

## 8. PARENTS/CAREGIVERS' PERSPECTIVES ON THEIR CHILDREN'S SCIENCE, ICT AND MATHEMATICS EDUCATION

Parents/caregivers were asked for their perceptions on a range of issues concerning their eldest school-age child's education in science, ICT and mathematics. The most significant findings related to perceptions of the capacity of their children's schools to attract and retain qualified teachers, and the qualities of their children's teachers.

### 8.1 PERCEPTIONS OF CAPACITIES OF SCHOOLS TO ATTRACT AND RETAIN TEACHERS OF SCIENCE, ICT AND MATHEMATICS

1. The study found that parents/caregivers' confidence in the capacity of their children's primary schools to attract and retain qualified teachers decreased significantly with the size and remoteness of school location (see Figure 8.1). There was also a clear indication that parents/caregivers in rural and remote areas are aware of staffing difficulties in those locations. Overall, parent/caregiver perceptions were generally in agreement with those of teachers, who considered vacant positions in metropolitan schools easiest to fill.

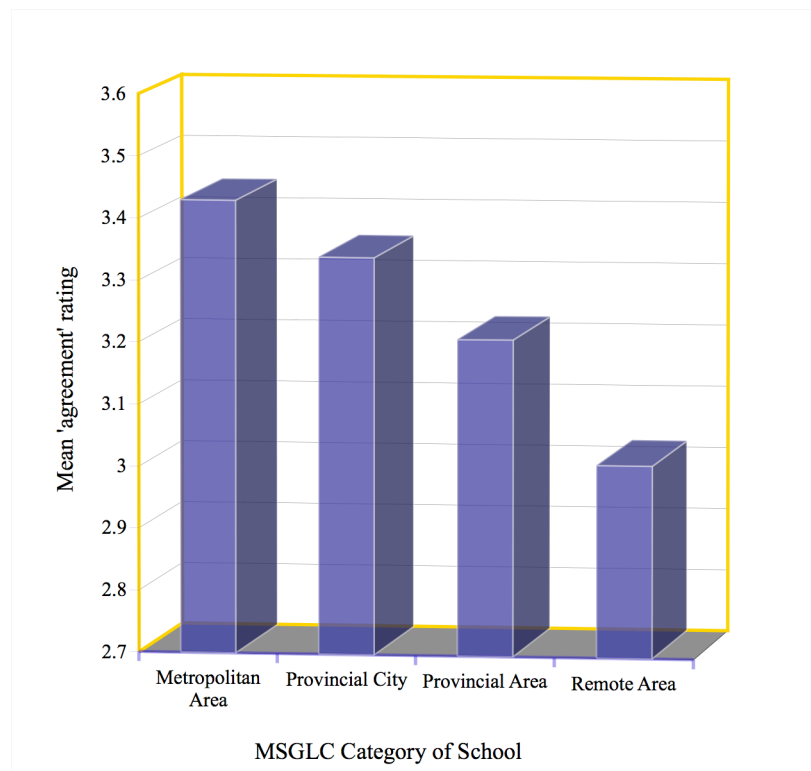


Figure 8.1. Mean 'agreement' by respondents that their child's school is able to attract and keep qualified primary teachers, compared by MSGLC categories [ratings on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree)]

2. Analysis of the responses of parents/caregivers reporting about secondary schools did not reveal the same significant geographical pattern in staffing difficulties reported by science and mathematics teacher respondents. However, it may be that many parents/caregivers are unfamiliar with the subject-specific qualifications of secondary teachers, generally assuming that those teaching mathematics or science to their children are qualified to teach those subjects.
3. While parents/caregivers in Remote Areas are generally appreciative of their children's teachers, there appears to be concern about the inexperience and capabilities of the teachers

commonly recruited to these schools, and the long-term effects on the education of children.

## 8.2 PERCEPTIONS OF ACHIEVEMENT AND TEACHER ATTITUDES IN SCIENCE, ICT AND MATHEMATICS EDUCATION

1. The findings indicate firstly that parents/caregivers consider the commitment and enthusiasm of teachers to be one of the greatest strengths of schools. Perceptions of the levels of enthusiasm teachers bring to class do not appear to vary significantly with geographical location or type of school.
2. With regard to parents/caregivers' views on whether teachers care that students work to their potential, there was little evidence of substantial variation with type or location of school. Nevertheless, the weak but consistent (and in the case of mathematics, significant) pattern suggesting that parents/caregivers with children attending Provincial Area schools were less inclined than others to consider that teachers care whether students work to their potential is perhaps cause for further investigation.
3. The evidence suggests that the perceptions of parents/caregivers across Australia about achievement levels in science, ICT and mathematics vary substantially with geographic location. As shown in Figures 8.2, 8.3 and 8.4 respondents with children attending Metropolitan schools were significantly more inclined to agree that children in these schools achieved to a high standard in science, ICT and mathematics than were respondents with children in non-metropolitan schools. Those with children attending schools in Remote Areas were least inclined to agree. The geographical pattern in perceptions is consistent with patterns of achievement levels in science and mathematics revealed in international studies (Thomson et al., 2004).
4. There also seems to be a perception that teachers in primary and secondary schools in larger population centres provide greater encouragement for students to achieve to their potential in these subjects.

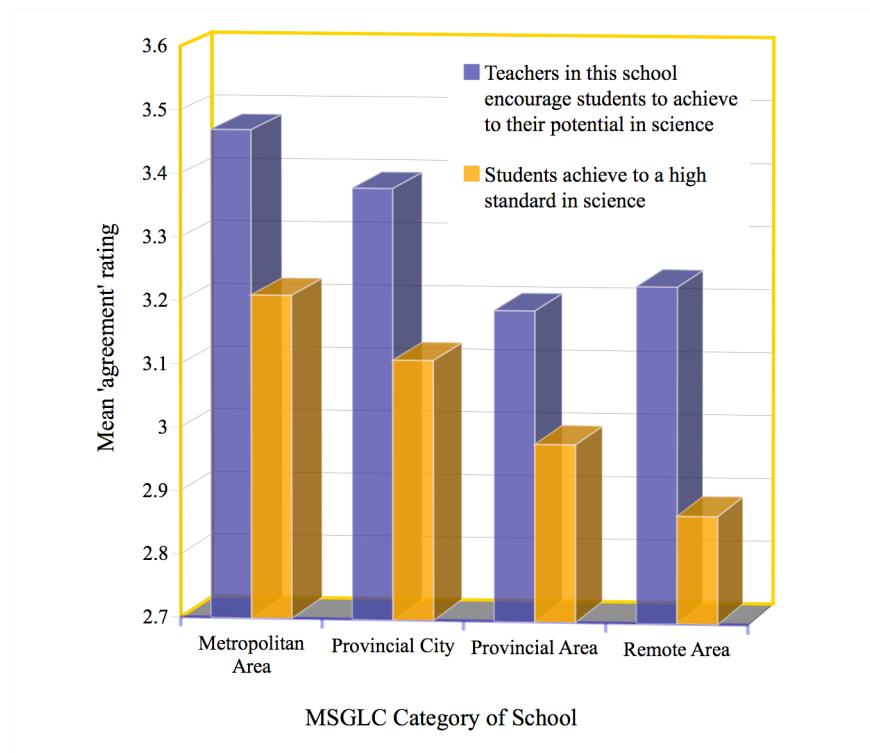


Figure 8.2. Mean 'agreement' of parent/caregiver respondents with statements about science achievement in their children's schools, compared by MSGLC categories [ratings on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree)]

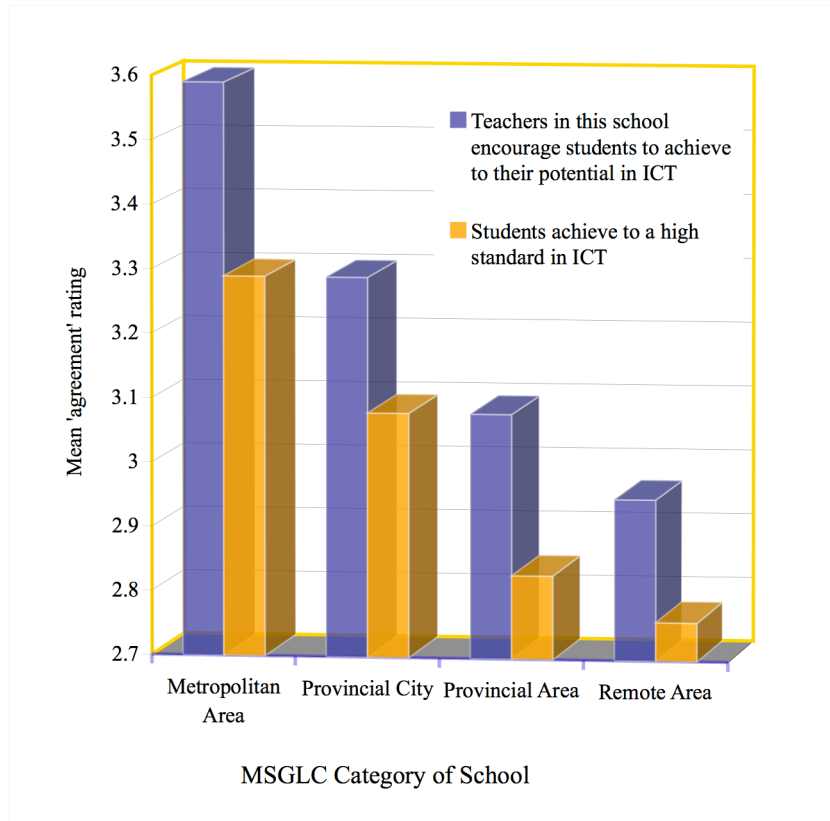


Figure 8.3. Mean ratings by parent/caregiver respondents on perceptions of ICT achievement levels in their child's school, compared by MSGLC categories [ratings on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree)]

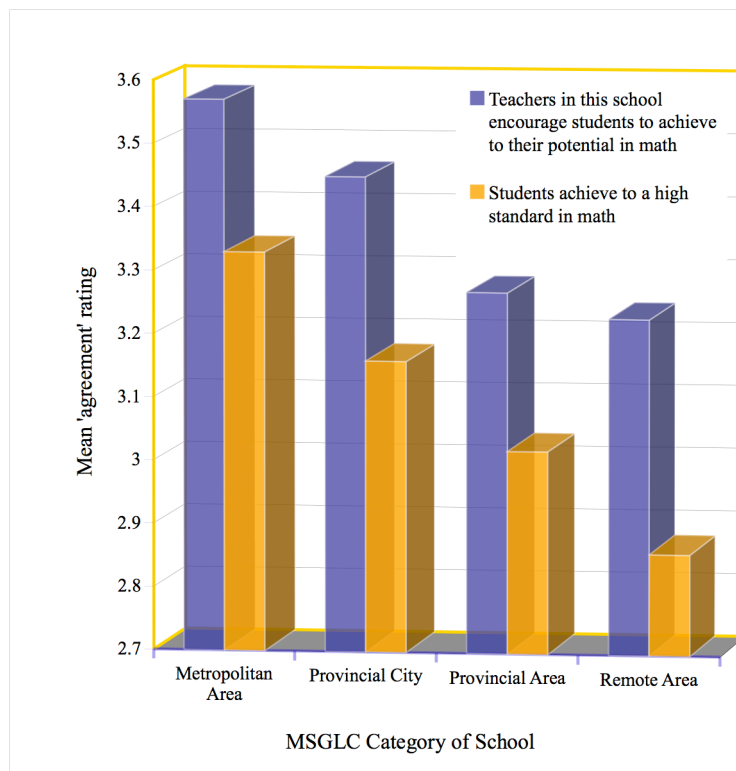


Figure 8.4. Mean ratings by parent/caregiver respondents on perceptions of mathematics achievement levels in their child's school, compared by MSGLC categories [ratings on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree)]

### **8.3 PERCEPTIONS OF STRENGTHS AND OBSTACLES IN SCIENCE, ICT AND MATHEMATICS EDUCATION**

1. The findings suggest that, overall, parent/caregivers are appreciative of the commitment, efforts and enthusiasm of teachers involved in science, ICT and mathematics education.
2. Understandably, their greatest concern appears to be that their children have access to an adequate range of learning experiences and opportunities. These include excursions, visits by experts, and a good variety of senior courses from which to choose. Parents/caregivers seem to be aware that student access to these experiences and opportunities is considerably greater in larger population centres. There is also evidence that those outside these centres are concerned that their children are at an educational disadvantage.
3. Parents/caregivers with children having special needs or talent are appreciative where schools are able to provide relevant support. However, there appears to be concern from parents/caregivers in Provincial and Remote Areas that their schools are unable to provide this support adequately.
4. Finally, ICT education emerged as a key area of interest among parent/caregivers. There seems to be a general concern that children are not incorporating ICT into their learning as effectively as parents/caregivers would like, and a specific concern among those with children in rural schools that there is insufficient expertise and technical support for ICT.

### **8.4 DISCUSSION**

The responses of parents/caregivers provided an illuminating insight into their educational values and attitudes, as well as their perceptions of the schools attended by their children. In some cases these perceptions reflected the views and concerns of teachers.

Parents/caregivers' perceptions of the difficulty of attracting and retaining qualified primary teachers displayed a geographical pattern similar to that of primary teachers themselves, indicating their awareness that it is considerably more difficult to staff rural primary schools with qualified teachers than is the case in larger population centres. It was not clear whether parents/caregivers with children at the secondary level were aware of the staffing difficulties reported by science, ICT and mathematics teachers. However, it is doubtful that parents/caregivers would be aware of the subject-specific qualifications of secondary teachers, and therefore of whether their children's teachers were suitably qualified to teach those courses.

With regard to reflections on the qualities of their children's teachers, it was heartening to find that parents/caregivers are in general appreciative of the commitment, efforts and enthusiasm of teachers involved in these subject areas. There was no evidence that the enthusiasm teachers bring to the classroom varied with type or geographic location of school. Nevertheless, comments from parents/caregivers with children in Remote Area schools suggest that there is greater concern about the inexperience of teachers in these schools, and the long term effects of this on children's learning, than is the case in other locations.

One area in which geographical differences were clear was in perceptions of the achievement levels of students in science, ICT and mathematics. The findings indicate that parents/caregivers with children attending schools in Metropolitan Areas are more inclined to think that students in these schools exhibit high achievement, and are encouraged to do so by their teachers, than are parents/with children in non-metropolitan schools. This geographic pattern in perceptions reflects the achievement patterns in national science and mathematics results from PISA, indicating awareness on the part of parents/caregivers of the achievement levels of their schools relative to those in other locations. In a few cases, the belief that students in

Metropolitan schools achieved higher results, and are more achievement-oriented, influenced parents/caregivers to consider sending their child to a metropolitan school.

The influence of this belief is important in the context of educational orientations, in that parents/caregivers who value university admission results highly may be influenced to move their children from rural schools to metropolitan schools in order to maximise academic success.