



Multi-grade teaching: the influence on academic and social outcomes

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Introduction

- **One-third of Irish children are taught in multi-grade classes**
- **‘Combination’, ‘Multi-age’, ‘Mixed-age’**
- **Effect on teaching approaches, teachers, student outcomes – academic and social**
- **Mixed results from international research**
- **Irish research limited to impact on teachers**



Previous Research

- **Impact on teaching approaches**
 - More time working individually
 - More time waiting on teacher
 - Less active teaching
- **Impact on teacher**
 - Heavier workload
 - More challenging
 - Curriculum overload
 - Job stress
 - Advantages – wide range of methodologies, get to know children better



Previous Research

- **Impact on student academic outcomes**
 - No consistent differences on academic outcomes
 - Negative effect on literacy (Russell et al, 1998)
 - Positive effect on maths (Thomas, 2011)
- **Impact on student social outcomes**
 - Little focus (except for pre-school education)
 - Some studies favour multi-grade – attitude to school, self-concept, sense of belonging (Miller, 1990)
- **Positive impact**
 - Continuity of teaching; exposure to more advanced material; revision of older material; independent learning; social development
- **Negative impact**
 - Difficult to maintain high quality instruction; discipline problems

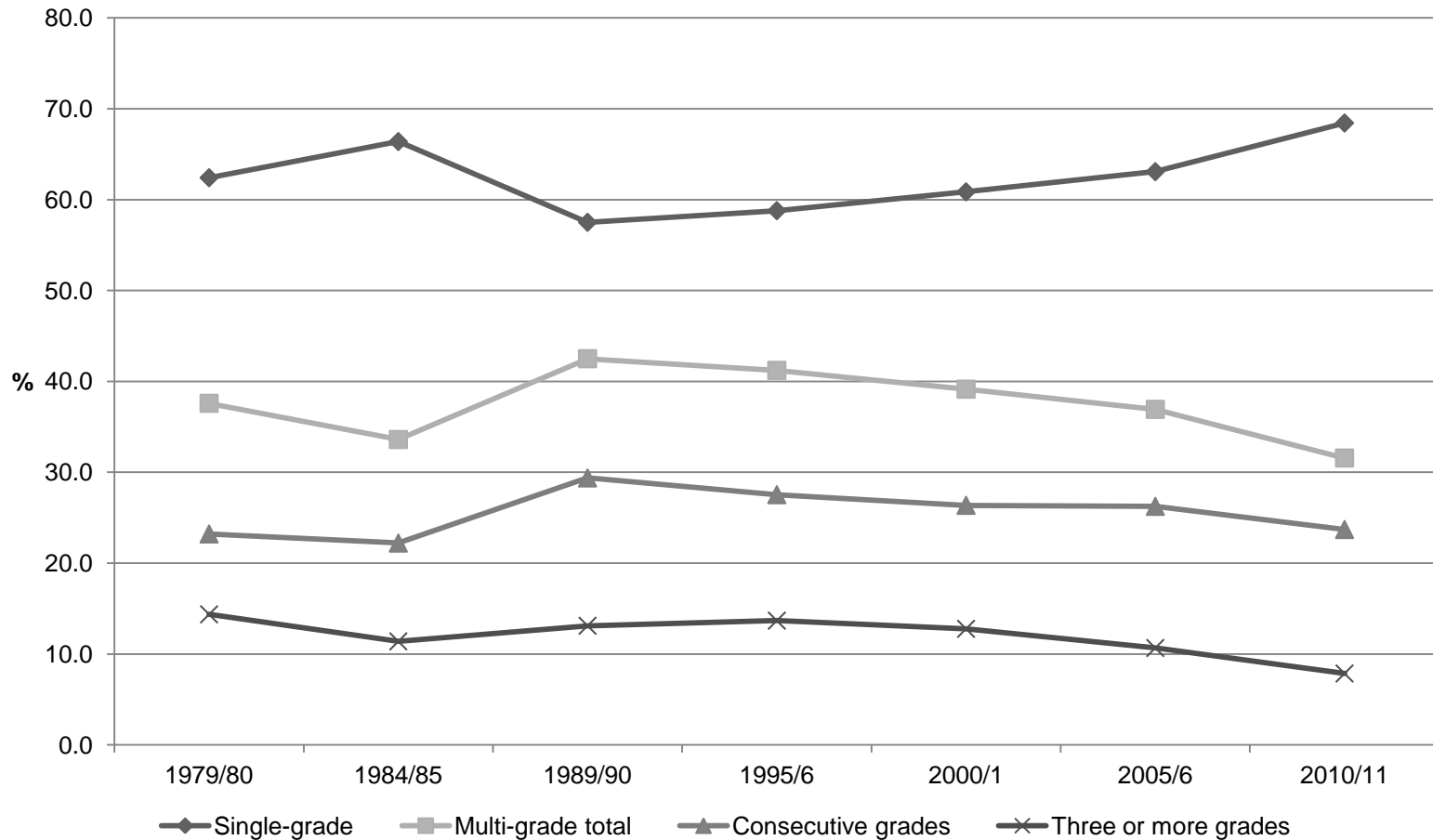


Current Study

- **Failure to account for class composition may account for contradictory findings**
 - Leuven & Ronning (2011)
 - Higher achievement if mixed with older children
 - Presence of younger peers appeared detrimental to achievement
- **Studies tend not to look at both academic and social outcomes**



Trends in the proportion of primary school students in multi-grade classes





GUI Data

- **Growing Up in Ireland**
- **Child Cohort @ 9 years**
- **Over 8,500 children**
- **Sampled through their schools**
- **Information from principal, teachers, parents and children themselves**



% of 9-year-olds in Multi-grade classes

- **34.7% of nine-year olds are taught in multi-grade classes**
- **Of these:**
 - 71.1% are taught in classes with 2 class groups, 20.2% with 3 class groups and 8.7% with 4 or more class groups in the same class
 - 47.4% are taught with older children, 41.9% with younger children and 10.7% with both older and younger children



9-Year-Olds according to school characteristics

		Single Grade	Multi-grade	Total	N
Gendermix	Co-ed	59.6%	40.4%	100%	5,488
	Boy	77.6%	22.4%	100%	1,094
	Girl	80.3%	19.7%	100%	1,188
School size	Small	19.1%	80.9%	100%	2,479
	Medium	89.9%	10.1%	100%	2,431
	Large	92.8%	7.2%	100%	2,807
School region	Urban	90.8%	9.2%	100%	1,293
	Rural	31.8%	68.2%	100%	2,891
	Mixed	85.8%	14.2%	100%	3,586
Total		62.3%	34.7%	100%	7,770



Analysis

- **Multi-level modelling – 3 levels**
 - Child within class within school
- **Independent Variable – Multi-grade**
 - Single grade
 - Mixed with older children
 - Mixed with younger children
 - Mixed with both older and younger children
- **Academic Outcomes**
 - Drumcondra Reading Score
 - Drumcondra Maths Score
- **Social-Emotional Outcomes**
 - Piers-Harris Behavioural Adjustment Subscale
 - Piers-Harris Intellectual and School Status Subscale
 - Piers-Harris Popularity Subscale



Analysis

- **Child / Family Level**
 - Child gender
 - Family social class
 - Family income
 - One parent family
 - Parental education
 - Number of books in the home
 - Newcomer status
 - Learning disability

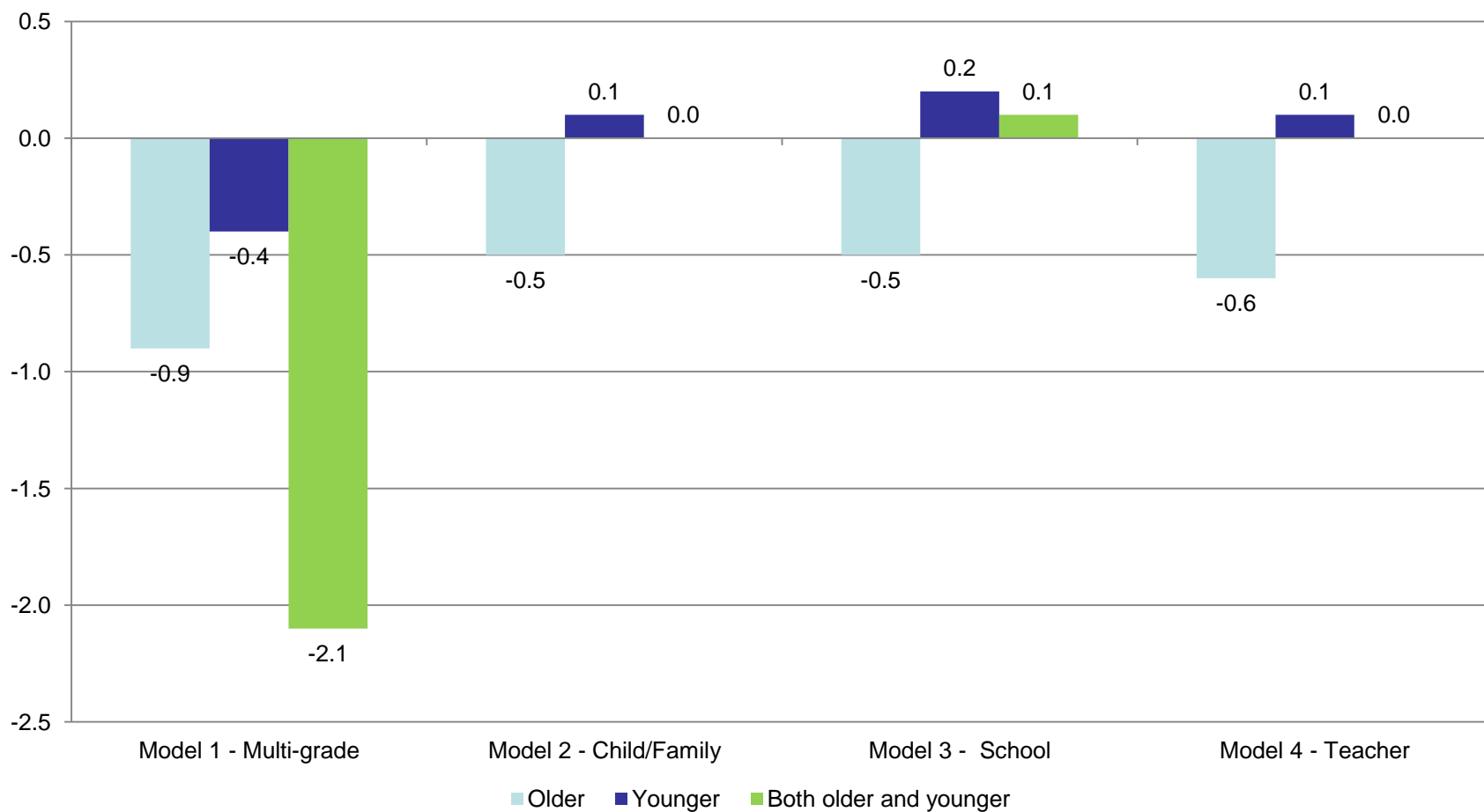


Analysis

- **School level**
 - Region
 - DEIS status
 - School gender mix
- **Teacher level**
 - Teaching experience
 - Class size

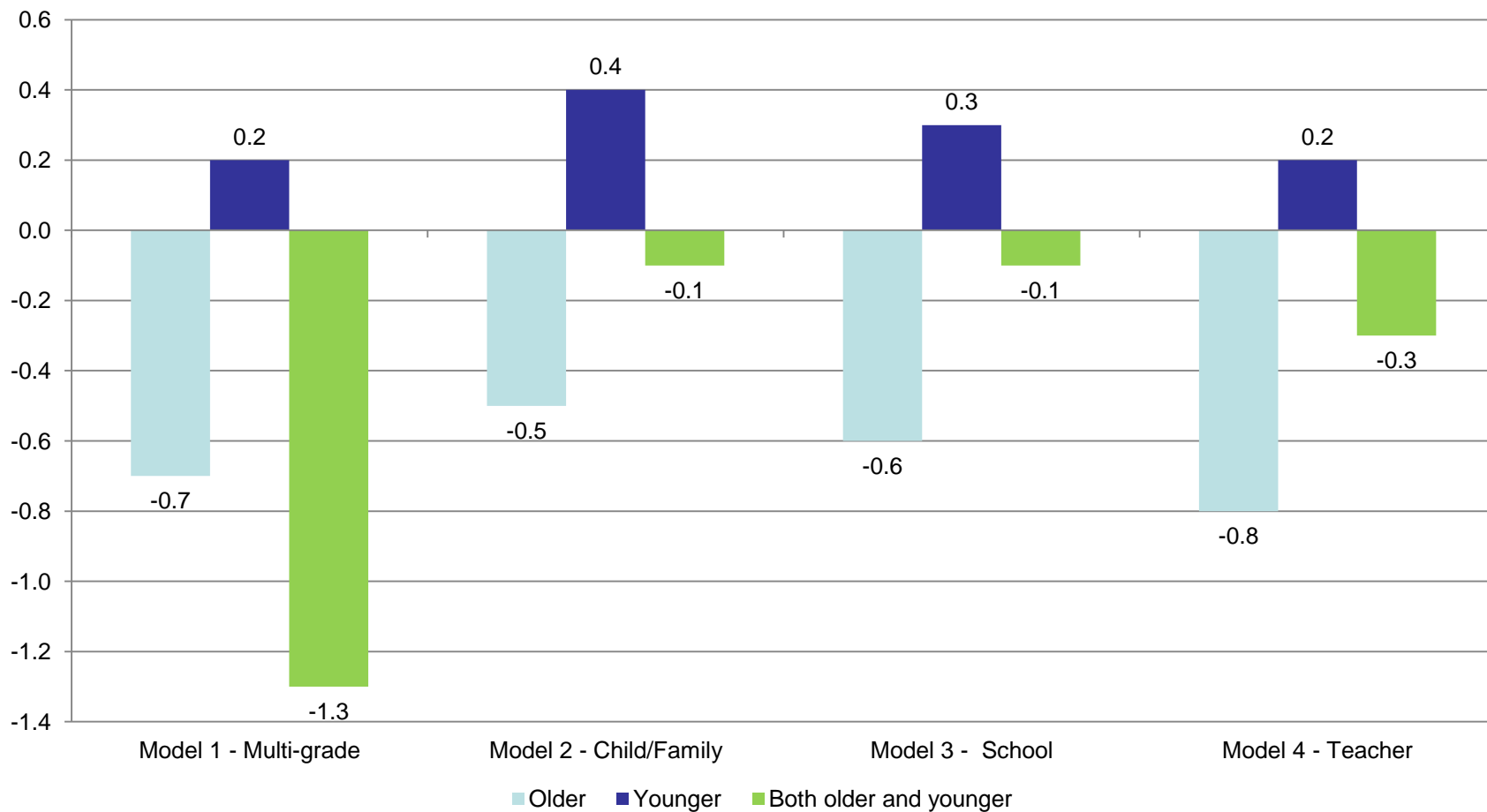


Reading – difference from single grade



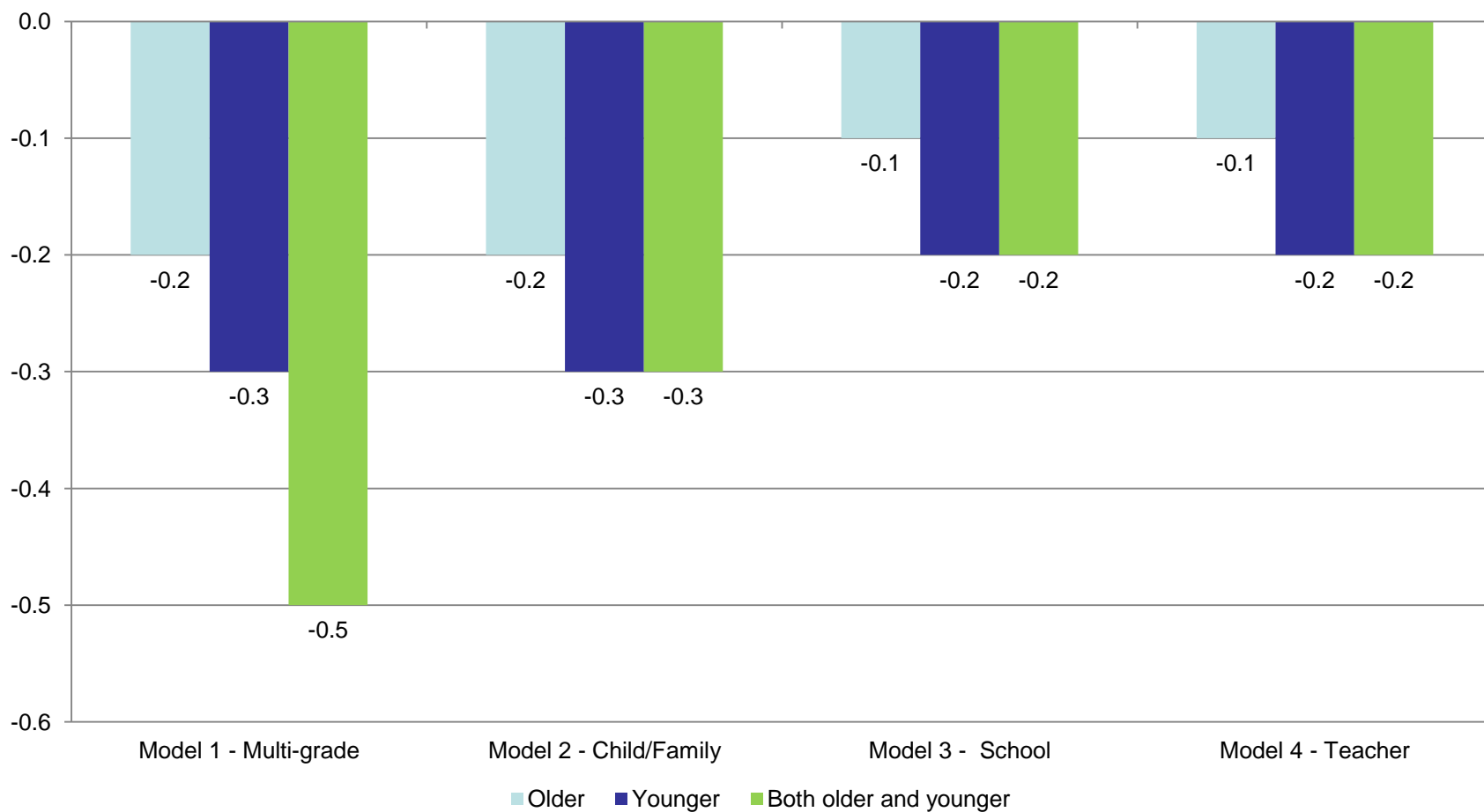


Maths – difference from single grade



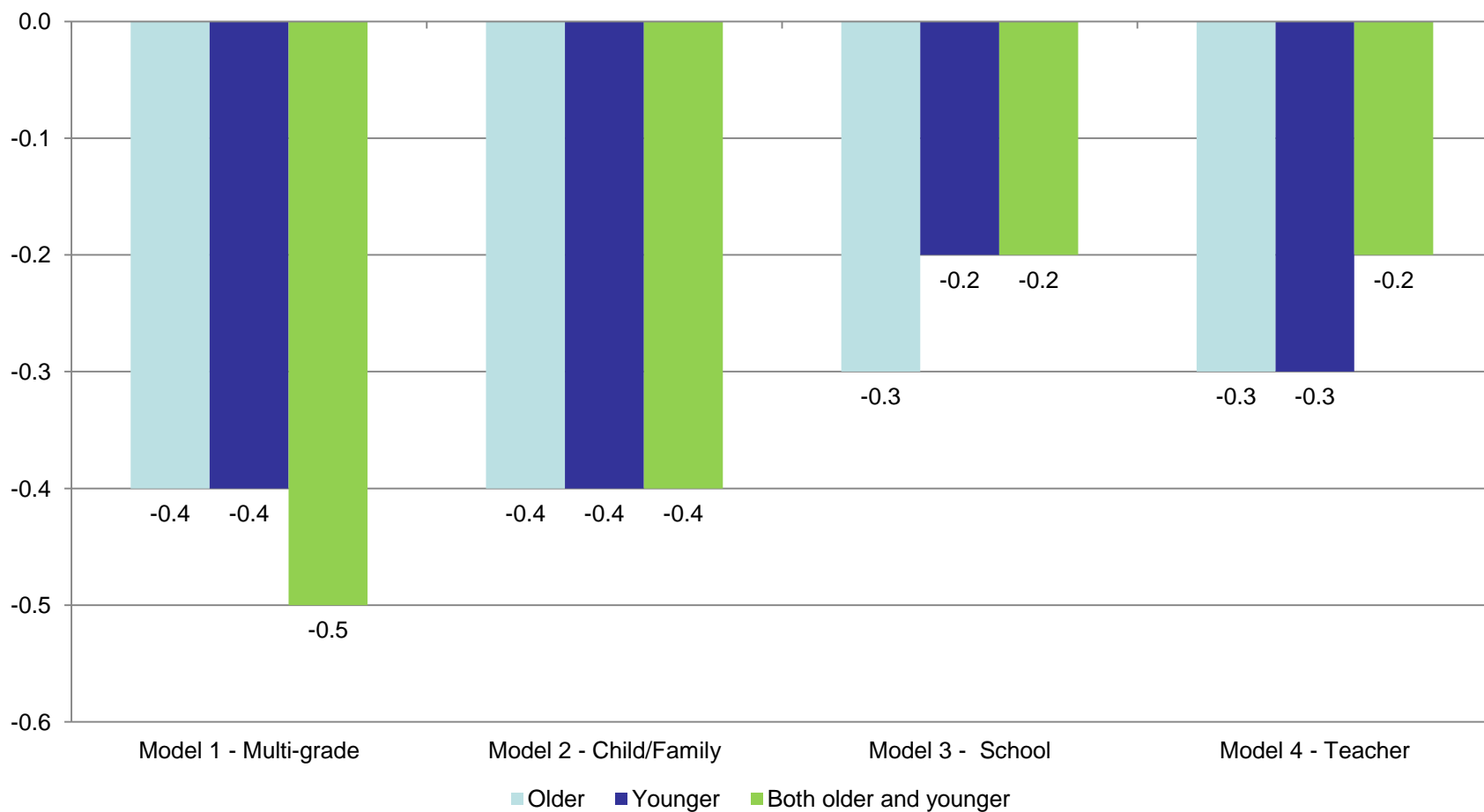


Behavioural Adjustment – difference from single grade



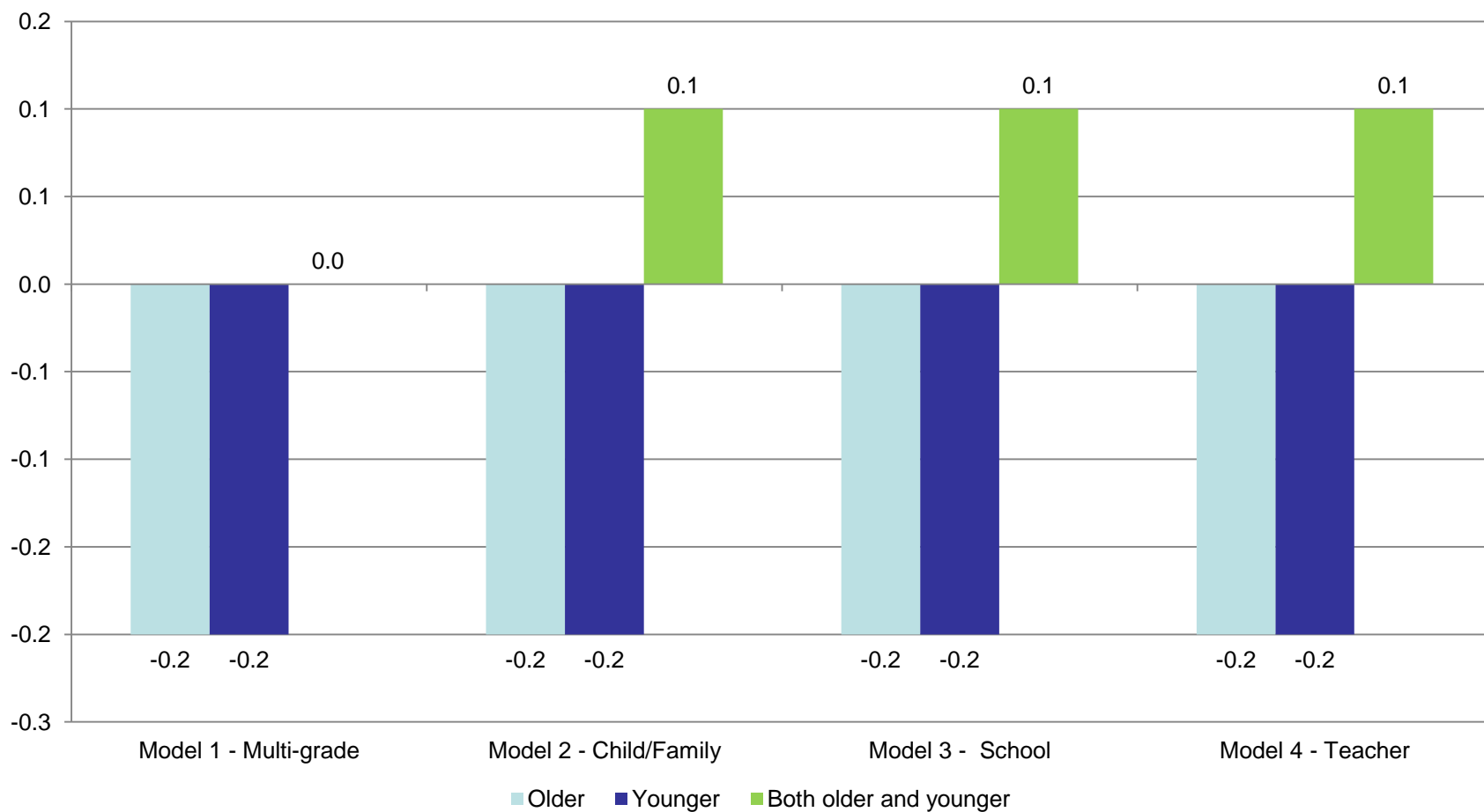


Intellectual and School Status— difference from single grade





Popularity – difference from single grade





Gender differences

- **Further investigation by gender**
- **Academically, negative effect for girls when mixed with older children**
- **Socially, negative effect for girls in terms of behaviour when mixed with older children; and popularity and school concept when mixed with older or younger children**
- **Boys, some evidence of negative effect for behaviour when mixed with younger children**



Conclusions

- **Academically, being taught in a multi-grade class has little effect**
- **But unpacking the difference by gender, it does seem that girls are under-performing when mixed with older grades**
- **Socially, there is some indication of differences – mainly for girls**
- **Girls being taught in multi-grade classes are more negative in their self-concept in terms of popularity and school performance**



Conclusions

- **Previous research has shown that multi-grade teaching is more challenging and stressful**
- **Academic effect is not marked but social effect more so, especially for girls**
- **Not just about managing different grades within multi-grade setting, but also different genders**
- **Need to take into account how boys and girls manage self-concept differently in any initial and continuing teacher training**



Thank you

Questions?