Japanese Education Statistics Dataset

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1 Introduction

This document provides information on a set of comprehensive education statistics for Japan, covering various aspects of the education system from early childhood education to university level. The data is at the prefecture level, with an additional row for national averages, forming an unbalanced panel dataset.

```
knitr::opts_chunk$set(echo = TRUE, eval = FALSE)
# Example code for loading dataset
# japan_ed_data_with_NAs <- read_csv("path/to/your/data.csv") # for .csv file with NAs for yea
# japan_ed_data_noNAs <- read_csv("path/to/your/data.csv") # for .csv file with no NAs for yea
# or
# japan_ed_data_with_NaAs <- read_excel("path/to/your/data.xlsx") # for excel file with NAs fo
# japan_ed_data_noNAs <- read_excel("path/to/your/data.xlsx") # for excel file with no NAs for
```

2 Data Overview

2.1 Variables Description

The dataset includes the following key variables:

- sheet_index: Numeric identifier for each variable
- prefecture_code: Numeric identifier for each prefecture
- prefecture_name_jp: Name of the prefecture in Japanese
- prefecture_name_en: Name of the prefecture in English
- year: Year of observation
- sheet_name: String identifier for each variable name
- value: Value of the specific educational statistic for that prefecture and year

2.2 Variables Names

Variable Name	Description	Japanese Description	Variable Code (unit)
1.1.1 Elementary schools	Number of elementary schools per 100,000 population aged 6-11 years	小学校数 (6 〜 11歳人口10万人当たり)	#E0110101 (校)
1.1.2 Junior high schools	Number of junior high schools per 100,000 population aged 12-14 years	中学校数 (12〜14歳人口10万人当たり)	#E0110102 (校)
1.1.3 Senior high schools	Number of senior high schools per 100,000 population aged 15-17 years	高等学校数 (15〜17歳人口10万人当たり)	#E0110103 (校)
1.1.4 Kindergartens	Number of kindergartens per 100,000 population aged 3-5 years	幼稚園数 (3 〜 5 歳人口10万人当たり)	#E0110104 (園)
1.1.5 Day nurseries	Number of day nurseries per 100,000 population aged 0-5 years	保育所数 (0 〜 5 歳人口10万人当たり)	#E0110105 (所)
1.1.6 Authorized child centers	Number of authorized child centers per 100,000 population aged 0-5 years	認定こども園数 (0 〜 5 歳人口10万人当たり)	#E0110106 (園)
1.2.1 Elementary schools area	Number of elementary schools per inhabitable area (100 km^2)	小学校数 (可住地面積100k㎡当たり)	#E0110201 (校)
1.2.2 Junior HS area	Number of junior high schools per	中学校数 (可住地面積100k㎡当	#E0110202 (校)

Variable Name	Description	Japanese Description	Variable Code (unit)
	inhabitable area (100 km²)	たり)	
1.2.3 Senior HS area	Number of senior high schools per inhabitable area (100 km²)	高等学校数 (可住地面積100k㎡当たり)	#E0110203 (校)
1.3.1 Ratio public senior HS	Percentage of senior high schools that are public institutions	公立高等学校割合	#E01303 (%)
1.3.2 Ratio public kindergarten	Percentage of kindergartens that are public institutions	公立幼稚園割合	#E01304 (%)
1.3.3 Ratio public day nurse.	Percentage of day nurseries that are public institutions	公営保育所割合	#E01305 (%)
2.1.1 ES female teachers ratio	Percentage of elementary school teachers who are female	女子教員割合［小学校］	#E0410201 (%)
2.1.2 JHS female teachers ratio	Percentage of junior high school teachers who are female	女子教員割合［中学校］	#E0410202 (%)
3.1.1 ES pupils per teacher	Number of elementary school pupils per teacher	小学校児童数 (教員 1 人当たり)	#E0510301 (人:person)
3.1.2 JHS students per teacher	Number of junior high school students per teacher	中学校生徒数 (教員 1 人当たり)	#E0510302 (人:person)
3.1.3 SHS students per teacher	Number of senior high school students per teacher	高等学校生徒数 (教員 1 人当たり)	#E0510303 (人:person)

Variable Name	Description	Japanese Description	Variable Code (unit)
3.1.4 Kindergarten pupils p.t.	Number of kindergarten pupils per teacher	幼稚園在園者数(教員１人当たり)	#E0510304 (人:person)
3.1.5 Day nursery pupils (p.n)	Number of day nursery pupils per nurse	保育所在所児数(保育士１人当たり)	#E0510305 (人:person)
3.2.1 Ratio of public SHS	Percentage of senior high school students in public institutions	公立高等学校生徒比率	#E05203 (%)
3.2.2 Public kinderga. ratio	Percentage of kindergarten pupils in public institutions	公立幼稚園在園者比率	#E05204 (%)
3.2.3 Public day nurse. ratio	Percentage of day nursery children in public institutions	公営保育所在所児比率	#E05205 (%)
3.3.1 ES pupils	Number of elementary school pupils per class	小学校児童数(１学級当たり)	#E0510205 (人:person)
3.3.2 JHS students	Number of junior high school students per class	中学校生徒数(１学級当たり)	#E0510206 (人:person)
4.1.1 Junior colleges	Number of junior colleges per 100,000 population	短期大学数 (人口10万人当たり)	#E0610101 (校)
4.1.2 Colleges and universities	Number of colleges and universities per 100,000 population	大学数 (人口10万人当たり)	#E0610102 (校)

Variable Name	Description	Japanese Description	Variable Code (unit)
4.2.1 Junior entrance cap. ind.	Index showing entrance capacity relative to previous year's advancing students for junior colleges	短期大学収容力指数	#E0610201
4.2.2 Uni. entrance cap. ind.	Index showing entrance capacity relative to previous year's advancing students for universities	大学収容力指数	#E0610202
4.3.1 Nat. colle. stud. ratio	Percentage of university students enrolled in national institutions	国立大学学生数割合	#E0620401 (%)
4.3.2 Pub. colle. stud. ratio	Percentage of university students enrolled in public institutions	公立大学学生数割合	#E0620402 (%)
4.3.3 Priv. colle. stud. ratio	Percentage of university students enrolled in private institutions	私立大学学生数割合	#E0620403 (%)
5.1.1 Speciality schools	Number of specialty schools per 100,000 population	専修学校数 (人口10万人当たり)	#E08101 (校)
5.1.2 Miscellaneous schools	Number of miscellaneous schools per 100,000 population	各種学校数 (人口10万人当たり)	#E08102 (校)

Variable Name	Description	Japanese Description	Variable Code (unit)
5.2.1 Students Specia. Schools	Number of students in specialty schools per 1,000 population	専修学校生徒数(人口千人当たり)	#E08201 (人:person)
5.2.2 Students Misc. Schools	Number of students in miscellaneous schools per 1,000 population	各種学校生徒数(人口千人当たり)	#E08202 (人:person)
6.1.1 Ed. Diff. Rate Kind.	Ratio of kindergarten graduates to first-grade elementary school students	教育普及度［幼稚園］	#E0910101 (%)
6.1.2 Ed. Diff. Rate Nurs.	Ratio of day nursery graduates to first-grade elementary school students	教育普及度［保育所］	#E0910102 (%)
6.2.1 Nurse. working rate	Percentage of day nursery capacity currently being utilized	保育所利用率	#E0910402 (%)
6.3.1 ES absentees ratio	Long-term absentees (30+ days) from elementary school per 1,000 pupils	小学校長期欠席児童比率 [年度間30日以上]	#E09211
6.3.2 JHS absentees ratio	Long-term absentees (30+ days) from junior high school per 1,000 students	中学校長期欠席生徒比率 [年度間30日以上]	#E09212
6.3.3 ES absentees ratio dis.	Long-term absentees due to	病気による小学校長期欠席児童	#I0821101

Variable Name	Description	Japanese Description	Variable Code (unit)
	diseases from elementary school per 1,000 pupils	比率 [年度間30日以上]	
6.3.4 JHS absentees ratio dis.	Long-term absentees due to diseases from junior high school per 1,000 students	病気による中学校長期欠席生徒比率 [年度間30日以上]	#I0821102
6.3.5 ES absentees ratio ref.	Long-term absentees due to school refusal from elementary school per 1,000 pupils	不登校による小学校長期欠席児童比率 [年度間30日以上]	#E09213
6.3.6 JSH absentees ratio ref.	Long-term absentees due to school refusal from junior high school per 1,000 students	不登校による中学校長期欠席生徒比率 [年度間30日以上]	#E09214
6.4.1 JHS Grads to Further Ed.	Percentage of junior high graduates continuing to further education	中学校卒業者の進学率	#E09401 (%)
6.4.2 SHS Grads to Further Ed.	Percentage of senior high graduates continuing to further education	高等学校卒業者の進学率	#E09402 (%)
6.5.1 HS Grads to Uni same pref	Percentage of high school graduates entering universities in the same prefecture	出身高校所在地県の大学への入学者割合	#E0940302 (%)

Variable Name	Description	Japanese Description	Variable Code (unit)
6.6.1 Ratio Elem-Jr High Grads	Percentage of people whose highest education is elementary or junior high school	最終学歴が小学・中学卒の者の割合	#E09501 (%)
6.6.2 Ratio SHS Completers	Percentage of people whose highest education is senior high school	最終学歴が高校・旧中卒の者の割合	#E09502 (%)
6.6.3 Ratio JC Completers	Percentage of people whose highest education is junior college	最終学歴が短大・高専卒の者の割合	#E09503 (%)
6.6.4 College-Uni comple. ratio	Percentage of people whose highest education is college/university	最終学歴が大学・大学院卒の者の割合	#E09504 (%)
7.1.1 ES ed exp	Educational expenses per pupil in elementary schools	小学校教育費(児童１人当たり)	#E10102 (円:yen)
7.1.2 Junior HS ed exp	Educational expenses per student in junior high schools	中学校教育費(生徒１人当たり)	#E10103 (円:yen)
7.1.3 HS educ exp	Educational expenses per student in senior high schools (full-time)	高等学校教育費［全日制］(生徒１人当たり)	#E10104 (円:yen)
7.1.4 Kindergarten ed exp	Educational expenses per	幼稚園教育費(在園者１人当た	#E10101 (円:yen)

Variable Name	Description	Japanese Description	Variable Code (unit)
	pupil in kindergartens	り)	
7.1.5 Auth. childcenters exp	Educational expenses per pupil in authorized child centers (Kindergarten-and-day-care center type)	幼保連携型認定こども園教育費（在園者１人当たり)	#E10105 (円:yen)

2.3 Prefecture Codes and Names

The dataset includes all 47 prefectures of Japan plus the national average (code 0). Here is the complete list, with coordinates of prefectural capitals:

Code	Japanese Name	English Name	Region	Lat (N+)	Long (E+)
0	全国	Japan	National Average	-	-
1	北海道	Hokkaido	Hokkaido	43.0642	141.3469
2	青森県	Aomori-ken	Tohoku	40.8244	140.7400
3	岩手県	Iwate-ken	Tohoku	39.7036	141.1527
4	宮城県	Miyagi-ken	Tohoku	38.2688	140.8721
5	秋田県	Akita-ken	Tohoku	39.7186	140.1024
6	山形県	Yamagata-ken	Tohoku	38.2404	140.3633
7	福島県	Fukushima-ken	Tohoku	37.7500	140.4678
8	茨城県	Ibaraki-ken	Kanto	36.3418	140.4467
9	栃木県	Tochigi-ken	Kanto	36.5657	139.8836
10	群馬県	Gumma-ken	Kanto	36.3911	139.0608
11	埼玉県	Saitama-ken	Kanto	35.8569	139.6489
12	千葉県	Chiba-ken	Kanto	35.6073	140.1063
13	東京都	Tokyo-to	Kanto	35.6895	139.6917
14	神奈川県	Kanagawa-ken	Kanto	35.4478	139.6425

Code	Japanese Name	English Name	Region	Lat (N+)	Long (E+)
15	新潟県	Niigata-ken	Chubu	37.9022	139.0236
16	富山県	Toyama-ken	Chubu	36.6953	137.2114
17	石川県	Ishikawa-ken	Chubu	36.5945	136.6256
18	福井県	Fukui-ken	Chubu	36.0641	136.2196
19	山梨県	Yamanashi-ken	Chubu	35.6641	138.5684
20	長野県	Nagano-ken	Chubu	36.6513	138.1811
21	岐阜県	Gifu-ken	Chubu	35.3911	136.7220
22	静岡県	Shizuoka-ken	Chubu	34.9769	138.3831
23	愛知県	Aichi-ken	Chubu	35.1802	136.9066
24	三重県	Mie-ken	Kansai	34.7303	136.5086
25	滋賀県	Shiga-ken	Kansai	35.0045	135.8686
26	京都府	Kyoto-fu	Kansai	35.0116	135.7681
27	大阪府	Osaka-fu	Kansai	34.6937	135.5023
28	兵庫県	Hyogo-ken	Kansai	34.6913	135.1830
29	奈良県	Nara-ken	Kansai	34.6851	135.8048
30	和歌山県	Wakayama-ken	Kansai	34.2260	135.1675
31	鳥取県	Tottori-ken	Chugoku	35.5036	134.2383
32	島根県	Shimane-ken	Chugoku	35.4723	133.0505
33	岡山県	Okayama-ken	Chugoku	34.6618	133.9343
34	広島県	Hiroshima-ken	Chugoku	34.3853	132.4553
35	山口県	Yamaguchi-ken	Chugoku	34.1859	131.4706
36	徳島県	Tokushima-ken	Shikoku	34.0658	134.5593
37	香川県	Kagawa-ken	Shikoku	34.3401	134.0434
38	愛媛県	Ehime-ken	Shikoku	33.8417	132.7661
39	高知県	Kochi-ken	Shikoku	33.5597	133.5311
40	福岡県	Fukuoka-ken	Kyushu	33.6064	130.4181

Code	Japanese Name	English Name	Region	Lat (N+)	Long (E+)
41	佐賀県	Saga-ken	Kyushu	33.2494	130.2989
42	長崎県	Nagasaki-ken	Kyushu	32.7448	129.8737
43	熊本県	Kumamoto-ken	Kyushu	32.7898	130.7417
44	大分県	Oita-ken	Kyushu	33.2382	131.6125
45	宮崎県	Miyazaki-ken	Kyushu	31.9077	131.4202
46	鹿児島県	Kagoshima-ken	Kyushu	31.5602	130.5581
47	沖縄県	Okinawa-ken	Kyushu	26.2124	127.6809

2.4 Variables time range

Section	Variable	Years Covered
1. Educational Institutions		
	1.1 Elementary schools (per 100k pop)	1995, 2000, 2005-2022
	1.2 Junior high schools (per 100k pop)	1995, 2000, 2005-2022
	1.3 Senior high schools (per 100k pop)	1995, 2000, 2005-2022
	1.4 Kindergartens (per 100k pop)	1995, 2000, 2005-2022
	1.5 Day nurseries (per 100k pop)	1995, 2000, 2004-2020
	1.6 Authorized child centers (per 100k pop)	2015-2022
	2.1-2.3 Schools per inhabitable area	1995, 2000, 2005-2022
	3.1-3.2 Ratio of public institutions	1995, 2000, 2005-2022
	3.3 Ratio of public day nurseries	1995, 2000, 2004-2020

Section	Variable	Years Covered
2. Teachers		
	1.1 Female teachers ratio (elementary)	1995, 2000, 2005-2022
	1.2 Female teachers ratio (junior high)	1995, 2000, 2005-2022
3. Pupils		
	1.1-1.4 Pupils per teacher (various schools)	1995, 2000, 2005-2022
	1.5 Day nursery pupils per nurse	2002-2020 (except 2004)
	2.1-2.2 Ratio of public school students	1995, 2000, 2005-2022
	2.3 Ratio of public day nursery children	1995, 2000, 2004-2020
	3.1-3.2 Pupils per class	2000-2022
4. Junior Colleges & Universities		
	1.1-1.2 Institutions per 100k persons	1995, 2000, 2005-2022
	2.1-2.2 Entrance capacity index	1995, 2000, 2005-2022
	3.1-3.3 Student ratio by institution type	1995, 2000, 2005-2022
5. Specialty & Miscellaneous Schools		
	1.1-1.2 Schools per 100k persons	1995, 2000, 2005-2022
	2.1-2.2 Students enrolled per 1k persons	1995, 2000, 2005-2022
6. Educational Diffusion		
	1.1-1.2 Educational diffusion rate	1995, 2000, 2005-2022

Section	Variable	Years Covered
	2.1 Working rate of day nurseries	1995, 2000, 2004-2020
	3.1-3.2, 3.4-3.6 Long-term absentees ratios	1995, 2000, 2004-2021
	3.3 Long-term absentees (elementary/disease)	1995, 2000, 2004-2018, 2020-2021
	4.1-4.2 Further education progression	1995, 2000, 2004-2021
	5.1 Same-prefecture university entrance	1995, 2000, 2005-2022
	6.1-6.4 Educational attainment ratios	1980, 1990, 2000, 2010, 2020
7. Education Expenditure		
	1.1 Elementary school expenses	1995, 2000-2019
	1.2-1.3 Junior/High school expenses	1995, 2000-2020
	1.4 Kindergarten expenses	1995, 2000-2018, 2020
	1.5 Authorized child centers expenses	2015-2020

3 Sections Overview

The dataset is an unbalanced panel, with data points starting in 1995, jumping to 2000, and then continuing from 2005 to 2022 for most variables. Each sheet in the original Excel file represents a different educational statistic, including:

1. Educational institutions 教育施設
2. Teachers 教員
3. Pupils 生徒
4. Junior colleges, colleges, and universities 短期大学・大学
5. Specialty schools and miscellaneous schools 専修学校・各種学
6. Educational diffusion rates 教育普及度
7. Education expenditure per pupil 1人当たりの学校等教育費

Each variable is represented in a sheet according to the order above. They contains the name in both in English and Japanese.

The data for each statistic is presented in a long format, with all variables as rows. The dataset includes 47 prefectures plus a row for the national average 全国.

Note: The actual number of variables and observations may differ from the placeholder values in this documentation. Users should check the loaded data for the most accurate information.

For each section, it is provided:
a) a list of variables,
b) the years covered,
c) the calculation methods,
d) an interpretation of what the metrics mean and their significance.

3.1 Section 1: Education 教育, Educational institutions 教育施設:

The variables covered in this section are:

1.1 Elementary schools (per 100,000 population 6-11 years)
1.2 Junior high schools (per 100,000 population 12-14 years)
1.3 Senior high schools (per 100,000 population 15-17 years)
1.4 Kindergartens (per 100,000 population 3-5 years)
1.5 Day nurseries (per 100,000 population 0-5 years)
1.6 Authorized child centers (per 100,000 population 0-5 years)

2.1 Elementary schools (per inhabitable area 100 k㎡)
2.2 Junior high schools (per inhabitable area 100 k㎡) pre-2019 / Number of lower secondary schools (per inhabitable area 100 k㎡) from 2019 onwards
2.3 Senior high schools (per inhabitable area 100 k㎡) pre-2019 / Number of upper secondary schools (per inhabitable area 100 k㎡) from 2019 onwards

3.1 Ratio/percentage of public senior high/upper secondary schools
3.2 Ratio/percentage of public kindergartens
3.3 Ratio/percentage of public day nurseries

3.1.1 Subsections 1.1 - 1.6:

The data is separated in columns per 100,000 population by different age ranges:
Elementary schools 小学校数: 6-11
Junior high schools 中学校数: 12-14
Senior high schools 高等学校数: 15-17
Kindergartens 幼稚園数: 0-3

- The years covered are: 1995, 2000, 2005-2022

Day nurseries 保育所数: 3-5

- The years covered are: 1995, 2000, 2004-2020
- The calculations are made by employing the formula: (Number of “variable” / Population aged “variable”“) * 100,000

- For example, if we take data for Kanagawa 神奈川県 in 2012 we have 184.9, it was calculated by (Number of elementary schools in Kanagawa / Population of 6-11 year olds in Kanagawa) * 100,000 = 184.9. This method allows for comparison between prefectures with different population sizes.

One variable that was introduced later in the dataset was: Authorized child centers (per 100,000 population 0-5 years) 認定こども園数(０～５歳人口10万人当たり)

- The years covered are 2015-2022
- The calculations are made by employing the formula: (Number of authorized child centers / Population aged 0-5 years) * 100,000
- For each prefecture and year, they would have: counted the number of authorized child centers, counted the total population aged 0-5 years, divided the number of centers by the population, then multiplied the result by 100,000 to get the ratio per 100,000 children.
- This metric provides insights into the availability of authorized child centers across different regions of Japan relative to the young child population. It can reflect various factors such as local childcare policies, demographic trends, and societal needs in different areas. The data over time allows for analysis of trends in the expansion of authorized child centers. These figures can be important indicators of early childhood education and care provision, which may have implications for child development, work-life balance for parents, and broader social policies. Comparing the ratios between prefectures can reveal regional differences in childcare infrastructure and potentially inform resource allocation and policy decisions.

3.1.2 Subsections 2.1 - 2.3

They contain information on Junior high schools 中学校数-Lower secondary schools and Senior high schools 高等学校数-Upper secondary schools per inhabitable area 100 k㎡ 可住地面積100k㎡当たり.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of “variable schools” / Inhabitable area in k㎡) * 100
- For each prefecture and year, they would have: counted the total number of elementary schools, measured the total inhabitable area in square kilometers, divided the number of schools by the area, and then multiplied the result by 100 to get the number per 100 k㎡.
- This measure shows how densely or sparsely schools are distributed across the habitable land in each prefecture, which can be particularly relevant in a country like Japan with varying population densities and significant uninhabitable areas (like mountains).

3.1.3 Subsections 3.1 - 3.3:

They contain information on the Ratio/percentage of public senior high/upper secondary schools 公立高等学校割合 (%), Ratio/percentage of public kindergartens 公立幼稚園割合 (%), and Ratio/percentage of public day nurseries/nurse centers 公営保育所割合 (%) for the years 1995, 2000, 2005-2022 (except for the last one, Ratio/percentage of public day nurseries/nurse centers, for which we have data for the years 1995, 2000, 2004-2020).

- The calculations are made by employing the formula: (Number of public “variable schools” / Total number of “variable schools”) * 100
- For each prefecture and year, they would have: counted the number of public schools, counted the total number schools, divided the number of public schools by the total number, then multiplied the result by 100 to get the percentage. For example, the national average 全国 for 2012 is 73.4%, which means that in 2012, 73.4% of all senior high schools in Japan were public schools. It was named “ratio” until 2020, when the variable was changed to “percentage”, but they were calculated the same way.
- These metrics collectively provide a comprehensive view of the educational infrastructure across Japan. The number of institutions per population gives insight into the accessibility of education for different age groups, while the number per inhabitable area reflects the physical distribution of schools. The ratios/percentages of public institutions show the balance between public and private education provision. Together, these metrics can reveal regional differences in educational resources, urbanization patterns, and government priorities in education. They allow for comparisons between prefectures with different population sizes and geographical characteristics. Analyzing these metrics over time can also indicate trends in educational policy and infrastructure development across Japan, such as changes in school distribution or shifts in the balance between public and private education. This information is important for understanding the educational landscape and informing policy decisions related to educational access and resource allocation.

3.2 Section 2: Education 教育, Teachers 教員:

The variables covered in this section are:

Ratio of female teachers (elementary school)
Ratio of female teachers (junior high/lower secondary school)

3.2.1 Subsections 1.1 - 1.2:

They contain information on the Ratio of female teachers 女子教員割合 (%) for elementary 小学校 and junior high/lower secondary school school 中学校.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of female “variable school” teachers / Total number of “variable school” school teachers) * 100
- For each prefecture and year, they would have: counted the number of female “variable school” teachers, counted the total number of “variable school” teachers, divided the number of female teachers by the total number, then multiplied the result by 100 to get the percentage.
- These metrics provide insights into the gender balance among school teachers across different regions of Japan. They can reflect various factors such as societal norms, employment policies, and career preferences in different areas. Comparing the ratios between elementary and junior high/lower secondary school schools can reveal differences in gender distribution at different levels of education. The data over time allows for analysis of trends in gender representation in the

teaching profession. These figures can be important indicators of gender equality in the education sector and may have implications for students' perceptions of gender roles in society.

3.3 Section 3: Education 教育, Pupils 生徒:

The variables covered in this section are:

1.1 Elementary school pupils (per teacher)
1.2 Junior high school students (per teacher)
1.3 Senior high school students (per teacher)
1.4 Kindergarten pupils (per teacher)
1.5 Day nursery pupils (per nurse)

2.1 Ratio of public senior high school students
2.2 Ratio of public kindergarteners
2.3 Ratio of public day nursery children

3.1 Elementary school pupils (per class)
3.2 Junior high school students (per class)

3.3.1 Subsections 1.1 - 1.5:

They contain information on the number of Elementary school pupils 小学校児童数, Junior high school students 中学校生徒数, Senior high school students 高等学校生徒数, and Kindergarten pupils 幼稚園在園者数, all per teacher 教員 1 人当た.

- The years covered are 1995, 2000, 2005-2022

And Day nursery pupils 保育所在所児数 per nurse 保育士 1 人当たり.

- The years covered are 2002-2020 (except for 2004, which I couldn't find data anywhere)
- The calculations are made by employing the formula: (Total number of "variable school" students/pupils) / (Total number of "variable school" teachers/nurses)
- For each prefecture and year, they would have: counted the total number of "variable school" students/pupils, counted the total number of "variable school" teachers/nurses, then divided the number of students/pupils by the number of teachers/nurses.

3.3.2 Subsections 2.1 - 2.3:

They contain information on the Ratio of public senior high school 公立高等学校生徒比率 (%), and Ratio of public kindergarteners 公立幼稚園在園者比率 (%).

- The years covered are 1995, 2000, 2005-2022

They contain information on the Ratio of public day nursery children 公営保育所在所児比率 (%).

- The years covered are 1995, 2000, 2004-2020
- The calculations are made by employing the formula: (Number of students/pupils/children in public "variable schools" / Total number of "variable school" students/pupils/children) * 100

- For each prefecture and year, they would have: counted the number of students/pupils/children in public “variable school”, counted the total number of students/pupils/children (public and private), divided the number of public “variable school” students/pupils/children by the total, then multiplied the result by 100 to get the percentage.

3.3.3 Subsections 3.1 - 3.2:

They contain information on the number of Elementary school pupils per class 小学校児童数 (1 学級当たり, 人), and Junior high school students 中学校生徒数 (1 学級当たり, 人).

- The years covered are 2000-2022
- The calculations are made by employing the formula: (Total number of “variable school” students) / (Total number of classes in “variable school”)
- For each prefecture and year, they would have: counted the total number of “variable school” students, counted the total number of classes in “variable school”, then divided the number of students by the number of classes.
- These metrics provide a multifaceted view of the education system in Japan, from early childhood through high school. The student-to-teacher and student-to-class ratios offer insights into the resources available to students and the potential quality of individual attention they might receive. The ratios of public institution attendance reflect the balance between public and private education in different regions, which can indicate both government priorities and societal preferences. Together, these metrics can reveal regional differences in educational resources, class sizes, and the structure of the education system. Comparing these metrics over time can also indicate trends in educational policy and practice across Japan, such as efforts to reduce class sizes or shifts in the balance between public and private education.

3.4 Section 4: Education 教育, Junior colleges, colleges and universities 短期大学・大学:

The variables covered in this section are:

1.1 Junior colleges (per 100,000 persons)
1.2 Colleges and universities (per 100,000 persons)

2.1 Entrance capacity index of junior colleges
2.2 Entrance capacity index of colleges and universities

3.1 Ratio of students of national colleges + universities to all students
3.2 Ratio of students of public colleges and universities to all students
3.3 Ratio of students of private colleges and universities to all students

3.4.1 Subsections 1.1 - 1.2:

They contain information on the Number of Junior Colleges (per 100,000 persons) 短期大学数 (人口10万人当たり), Number of Colleges and Universities (per 100,000 persons) 大学数 (人口10万人当たり).

- The years covered are 1995, 2000, 2005-2022

- The calculations are made by employing the formula: (Number of institutions) / (Total population) * 100,000
- For each prefecture and year, they would have: counted the number of institutions, obtained the total population, divided the number of institutions by the population, then multiplied the result by 100,000.

3.4.2 Subsections 2.1 - 2.2:

They contain information on Entrance Capacity Index of Junior Colleges 短期大学収容力指数 and Entrance Capacity Index of Colleges and Universities 大学収容力指数.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of new entrants × 100) / (Number of high school graduates who advanced to junior colleges or universities in the previous year)
- For each prefecture and year, they would have: counted the number of new entrants, counted the number of high school graduates who advanced to junior colleges or universities in the previous year, divided the number of new entrants by the number of advancing graduates, then multiplied the result by 100.

3.4.3 Subsections 3.1 - 3.3:

They contain information on the Ratio (%) of students in National Colleges and Universities 国立大学学生数割合, Ratio of students in Public Colleges and Universities 公立大学学生数割合, and Ratio of students in Private Colleges and Universities 私立大学学生数割合.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of students in national/public/private institutions) / (Total number of university students) * 100
- For each prefecture and year, they would have: counted the number of students in national, public, or private institutions, counted the total number of university students, divided the number of students in each category by the total, then multiplied the result by 100 to get the percentage.
- These metrics provide a comprehensive view of higher education in Japan. The number of institutions per capita indicates the accessibility of higher education in different regions. The entrance capacity index shows how well the supply of higher education spots meets the demand from high school graduates. The ratios of students in national, public, and private institutions reflect the structure of the higher education system in each prefecture. Together, these metrics can reveal regional differences in educational opportunities, the balance between different types of institutions, and potentially, the educational priorities or strategies of different prefectures. Comparing these metrics over time can also indicate trends in the development of Japan's higher education system.

3.5 Section 5: Education 教育, Speciality schools and miscellaneous schools 専修学校・各種学校:

The variables covered in this section are:

1.1 Speciality schools (per 100,000 persons)
1.2 Miscellaneous schools (per 100,000 persons)

2.1 Students enrolled in speciality schools (per 1,000 persons)/Number of specialized training college students (per 1,000 persons)
2.2 Students enrolled in miscellaneous schools (per 1,000 persons)

3.5.1 Subsections 1.1 - 1.2:

They contain information on the Number of Speciality Schools per 100,000 persons 専修学校数 (人口10万人当たり)/Number of specialized training college students (new English nomenclature in 2020/2021/2022), Number of Miscellaneous Schools per 100,000 persons 各種学校数 (人口10万人当たり).

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of schools) / (Total population) * 100,000.
- For each prefecture and year, they would have: counted the number of schools, obtained the total population, divided the number of schools by the population, then multiplied the result by 100,000.
- These calculations provide insights into the prevalence and utilization of speciality and miscellaneous schools across Japan. Speciality schools 専修学校 typically offer practical vocational education, while miscellaneous schools 各種学校 cover a wide range of educational institutions that don't fit into other categories, such as international schools or schools for specific skills like cooking or languages. The rates of schools and enrolled students per capita can indicate the diversity of educational options available in different prefectures, the demand for specialized or vocational education, and potentially reflect regional economic needs or cultural preferences for different types of education.

3.5.2 Subsections 2.1 - 2.2:

They contain information on the number of Students enrolled in Speciality Schools per 1,000 persons 専修学校生徒数 (人口千人当たり) and Students enrolled in Miscellaneous Schools per 1,000 persons 各種学校生徒数 (人口千人当たり).

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of enrolled students) / (Total population) * 1,000
- For each prefecture and year, they would have: counted the number of enrolled students, obtained the total population, divided the number of students by the population, then multiplied the result by 1,000.
- These calculations allow for comparisons of speciality and miscellaneous schools across prefectures and over time. They provide insights into the availability and popularity of these types of educational institutions in different regions of Japan, taking into account the population differences between prefectures.

3.6 Section 6: Education 教育, Educational diffusion rates 教育普及度:

The variables covered in this section are:

1.1 Educational diffusion rate (kindergartens)
1.2 Educational diffusion rate (day nurseries)

2.1 Working rate of day nurseries against the capacity

3.1 Ratio of long-term absentees from elementary school (30 days and more for a school year) (per 1,000 pupils)
3.2 Ratio of long-term absentees from junior high school (30 days and more for a school year) (per 1,000 students)
3.3 Ratio of long-term absentees from elementary school due to diseases (30 days and more for a school year) (per 1,000 pupils)
3.4 Ratio of long-term absentees from junior high school due to diseases (30 days and more for a school year) (per 1,000 students)
3.5 Ratio of long-term absentees from elementary school pupils due to refusal to attend school (30 days and more for a school year)(per 1,000 pupils)
3.6 Ratio of long-term absentees from junior high school students due to refusal to attend school (30 days and more for a school year)(per 1,000 students)

4.1 Ratio of junior high graduates going to further education
4.2 Ratio of senior high graduates going to further education

5.1 Ratio of high school graduates entering colleges and universities in the same prefecture

6.1 Ratio of people having completed up to elementary or junior high school only
6.2 Ratio of people having completed up to senior high school only
6.3 Ratio of people having completed up to junior colleges or equivalent
6.4 Ratio of people having completed up to colleges and universities

3.6.1 Subsections 1.1 - 1.2:

They contain information on the Educational diffusion rate (%) 教育普及度 for kindergartens 幼稚園, and day nurseries 保育所.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of graduates) / (Number of first-grade elementary school students) * 100
- For each prefecture and year, they would have: counted the number of kindergarten graduates and day nursery graduates, counted the number of first-grade elementary school students, divided the number of graduates from each type of institution by the number of first-grade students, then multiplied the result by 100 to get the percentage.
- Both measures use the number of first-grade elementary school students as the denominator, which represents the total cohort of children entering formal education. These rates help to understand: the prevalence of early childhood education in each prefecture, the balance between

kindergartens and day nurseries in providing pre-elementary education, and trends in early childhood education participation over time. The comparison between these two rates can also give insights into the preferences or availability of different types of early childhood education in various regions of Japan.

3.6.2 Subsection 2.1:

It contains information on the Working rate of day nurseries against the capacity 保育所利用率 (%).

- The years covered are 1995, 2000, 2004-2020
- The calculations are made by employing the formula: (Number of children in day nurseries) / (Capacity of day nurseries) * 100.
- For each prefecture and year, they would have: counted the total number of children currently enrolled in day nurseries, determined the total capacity of all day nurseries in the prefecture, divided the number of enrolled children by the total capacity, then multiplied the result by 100 to get the percentage.
- This rate provides insights into the demand for day nursery services in each prefecture, how efficiently the existing day nursery infrastructure is being used, and potential shortages or surpluses in day nursery capacity. A rate close to or exceeding 100 would indicate high demand and potentially a need for more day nursery facilities, while a lower rate might suggest underutilization of existing facilities.

3.6.3 Subsections 3.1 - 3.6:

They contain information on the Ratio of long-term absentees from elementary school 小学校長期欠席児童比率 (per 1,000 pupils), Ratio of long-term absentees from junior high school 中学校長期欠席生徒比率 (per 1,000 students), Ratio of long-term absentees from elementary school due to diseases 病気による小学校長期欠席児童比率 (per 1,000 pupils), Ratio of long-term absentees from junior high school due to diseases 病気による中学校長期欠席生徒比率 (per 1,000 students), Ratio of long-term absentees from elementary school due to school refusal 不登校による小学校長期欠席児童比率 (per 1,000 pupils), Ratio of long-term absentees from junior high school due to school refusal 不登校による中学校長期欠席生徒比率 (per 1,000 students).

- The years covered are 1995, 2000, 2004-2021 (except for subsection 3.3, where we don’t have data for 2019)
- The calculations are made by employing the formula: (Number of long-term absentees) / (Total number of students) * 1,000
- For each prefecture and year, they would have: counted the number of long-term absentees for each category (total, due to illness, due to school refusal) for both elementary and junior high schools, divided these numbers by the total number of students in elementary or junior high schools respectively, then multiplied the result by 1,000 to get the rate per 1,000 students. These rates allow for comparison of absenteeism across prefectures and over time, providing insights into overall attendance issues, health-related absences, and school refusal problems in different regions of Japan.

3.6.4 Subsections 4.1 - 4.2:

They contain information on the Ratio (%) of junior high graduates going to further education 中学校卒業者の進学率, and Ratio of senior high graduates going to further education 高等学校卒業者の進学率.

- The years covered are 1995, 2000, 2004-2021
- The calculations are made by employing the formula: (Number of graduates going to further education) / (Total number of graduates) * 100
- For each prefecture and year, they would have: counted the number of junior high or senior high graduates going to further education, counted the total number of graduates from each level, divided the number going to further education by the total number of graduates, then multiplied the result by 100 to get the percentage.
- These rates provide insights into the progression of students through the education system, indicating the proportion of students who continue their education after completing junior high and senior high school. They can reflect educational aspirations, access to higher education, and potentially economic factors influencing educational decisions in different regions of Japan.

3.6.5 Subsection 5.1:

It contain information on the Ratio (%) of high school graduates entering colleges and universities in the same prefecture 出身高校所在地県の大学への入学者割合.

- The years covered are 1995, 2000, 2005-2022
- The calculations are made by employing the formula: (Number of high school graduates entering colleges/universities in the same prefecture) / (Total number of high school graduates entering colleges/universities) * 100
- For each prefecture and year, they would have: counted the number of high school graduates entering colleges/universities in the same prefecture, counted the total number of high school graduates entering colleges/universities anywhere, divided the number entering in-prefecture institutions by the total number entering higher education, then multiplied the result by 100 to get the percentage.
- This rate provides insights into the retention of students within their home prefectures for higher education. It can reflect factors such as the quality and variety of higher education options within each prefecture, student preferences for staying close to home or moving away for college, and potentially economic factors influencing these decisions.

3.6.6 Subsections 6.1 - 6.4:

They contain information on the Ratio of people having completed up to elementary or junior high school 最終学歴が小学・中学卒の者の割合, Ratio of people having completed up to senior high school 最終学歴が高校・旧中卒の者の割合, Ratio of people having completed up to junior colleges or equivalent 最終学歴が短大・高専卒の者の割合, and Ratio of people having completed up to colleges and universities 最終学歴が大学・大学院卒の者の割合.

- The years covered are 1980, 1990, 2000, 2010, 2020

- The calculations are made by employing the formula: (Number of people with specific education level) / (Total number of graduates) * 100
- For each prefecture and year, they would have: counted the number of people whose highest level of education completed was elementary/junior high school, senior high school, junior college/technical college, or university/graduate school; counted the total number of graduates; divided the number for each education level by the total number of graduates; then multiplied the result by 100 to get the percentage.
- These rates provide a comprehensive picture of the educational attainment levels across different regions of Japan over time. They can reflect changes in access to education, societal expectations for education, economic factors influencing educational decisions, and potentially the changing demands of the job market in different areas. The comparison across years allows for analysis of trends in educational attainment over two decades.

3.7 Section 7: Education 教育, Education expenditure per pupil 1人当たりの学校等教育費:

The variables covered in this subsection are:

1.1 Elementary school educational expenses (per pupils)
1.2 Junior high school educational expenses (per students)
1.3 High school educational expenses (Full-time senior) (per students)
1.4 Kindergarten educational expenses (per Kindergarten pupils)
1.5 Authorized child centers educational expenses (Kindergarten-and-day-care center type) (per pupils)

3.7.1 Subsections 1.1 - 1.5:

They contain information on Elementary school educational expenses 小学校教育費 (per pupils, in yen) (児童１人当たり, 円), Junior high school educational expenses 中学校教育費 (per students, in yen) (生徒１人当たり, 円), High school educational expenses [Full-time senior] 高等学校教育費［全日制］(per students, in yen) (生徒１人当たり,円), Kindergarten educational expenses 幼稚園教育費 (per Kindergarten pupils, yen)（在園者１人当たり, 円), Authorized child centers educational expenses [Kindergarten-and-day-care center type] 幼保連携型認定こども園教育費 (per pupils, yen)（在園者１人当たり, 円).

- The years covered are 1995, 2000-2019 for subsection 1.1 Elementary school educational expenses (per pupils)
- The years covered are 1995, 2000-2020 for subsections 1.2 Junior high school educational expenses and 1.3 High school educational expenses
- The years covered are 1995, 2000-2018, 2020 subsection 1.4 for Kindergarten educational expenses
- The years covered are 2015-2020 for subsection 1.5 Authorized child centers educational expenses
- The calculations are made by employing the formula: (Total educational expenses for the specific school type) / (Total number of students in that school type)

- For each prefecture and year, they would have: calculated the total educational expenses for each school type (elementary, junior high, high school, kindergarten, authorized child centers), counted the total number of students in each school type, then divided the total expenses by the number of students to get the per-pupil expenditure.

According to the data dictionary: - For elementary schools (E8102), junior high schools (E8103), and high schools (E8104), the denominator is listed as "School education expenditure per student" for each respective school type. - For kindergartens (E8101) and authorized child centers (E810101), the denominator is also listed as "School education expenditure per student" for each respective type.

- These metrics provide insights into the financial investment in education across different levels of schooling and across different prefectures in Japan. They allow for comparisons of educational spending between different types of schools and between different regions. The data over time enables analysis of trends in educational funding, which could reflect changes in educational policies, economic conditions, or demographic shifts. Higher per-pupil expenditures might indicate greater resources available for education, potentially leading to better facilities, smaller class sizes, or more comprehensive educational programs. However, it's important to consider these figures alongside other metrics, such as educational outcomes and regional economic factors, for a more complete understanding of the education system's efficiency and effectiveness.

- The inclusion of authorized child centers (Kindergarten-and-day-care center type) in this category reflects Japan's evolving early childhood education and care system, integrating traditional kindergartens with day-care services. This allows for analysis of resource allocation in these integrated facilities compared to traditional kindergartens and other school types.

- When interpreting these statistics, researchers and policymakers should be aware of potential differences in cost structures between urban and rural areas, variations in local funding models, and any changes in the definition or scope of educational expenses over time. Cross-referencing these expenditure figures with other educational and demographic data can provide a more comprehensive picture of the educational landscape across Japan.