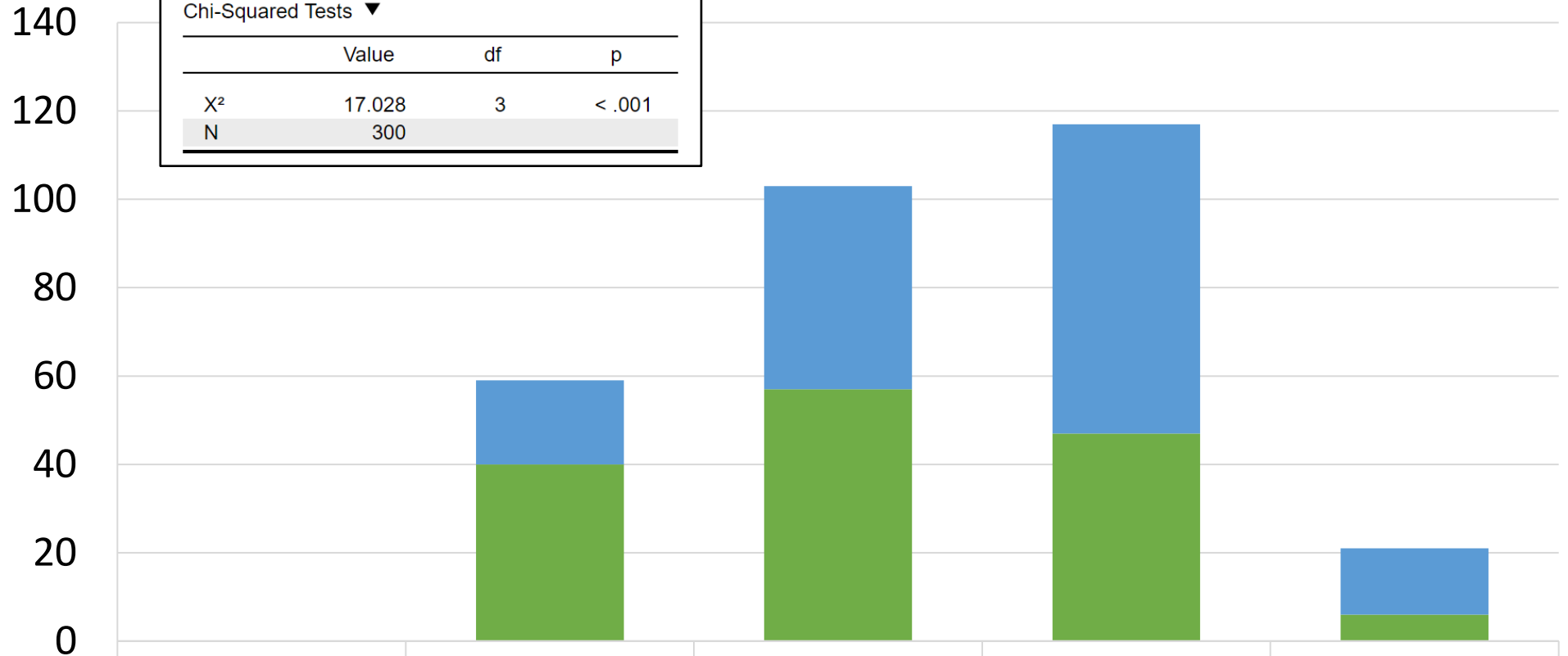
MATH OVERALL PROFICIENCY



	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
During-Pandemic	0	16	52	81	1
Pre-Pandemic	0	52	66	31	1

PATTERNS & ALGEBRA

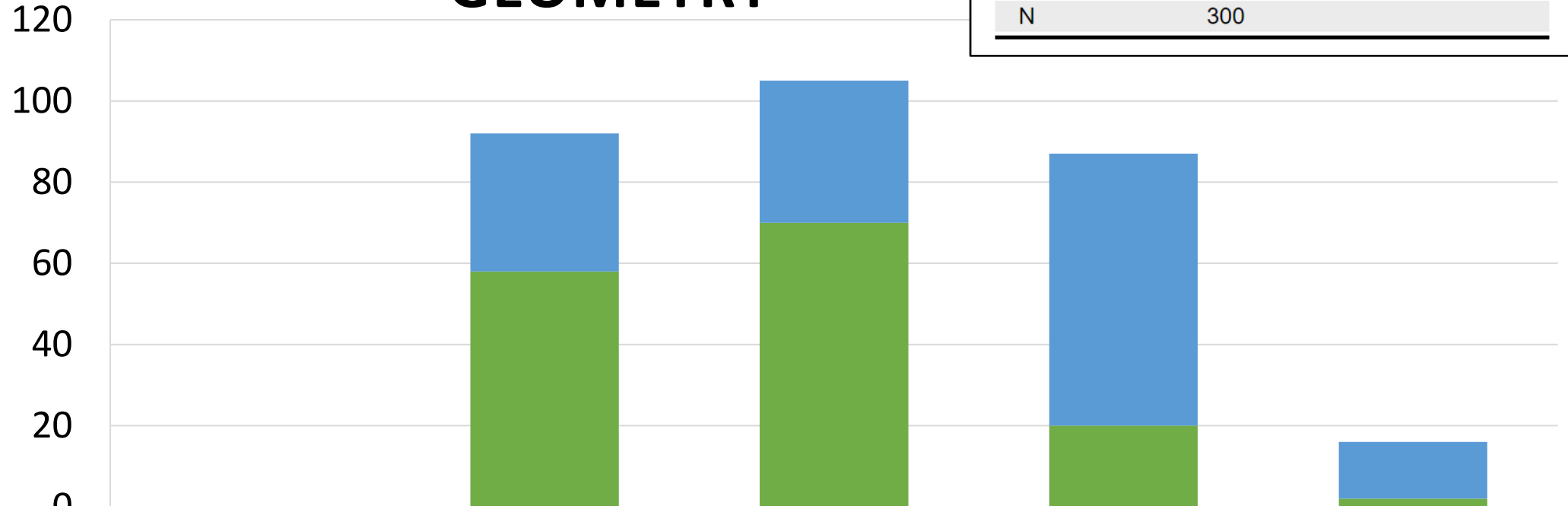
Chi-Squared Tests ▼			
	Value	df	p
X ²	17.028	3	< .001
N	300		



	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
■ During-Pandemic	0	19	46	70	15
■ Pre-Pandemic	0	40	57	47	6

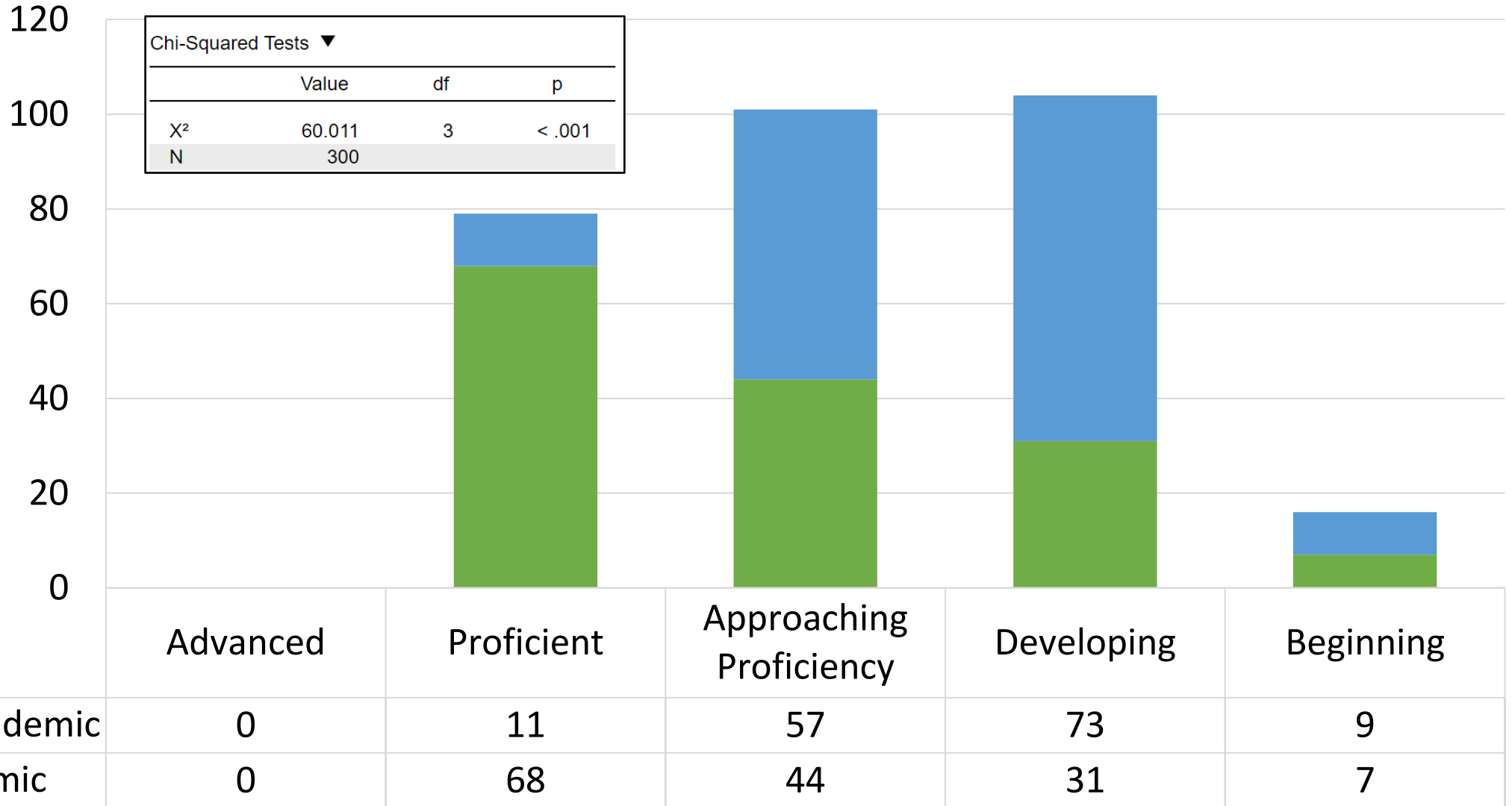
GEOMETRY

Chi-Squared Tests			
	Value	df	p
X ²	52.318	3	< .001
N	300		

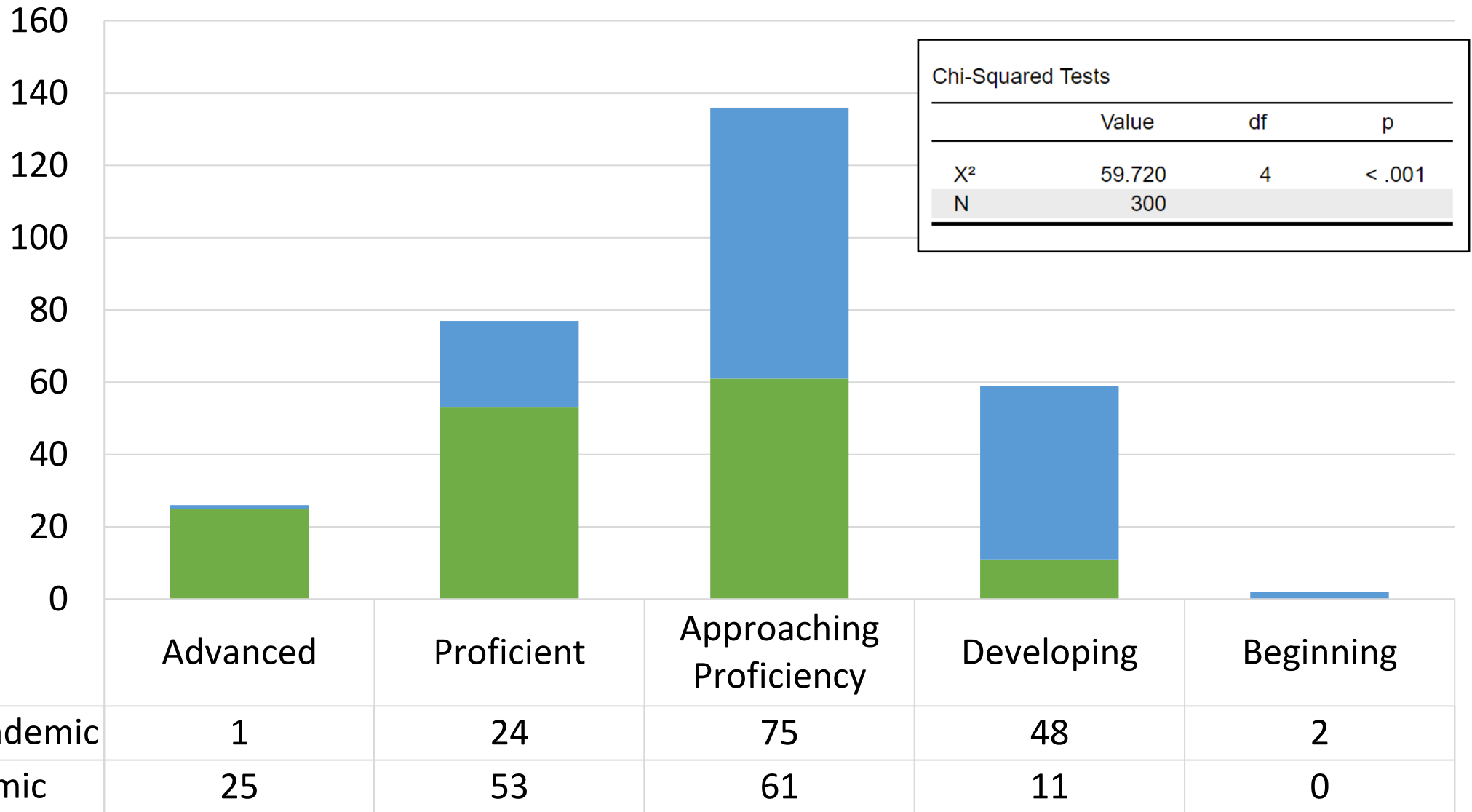


	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
During-Pandemic	0	34	35	67	14
Pre-Pandemic	0	58	70	20	2

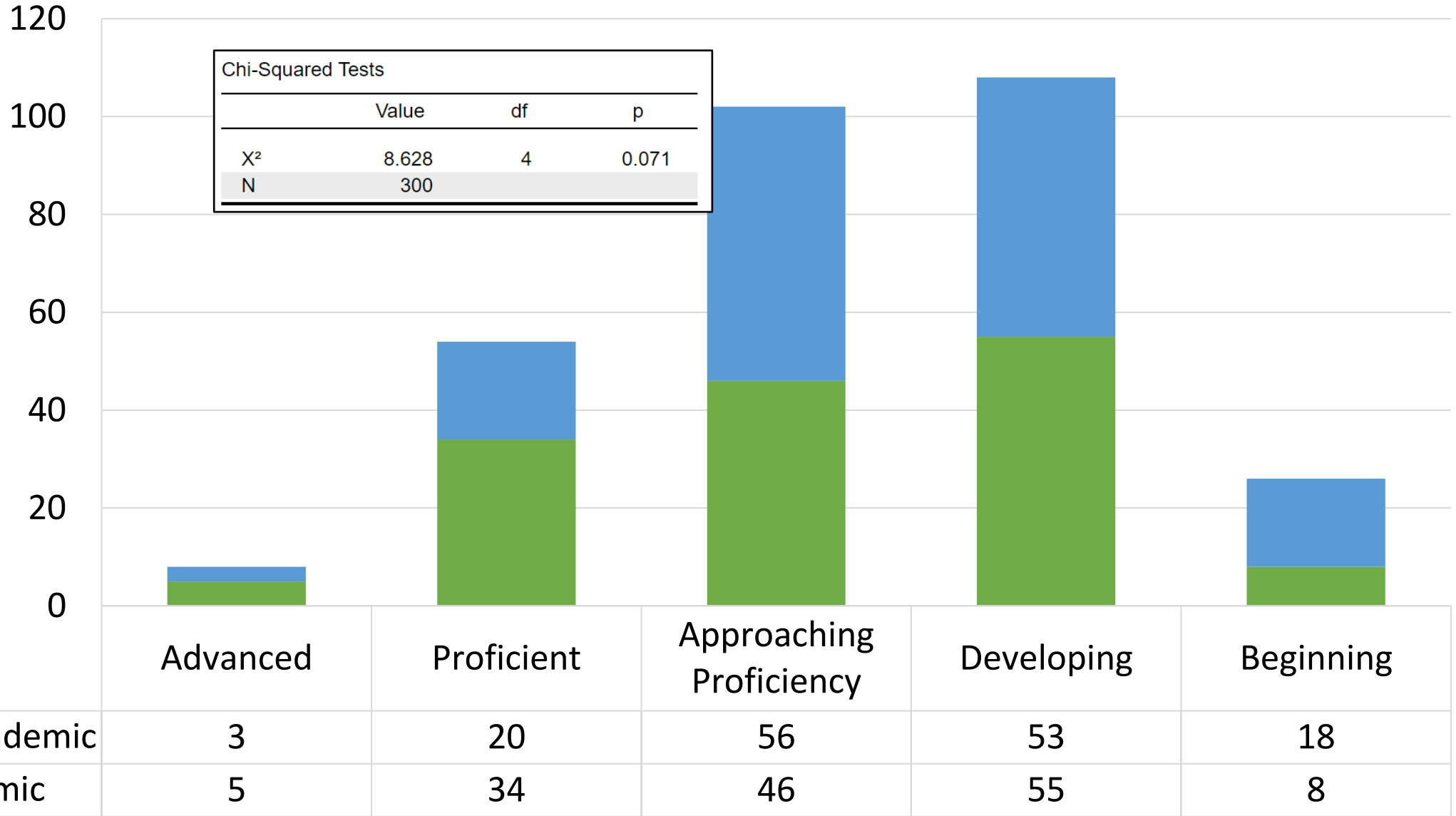
STATISTICS & PROBABILITY



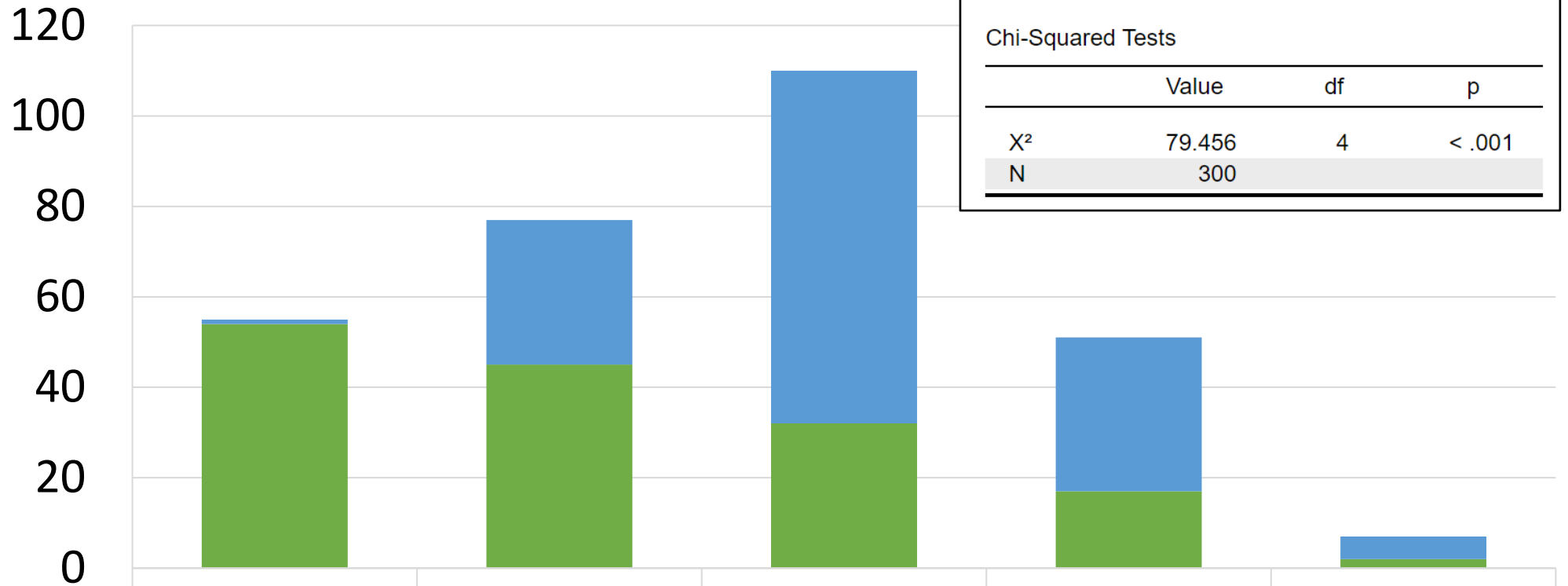
SCIENCE OVERALL PROFICIENCY



EARTH & SPACE



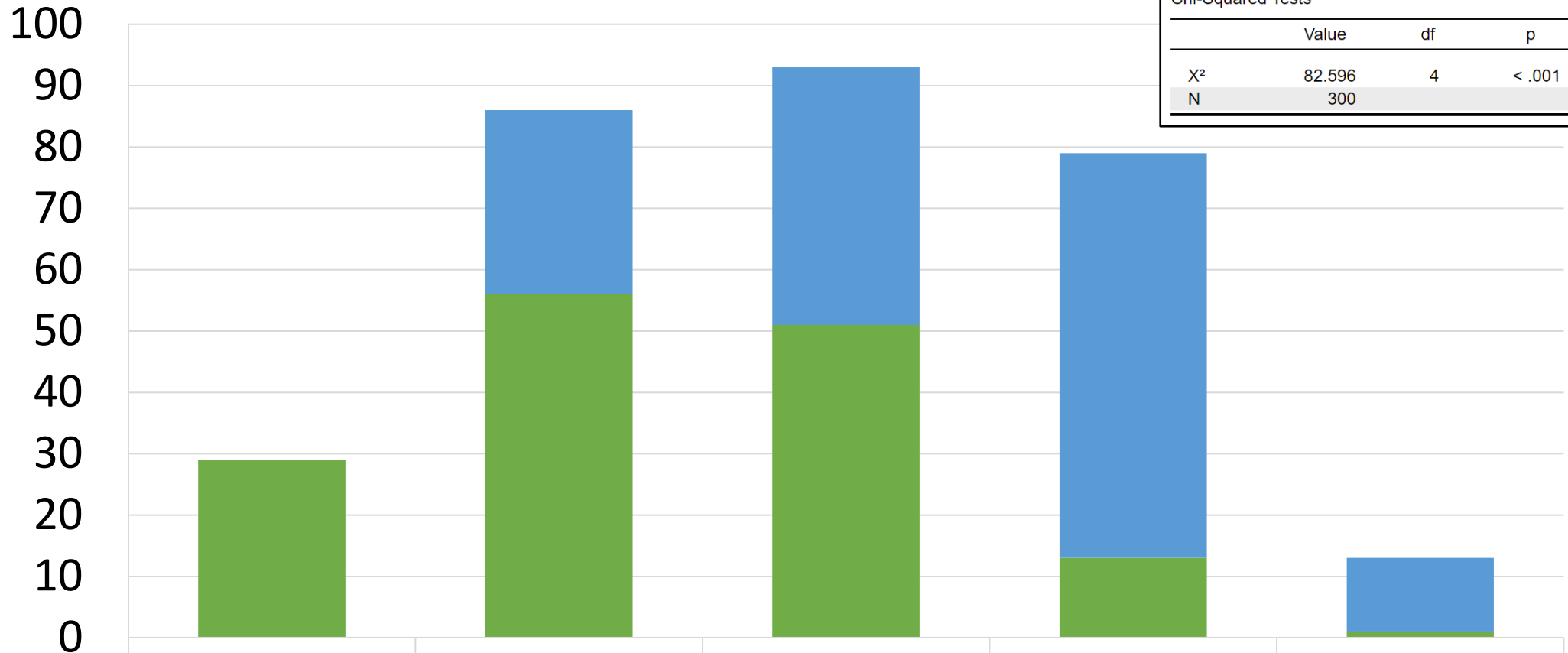
FORCE, MOTION & ENERGY



Chi-Squared Tests			
	Value	df	p
X ²	79.456	4	< .001
N	300		

■ During-Pandemic	1	32	78	34	5
■ Pre-Pandemic	54	45	32	17	2

LIVING THINGS & THEIR ENVIRONMENT



Chi-Squared Tests			
	Value	df	p
X ²	82.596	4	< .001
N	300		

	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
During-Pandemic	0	30	42	66	12
Pre-Pandemic	29	56	51	13	1

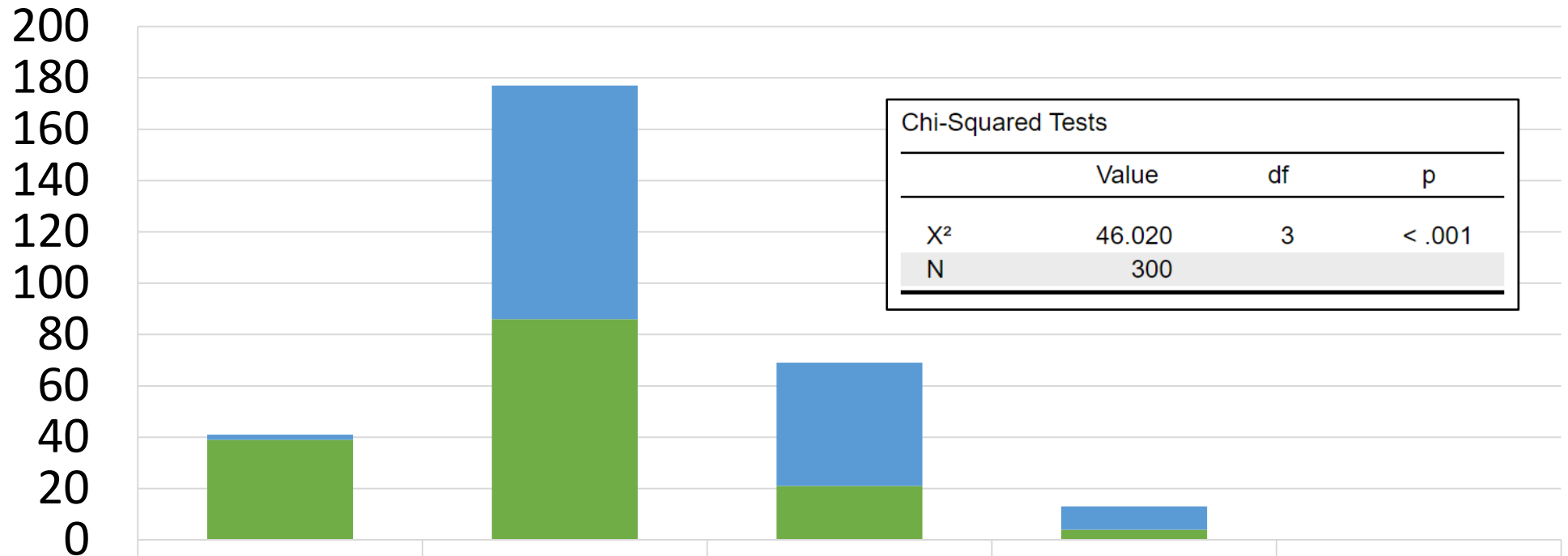
MATTER

Chi-Squared Tests ▼			
	Value	df	p
X ²	37.427	4	< .001
N	300		



	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
■ During-Pandemic	11	33	44	56	6
■ Pre-Pandemic	44	40	42	21	3

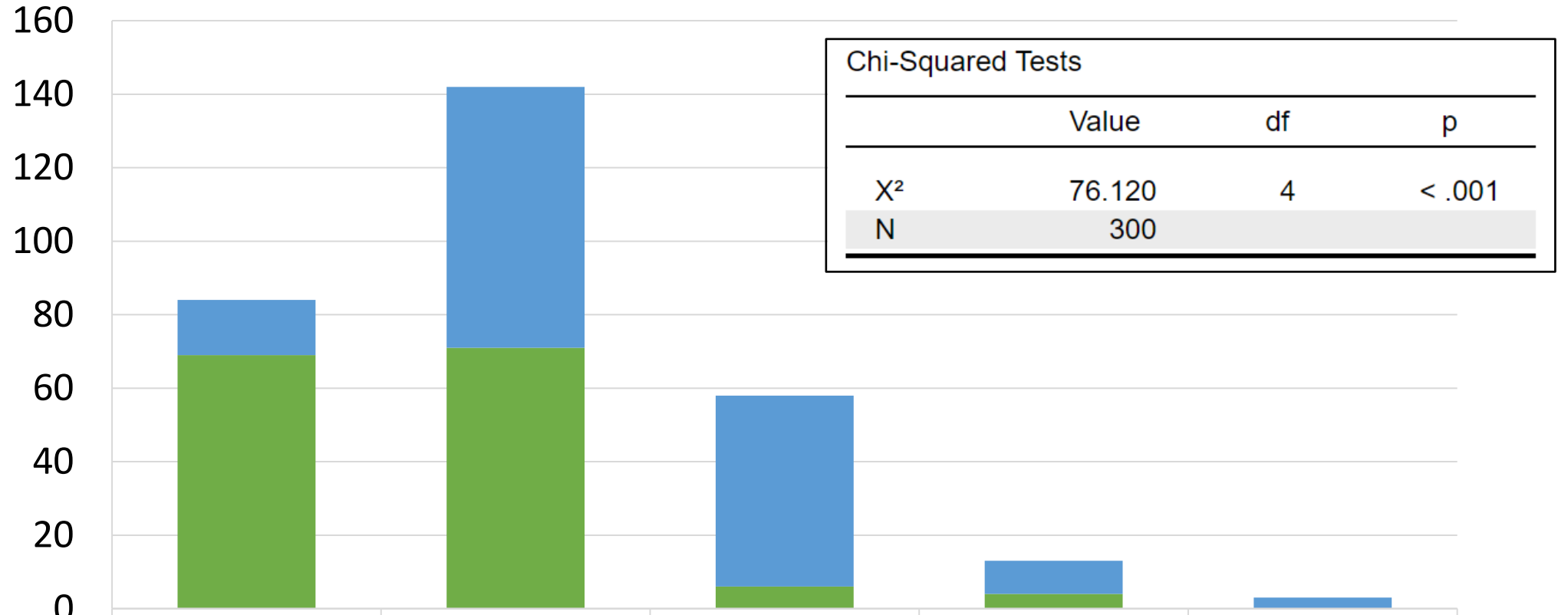
ENGLISH OVERALL PROFICIENCY



Chi-Squared Tests			
	Value	df	p
X ²	46.020	3	< .001
N	300		

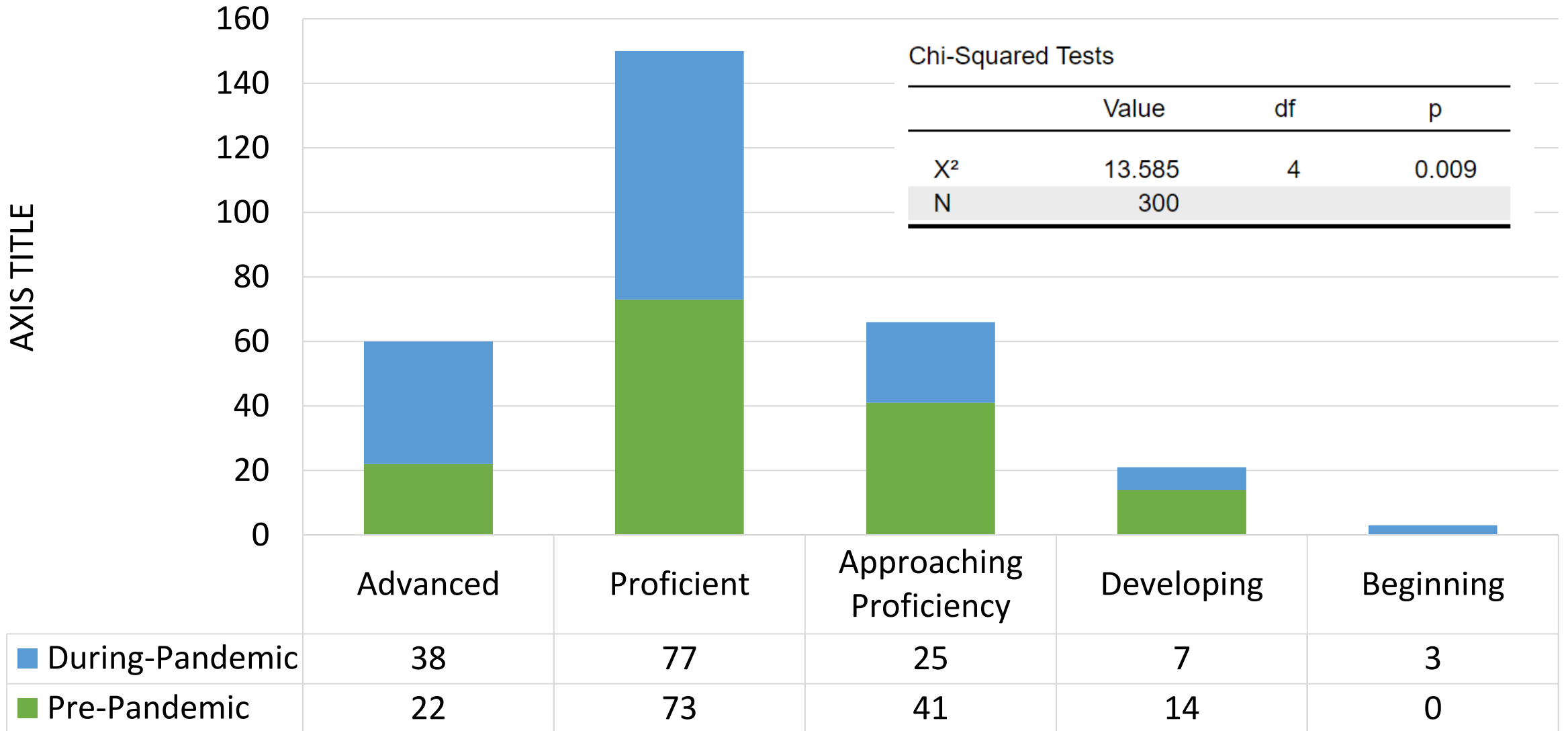
	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
■ During-Pandemic	2	91	48	9	0
■ Pre-Pandemic	39	86	21	4	0

GRAMMAR



	Advanced	Proficient	Approaching Proficiency	Developing	Beginning
■ During-Pandemic	15	71	52	9	3
■ Pre-Pandemic	69	71	6	4	0

READING



Summary of Findings & Recommendations

- (1) There was significant learning loss documented based on the test scores of the pre-and during pandemic cohorts across subject areas.
- (2) The problem is more pronounced in Math, specifically in the content areas of Patterns & Algebra and Geometry.
- (3) A learning gain was only documented in the content area of Reading.
- (4) R: Design and implement learning acceleration programs to address learning deficits

Thank you!