Survey on the Learning of Children in Upper Elementary School 2019

In this survey, children in the fourth to sixth grades of elementary school and their parents were asked questions regarding children's learning and parental involvement. Based on the survey results, we now report on the status of children's **metacognition**, a skill necessary to evaluate their learning objectively, as well as parental involvement which enhances such a skill.

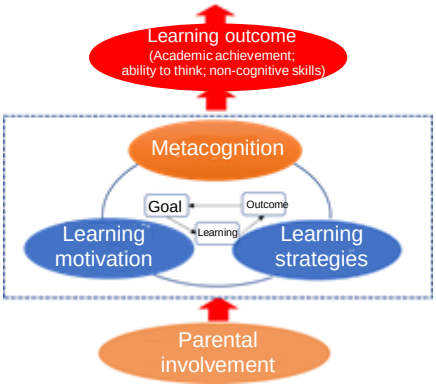
We hope that this report will contribute to the development of children's metacognition and foster more **self-directed learners**.

●Table of Contents●

Benesse Educational Research and Development Institute

Survey Purpose and Design

Foster self-sufficient learners



* The definition of "learning outcome" in this survey includes not only academic achievements but also the ability to think and develop non-cognitive skills.
* This survey is designed based on the "2014 Survey on the Actual Conditions of Children's Learning in Elementary School and Junior High School" conducted by the Benesse Educational Research & Development Institute (BERD).

Importance of "Metacognition"

- The government's curriculum guidelines implemented in 2020 state "Creatively and systematically design learning activities that enhance the skills of study planning and reflective learning." Under these guidelines, the concept of metacognition is one of the priority topics.
- "Metacognition" is the skill which enables making an objective self-assessment of learning activities from a higher perspective. This skill is one of the critical elements of self-regulated learning (meaning the learner's active involvement in his/her learning), besides "learning motivation" and "learning strategies."

Purpose of this survey

- In this report, we will examine the actual conditions of children's learning in upper elementary school, including the status of metacognition and the correlations between metacognition and learning strategies/learning motivation/academic achievements. This survey also aims to clarify the effects of parental involvement on children's self-directed learning. We hope that the outcome of this survey will contribute to child-rearing by parents and educational practices by schools and teachers. Ultimately, we wish to develop self-sufficient learners among young children.

Survey design

- This survey is designed based on the learning model of "independent learning" under the theory of "self-regulated learning" (by BERD, 2014).

Survey Outline

- **Theme** Awareness and actual conditions of children in upper elementary school regarding their learning and parental involvement.
- **Method** Online survey
- **Participants** Children in fourth to sixth grades in elementary school and their parents across Japan. We completed the survey after collecting 1,000 samples per grade.
- **Number of valid samples**
  - Fourth-graders: 992 samples * Eight samples were excluded from analysis due to inconsistency in the children's grade at the time of the survey request and at the time of response.
  - Fifth-graders: 1,005 samples
  - Sixth-graders: 1,007 samples * Number of samples for children in fifth/sixth grade exceeds 1,000 because multiple answers were sent in at the same time.
- **Period** Late July - Early August
- **Survey items**

<Key items for children>

Usual lifestyle and learning habits; usual studying and reading time in average; the status of metacognition; studying methods (learning strategies); study planning and reflective learning; children's ingenuity in learning and its benefits; reasons for study (learning motivation); self-assessment on academic achievements/ability to think/non-cognitive skills.

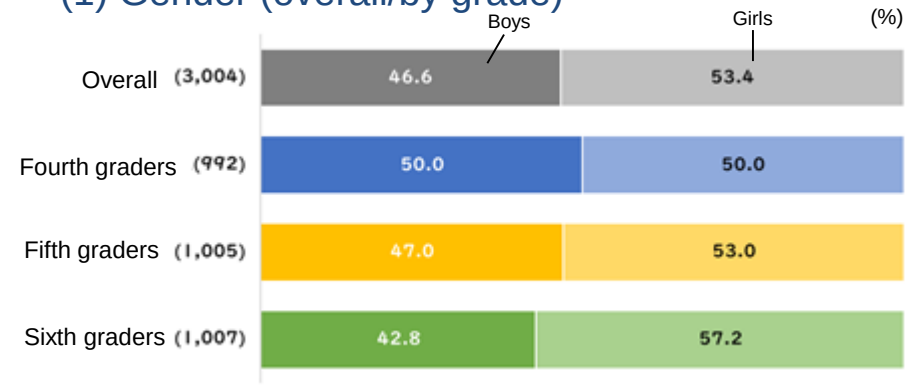
<Key items for parents>

Current parental involvement in children's daily activities and education; reflection on parental involvement when children were in lower elementary school; different ways to praise children; attitudes towards children's education.

■ Notes to consider when reading this digest version

(1) Data in tables and figures as well as in the main text represent overall fourth to sixth graders in elementary school, apart from when their specific grade and information are stated.
(2) Percentage figures used in tables and figures are calculated by rounding to one decimal place; therefore, the total of such figures may not be 100.

(1) Gender (overall/by grade)



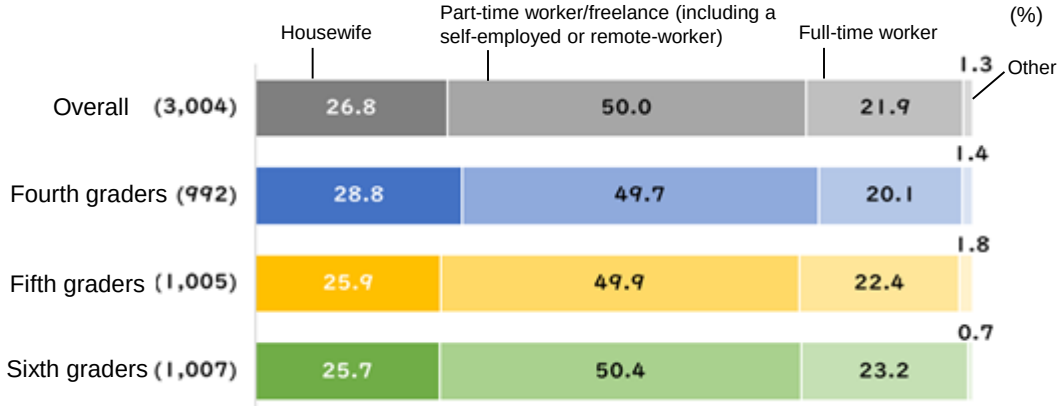
(5) Average age of parents (overall)

Mothers 41.0

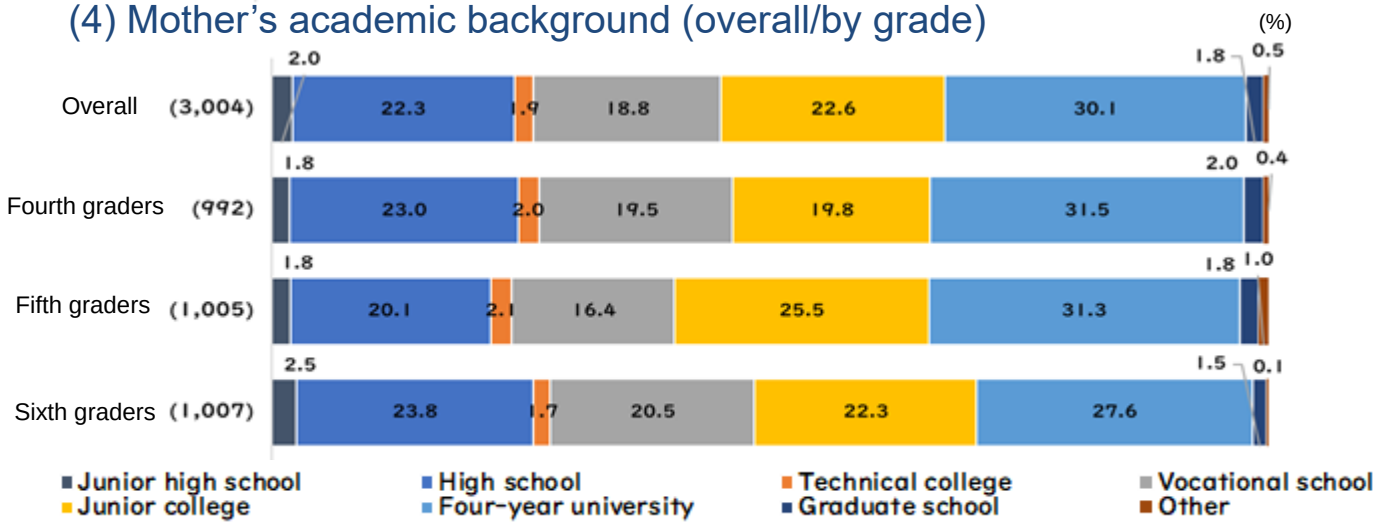
Fathers 43.1

(2) Respondent's relationship with a child (overall/by grade)

(3) Mother's working status (overall/by grade)



(4) Mother's academic background (overall/by grade)



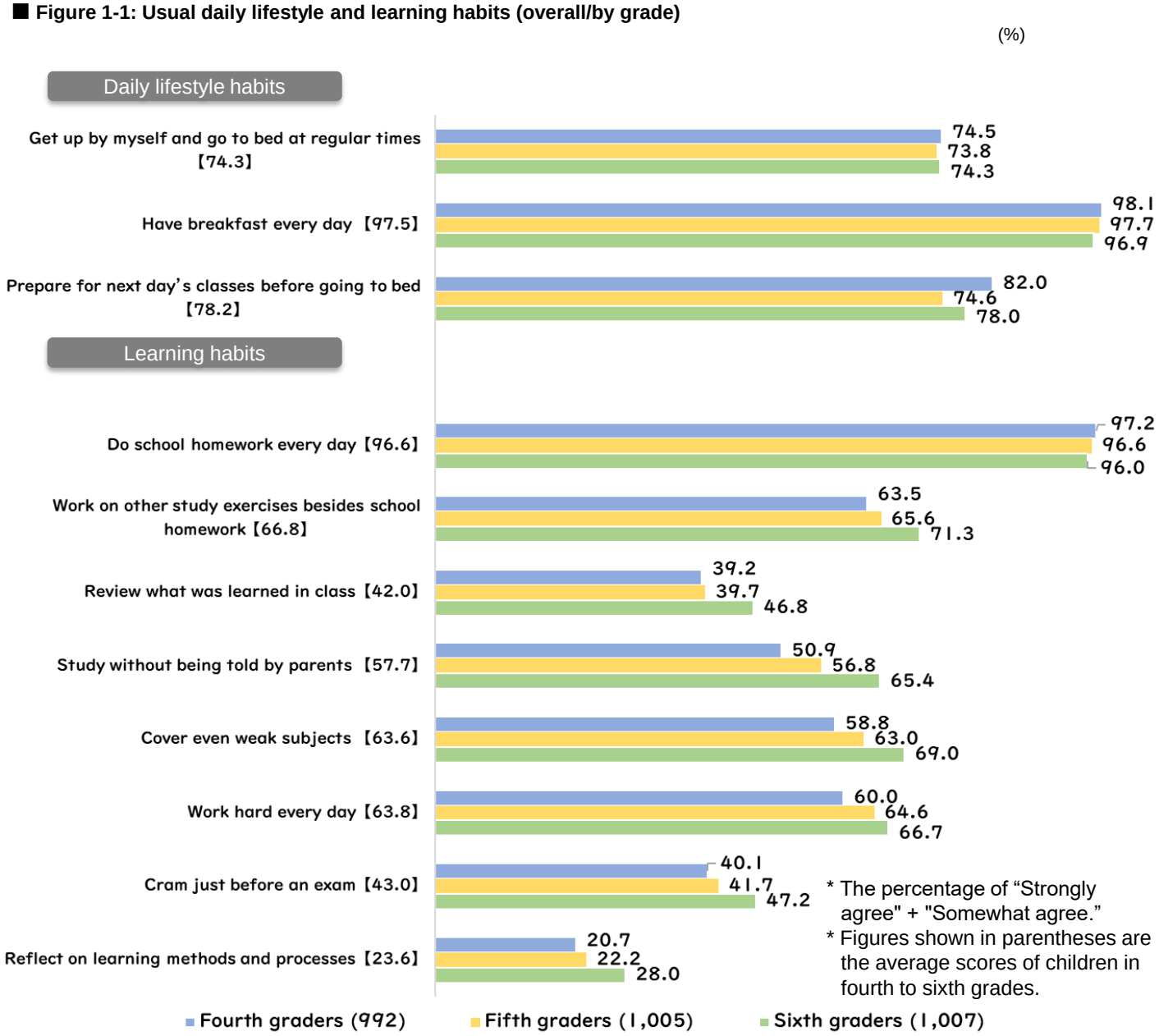
(1) Daily Lifestyle and Learning Habits

Children acquire learning habits as they proceed through higher grades

We asked the participating children about three items relating to usual daily lifestyle habits and eight items relating to usual learning habits. As for the items of daily lifestyle habits, there is almost no difference in the percentage of “Strongly agree” and “Somewhat agree” among children of each grade. In contrast, regarding the items of learning habits, more children have acquired learning habits as their grade goes up, apart from the item of “Do school homework every day.” The results indicate how their learning habits are gradually established as they proceed through fourth grade to sixth grade.

Q: Please indicate to what extent the following situations apply to your daily lifestyle and learning habits.

■ **Figure 1-1: Usual daily lifestyle and learning habits (overall/by grade)**



(2) Studying and Reading Time

About 40% of children in fourth to sixth grades in elementary school do not have reading habits

We asked the participating children about their learning time and reading time. Based on their answers, the average figures were calculated. For “School homework,” “Correspondence courses,” and “Purchased workbooks,” there is no difference in the time spent by children in each grade. In contrast, the higher the grade of respondents, the more time was spent on “Other study exercises” and “Cram school.” As for reading time, there is a slight increase as the respondents’ grades go up. Nevertheless, about 40% of children in each grade answered that they “do not have reading habits.”

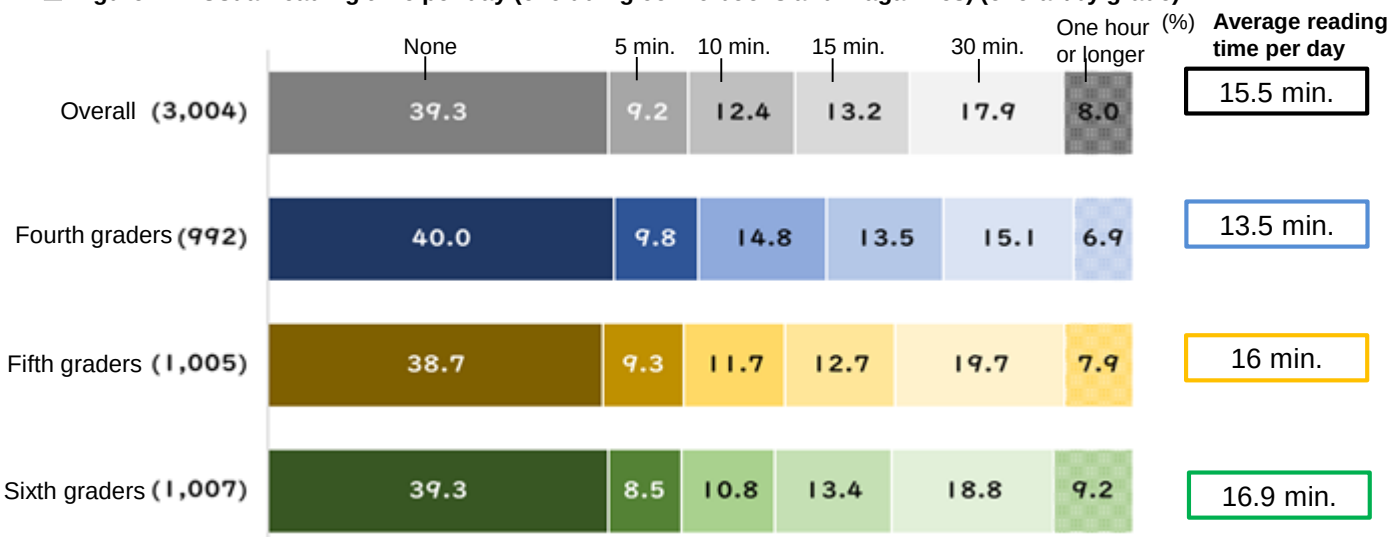
Q: How many minutes do you usually spend on the following activities per day (on school days)?
Please exclude school hours. If the length of time differs depending on the day, please tell us the average time.

■ **Table 1-1: Usual learning time in average (by grade)**

	Fourth-graders (992)	Fifth-graders (1,005)	Sixth-graders (1,007)
1. School homework	34.6 min.	37.1 min.	36.4 min.
2. Correspondence courses	8.3 min.	8.6 min.	8.7 min.
3. Purchased workbooks	5.5 min.	4.6 min.	5.4 min.
4. Learning activities other than 1-3	11.1 min.	11.9 min.	19.4 min.
5. Cram school lessons	7.7 min.	14.7 min.	22 min.
Total learning time per weekday	1hr. 7 min.	1hr. 17 min.	1hr. 32 min.

* Average time is calculated based on the following rule: “None” = 0 min.; “5 min.” “10 min.” “15 min.” “30 min.” through to “4 hours” (at half-hour intervals) are counted by minutes; and “More than 4 hours” = 270 min.
* The length of time spent at cram school is calculated based on the following rule: the length of time for each lesson at cram school on weekdays x the number of attendance per week/5 days. For cases where the participants answered they do not attend cram school, the length of time at cram school is counted as zero.

■ **Figure 1-2: Usual reading time per day (excluding comic books and magazines) (overall/by grade)**



* The option of “One hour or longer” includes the answers of “One hour,” “2 hours,” “2.5 hours,” “3 hours,” “3.5 hours,” “4 hours,” and “More than 4 hours.”
* Average time is calculated based on the following rule: “None” = 0 min.; “5 min.” “10 min.” “15 min.” “30 min.” through to “4 hours” (at half-hour intervals) are counted by minutes; and “More than 4 hours” = 270 min.

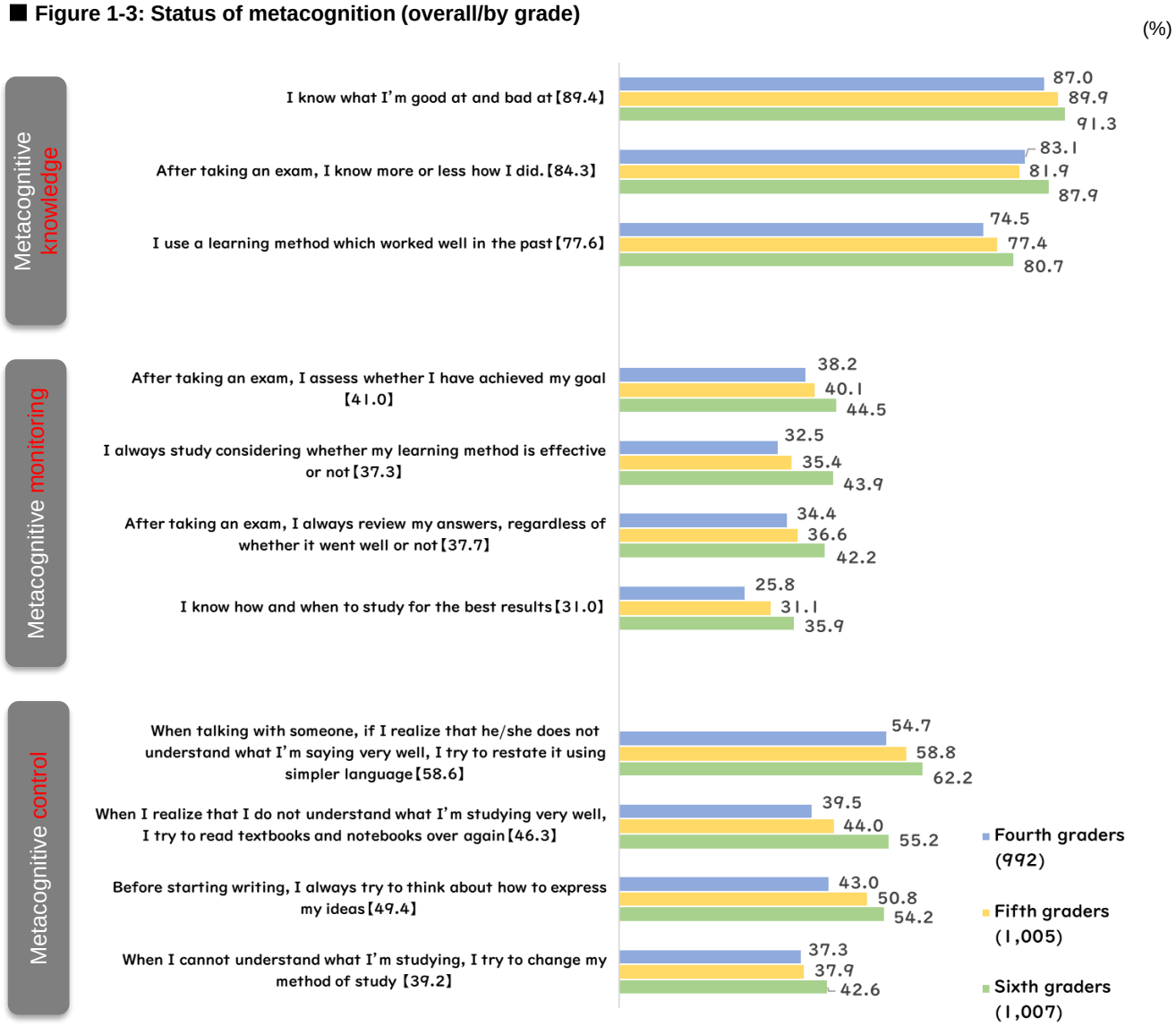
(3) Metacognitive Skills

Metacognitive skills gradually develop as children proceed through higher grades

We confirmed to what extent children in upper elementary school can assess their own learning objectively. It is revealed that, for each item, children in higher grades are more likely to show a higher percentage of "Strongly agree" and "Somewhat agree" than those in lower grades. On the whole, for the current status of metacognition, children in upper elementary school show higher scores for "Metacognitive knowledge" than for "Metacognitive monitoring" and "Metacognitive control."

Q: Please indicate to what extent the following situations apply to your learning activities and thoughts.

■ **Figure 1-3: Status of metacognition (overall/by grade)**



* The percentage of "Strongly agree" + "Somewhat agree."
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* The above 11 items are not intended to measure the metacognitive skills of children in upper elementary schools, but to confirm the current status of their metacognition. The developmental conditions of children may affect their metacognitive skills. Therefore, it is important to pay extra attention when interpreting these figures.
* We created the above items by reference to "An Attempt to Construct the Adults' Metacognition Scale - Based on Metacognitive Awareness Inventory" (Mamiko Abe and Masanori Ida, 2010).

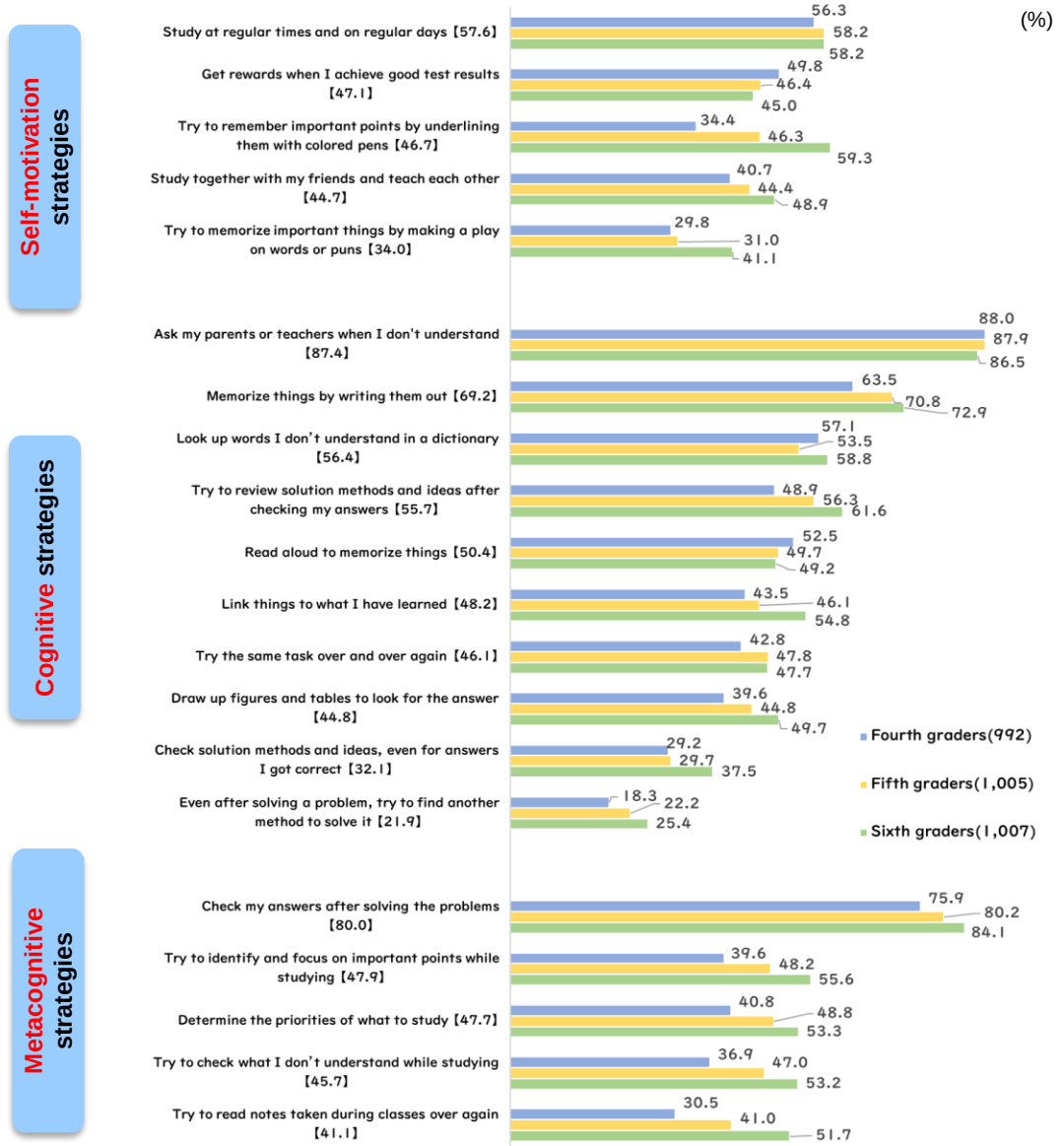
(4) Study Methods (Learning Strategies)

Metacognitive strategies are gradually acquired as children move on to higher grades

We examined the usage status of learning strategies by children in upper elementary school. The higher percentage of “Often” and “Sometimes” is shown in most learning strategies employed by children in each grade. In particular, scores for strategies to improve learning effectiveness and efficiency increased by more than 20 points. Such strategies include “Try to remember important points by underlining them with colored pens” and “Try to read notes taken during classes over again.” In this way, children try to enhance self-motivation and utilize metacognitive skills. It should be noted that children in higher grades are more likely to utilize cognitive/metacognitive strategies than those in lower grades.

Q: Please indicate to what extent the following activities apply to you while studying.

■ **Figure1-4: Learning methods (learning strategies) (overall/by grade)**



* The percentage of “Often” and “Sometimes.”
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order by category.

(5) Study Planning and Reflective Learning

About 40% of children do study planning, while about 80% do reflective learning

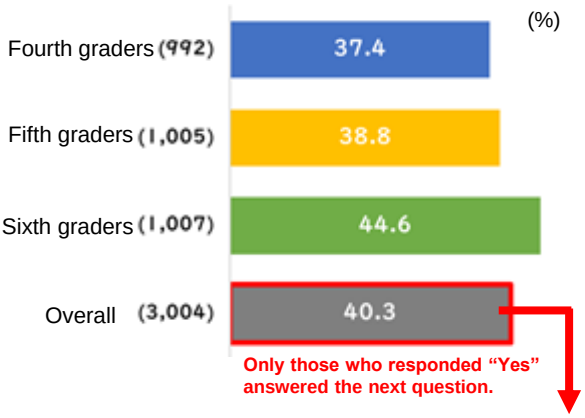
We summarized the participants' answers regarding study planning and reflective learning. For study planning, 40.3% of children answered "Yes." Children in higher grades are more likely to do study planning than those in lower grades. In addition, about 70% of children think about the viability of their study plan based on their experiences. Meanwhile, for reflective learning, 76.3% of children answered they review and retry "wrong answers." When examined by grade, more children in fifth grade gave this answer than those in fourth grade.

Study planning

Q: Do you usually make a study plan?

■ Figure 1-5: Study planning (overall/by grade)

"Yes"



Q: Please indicate to what extent the following activities apply to you when making a study plan.

	Overall (%)
When making a study plan, think about its viability	74.0
Make a study plan based on past experiences	68.5
Always consider whether the current study is consistent with the study plan	64.9
Review whether the study progress is consistent with the study plan	61.0
If the current study plan doesn't work, review the plan for improvement	56.6
Make and follow a study plan on a weekly basis determining "When, at what time, and what to do"	50.9
Cannot study based on the study plan	31.7

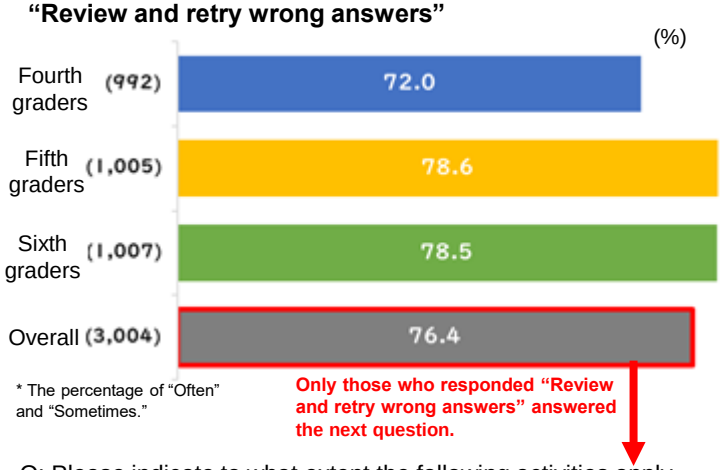
* The percentage of "Strongly agree" + "Somewhat agree"
* Data is displayed in descending order.
* 1,254 children who answered they "make a study plan" are subject to analysis.

Reflective learning

Q: Please indicate to what extent the following activity usually apply to you when studying.

■ Figure 1-6: Reflective learning (overall/by grade)

"Review and retry wrong answers"



Q: Please indicate to what extent the following activities apply to you when reviewing wrong answers.

	Overall (%)
Retry wrong answers	89.7
Check with parents and teachers why these answers are wrong	75.7
Think on my own why I got these answers wrong	68.9
Read the textbook again in trying to understand what I don't understand	67.8
Review and seek a study method appropriate for me	42.7
Write down why these answers are wrong	13.4

* The percentage of "Strongly agree" + "Somewhat agree"
* Data is displayed in descending order.
* 2,413 children who answered "Often" or "Sometimes" to the question of "Review and retry wrong answers" are subject to analysis.

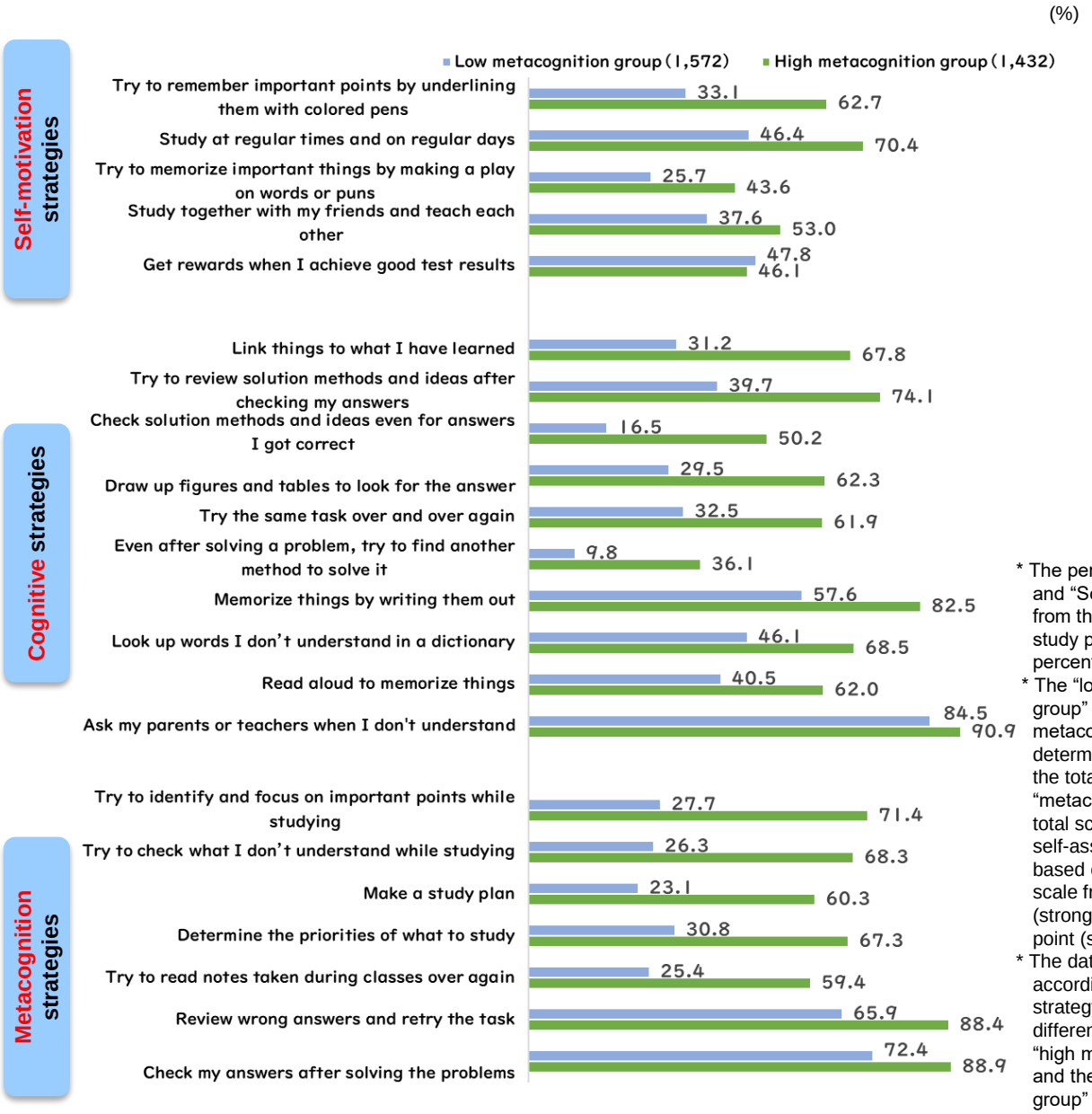
(6) Study Methods and Metacognition

Children with higher metacognition are more likely to utilize learning strategies

We divided children into two groups according to their scores on metacognition, the “low metacognition group” and the “high metacognition group.” Then, we examined the correlation between metacognition and the following 22 items relating to learning strategies, including study planning and reflective learning. As a result, it is revealed that children in the high metacognition group are more likely to answer “Often” or “Sometimes,” apart from the item of “Get rewards when I achieve good test results.” In particular, there is a significant difference between the low score group and the high metacognition group in the section of metacognitive strategies, such as “Try to identify and focus on important points while studying” and “Try to check what I don’t understand while studying.”

Q: Please indicate to what extent the following activities apply to you while studying.

■ **Figure1-7: Study methods (Learning Strategies) (by metacognition)**



* The percentage of “Often” and “Sometimes” apart from the item of “make a study plan,” which is the percentage of “Yes.”
* The “low metacognition group” and the “high metacognition group” are determined according to the total score of 11 “metacognition” items. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (strongly agree) to one point (strongly disagree).
* The data is displayed according to the types of strategy and the differences between the “high metacognition group” and the “low metacognition group” in descending order.

(7) Children's Ingenuity in Studying and its Benefits

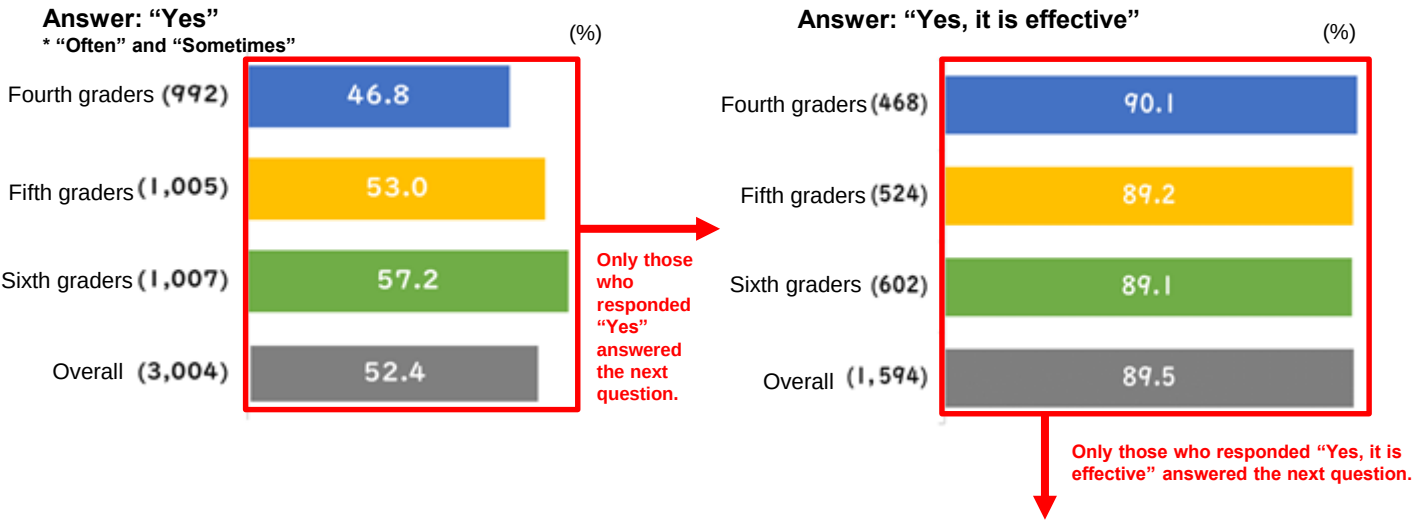
About 50% of children try to find or create a study method appropriate for them

We asked the participating children whether they usually try to find or create a learning method appropriate for them. 52.4% of overall children answered "Often" or "Sometimes." Children in higher grades are more likely to give a positive answer than those in lower grades. In addition, 89.5% of overall children gave affirmative answers that their learning method is effective. There is no difference in such a positive attitude among children of each grade. More precisely, 61.1 % of children answered "I can understand what I am learning now," and almost 50% answered "I am confident that I can do it if I try" as a result of the learning method they found or created.

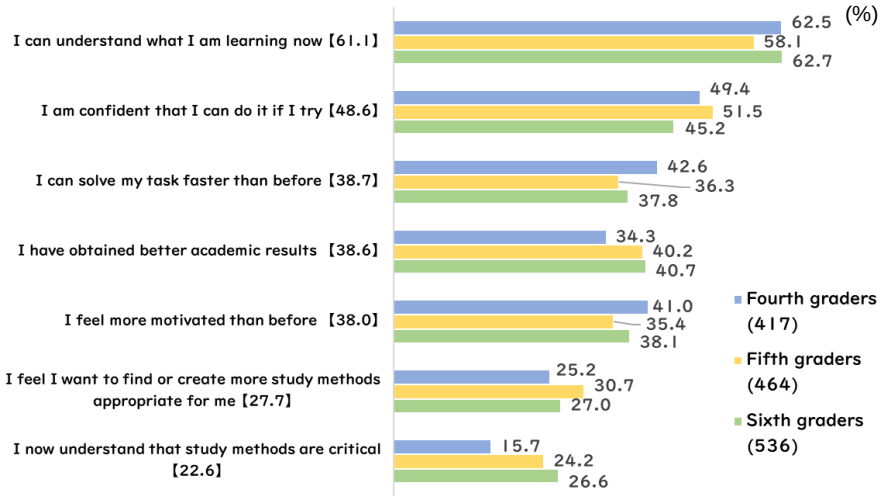
Q: Do you usually try to find or create a learning method appropriate for you?

Q: Do you think the learning method you found or created is effective?

■ **Figure 1-8: Children's ingenuity in learning and its benefits (Overall/by grade)**



Q: Please choose any of the following benefits you think your studying method has.



* Multiple answers allowed.
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order.
* 1,417 children who answered "Yes" to the question about the benefits of their learning method are subject to analysis.

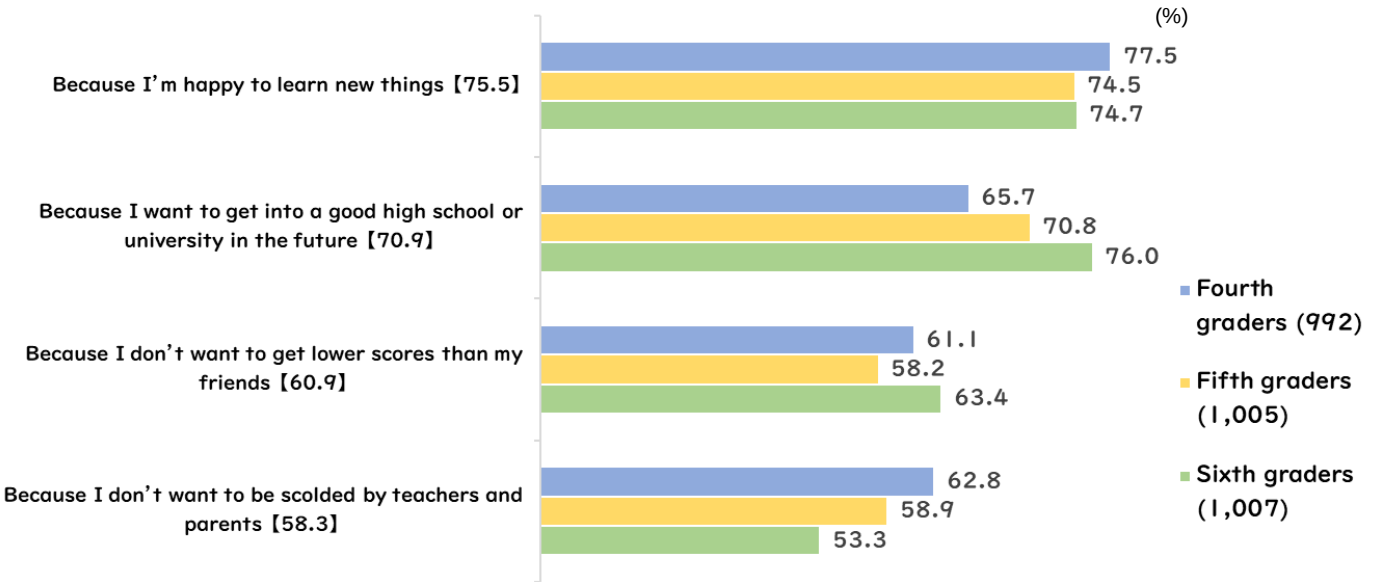
(8) Reasons for Study (Learning Motivation)

76% of children in sixth grade are motivated to study for higher education

In terms of learning motivation, the most popular answer was “Because I’m happy to learn new things,” to which 75.5% of overall children answered, “Strongly agree” or “Somewhat agree.” Looking at the answers by school grade, children in higher grades are less likely to answer, “Because I don’t want to be scolded by teachers and parents” and more likely to answer, “Because I want to get into a good high school or university in the future.” In terms of metacognition, more children in the low metacognition group are motivated to study for external reasons, such as “Because I don’t want to be scolded by teachers and parents.”

Q: Please indicate to what extent the following reasons apply to your learning motivation.

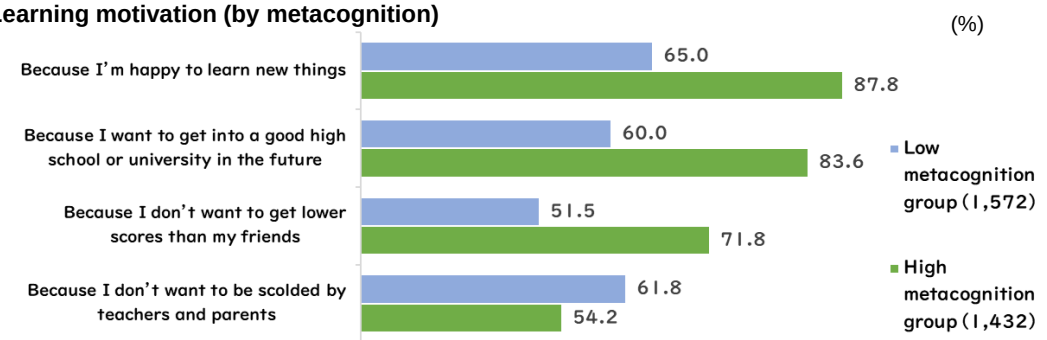
■ **Figure 1-9: Learning motivation (overall/by grade)**



* The percentage of “Strongly agree" + "Somewhat agree.”
* Average scores of children in fourth to sixth grades are displayed in descending order.

Q: Please indicate to what extent the following reasons apply to your learning motivation.

■ **Figure1-10: Learning motivation (by metacognition)**



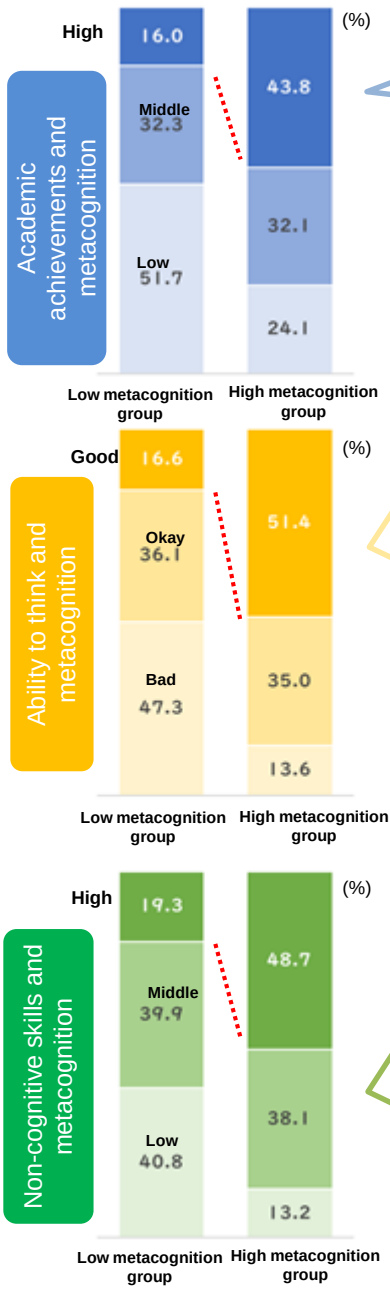
* The percentage of “Strongly agree" + "Somewhat agree.”
* The “low metacognition group” and the “high metacognition group” are determined according to the total score of 11 “metacognition” items. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (strongly agree) to one point (strongly disagree).

(9) Learning Outcome and Metacognition

Metacognition affects children's academic achievements, their ability to think and non-cognitive skills

In this survey, we define the term "learning outcome" not only as children's academic achievements but also on their ability to think and degree of non-cognitive skills. Looking at the correlation between children's self-assessment on academic achievements and metacognition, the score of children in the high metacognition group is 27.8 points higher than those in the low metacognition group for the category of high academic achievements (i.e., the high metacognition group is 43.8% and the low metacognition group is 16.0%). Likewise, the score of children in the high metacognition group is 34.8 points higher for the category of good ability to think (i.e., the high metacognition group is 51.4% and the low metacognition group is 16.6%) and 29.4% points higher for the category of high non-cognitive skills (i.e., the high metacognition group is 48.7% and the low metacognition group is 19.3%) than those in the low metacognition group. These results indicate that children with a higher level of metacognition are more likely to get good academic achievements as well as a good ability to think and non-cognitive skills.

■ **Figure 1-11: Self-assessment on academic achievements/ability to think/non-cognitive skills (by metacognition)**

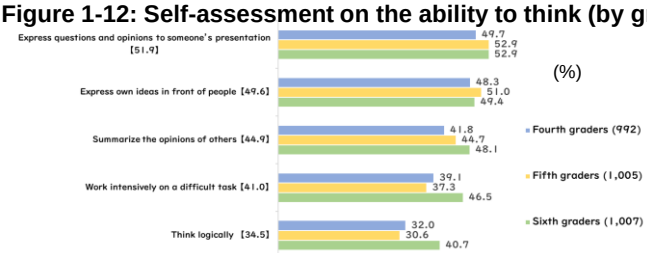


Academic achievements are divided into three categories of "High," "Middle," and "Low," according to the total score of five subjects (Japanese language, arithmetic, science, social studies, and English language). The total score is obtained from self-assessed scores based on a five-point scale from 5 points (high) to one point (low).

The ability to think is divided into three categories of "Good," "Okay," and "Bad," according to the total score of the following five items. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (very good) to one point (very bad).

Q: Please indicate to what extent you are good at or bad at the following activities.

■ **Figure 1-12: Self-assessment on the ability to think (by grade)**

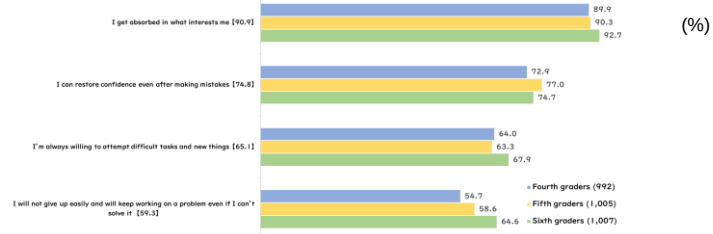


* The percentage of "Very good" + "Good."
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order.

Non-cognitive skills are divided into three categories of "High," "Middle," and "Low," according to the total score of the following five items. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (strongly agree) to one point (strongly disagree).

Q: Please indicate to what extent the following behavior patterns apply to you.

■ **Figure 1-13: Self-assessment on non-cognitive skills (by grade)**



* The percentage of "Strongly agree" + "Somewhat agree."
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order.

* The "low metacognition group" and the "high metacognition group" are determined according to the total score of 11 "metacognition" items. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (strongly agree) to one point (strongly disagree).

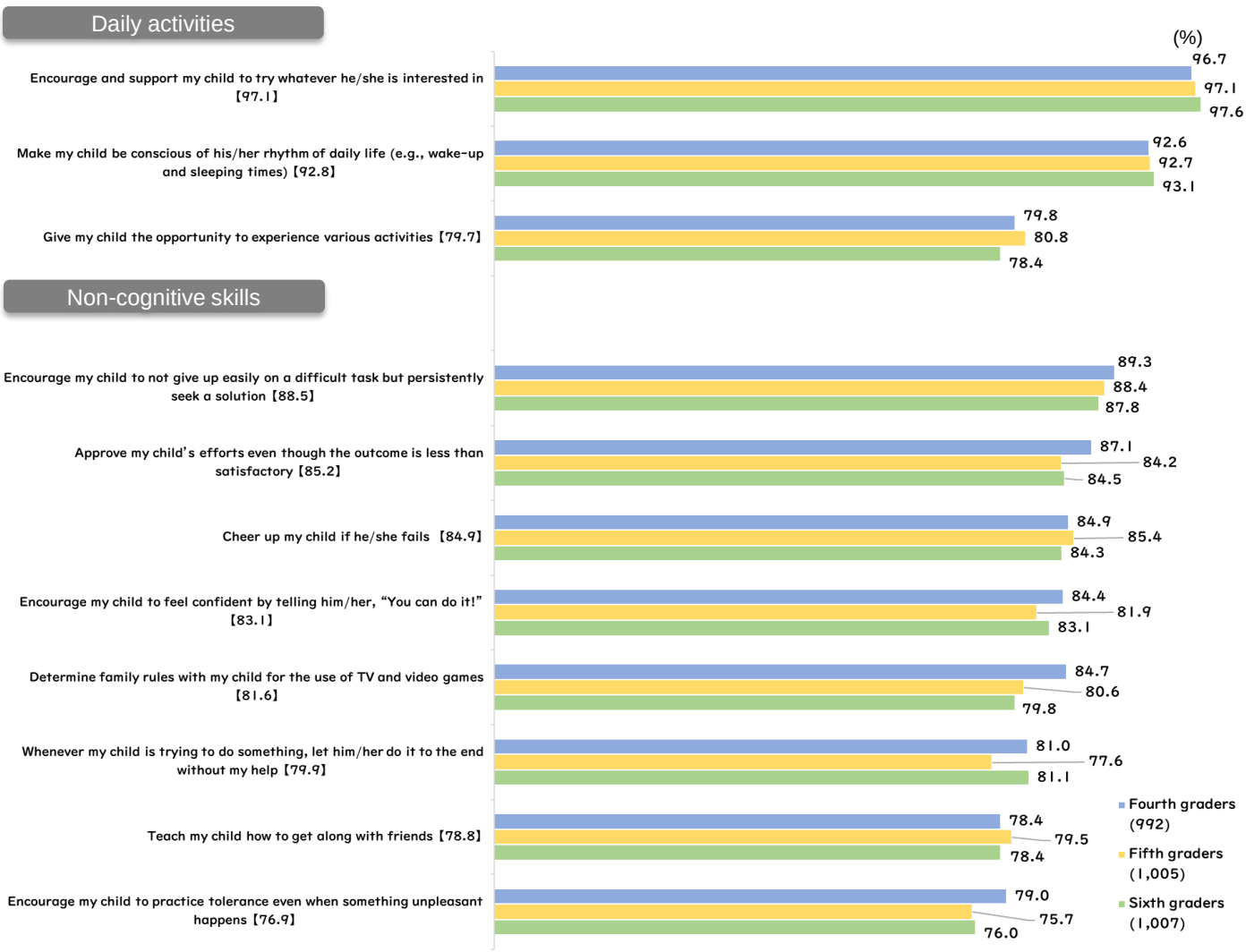
(1) Parental Involvement in Children's Daily Life and Non-Cognitive Skills

Strong parental involvement in both children's daily activities and non-cognitive skills

We asked the participating parents about their parental involvement in three items of children's daily activities and eight items of non-cognitive skills. About 80-90% of parents answered "Strongly agree" or "Somewhat agree" for each item, indicating a high level of parental involvement. There is almost no difference in the answers of overall parents regardless of their child's grade, apart from the item of "Determine family rules with my child for the use of TV and video games." These results indicate that parents are placing a great deal of emphasis on children's daily activities and non-cognitive skills.

Q: Please indicate to what extent the following behavior patterns apply to you regarding your child's daily and learning activities, which are subject to this survey.

■ **Figure2-1: Parental involvement in children's daily activities and non-cognitive skills (overall/by grade)**



* The percentage of "Strongly agree" + "Somewhat agree."
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order by daily activities/non-cognitive skills.

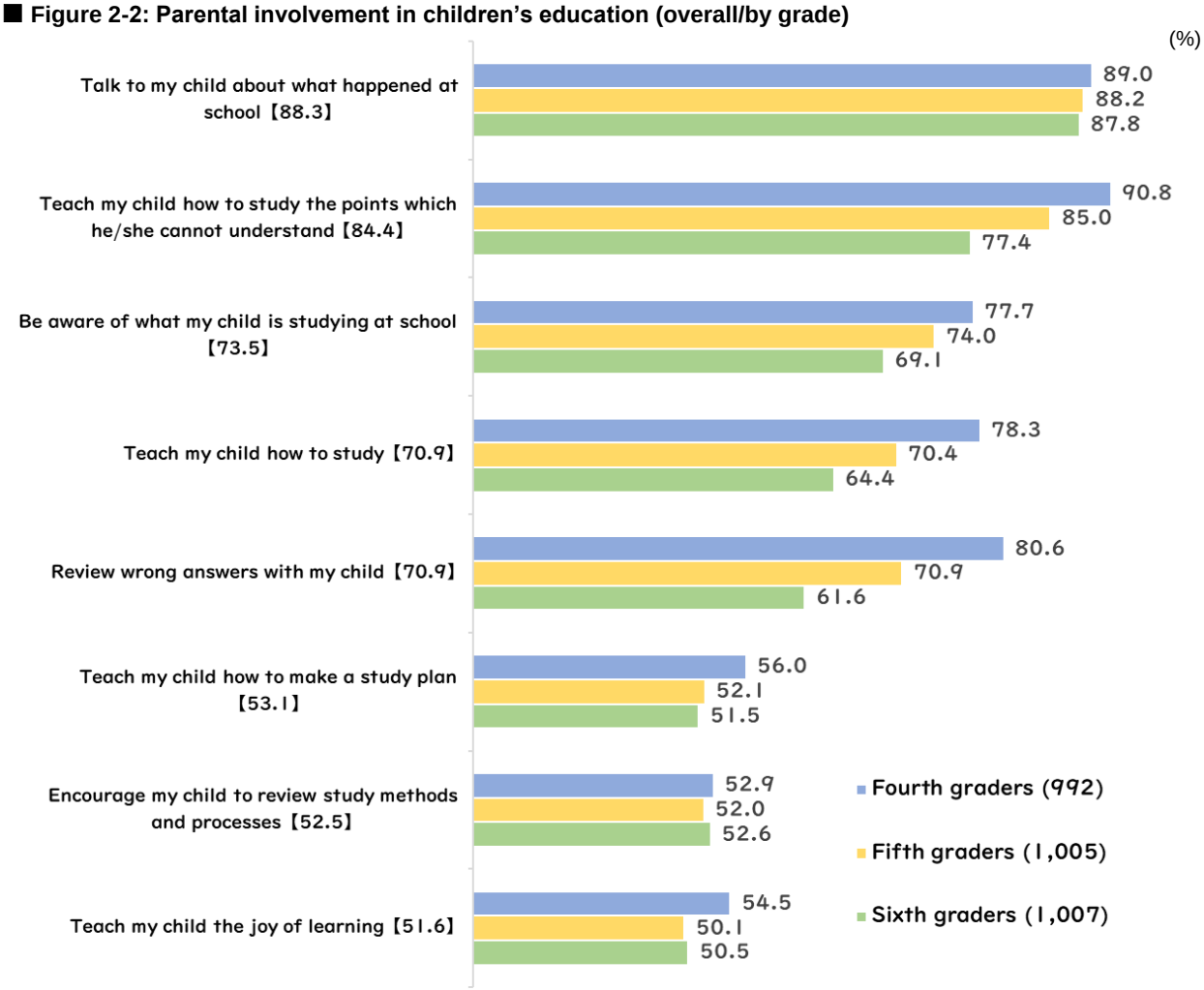
(2) Parental Involvement in Children's Studying

50% of parents are involved in facilitating children's study planning and reflective learning

We asked the participating parents about their parental involvement in children's learning activities with eight items. The most popular answer is "Talk to my child about what happened at school," for which about 90% of parents answered "Strongly agree" or "Somewhat agree." In addition, the number of parents who help their children with their studies –i.e. "Review wrong answers with my child," "Teach my child how to study," and "Teach my child how to study the points which he/she cannot understand" –decrease as the child's school grade proceeds to higher years.

Q: Please indicate to what extent the following behavior patterns apply to you regarding your child's daily and learning activities, which are subject to this survey.

■ **Figure 2-2: Parental involvement in children's education (overall/by grade)**



* The percentage of "Strongly agree" + "Somewhat agree."
* Figures shown in parentheses are the average scores of children in fourth to sixth grades.
* Average scores of children in fourth to sixth grades are displayed in descending order.

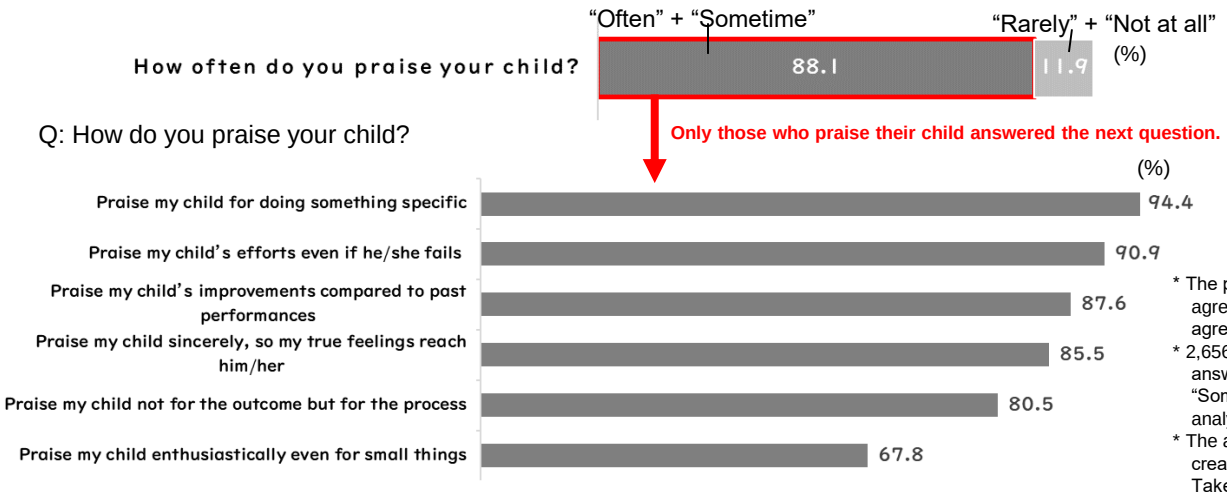
(3) Parents' Way of Praising a Child and its Effects

Parental praise influences children's metacognition and learning

We asked the participating parents about praising children. 88.1% of parents answered "Often" or "Sometimes." Of which, more than 90% of parents answered "Praise my child for doing something specific" or "Praise my child's efforts even if he/she fails." We also divided parents into two groups of "frequently praise" and "rarely praise." In terms of children's metacognition, children whose parents frequently praise them are more likely to show a high level of metacognition, higher usage of learning strategies, and more self-directed towards their motivation to study. It is also revealed that they are more confident to study and willing to determine things by themselves. In a way, it can be said that children's self-directed learning attitude and behavior patterns may influence parents' involvement, which favorably leads to more positive parenting attitudes that enhance the development of children.

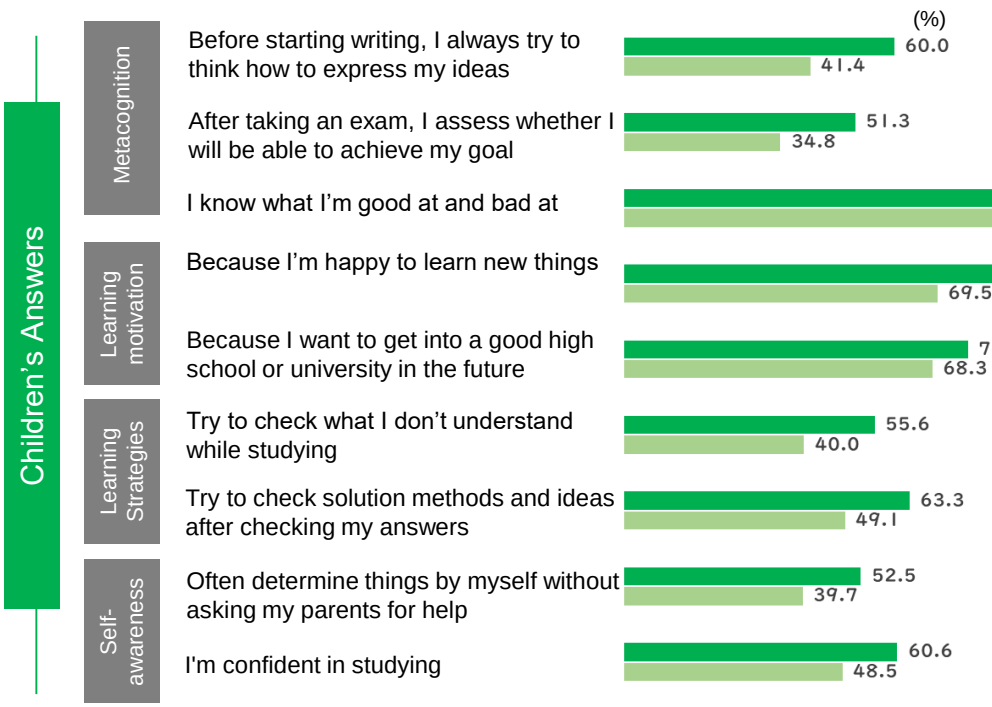
Q: How often do you usually praise your child?

■ Figure 2-3: Type and frequency of praise by parents (overall)



* The percentage of "Strongly agree" + "Somewhat agree."
* 2,656 parents who answered "Often" and "Sometimes" are subject to analysis.
* The above praise items are created based on "Ability to Take Action Persistently" (Miki Toyama, 2011).

■ Figure 2-4: Effects of praising children (by frequency of praising children)



* The percentage of "Strongly agree" + "Somewhat agree," except for the two items relating to learning strategies, which is the percentage of "Often" + "Sometimes."
* Praising types are divided into three categories of "Frequent," "Sometimes," and "Not at all," according to the total score of six praising items shown in Figure 2-3. The total score is obtained from self-assessed scores based on a four-point scale from 4 points (strongly agree) to one point (strongly disagree). To simplify the chart, only the "Frequent" group and the "Not at all" group are displayed.

Benesse Educational Research & Development Institute

“Survey on the Learning of Children in Upper Elementary School 2019”

Survey Planners/Analyzers

Junko Takaoka (Principal Researcher, Center for Child Life and Learning Research, BERD)

Qinfeng Shao (Senior Researcher, Center for Child Life and Learning Research, BERD)

* The above affiliations and titles are as of the publication date.

About the website of Benesse Educational Research & Development Institute

For this digest version and survey results published by BERD, please visit the following site (in Japanese):

https://berd.benesse.jp/

“Survey on the Learning of Children in Upper Elementary School 2019”

The digest version

Publication date: February 28, 2020

Publisher: Kazunari Taniyama

Editor: Junko Takaoka

Publishing institution: Benesse Educational Research and Development Institute, Benesse Corporation, Inc

Editorial assistance: Runa Matsumoto

9JKK01

Benesse