Table S1. Research framework, search terms, Boolean operation search strings, and keywords.

	Research Component	Search Terms	Boolean search string	Keywords
1	CO_2 based National and International IAQ standards.	Ventilation requirements for schools, ventilation guidelines for schools, ventilation standards for schools, IAQ guidelines for schools, IAQ standards for schools, IAQ requirements for schools, maximum permitted CO_2 levels in schools	("indoor air quality" OR IAQ OR ventilation OR "Carbon dioxide" OR CO_2) AND (standards OR guidelines OR regulations) AND (school OR schools OR classroom OR classrooms OR "educational facility" OR "educational institution") AND (national OR international OR global)	IAQ, CO_2, Ventilation, Standards, Guidelines, regulations, school, classroom
2	CO_2 Concentrations in Schools. Assessment of IAQ in schools. Correlation between CO_2 levels and IAQ.	Indoor Air Quality in Schools, Indoor Air Quality in Classrooms, School IAQ, Classroom IAQ, CO_2 levels in Schools, CO_2 Levels in Classrooms	("indoor air quality" OR iaq) AND ("carbon dioxide" OR CO_2) AND (levels OR assessment OR measurement OR sampling) AND (school OR schools OR classroom OR classrooms OR "educational facility" OR "educational institution")	IAQ, CO_2, Schools, Classrooms, Ventilation, Indoor Air Quality
3	Impacts of external factors such as environment, weather, and occupant behaviour on IAQ/CO_2 levels.	Occupant behaviour and IAQ in schools, Outdoor environment and IAQ in schools, Weather and IAQ in Schools	("indoor air quality" OR iaq) AND (CO_2 OR "carbon dioxide") AND (school OR schools OR "educational facility" OR "educational institution") AND ("external factors" OR environment OR weather OR "occupant behaviour" OR "occupant behavior") AND ("naturally ventilated" OR "natural ventilation")	IAQ, CO_2, occupancy, weather, behaviour, environment, schools, classrooms
4	Monitoring CO_2 levels in in Naturally Ventilated Classrooms.	Sampling CO_2 in naturally ventilated classrooms, accurate measurement of CO_2 in classrooms	("indoor air quality" OR iaq) AND (natural OR naturally) AND ("carbon dioxide" OR CO_2) AND (assessment OR measurement OR monitoring OR sampling) AND (classroom OR classrooms OR "educational facility" OR "educational institution")	CO_2, sampling, assessment, measuring, schools, classrooms
5	Associations between classroom CO_2 levels and occupant health.	Effects of poor IAQ on students, Air Quality and contaminants in schools, health risks associated with poor IAQ in schools	("indoor air quality" OR iaq) AND ("carbon dioxide" OR CO_2) AND (school OR schools OR classroom OR classrooms OR "educational facility" OR "educational institution") AND (risks OR effects OR impact OR consequences OR outcomes OR health OR "academic performance" OR well-being OR productivity)	IAQ, CO_2, Impacts, Effects, Risks, Contaminants, schools, classrooms
6	Associations between classroom CO_2 levels and cognitive performance.	IAQ and cognitive performance in schools, CO_2 and cognitive performance in schools, IAQ and productivity in schools, CO_2 and productivity in schools	("indoor air quality" OR iaq) AND (CO_2 OR "carbon dioxide") AND ("performance" OR productivity OR "academic achievement" OR "cognitive function" OR "learning outcomes") AND (school OR schools OR "educational facility" OR "educational institution")	IAQ, CO_2, Performance, productivity, schools, classrooms

Table S2. Inclusion and exclusion criteria.

Review Stage	Include	Exclude
Before Screening	All published studies	Duplicates articles
	All peer-reviewed journal articles	Books or Book chapters
		Non-English language
		Reviews
		Letters or notes
		Editorials & magazine articles
Title/Abstract Screening	Studies that refer to CO_2/IAQ/Ventilation in classrooms	Studies conducted during COVID restrictions
		Studies from climates other than temperate
		Studies that were not based in school settings
Full Article Level	Studies involving naturally ventilated classrooms	Studies that derived but did not verify results from simulations or statistical models with empirical field data
	Studies involving primary schools	Data that was not gathered during normal occupied periods
		Studies that did not include data collection or sampling methodology