1185682 Education Report: More Detail on Participation Intensity Measures

To: Hon. Chris Hipkins Minister of Education
Date: 8 July 2019
Priority: Low
Security Level: In Confidence
METIS No: 1185663
Drafted: Kirsti Rawstron
Key contact and number: Rebecca Parish
Messaging seen by Communications team: No

Purpose of Report

The purpose of this report is to:

- **Provide** further information on the new early childhood education (ECE) participation intensity measures, as you requested in response to *Education Report: New ECE Participation Measures [METIS 1178684]*.

- **Advise** on the options for using this additional information in the annual reporting of the measures.

Summary

1. This report uses the ECE participation intensity measures that you agreed previously [METIS 1182881]. These measures are for children aged 4 and 5 at 30 June 2018, based on data in the Early Learning Information (ELI) system and population estimates from Stats NZ.

2. Time series of these participation measures are provided across all the hourly bands of attendance. While the proportion of 5 year old children attending when they were 4 years of age has been relatively stable in each of the hourly attendance bands over the last year, there were slightly more marked changes for 4 year old children attending when they were 3 years of age (the proportion attending less than 10 hours has gone down and the proportion attending more than 20 hours has gone up.)

3. Two options for reporting to you on these measures on an annual basis are provided based on median projected populations of 4 and 5 year old children from Stats NZ. We recommend the option that includes the time series across all hourly attendance bands, as it provides a more comprehensive view on ECE participation intensity.

4. The data shows children with no ECE participation are more likely to be of Māori and/or Pacific ethnicity compared to the general population of children, and are more likely to
live in low socioeconomic areas and/or attend low decile schools. Data has been drawn from both ELI and ENROL for this analysis.

Recommended Actions

The Ministry of Education recommends you:

a. **note** that more information about the new ECE participation intensity measure has been provided as requested.
   
   Noted

b. **note** that only attendance at an ELI-reporting service is included in this analysis. Some of the children with very low hours of attendance may also attend ECE services that do not report attendance via ELI (such as kōhanga reo).
   
   Noted

c. **agree** to an annual update of the ECE participation intensity measure and publication on Education Counts of either:

   Option 1: The four ECE participation intensity measures (Annex 1), or
   
   Agree / Disagree

   Option 2 (Recommended): The four ECE participation intensity measures and related time series (Annex 2).
   
   Agree / Disagree

d. **Agree** that this report will be proactively released as per your expectation that information be released as soon as possible. Any information which may need to be withheld will be done so in line with the provisions of the Official Information Act 1982.

   Agree / Disagree

Cathryn Ashley-Jones
Group Manager
Evidence, Synthesis & Dissemination

Hon Chris Hipkins
Minister of Education

08/07/2019

22/7/19
Background

1. On 8 March 2019 we sent you Education Report: New ECE Participation Measures [METIS 1178684], outlining a new ECE participation intensity measure, calculated from the percentage of current 5 year olds who attended ECE for an average of 10+ and 20+ hours per week when aged 3 and when aged 4. Supplementary information was provided on 12 April 2019 in Education Report: New ECE Participation Measures (Ethnicity and Socioeconomic Status) [METIS 1182881].

2. On 9 April 2019 your office asked us to provide the following information:
   a. Children with no ECE attendance.
   b. Children with less than 10 hours.
   c. Children with 10 hours, with 15 hours and with 20 hours.
   d. Participation intensity for current 4 year old's attendance when they were 3 year olds, to compare to the previously provided measure (and any additional advice we wish to provide about casting the measure in this way).
   e. Data back to 2017.

3. On 7 May 2019 we received your comment on Education Report: New ECE Participation Measures (Ethnicity and Socioeconomic Status) [METIS 1182881]. You agreed that the four participation measures be the percentage of current 5 year olds who attended ECE for an average of 10+ and 20+ hours per week when aged 4, and the percentage of current 4 year olds who attended ECE for an average of 10+ and 20+ hours per week when aged 3, by ethnic group and socio-economic status. You agreed to the reporting of provisional results in the Education Weekly Update and the publication on Education Counts.

4. This report provides the comparative data and time series for the measures as agreed, and recommends changes to the proposed reporting to incorporate additional data.

5. In this report we largely use the same methodology outlined in our previous briefing [METIS 1182881] for information on ECE participation intensity by ethnicity for 4 and 5 year old children in ELI. Key things to note when compared to our previous briefing:
   a. To standardise our work with a wider range of statistics we are using population projections produced by Stats NZ based on the 2013 Census as the total population of 4 and 5 year olds, rather than the number of children in ELI.
   b. As the population projections produced by Stats NZ are for the year at 30 June rather than at 31 December, the figures in the Annexes have been recalculated to account for this.
   c. Based on demographic data from ELI, we have used the following percentages to approximate the number of children in high, medium and low socioeconomic areas: 30% of the population of children are in high socioeconomic areas, 37% in medium socioeconomic areas, and the remaining 33% in low socioeconomic areas.
   d. As only two years of data have been analysed the provided time series analysis is minimal. The strength of this analysis will improve with time.
ECE Participation Intensity

6. Median population projections from Stats NZ stated that at 30 June 2018 there were 61,390 children aged 4 and 63,230 children aged 5.

Participation intensity for 5 year olds when aged 4

7. Figure 1 below presents the ECE participation intensity of 5 year olds when they were aged 4. It includes children aged 5 at 30 June 2017 and children aged 5 at 30 June 2018.

Figure 1 Participation intensity at age 4 by 5 year olds, 30 June 2017 and 30 June 2018

8. Figure 1 above shows the proportion of 5 year olds who attended ECE for 20+ hours a week when aged 4 increased between 2017 and 2018, as did the proportion who attended for 15 to 19 hours a week on average.

9. The proportion of 5 year old children who attended ECE for less than 10 hours a week on average when they were aged 4 has decreased between the two years, as has the proportion who attended for 10 to 14 hours a week. The proportion of 5 year olds who had no attendance data in ELI at age 4 increased between 2017 and 2018.
Participation intensity for 4 year olds when aged 3

10. Figure 2 below shows the ECE participation intensity of 4 year olds when they were aged 3. It covers children aged 4 at 30 June 2017 and children aged 4 at 30 June 2018.

Figure 2 Participation intensity at age 3 by 4 year olds, 30 June 2017 and 30 June 2018

11. Figure 2 shows that the proportion of children aged 4 who attended ECE for 20+ hours a week on average when aged 3 increased between 2017 and 2018, while the proportion who attended for less than 10 hours a week on average decreased.

12. The proportions of children who attended ECE for 10 to 14 hours and 15 to 19 hours a week on average when aged 3 remained largely stable between 2017 and 2018, while the proportion of children aged 4 with no attendance data in ELI at age 3 increased.

Children with no ECE attendance data

13. There were 5,206 children aged 5 at 30 June 2018 who had no attendance data in ELI at age 4. There are four reasons why a child might be enrolled in ELI yet have no attendance data at a particular point in time (age 4 in this case):
   a. The child could have enrolled at or attended an ELI-linked ECE service when younger than 4, then moved to attending an ECE service that at this stage does not use ELI (such as ngā kōhanga reo or playgroups).
   b. The child could have enrolled at or attended an ELI-linked ECE service when younger than 4, then stopped attending ECE in New Zealand.
   c. The child could have enrolled at or attended an ELI-linked ECE service when aged 5 or older.
   d. The child may be enrolled in correspondence ECE. Correspondence ECE enrolments are included in ELI, however attendance data for correspondence ECE is not (in this cohort there were 75 children enrolled in correspondence ECE that had no attendance data in ELI).
14. The 2018 Early Childhood Education Census results reported there were 1,939 children aged 4 enrolled in nga kōhanga reo and 2,090 aged 4 enrolled in playgroups in June 2018. These children could have an enrolment record in ELI but no attendance data at age 4, as outlined in 13(a).

**Information from ELI**

15. We examined the demographic characteristics of the 5,206 5 year olds who had no attendance data in ELI at age 4 compared to the population of 63,230 children aged 5 at 30 June 2013.

16. The children with no attendance data in ELI when they were aged 4 were more likely to be of Māori and/or Pacific descent when compared to the entire sample of 5 year olds. Children with no attendance data at age 4 were also more likely to have a home address in a low socioeconomic area when compared to the entire sample.

17. Moreover, Māori and Pacific 5 year olds with no attendance data at age 4 are more likely to have addresses in low socioeconomic areas compared to children of other ethnicities.

**Information from ENROL**

18. Another source of information on children with no ECE attendance is the ENROL data, collected when children are enrolled in compulsory schooling. Not all of the children with records in ELI that were aged 5 at 30 June 2018 have transitioned to school.

19. The most recent published data is for children who entered primary school between 1 July 2017 and 30 June 2018, which included 1,856 children whose enrolment forms stated they hadn’t attended ECE prior to starting school. These children accounted for 3% of the children who entered primary school between 1 July 2017 and 30 June 2018.

20. Based on school enrolment data, children of Māori and/or Pacific descent are more likely to not attend ECE prior to beginning school than children from other ethnic groups. Children with no ECE participation are twice as likely to be enrolled in a low decile school compared to other new entrants.

21. These results are consistent with our analysis of children with no attendance data in ELI at age 4. Both sets of analysis indicate that Māori and Pacific children, as well as children with addresses in low socioeconomic addresses/children who enrol in low decile schools, are more likely than other children to not attend ECE prior to starting school.

**Reporting**

22. Stats NZ population projections are only available on an annual basis, we therefore recommend reporting this ECE participation intensity measure provisionally to you on an annual basis in late August/early September each year, with final figures provided to you in November if there are major differences from the provisional figures.

23. In the 12 April Education Report [METIS 1182881] we provided a draft outline for the measures to be reported in the Education Weekly Update on an annual basis. We have updated this for the participation intensity measures you agreed to [METIS 1182881] and Annex one provides a draft for your consideration.

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¹ "Prior Participation in ECE (Year Ended March 2019)“, currently on Education Counts.
24. Alternatively we can include in the reporting more comparative data (including no attendance as well as all hourly attendance bands) and times series as provided above in this report. Annex two shows an example of a report for the Education Weekly Update which includes the range of hourly bands and time series. This option provides a more comprehensive picture.

25. This measure has been included in the draft Child and Youth Wellbeing Strategy as the indicator of participation in early learning. The measure has been described as "Percentage of children attending early childhood education for 10 or more hours a week on average at age 3 and at age 4". A note has been made in the Child and Youth Wellbeing Strategy that this indicator "is currently undergoing review by technical experts and will be finalised before cabinet consideration" and is subject to your approval.

Next steps

26. Subject to your agreement to the reporting format, given the additional information in this report, the measures will be calculated on an annual basis and released in late August/early September each year.

Annexes

Annex 1: Option 1: Early Childhood Education Participation Intensity – June 2018 results (Education Weekly Update draft, key results only).

Annex 2: Option 2: Early Childhood Education Participation Intensity – June 2018 results (Education Weekly Update draft, all bands and time series).
Annex 1: Early Childhood Education Participation Intensity – June 2018 results (Education Weekly Update draft, key results only)

According to Stats NZ, there were 61,390 children in New Zealand aged 4, and 63,230 aged 5 on 30 June 2018. Of these children:

<table>
<thead>
<tr>
<th></th>
<th>Current 4 year olds when aged 3</th>
<th>Current 5 year olds when aged 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10+ hours a week</td>
<td>20+ hours a week</td>
</tr>
<tr>
<td>Total children</td>
<td>72%</td>
<td>33%</td>
</tr>
<tr>
<td>Māori</td>
<td>62%</td>
<td>28%</td>
</tr>
<tr>
<td>Pacific</td>
<td>65%</td>
<td>32%</td>
</tr>
<tr>
<td>Low socioeconomic areas</td>
<td>66%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Key messages:
- Children attend ECE for more hours each week on average when aged 4 than when aged 3.
- A lower percentage of Māori and Pacific children attended ECE for 10+ and 20+ hours a week compared to the total population.
- A similar percentage of children with addresses in low socioeconomic areas attended ECE for 10+ and 20+ hours a week compared to the total population.

Notes:
1. The population of 4 and 5 year olds on 30 June 2018 is taken from Stats NZ, National ethnic population projections, by age and sex, 2013(base)-2038 update, 50th percentile (median) scenario.
2. Based on demographic data from the Early Learning Information system (ELI), we have used the following percentages to approximate the number of children in high, medium and low socioeconomic areas: 30% of the population of children are in high socioeconomic areas, 37% in medium socioeconomic areas, and the remaining 33% in low socioeconomic areas.
3. The participation intensity measures are calculated using attendance data from ELI.
4. These measures do not include attendance at services that do not report their data via ELI, such as ngā kōhanga reo or playgroups.
5. These measures are calculated from the day each individual child turns 3 for the age 3 measure, and from the day the child turns 4 for the age 4 measure. Attendance when aged less than 3 years and 5 or older are not included.
Annex 2: Early Childhood Education Participation Intensity – December 2018 results (Education Weekly Update draft, all bands and time series)

According to Stats NZ, there were 61,390 children in New Zealand aged 4, and 63,230 aged 5 on 30 June 2018. Of these children:

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<tr>
<td>Māori</td>
<td>62% 28%</td>
<td>68% 29%</td>
</tr>
<tr>
<td>Pacific</td>
<td>65% 32%</td>
<td>75% 35%</td>
</tr>
<tr>
<td>Low socioeconomic areas</td>
<td>66% 29%</td>
<td>75% 33%</td>
</tr>
</tbody>
</table>

Key messages:
- The percentage of 4 year olds who attended ECE for 20+ hours a week when aged 3 (Figure 1) increased between 2017 and 2018, while the percentage attending for less than 10 hours a week decreased.
- The percentage of 5 year olds who attended ECE for 20+ hours a week when aged 4 (Figure 2) increased from 2017 to 2018, as did the percentage of 5 year olds with no ELI attendance data at age 4.
- A lower percentage of Māori and Pacific children attended ECE for 10+ and 20+ hours a week compared to the total population.
- A lower percentage of children with addresses in low socioeconomic areas attended ECE for 10+ and 20+ hours a week compared to the total population.

*Figure 1 Participation intensity at age 3 by 4 year olds, 30 June 2017 and 30 June 2018*
Notes:

1. The population of 4 and 5 year olds on 30 June 2018 is taken from Stats NZ, National ethnic population projections, by age and sex, 2013(base)-2038 update, 50th percentile (median) scenario.

2. Based on demographic data from the Early Learning Information system (ELI), we have used the following percentages to approximate the number of children in high, medium and low socioeconomic areas: 30% of the population of children are in high socioeconomic areas, 37% in medium socioeconomic areas, and the remaining 33% in low socioeconomic areas.

3. The participation intensity measures are calculated using attendance data from ELI.

4. These measures are calculated from the day each individual child turns 3 for the age 3 measure, and from the day the child turns 4 for the age 4 measure. Attendance when a child is aged less than 3 years and 5 or older are not included.

5. These measures do not include attendance from services that do not report their data via ELI, such as ngā kōhanga reo or playgroups.

6. Because the attendance data and the Stats NZ projections are from two different sources, the sum of the proportions for 30 June 2017 and 30 June 2018 do not add to 100%.