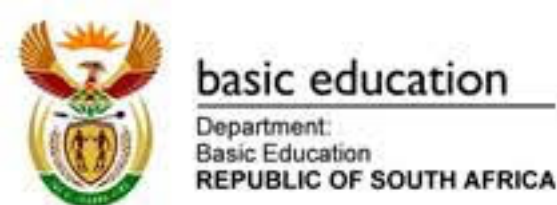




Have we reached gender equity in mathematics education?

Human and Social Dynamics Research
Seminar

22 March 2017

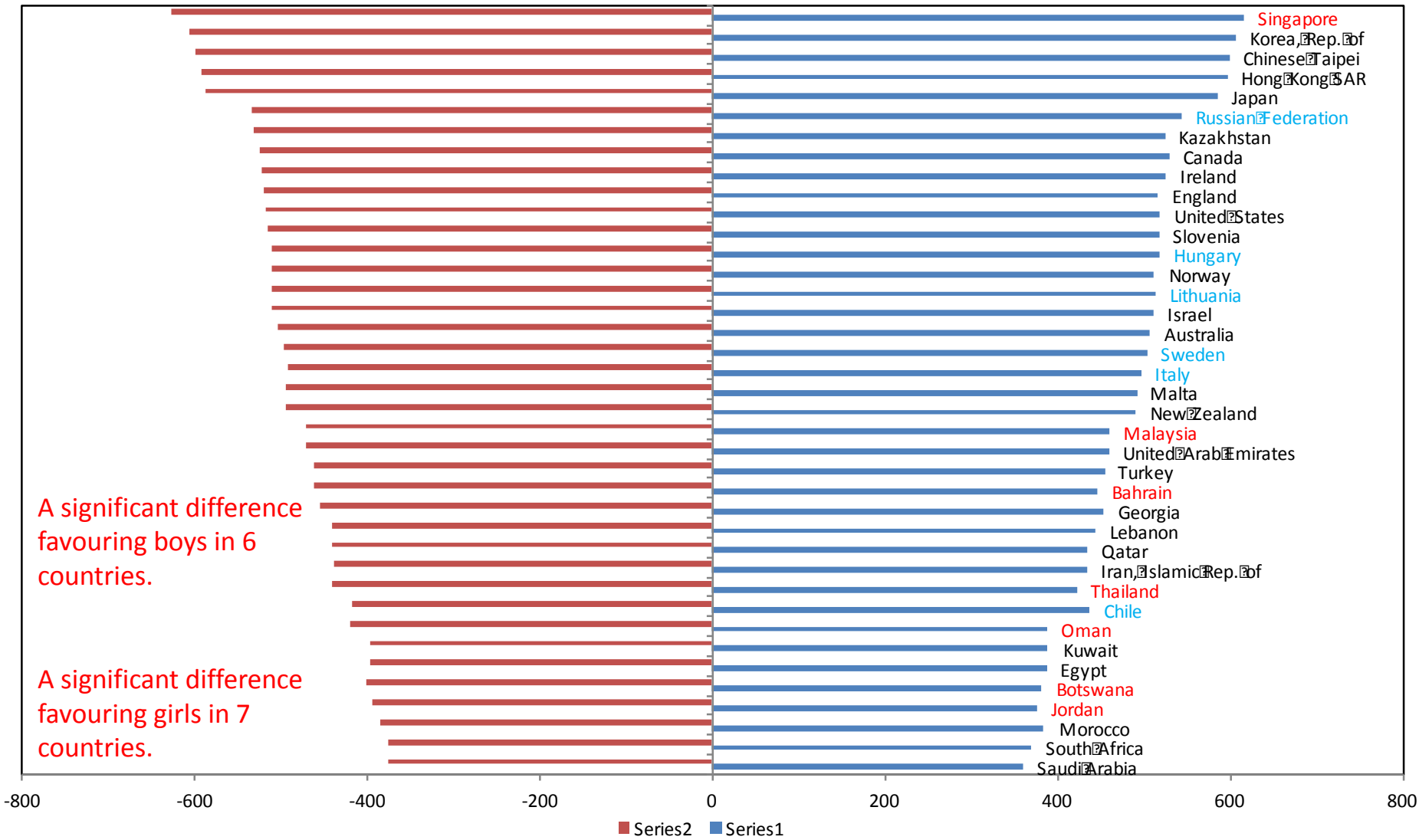


Outline of the presentation

- **International trends**
- **Local trends**
- **Gender and learner age**
- **Gender and learner attitudes**
- **Parental involvement**
- **School safety**
- **Conclusion**



International Gender Differences in Mathematics Achievement



Gender Differences in South Africa

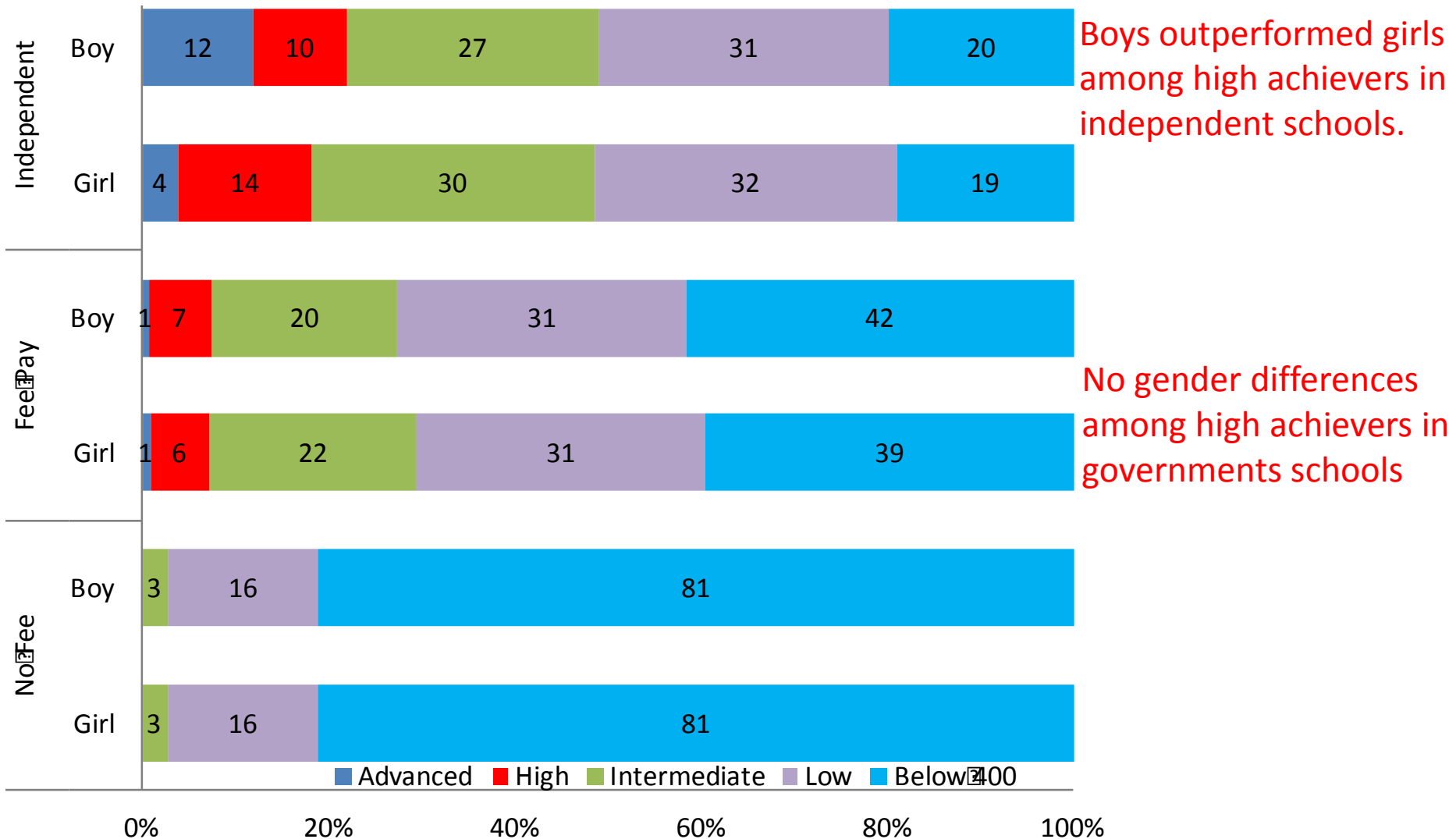
Mathematics		Below 400 (2011)	Below 400 (2015)
No Fee	Girl	87%	81%
	Boy	88%	81%
Fee Pay	Girl	54%	39%
	Boy	57%	42%
Independent	Girl	27%	19%
	Boy	31%	20%

Although gender gaps within school types were narrow, gender gaps across school types remained wide.

Girls from independent and fee paying schools were more academically advantaged than girls in no fee schools

The same pattern was found for boys.

Gender Differences in South Africa



Age, Gender and Achievement

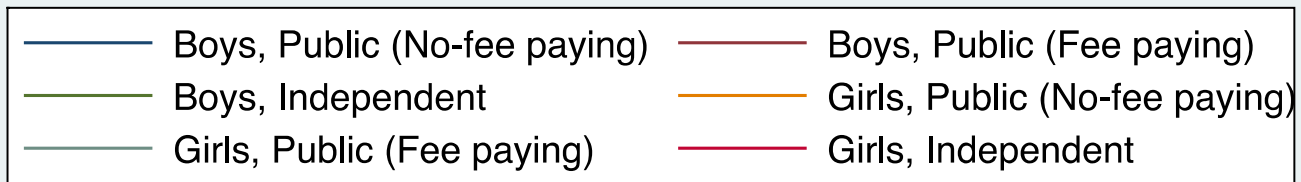
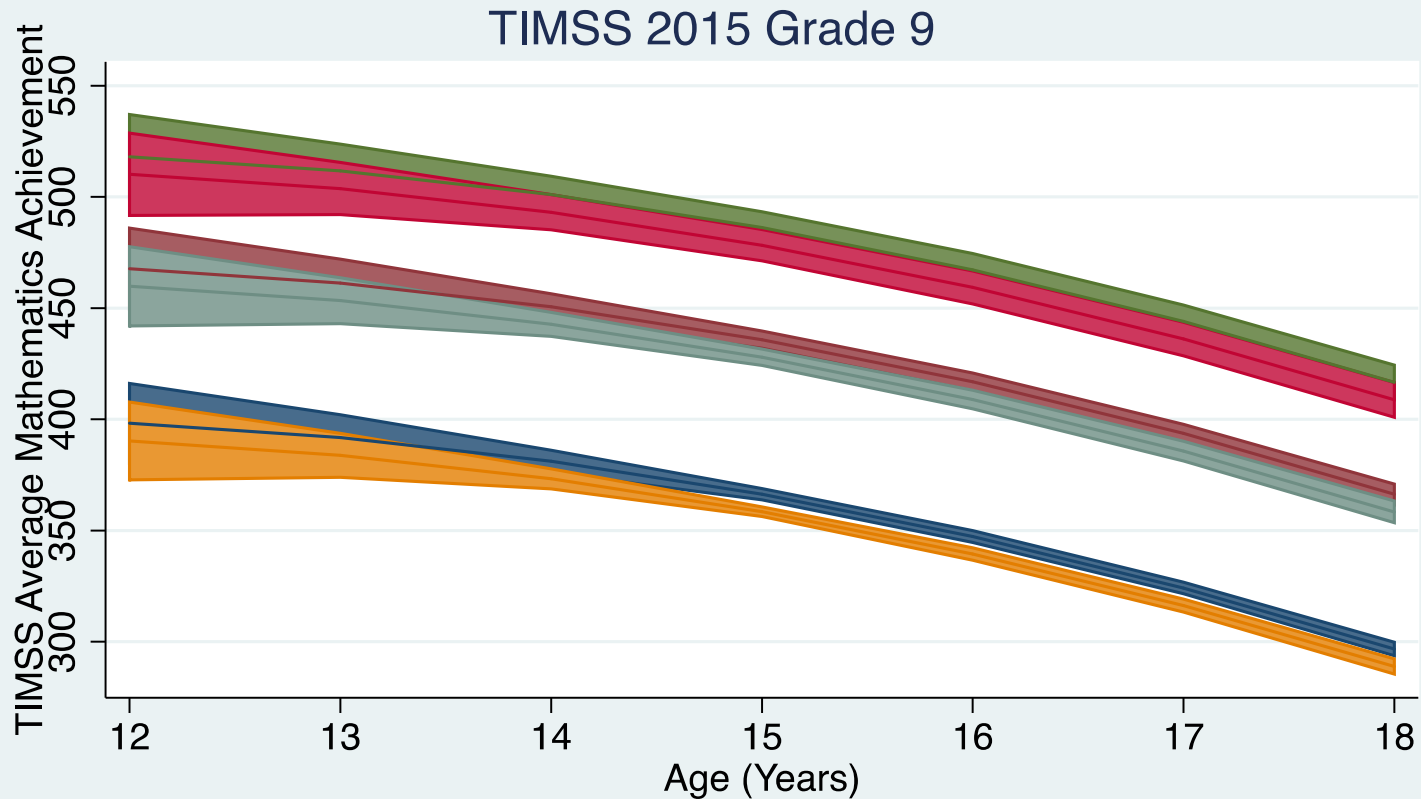
Average Learner Age	
No Fee	
Boys	16.2
Girls	15.6
Fee Pay	
Boys	15.5
Girls	15.2
Independent	
Boys	15.3
Girls	15.0

On average, Grade 9 boys were older than Grade 9 girls.

Either they start school later or they repeated a grade once or more.

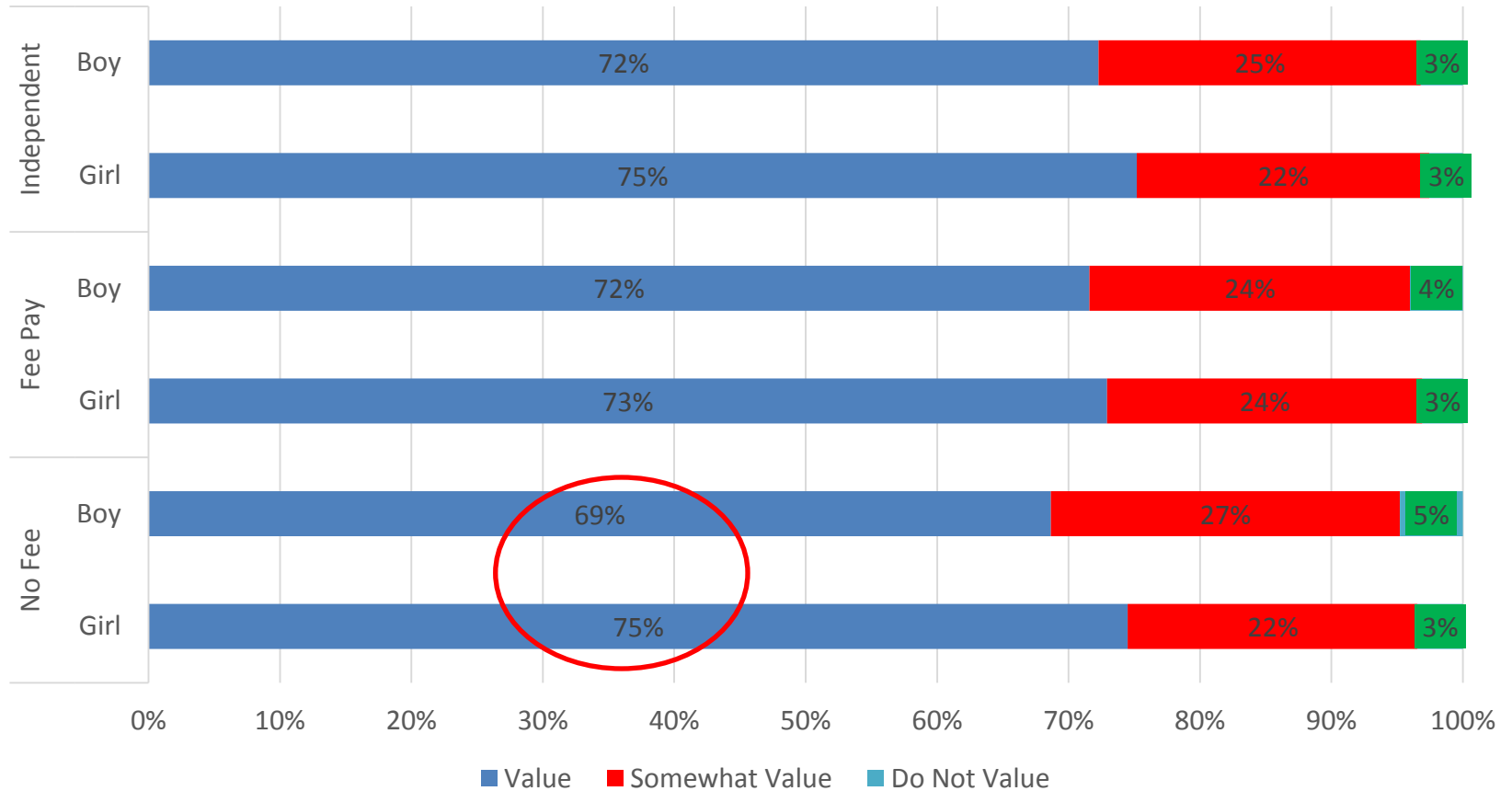
The biggest age differences were in no fee schools.

Age, Gender and Achievement



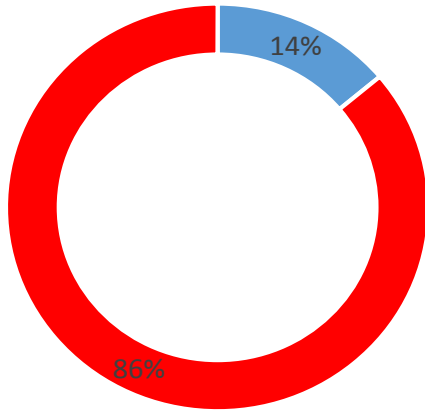
Gender and Learner Attitudes

Learner Value of Mathematics



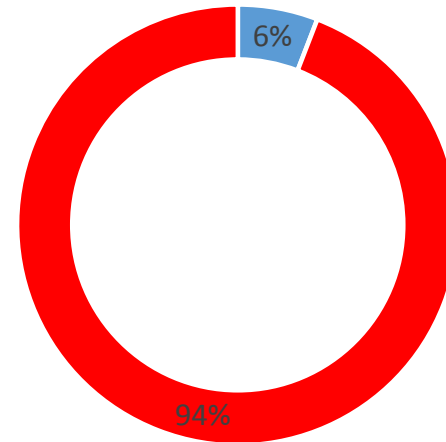
Gender and Learner Aspirations

Boys Independent



■ Less than First Degree ■ Finish First Degree or Higher

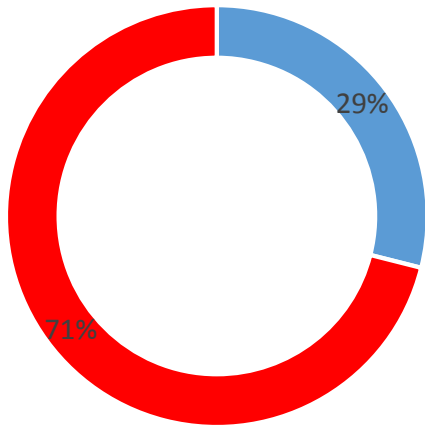
Girls Independent



■ Less than First Degree ■ Finish First Degree or Higher

Gender and Learner Aspirations

Boys' Aspirations

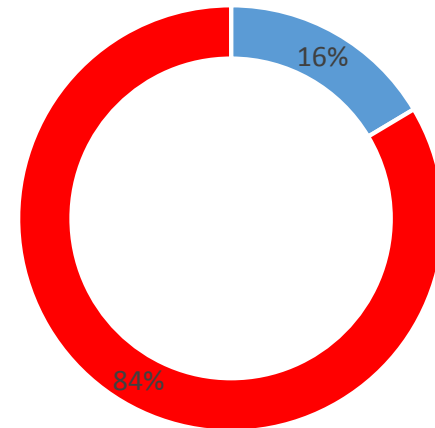


■ Less than First Degree ■ Finish First Degree or Higher

The percentage of boys and girls aspiring to tertiary studies was lower in government schools.

Girls were more optimistic about their academic careers.

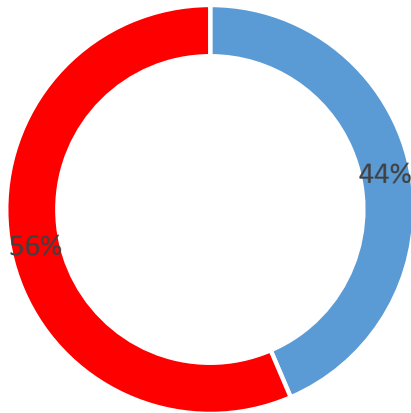
Girls' Aspirations



■ Less than First Degree ■ Finish First Degree or Higher

Gender and Learner Aspirations

Boys No Fee

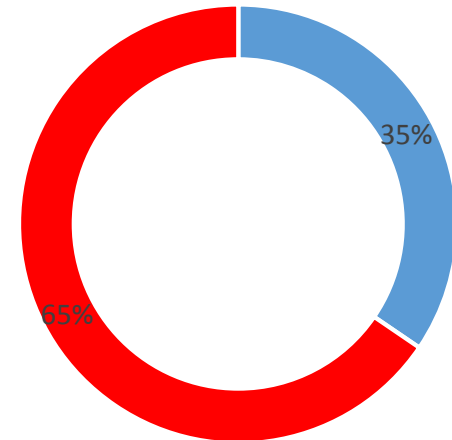


■ Less than First Degree ■ Finish First Degree or Higher

...but perhaps these boys had alternative career pathways in mind.

On average, boys in no fee schools had the lowest aspirations for traditional tertiary studies...

Girls No Fee



■ Less than First Degree ■ Finish First Degree or Higher

Gender and Parental Involvement

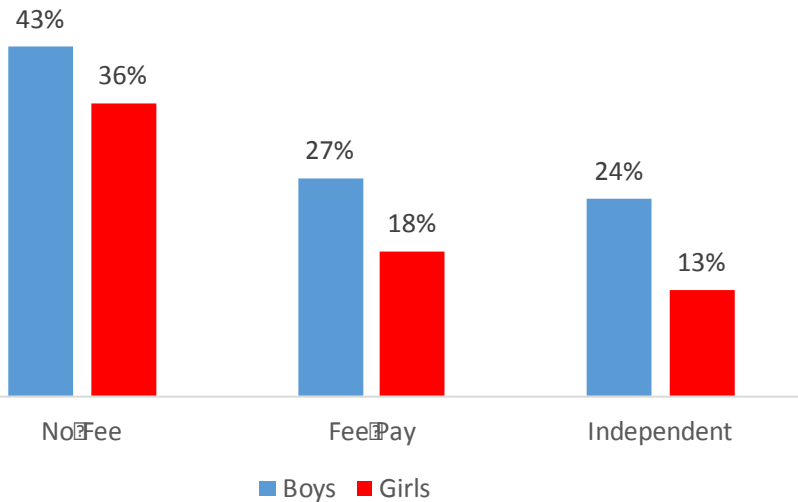
School Type	Parents Ask		Talk About School		Time for Homework	
	Boys	Girls	Boys	Girls	Boys	Girls
No-Fee						
Less Often	33%	31%	45%	38%	34%	28%
Every Day	62%	66%	48%	58%	59%	68%
Omitted/invalid	6%	3%	7%	4%	8%	4%
Total	100%	100%	100%	100%	100%	100%
Fee Paying						
Less Often	46%	45%	61%	52%	42%	35%
Every Day	51%	53%	35%	45%	54%	63%
Omitted/invalid	3%	2%	3%	2%	4%	3%
Total	100%	100%	100%	100%	100%	100%
Independent						
Less Often	52%	58%	70%	54%	44%	39%
Every Day	46%	41%	28%	46%	54%	60%
Omitted/invalid	2%	0%	2%	1%	2%	1%
Total	100%	100%	100%	100%	100%	100%

Girls were more likely to speak to an adult on a daily basis about school.

Girls also reported that parents set aside time for them to do their homework.

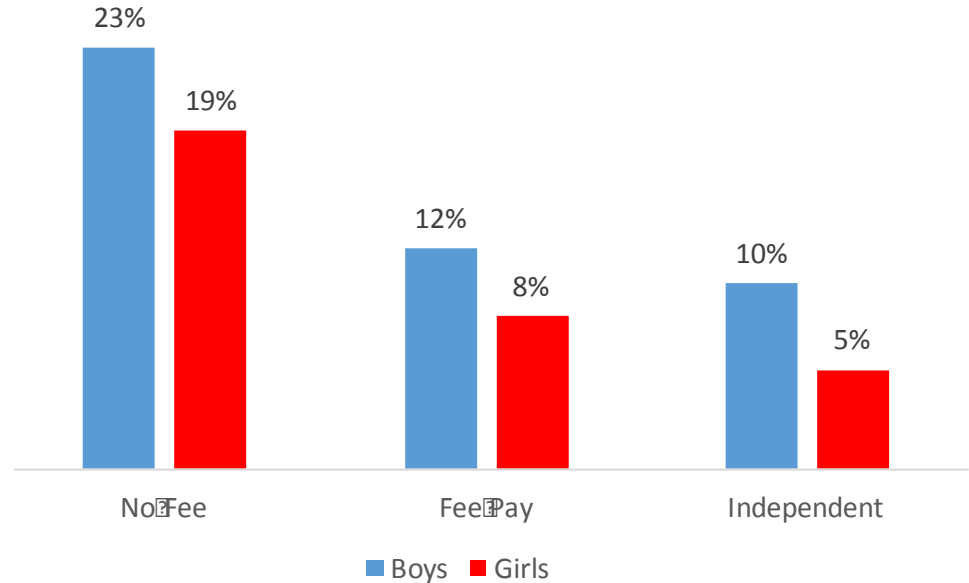
Gender and School Safety

Victims of Weekly Bullying
2011



Although there has been a general decline in bullying across time...

Victims of Weekly Bullying
2015



...bullying was experienced more regularly by South African boys in all school settings

Conclusions

- Raise performance
- Transform attitudes
- Improve the climate

Thank You