RESEARCH REPORT

May 2025

The Impact of IXL on Maths and English Learning in Australia

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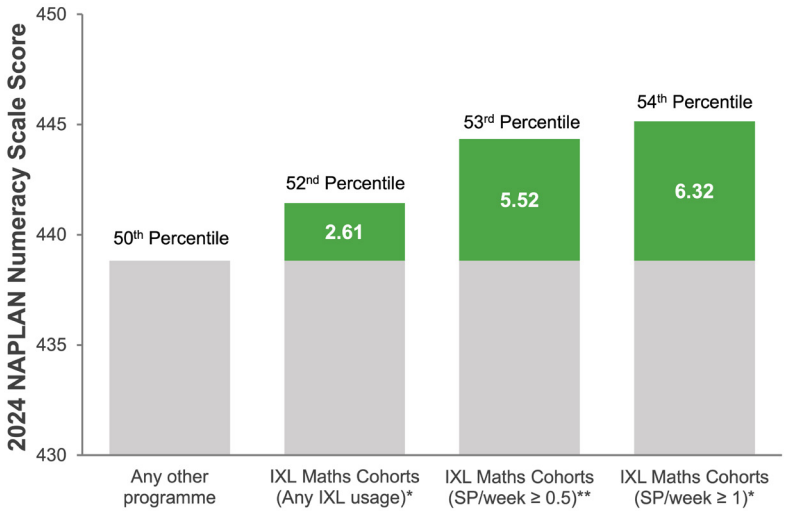
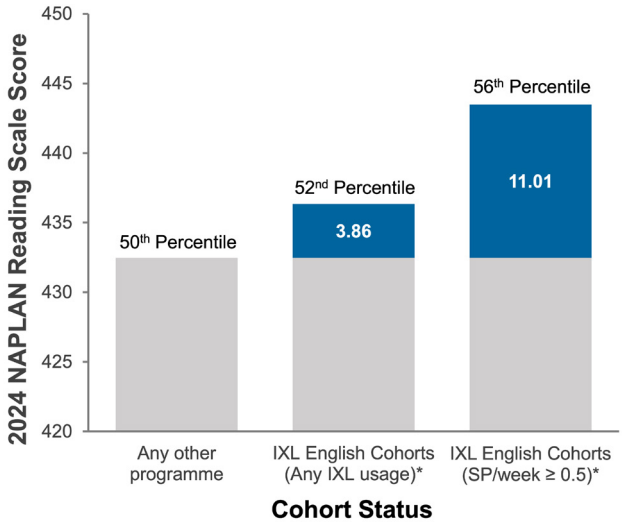
Executive Summary

IXL is an end-to-end teaching and learning platform that engages learners in Pre-School to Year 12 with a comprehensive curriculum and personalised recommendations for reaching students' full potential. Prior research has consistently reported significant positive effects of IXL on student learning, including in an independent randomised control trial (Copeland et al., 2023).

The goal of this study was to examine IXL usage among Year 3, 5, 7 and 9 students in Australia and its impact on numeracy and reading achievement, as measured by the National Assessment Program – Literacy and Numeracy (NAPLAN). Key findings include[1]:

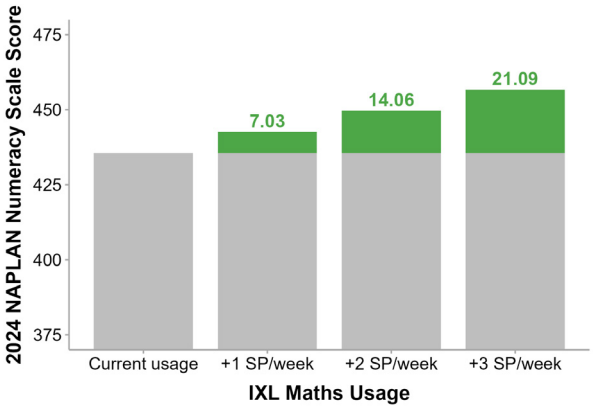
- **IXL implementation improves student achievement.** Year cohorts that used IXL performed better on NAPLAN than year cohorts that used any other programme.

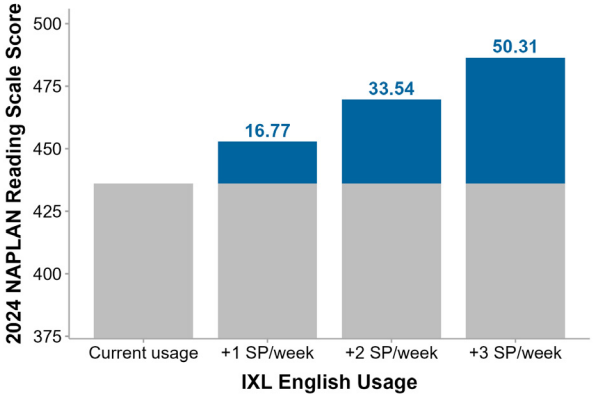




[1] ** indicates statistical significance at the p < .05 level. SP/week = skills proficient per week, the weekly average number of IXL skills in which students reached proficiency (i.e., a SmartScore of 80+).*

- **Higher levels of IXL usage are related to larger achievement gains in both maths and English.** Among IXL cohorts, the higher a cohort's IXL usage, the better its NAPLAN performance.





The Impact of IXL on Maths and English Learning in Australia

Background

IXL is an end-to-end teaching and learning platform that engages learners in Pre-School to Year 12 with a comprehensive curriculum and personalised recommendations for reaching students' full potential. IXL provides adaptive skill practice in both mathematics and English. As of this writing, IXL is used by more than 150,000 students in Australia, and over 1 million educators worldwide. IXL is deeply rooted in learning science research (see Bashkov et al., 2021) and engages students in a personalised learning experience tailored to their working level. As a result, students work through problems that are neither too easy nor too difficult, which in turn supports their self-efficacy (An & Schonberg, 2024) and motivation for continued learning. Prior research has consistently reported significant positive effects of IXL on student learning, including in an independent randomised control trial (Copeland et al., 2023), a study of one school in Queensland, Australia (Hargis, 2024) and a nationwide study of IXL's efficacy in Australia (IXL Learning, 2024).

The goal of the present study was to examine the impact of IXL usage on numeracy and reading achievement among students in Years 3, 5, 7 and 9 in schools across Australia. Specifically, we examined the relationship between the amount of IXL Maths and IXL English usage and student performance on the Australian National Assessment Program – Literacy and Numeracy (NAPLAN). We investigated the efficacy of IXL by comparing NAPLAN scale scores in numeracy and reading among year-level cohorts that used IXL to those of year-level cohorts that did not use IXL but likely used a combination of other online programmes.

Study Design and Methodology

RESEARCH QUESTIONS

The present study aimed to answer the following research questions for IXL Maths and IXL English, separately:

1. **Overall efficacy and implementation fidelity of IXL:** Compared to non-IXL cohorts, did IXL cohorts perform better on NAPLAN, controlling for baseline performance and key demographic characteristics? Additionally, was high-fidelity implementation related to even larger academic gains?
2. **Cumulative usage effects of IXL.** Among the cohorts using IXL, was greater IXL usage related to better performance on NAPLAN, controlling for baseline performance and key demographic characteristics?

DATA SOURCES

Assessment and Demographic Data

Assessment and demographic data were obtained from the Australian Curriculum, Assessment and Reporting Authority (ACARA). Maths and English performance at pretest (2023) and posttest (2024) were measured using NAPLAN, the annual assessment programme that includes assessments in numeracy and reading[2] for students in Years 3, 5, 7 and 9. The outcome measure was the average NAPLAN scale score[3] for each year cohort in the numeracy domain and in the reading domain. NAPLAN scale scores range approximately from 0 to 1000. For more information about the assessment, see the NAPLAN website.

IXL Usage Data

IXL usage data from the time period between pretest and posttest NAPLAN administrations were obtained from IXL's database. When students use IXL, they complete practice problems organised within "skills," or specific topic areas within a subject. IXL uses a proprietary *SmartScore* to indicate a student's proficiency within a skill. The SmartScore ranges from 0-100 and increases as students answer questions correctly. However, it is not a percent correct score; a SmartScore of 100 is always possible. A SmartScore of 80 indicates proficiency in a skill, and a SmartScore of 100 indicates mastery.

RESEARCH QUESTION 1: OVERALL EFFICACY AND IMPLEMENTATION FIDELITY OF IXL

Study Design

The purpose of this study was to evaluate the impact of IXL on student maths and reading performance in Australia. The study adopted a quasi-experimental pretest-posttest control group design (see Figure 1). Specifically, we evaluated the impact of IXL by comparing the performance of the treatment group (IXL cohorts) and the comparison group (non-IXL cohorts) at posttest, accounting for the performance and key demographic characteristics of similar cohorts the year prior.

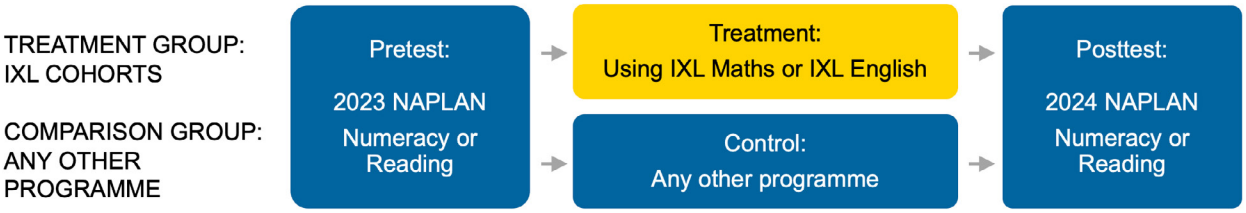


Figure 1. Study design

[2] The NAPLAN assessment includes numeracy, reading, writing, and conventions of language (spelling, grammar, and punctuation). Numeracy and reading were the domains of interest in this study.
[3] The NAPLAN scale was reset in 2023. We do not compare 2023 and 2024 scores directly; rather, the 2023 NAPLAN scores are only used to account for any school differences in baseline achievement.

Participants

A year-level cohort was identified as an IXL cohort if any students in that year used IXL in the study period (i.e., April 2023 to February 2024). We defined comparison cohorts as those in which students did not use IXL at all during the study period but likely used a combination of other online products. Using these criteria, we obtained a sample of 17,827 study cohorts for the IXL Maths analysis (treatment *n* = 246, comparison *n* = 17,581) and 17,721 study cohorts for the IXL English analysis (treatment *n* = 160, comparison *n* = 17,561). Descriptive statistics for treatment cohorts' IXL usage during the study period can be found in Table 1.

To summarise IXL usage, we calculated the average usage per week for the IXL cohorts across the study period. On average, students practised on IXL Maths for about six minutes per week, answering about 18 questions, and reaching proficiency in 0.52 skills per week. Students practised on IXL English for about three minutes per week, answering about nine questions, and reaching proficiency in 0.24 skills per week. See Table 1 for more details on IXL usage among IXL cohorts.

Table 1. IXL Maths and IXL English Usage During the Study Period

Weekly IXL usage	IXL Maths (*n* = 246 cohorts)				IXL English (*n* = 160 cohorts)			
	M	*SD*	Min	Max	*M*	*SD*	Min	Max
Time spent (in minutes)	6.34	7.71	0.00	57.91	2.56	3.61	0.00	26.24
Questions answered	17.59	22.83	0.03	188.63	9.17	15.48	0.01	155.97
Skills proficient	0.52	0.69	0.00	5.03	0.24	0.35	0.00	2.82

Note. M = mean, *SD* = standard deviation.

ANALYSIS

To assess the effect of using IXL Maths and IXL English on students' NAPLAN numeracy and reading scores, we specified a multilevel model for each subject to account for clustering at the school and state levels. Following the Measurement Framework for Schooling in Australia (2023) guidelines (ACARA, 2023), this model regressed NAPLAN scale scores on IXL cohort status (treatment or comparison) and covariates. The covariates in these models were baseline performance and the following demographic characteristics: the percentage of Indigenous students (Aboriginal and/or Torres Strait Islander status), the percentage of students who speak a language other than English at home, the percentage of male students, the school's Index of Community Socio-Educational Advantage (ICSEA) percentile, the number of teachers at each school and the number of students at each school.

Each effect is accompanied by a test of statistical significance (i.e., a *p*-value) and a measure of practical significance (i.e., effect size). The *p*-value is the probability of observing the current or more extreme data, assuming the effect is zero (Cohen, 1994). The smaller the *p*-value, the less likely it is that the result occurred at random, with *p*-values less than .05 considered statistically significant. Effect size is reported using Hedges' *g* and indicates the difference between treatment and

comparison groups on an outcome measure in standard deviation units. We also report percentile gain, which is the expected change in IXL cohorts' percentile rank relative to non-IXL cohorts at the 50th percentile. Percentile gain is based on the effect size. Given that these analyses are at the year cohort level, the effect sizes should be interpreted at the year cohort level as well.

RESEARCH QUESTION 2: CUMULATIVE USAGE EFFECTS OF IXL

The goal of this set of analyses was to investigate the continuous relationship between the cumulative amount of IXL usage and NAPLAN performance among cohorts that used IXL. We specifically examined cohorts' average skills proficient per week (SP/week) as the IXL usage metric of interest, as reaching proficiency in a skill indicates that a student has put forth a considerable amount of focused effort in practicing and learning the material. In these analyses, we included all cohorts with any amount of IXL usage during the study period. Prior to analysis, we identified cohorts that had IXL usage further than ±3 *SD* from the mean as outliers and removed them from the sample (IXL Maths outlier $n = 7$, or 2.8% of the initial sample; IXL English outlier $n = 5$, or 3.1% of the initial sample). The final sample consisted of 239 year-level cohorts for the IXL Maths analysis and 155 year-level cohorts for the IXL English analysis.

Analysis

As in the previous analyses, we specified and tested a multilevel model for each subject, which accounted for the fact that cohorts were clustered within schools and schools were clustered within states. The outcome variable and covariates were the same as those of the previous analyses. Here, we examined the effect of IXL usage by including a continuous predictor variable: each cohort's average SP/week. As there was no comparison group, Hedges' *g* is not applicable; however, we report a standardised regression coefficient to gauge the practical significance of IXL usage relative to the effects of the covariates. As in the previous analyses, effects should be interpreted at the year cohort level.

Results

MATHS

Given the wide variability in IXL Maths usage among the treatment group, we examined the impact of IXL Maths across three different usage thresholds: any amount of IXL usage, 0.5 skills proficient per week (SP/week) and 1 SP/week. Figure 2 below summarises our key findings (see also Table B1 in Appendix B for detailed results). In sum, IXL cohorts outperformed non-IXL cohorts across all three usage thresholds. Importantly, reaching a higher threshold of IXL Maths usage by the treatment group was associated with a larger NAPLAN numeracy assessment gain relative to the comparison group.

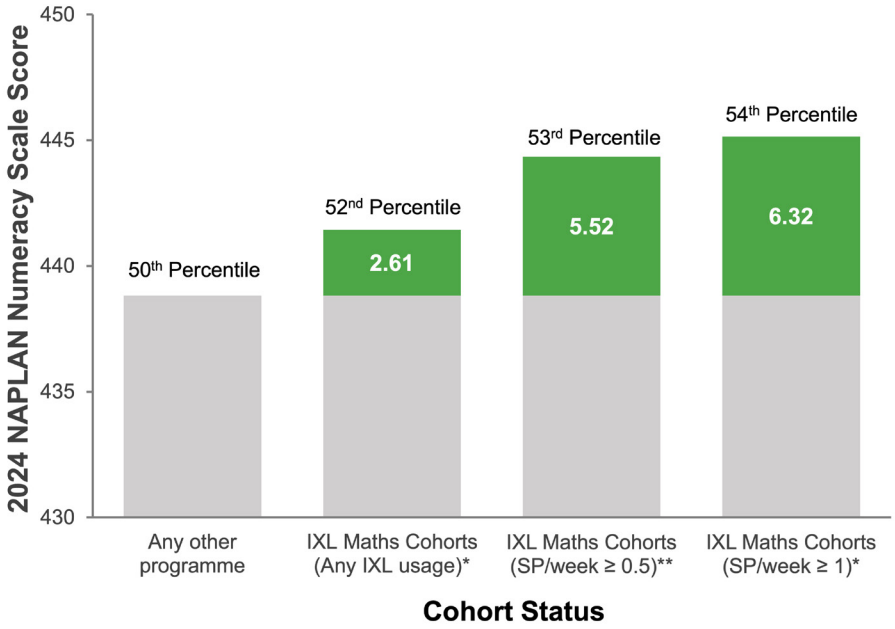


Figure 2. The efficacy of IXL Maths

Specifically, for cohorts with any IXL Maths usage (*n* = 246), NAPLAN scale scores in numeracy increased by 2.61 points (*p* = .04; Hedges' *g* = 0.04). This means that, relative to non-IXL cohorts, IXL Maths cohorts scored nearly three points higher on the NAPLAN numeracy assessment. This effect size of 0.04 corresponds to a percentile gain of two points. That is, if a typical non-IXL cohort at the 50th percentile adopts IXL Maths, that cohort is expected to be in the 52nd percentile on the NAPLAN numeracy assessment after one year of IXL implementation.

For IXL Maths cohorts where students reached at least 0.5 SP/week on average (*n* = 97), NAPLAN scale scores in numeracy increased by 5.52 points (*p* = .005; Hedges' *g* = 0.08). This means that, relative to non-IXL cohorts, IXL Maths cohorts scored more than five points higher on the NAPLAN numeracy assessment. This effect size of 0.08 corresponds to a percentile gain of three points. That is, if a typical non-IXL cohort at the 50th percentile adopts IXL Maths, and students reach at least 0.5 SP/week on average, that cohort is expected to be in the 53rd percentile on the NAPLAN numeracy assessment after one year of IXL implementation.

For IXL Maths cohorts where students reached at least 1 SP/week on average (*n* = 34), NAPLAN scale scores in numeracy increased by 6.32 points (*p* = .04; Hedges' *g* = 0.09). This means that, relative to non-IXL cohorts, IXL Maths cohorts scored more than six points higher on the NAPLAN numeracy assessment. This effect size of 0.09 corresponds to a percentile gain of four points. That is, if a typical non-IXL cohort at the 50th percentile adopts IXL Maths, and students reach at least 1 SP/week on average, that cohort is expected to be in the 54th percentile on the NAPLAN numeracy assessment after one year of IXL implementation.

ENGLISH

Given the smaller amount of variability in IXL English usage among the treatment group, we examined the impact of IXL English across two different usage thresholds: any amount of IXL usage

and 0.5 skills proficient per week (SP/week). As IXL English usage is typically lower than IXL Maths usage, we used slightly lower thresholds for English to maximise our sample size. Figure 3 below summarises our key findings (see also Table B2 in Appendix B for detailed results). In sum, IXL cohorts outperformed non-IXL cohorts across both usage thresholds. Importantly, reaching a higher threshold of IXL English usage among the treatment group was associated with a larger NAPLAN reading assessment gain relative to the comparison group.

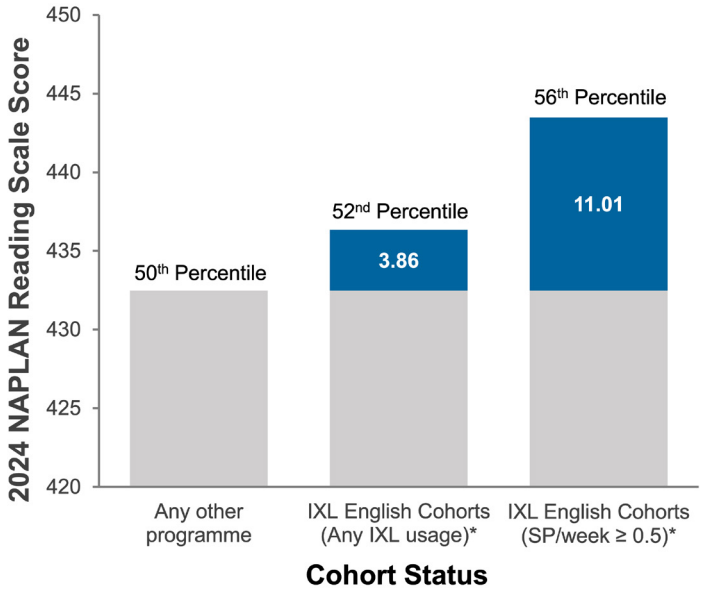


Figure 3. The efficacy of IXL English

Specifically, for cohorts with any IXL English usage (n = 160), NAPLAN scale scores in reading increased by 3.86 points (p = .03; Hedges' g = 0.05). This means that, relative to non-IXL cohorts, IXL English cohorts scored nearly four points higher on the NAPLAN reading assessment. This effect size of 0.05 corresponds to a percentile gain of two points. That is, if a typical non-IXL cohort at the 50th percentile adopts IXL English, and students average using IXL to some extent during each week, that cohort is expected to be in the 52nd percentile on the NAPLAN reading assessment after one year of IXL implementation.

For IXL English cohorts where students reached at least 0.5 SP/week on average (n = 24), NAPLAN scale scores in reading increased by 11.01 points (p = .012; Hedges' g = 0.15). This means that, relative to non-IXL cohorts, IXL English cohorts scored more than 11 points higher on the NAPLAN reading assessment. This effect size of 0.15 corresponds to a percentile gain of six points. That is, if a typical non-IXL cohort at the 50th percentile adopts IXL English, and students reach at least 0.5 SP/week on average, that cohort is expected to be in the 56th percentile on the English state assessment after one year of IXL implementation.

RESEARCH QUESTION 2: CUMULATIVE USAGE EFFECTS OF IXL

We found that increased IXL usage was positively and statistically significantly associated with 2024 NAPLAN scale scores in numeracy (b = 7.03, β = 0.04, p = .027; see Figure 4, left panel) and reading (b = 16.77, β = 0.05, p = .023; see Figure 4, right panel). That is, reaching proficiency in one

additional IXL Maths skill per week is associated with an expected increase in a typical cohort's maths scale score of 7.03 points, and reaching proficiency in one additional IXL English skill per week is associated with an expected increase in a typical cohort's reading scale score of 16.77 points. Full model results are presented in Appendix C, Tables C1 and C2.

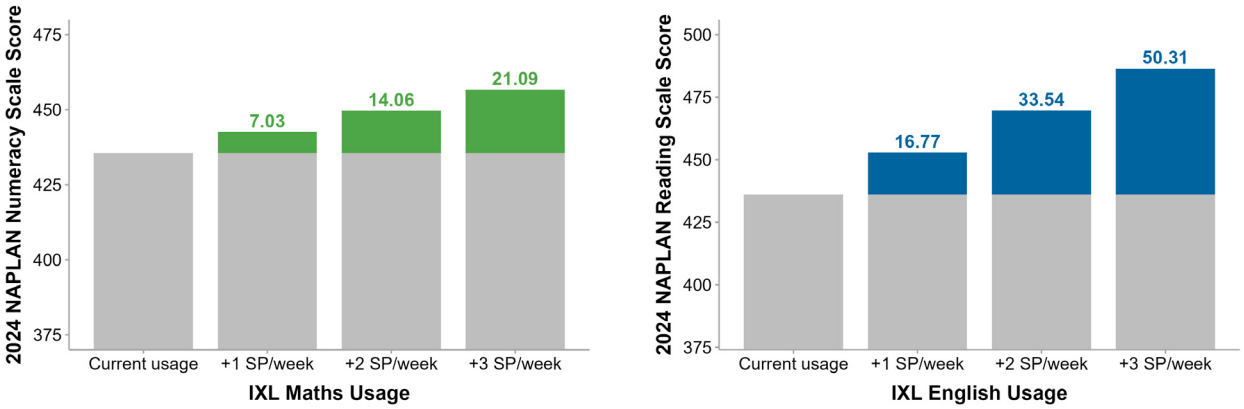


Figure 4. Predicted usage effects for IXL Maths and IXL English

Note: SP/week = skills proficient per week

Discussion and Recommendations

In this study, we investigated how IXL Maths and IXL English usage among Australian students related to their performance on the NAPLAN assessment. Controlling for baseline performance, year level and key demographic characteristics, we found that IXL Maths and IXL English cohorts performed better on the NAPLAN assessments in numeracy and reading, respectively, than cohorts using any other programme. We also found that greater IXL usage further boosted achievement in both maths and English: Among cohorts using IXL, reaching proficiency in more IXL skills per week was associated with higher scale scores on NAPLAN assessments.

Importantly, students are able to achieve these and larger attainment gains in very little time on IXL. In this study, students reached the milestone of 0.5 SP/week— which was associated with significant improvement in NAPLAN scores— in only 7 minutes of practice on IXL, on average. Students reached the 1 SP/week milestone in a mere 15 minutes, on average (see also An, 2021). These results add to studies of thousands of students across multiple countries, including Australia, in which IXL has been shown to be a powerful teaching and learning platform that significantly benefits academic growth (e.g., An, 2023; Bashkov, 2021; Hargis, 2023; Hargis, 2024; IXL Learning, 2024; Schonberg, 2023; Xiong, 2022).

IXL recommends that students aim to reach proficiency in at least two skills per week in each subject. In this sample, students' usage of IXL was slightly lower than this recommendation. Even so, we found strong effects of IXL usage on performance, demonstrating that IXL is a robust educational tool even when used in smaller doses. Because interventions are more effective when they are

carried out with fidelity (see Finney et al., 2021; Noell et al., 2002), and previous studies illustrate the benefit associated with meeting this guideline (e.g., An et al., 2022; An, 2023), we anticipate that students would achieve even greater gains when IXL is used as recommended. One way to increase implementation fidelity is through professional development programs. Prior research shows that IXL's professional development is especially effective in boosting teacher engagement and student learning (IXL Learning, 2020; An, 2023).

With its personalised guidance and first-of-its-kind assessment suite, IXL can play a key role in helping students and teachers close learning gaps. IXL recognises content areas where students may be struggling and engages them with material at the appropriate level. By meeting students where they are, IXL's personalised pathway for growth can help students efficiently fill in learning gaps. This combination of personalised learning and remediation has been suggested as a highly effective approach for both recovering from pandemic-related learning loss as well as boosting subsequent learning gains (Kaffenberger, 2021).

In addition to the current report, studies on thousands of schools have found that cohorts using IXL had higher achievement than cohorts using any other programme, and cohorts with higher usage see even greater benefits (see au.ixl.com/research). The results of this study show that IXL continues to be a powerful platform in supporting student learning and in helping students to simultaneously recover from learning loss and unlock their full academic potential.

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Appendix A: Achievement and Demographics

Table A. Means (Standard Deviations) for IXL (Treatment) and Non-IXL (Comparison) Cohorts' Achievement and Demographics

	Maths (Numeracy)		English (Reading)	
	IXL Cohorts *n* = 246	Non-IXL Cohorts *n* = 17, 581	IXL Cohorts *n* = 160	Non-IXL Cohorts *n* = 17,561
Achievement				
NAPLAN 2023 scale score	489.00 (68.97)	470.62 (71.95)	501.38 (67.58)	473.91 (72.75)
NAPLAN 2024 scale score	490.17 (69.77)	470.37 (71.62)	500.99 (66.15)	471.54 (73.92)
Year				
3	66	6,289	38	6,278
5	79	6,336	45	6,335
7	54	2,485	44	2,485
9	47	2,462	33	2,463
Demographic characteristics				
% Indigenous students	3.97 (10.68)	4.77 (13.57)	2.91 (8.63)	4.56 (12.74)
% LBOTE[1]	6.86 (16.15)	7.81 (12.87)	5.42 (9.47)	7.64 (12.21)
% Male	51.81 (14.48)	50.79 (11.53)	51.56 (16.40)	50.80 (11.53)
ICSEA[2] percentile	54.54 (30.12)	53.84 (28.54)	57.07 (30.24)	53.98 (28.46)
Number of teachers	56.90 (47.76)	41.28 (38.98)	65.35 (51.74)	41.43 (38.93)
Number of students	746.40 (624.09)	543.39 (489.84)	848.41 (685.03)	545.68 (488.29)

Note. Numbers in parentheses show standard deviations.

[1] Language background other than English.

[2] Index of Community Socio-Educational Advantage (ICSEA).

Appendix B: Efficacy Analysis Results

Table B1. Full IXL Maths Efficacy Model Predicting 2024 NAPLAN Numeracy Scale Score

Predictor	*b*	*SE*	95% CI	β	*t*	*p*
(Intercept)	438.83	1.71	435.24 – 442.34	-.04	256.14	< .001
2023 NAPLAN numeracy scale score[1]	0.59	0.01	0.57 – 0.60	.59	98.28	< .001
Year 5[2]	34.72	0.55	33.52 – 35.88	.23	62.90	< .001
Year 7[2]	53.87	0.89	51.94 – 55.75	.26	60.77	< .001
Year 9[2]	63.74	1.05	61.43 – 65.97	.31	60.71	< .001
% Indigenous students[1]	-0.02	0.01	-0.05 – 0.01	.00	-1.69	.091
% Language background other than English[1]	-0.09	0.01	-0.12 – -0.70	-.02	-7.20	< .001
% Male students[1]	0.03	0.01	0.01 – 0.06	.00	2.05	.041
ICSEA percentile[1,3]	0.44	0.01	0.42 – 0.46	.18	48.19	< .001
Number of teachers[1]	0.04	0.01	0.01 – 0.06	.02	2.95	.003
Number of students[1]	0.00	0.00	0.00 – 0.00	-.01	-1.28	.202
IXL treatment effect:						
Used IXL Maths (any amount)	**2.61**	**1.28**	**0.10 – 5.12**	**.04**	**2.04**	**.041**
Used IXL Maths (SP/week ≥ 0.5)	**5.52**	**1.98**	**1.64 – 9.40**	**.08**	**2.79**	**.005**
Used IXL Maths (SP/week ≥ 1)	**6.32**	**3.14**	**0.16 – 12.48**	**.09**	**2.01**	**.044**

Note. Dependent variable: scale score on the 2024 NAPLAN numeracy assessment. *b* = unstandardised regression coefficient, *SE* = standard error, CI = confidence interval, β = standardised regression coefficient.
[1] Grand-mean centred.
[2] Dummy coded; year 3 as reference group.
[3] Index of Community Socio-Educational Advantage (ICSEA).

Table B2. Full IXL English Efficacy Model Predicting 2024 NAPLAN Reading Scale Score

Predictor	*b*	*SE*	95% CI		β	*t*	*p*
(Intercept)	432.48	1.52	429.31	– 435.56	-.03	284.17	< .001
2023 NAPLAN reading scale score[1]	0.49	0.01	0.48	– 0.51	.48	68.57	< .001
Year 5[2]	42.54	0.73	40.99	– 44.05	.28	57.99	< .001
Year 7[2]	66.76	1.07	64.49	– 68.96	.32	62.36	< .001
Year 9[2]	83.27	1.27	80.57	– 85.89	.39	65.56	< .001
% Indigenous students[1]	-0.09	0.02	-0.12	– -0.06	-.02	-5.60	< .001
% Language background other than English[1]	-0.14	0.02	-0.17	– -0.11	-.02	-8.81	< .001
% Male students[1]	-0.09	0.02	-0.12	– -0.05	-.01	-5.52	< .001
ICSEA percentile[1,3]	0.63	0.01	0.61	– 0.66	.24	58.38	< .001
Number of teachers[1]	0.02	0.01	0.00	– 0.05	.01	1.61	.108
Number of students[1]	0.00	0.00	-0.01	– 0.00	-.02	-2.27	.023
IXL treatment effect:							
Used IXL English (any amount)	**3.86**	**1.82**	**0.30**	**– 7.42**	**.05**	**2.13**	**.033**
Used IXL English (SP/week ≥ 0.5)	**11.01**	**4.44**	**2.31**	**– 19.71**	**.15**	**2.48**	**.013**

Note. Dependent variable: scale score on the 2024 NAPLAN numeracy assessment. *b* = unstandardised regression coefficient, *SE* = standard error, CI = confidence interval, β = standardised regression coefficient.
[1] Grand-mean centred.
[2] Dummy coded; year 3 as reference group.
[3] Index of Community Socio-Educational Advantage (ICSEA).

Appendix C: Usage Analysis Results

Table C1. Full IXL Maths Usage Model Predicting 2024 NAPLAN Numeracy Scale Score

Predictor	*b*	*SE*	95% CI	β	*t*	*p*
(Intercept)	435.56	4.84	426.27 – 445.81	.01	89.99	< .001
2023 NAPLAN numeracy scale score[1]	0.56	0.05	0.46 – 0.69	.55	10.63	< .001
Year 5[2]	39.83	4.96	28.29 – 49.46	.27	8.03	< .001
Year 7[2]	64.07	7.62	46.65 – 78.96	.39	8.41	< .001
Year 9[2]	75.44	9.21	53.88 – 93.75	.43	8.19	< .001
% Indigenous students[1]	0.33	0.14	0.07 – 0.58	.05	2.48	.015
% Language background other than English[1]	-0.02	0.08	-0.16 – 0.12	-.01	-0.32	.747
% Male students[1]	0.01	0.10	-0.18 – 0.21	.00	0.09	.930
ICSEA percentile[1,3]	0.46	0.08	0.29 – 0.61	.20	6.06	< .001
Number of teachers[1]	0.12	0.10	-0.06 – 0.31	.09	1.22	.224
Number of students[1]	-0.01	0.01	-0.02 – 0.01	-.07	-0.93	.352
IXL Maths Skills Proficient[1,4]	**7.03**	**3.16**	**0.89 – 13.07**	**.04**	**2.23**	**.027**

Note. Dependent variable: scale score on the 2024 NAPLAN numeracy assessment. *b* = unstandardised regression coefficient, *SE* = standard error, CI = confidence interval, β = standardised regression coefficient.
[1] Grand-mean centred.
[2] Dummy coded; year 3 as reference group.
[3] Index of Community Socio-Educational Advantage (ICSEA).
[4] Weekly average amount.

Table C2. **Full IXL English Usage Model Predicting 2024 NAPLAN Reading Scale Score**

Predictor	*b*	*SE*	95% CI		β	*t*	*p*
(Intercept)	436.14	6.25	424.38	– 449.22	.00	69.79	< .001
2023 NAPLAN reading scale score[1]	0.50	0.06	0.37	– 0.64	.51	7.88	< .001
Year 5[2]	41.95	6.94	26.31	– 55.17	.29	6.05	< .001
Year 7[2]	65.34	9.48	44.38	– 83.52	.44	6.89	< .001
Year 9[2]	79.32	11.28	54.52	– 101.10	.48	7.03	< .001
% Indigenous students[1]	0.37	0.19	-0.06	– 0.71	.05	1.95	.054
% Language background other than English[1]	-0.17	0.20	-0.55	– 0.21	-.02	-0.86	.391
% Male students[1]	-0.05	0.11	-0.24	– 0.17	-.01	-0.42	.673
ICSEA percentile[1,3]	0.67	0.10	0.46	– 0.85	.31	6.76	< .001
Number of teachers[1]	0.05	0.11	-0.15	– 0.26	.04	0.49	.629
Number of students[1]	0.00	0.01	-0.02	– 0.01	-.03	-0.36	.720
IXL English Skills Proficient[1,4]	**16.77**	**7.28**	**2.46**	**– 30.30**	**.05**	**2.30**	**.023**

Note. Dependent variable: scale score on the 2024 NAPLAN numeracy assessment. *b* = unstandardised regression coefficient, *SE* = standard error, CI = confidence interval, β = standardised regression coefficient.
[1] Grand-mean centred.
[2] Dummy coded; year 3 as reference group.
[3] Index of Community Socio-Educational Advantage (ICSEA).
[4] Weekly average amount.