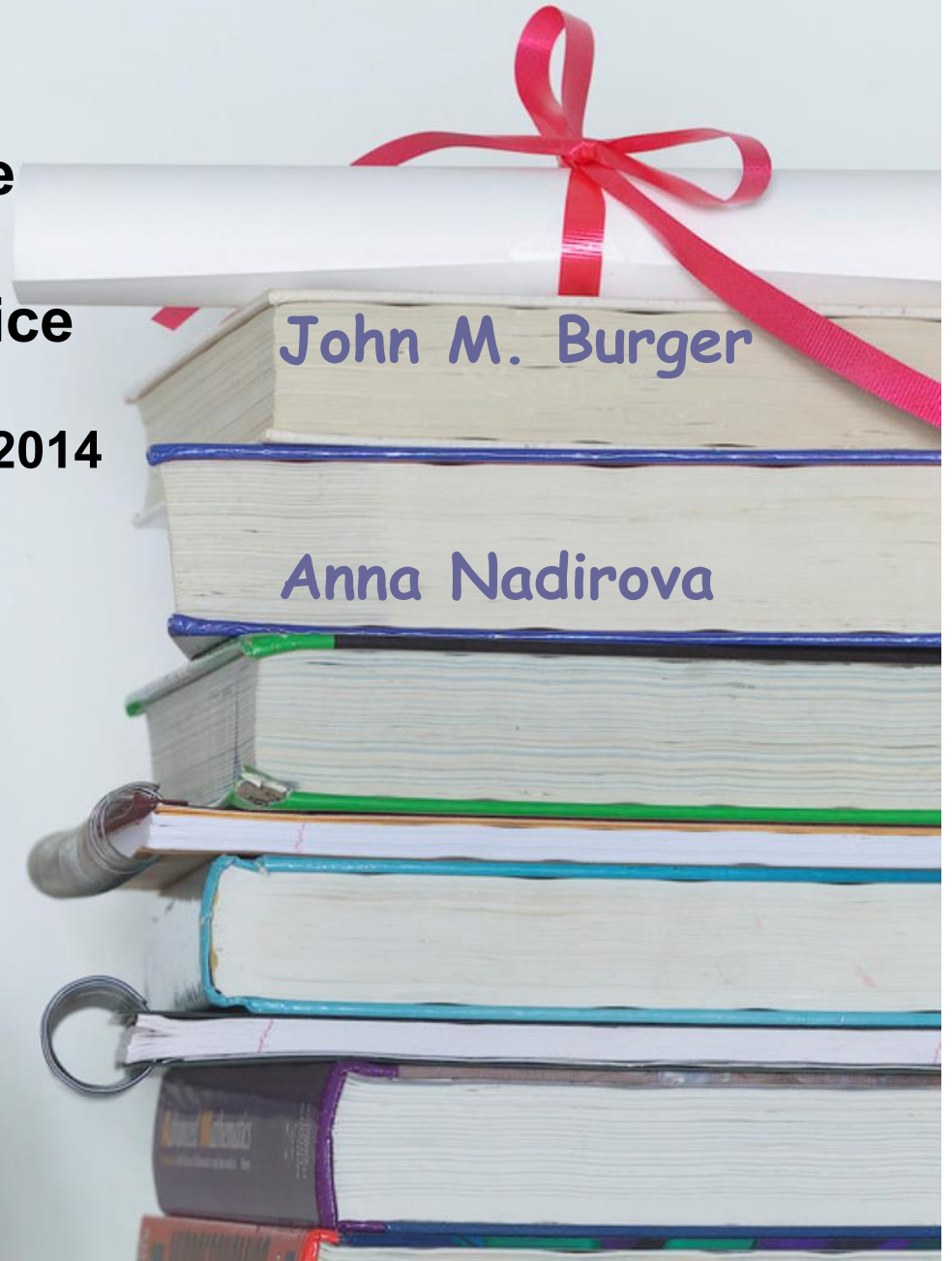


**Celebrating Collaborative
Research:
Using Data to Inform Practice**

Rocky View Schools, August 22, 2014

John M. Burger

Anna Nadirova

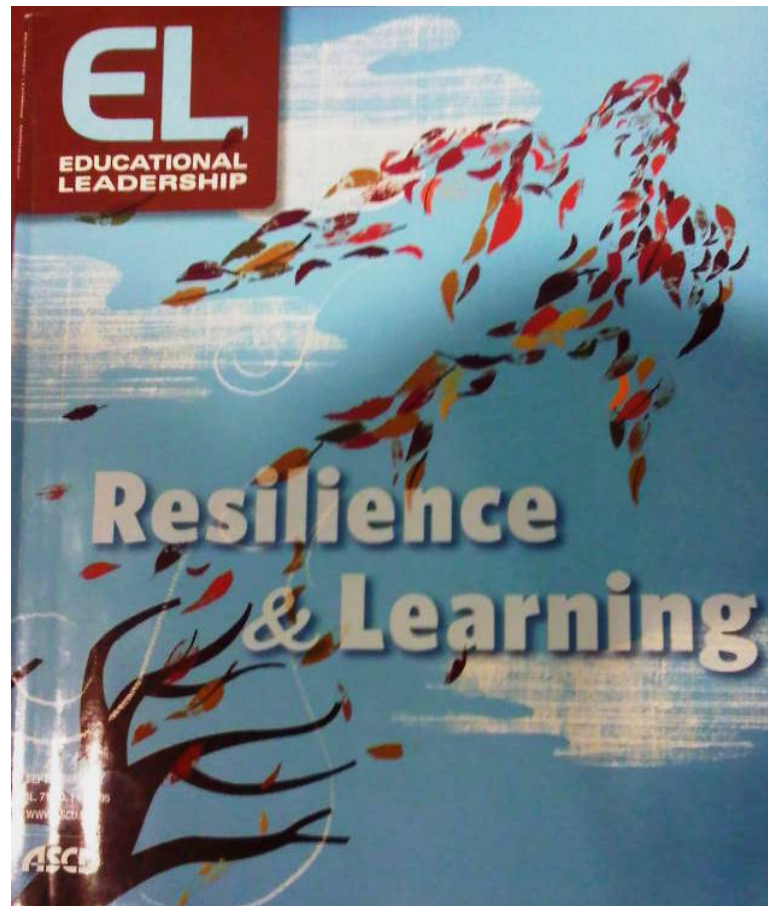


Growing emphasis on incorporating student socio-emotional component in education policy and practice to increase engagement and achievement

- “PISA results indicate that drive, motivation and confidence in oneself are essential if students are to fulfil their potential.” P.21
- “Teachers and school principals need to be able to identify students who show signs of lack of engagement with school and work with them individually before disengagement takes firm root.” P.22

Building Resilience
Influence of caring teachers
Connecting with troubled students
Unlearning helplessness [building self-confidence]

- September 2013 issue of Ed. Leadership



Non-Cognitive Assessments for Evidence-Based Decisions



- Educators and policymakers are increasingly interested in developing students' ***non-cognitive skills*** in support of academic success and long-term life outcomes (Yeager et al., 2013).
- Research has shown that non-cognitive factors predict grades in K-12, as well as social outcomes (Caprara et al., 2000).
- ***Non-cognitive qualities*** include: persistence, resilience, dependability, motivation, the ability to work with others, self-confidence, social connectedness, etc.
- Application of ***non-cognitive assessments*** measuring non-cognitive qualities is key for the “operationalization” of strategies and interventions directed at increased student engagement.

SOS-Q PURPOSE and APPLICATION



Student Orientation to School Questionnaire (SOS-Q)

**a non-cognitive assessment developed and tested
in Alberta collaboratively with schools**

SOS-Q Purpose:

- Diagnose students at risk of disengaging from school and research customized interventions to support student connectedness with school

SOS-Q Application:

- Supplement “conventional” measures
- Supports individual and cohort diagnostics of facilitators of student engagement

WHY SOS-Q ?



User-Friendly: SOS-Q is comprehensive (measures a broad range of non-cognitive skills), concise and easy to use (takes about 15 – 20 minutes to complete)

Student Centered: Was developed based on extensive input from students as well as educators

Flexible/Dynamic: Allows identification of individual students for diagnostics and self-assessment as well as work with cohorts (classrooms, grades, schools, etc.)

Connects to Real Achievement Data:

Allows linking individual SOS student data to classroom, provincial and other assessments – does not rely on student self-reported achievement

Puts Data at Educators' Fingertips:

Allows principals and staff to “slice and dice” data and generate results and reports based on their specific needs

SOS-Q DEVELOPMENT + VALIDATION



- SOS-Q was piloted and refined by Alberta Education over four years, 2003-2007
- Normed in Alberta and Canada in 2008 and 2009
- Two year research pilot in RVS 2011-13
- Scaling up research in RVS 2013-15
- **Upper-elementary (grade 4-6)** finalized version of the questionnaire includes 42 items
- **Junior-senior high (grade 7-12)** finalized version of the questionnaire includes 55 SOS items + an optional 11-item Balancing Work and School scale

SOS Q: SUB-SCALES

UPPER-ELEMENTARY AND JUNIOR-SENIOR HIGH

SAFE AND CARING SCHOOL	Students' perception of school environment – the academic and social setting of a school that support the welfare of students
PEERS	Perceived supports from friends and ability to get along with peers
SELF-CONFIDENCE	Students' conviction that they are capable and well-positioned to be successful at school and beyond
EXTERNAL RESILIENCE	Perceived ability to cope and adapt successfully in the face of challenges
INTERNAL RESILIENCE	Perceived ability to resist anxiety and maintain internal emotional and mental balance

SOS Q: SUB-SCALES UNIQUE TO JUNIOR-SENIOR HIGH

UTILITY OF SCHOOL	Students' sense of usefulness of school
EXTRA-CURRICULAR ACTIVITIES	Student participation in and perceived value of extra-curricular activities
WORK-SCHOOL INTEGRATION	Students' sense that work and school experiences are positive and complementary
HANDLING WORK-SCHOOL PRESSURES	Perceived challenges and outcomes of balancing work and school

SOS-Q at-Risk of Disengagement Student Profiles

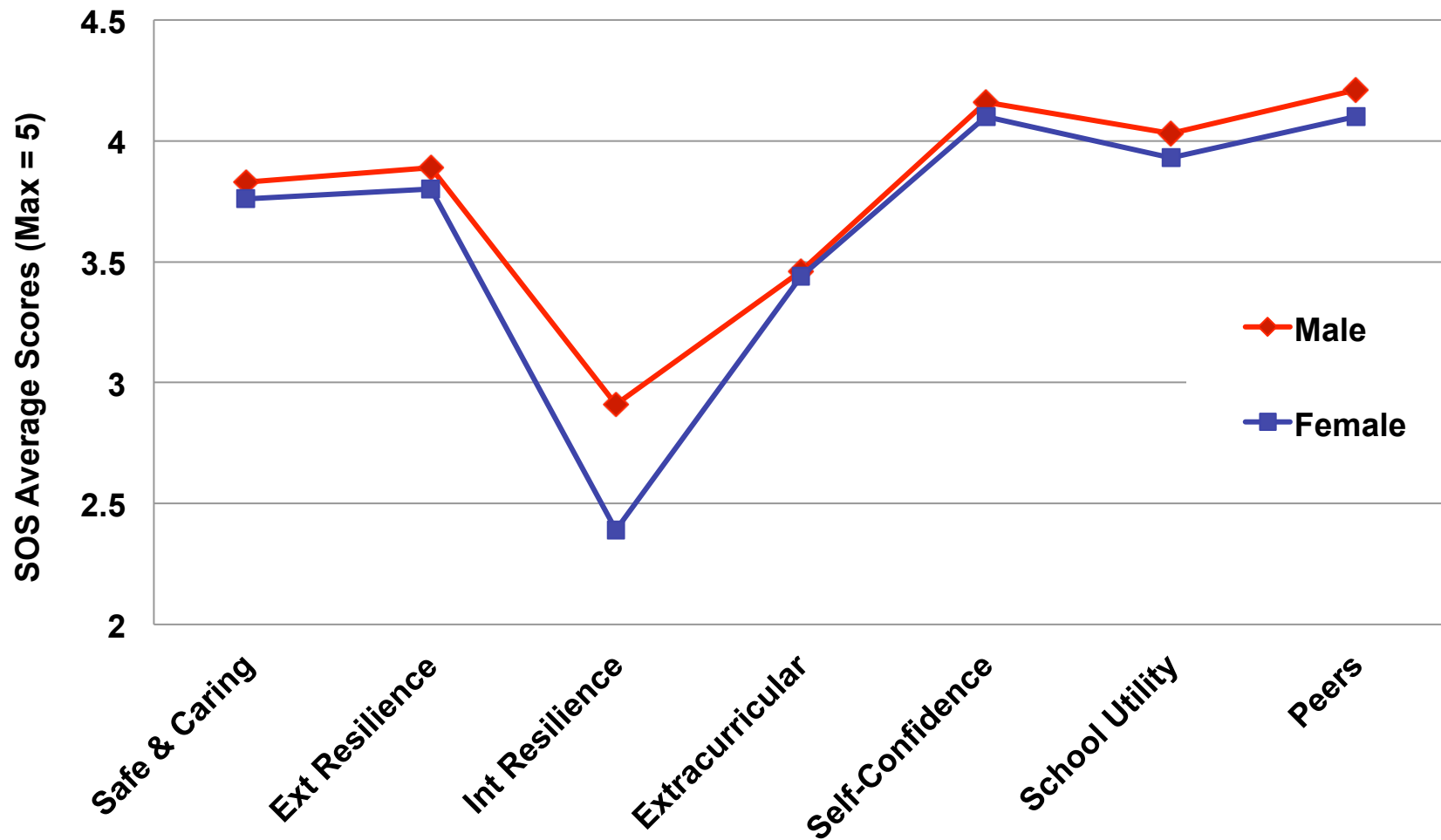
Safe/care	Safe/c Z	Self-Con	Self-C Z	Ext. Res	Ext.R Z	Int Res	Int Res Z	Peers	Peers Z	Total z
2.75	-1.90	1.83	-4.16	2.71	-1.91	2.00	-1.10	1.20	-4.51	-2.72
2.50	-2.26	2.17	-3.60	1.86	-3.29	2.40	-0.65	1.80	-3.58	-2.68
2.50	-2.26	2.92	-2.33	1.43	-3.99	1.60	-1.55	2.20	-2.97	-2.62
2.42	-2.39	2.67	-2.75	1.71	-3.53	2.00	-1.10	2.20	-2.97	-2.55
3.25	-1.16	2.25	-3.46	1.71	-3.53	1.40	-1.78	2.40	-2.66	-2.52
2.58	-2.14	3.25	-1.76	2.00	-3.06	1.00	-2.22	2.40	-2.66	-2.37
2.33	-2.51	3.00	-2.19	3.00	-1.45	2.00	-1.10	2.60	-2.35	-1.92
2.17	-2.75	3.42	-1.48	3.29	-0.99	2.00	-1.10	3.20	-1.43	-1.55
3.08	-1.41	3.42	-1.48	1.86	-3.29	1.80	-1.33	4.00	-0.20	-1.54
3.42	-0.92	2.83	-2.47	1.71	-3.53	3.80	0.92	3.40	-1.12	-1.42
3.25	-1.16	3.08	-2.05	2.86	-1.68	1.80	-1.33	3.80	-0.51	-1.34
3.58	-0.67	3.25	-1.76	2.29	-2.60	2.00	-1.10	3.80	-0.51	-1.33
3.92	-0.18	3.42	-1.48	2.86	-1.68	1.40	-1.78	3.40	-1.12	-1.25
2.08	-2.88	3.92	-0.63	3.14	-1.22	1.60	-1.55	4.20	0.11	-1.23
3.08	-1.41	3.25	-1.76	3.14	-1.22	3.20	0.25	3.40	-1.12	-1.05

SOS-Q High Engagement Student Profiles

Safe/care	Safe/c Z	Self-Con	Self-C Z	Ext. Res	Ext.R Z	Int Res	Int Res Z	Peers	Peers Z	Total z
5.00	1.41	5.00	1.20	4.86	1.54	1.20	-2.00	5.00	1.34	0.70
4.92	1.29	4.17	-0.21	4.71	1.31	3.60	0.70	4.40	0.42	0.70
4.75	1.04	4.08	-0.35	4.00	0.16	4.20	1.37	5.00	1.34	0.71
4.92	1.29	4.42	0.21	4.14	0.39	3.60	0.70	4.80	1.03	0.72
4.00	-0.06	4.42	0.21	4.14	0.39	4.80	2.04	4.80	1.03	0.72
5.00	1.41	4.50	0.36	4.14	0.39	3.40	0.47	4.80	1.03	0.73
4.75	1.04	4.58	0.50	4.71	1.31	2.80	-0.20	4.80	1.03	0.74
4.83	1.17	4.92	1.06	5.00	1.77	2.20	-0.88	4.60	0.72	0.77
4.92	1.29	4.92	1.06	4.43	0.85	2.60	-0.43	5.00	1.34	0.82
4.25	0.31	4.67	0.64	4.57	1.08	4.80	2.04	4.20	0.11	0.84
4.42	0.55	4.75	0.78	4.71	1.31	4.20	1.37	4.40	0.42	0.89
4.25	0.31	4.92	1.06	5.00	1.77	3.00	0.02	5.00	1.34	0.90
4.58	0.80	4.75	0.78	4.71	1.31	4.60	1.82	4.00	-0.20	0.90
4.33	0.43	4.42	0.21	4.57	1.08	4.40	1.60	5.00	1.34	0.93
4.67	0.92	4.50	0.36	4.43	0.85	4.80	2.04	4.60	0.72	0.98
4.83	1.17	4.83	0.92	4.43	0.85	3.60	0.70	5.00	1.34	1.00
4.25	0.31	4.67	0.64	5.00	1.77	3.80	0.92	5.00	1.34	1.00
4.75	1.04	4.75	0.78	4.29	0.62	4.40	1.60	4.80	1.03	1.01
4.67	0.92	5.00	1.20	5.00	1.77	3.40	0.47	4.60	0.72	1.02
4.75	1.04	4.83	0.92	4.57	1.08	5.00	2.27	4.00	-0.20	1.02

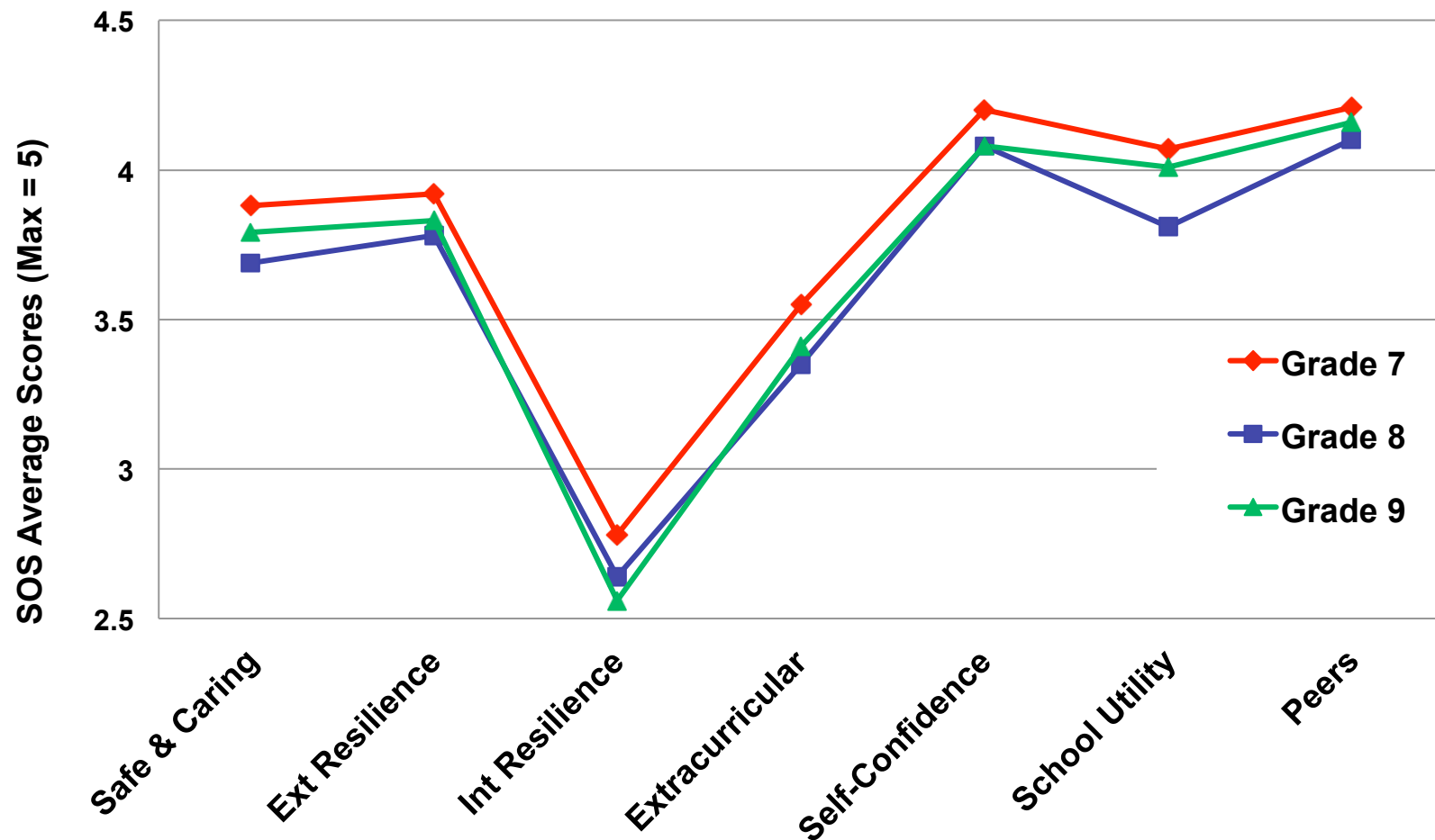
SOS in Various RVS Student Groups: GENDER

Student Orientation to School by Gender (Grades 7, 8 and 9; N = 1084)



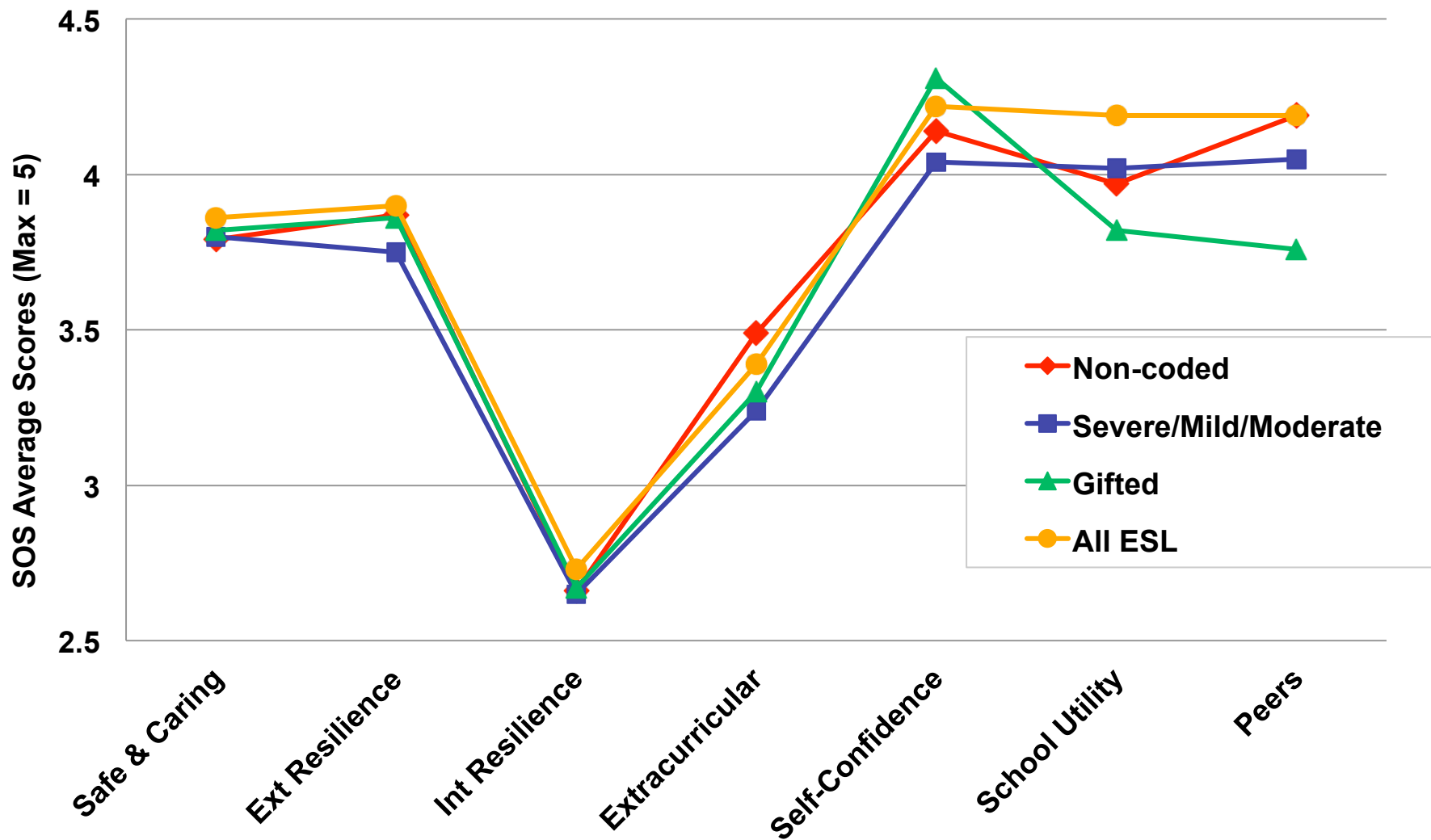
SOS in Various RVS Student Groups: GRADE

Student Orientation to School by Grade (N = 1084)



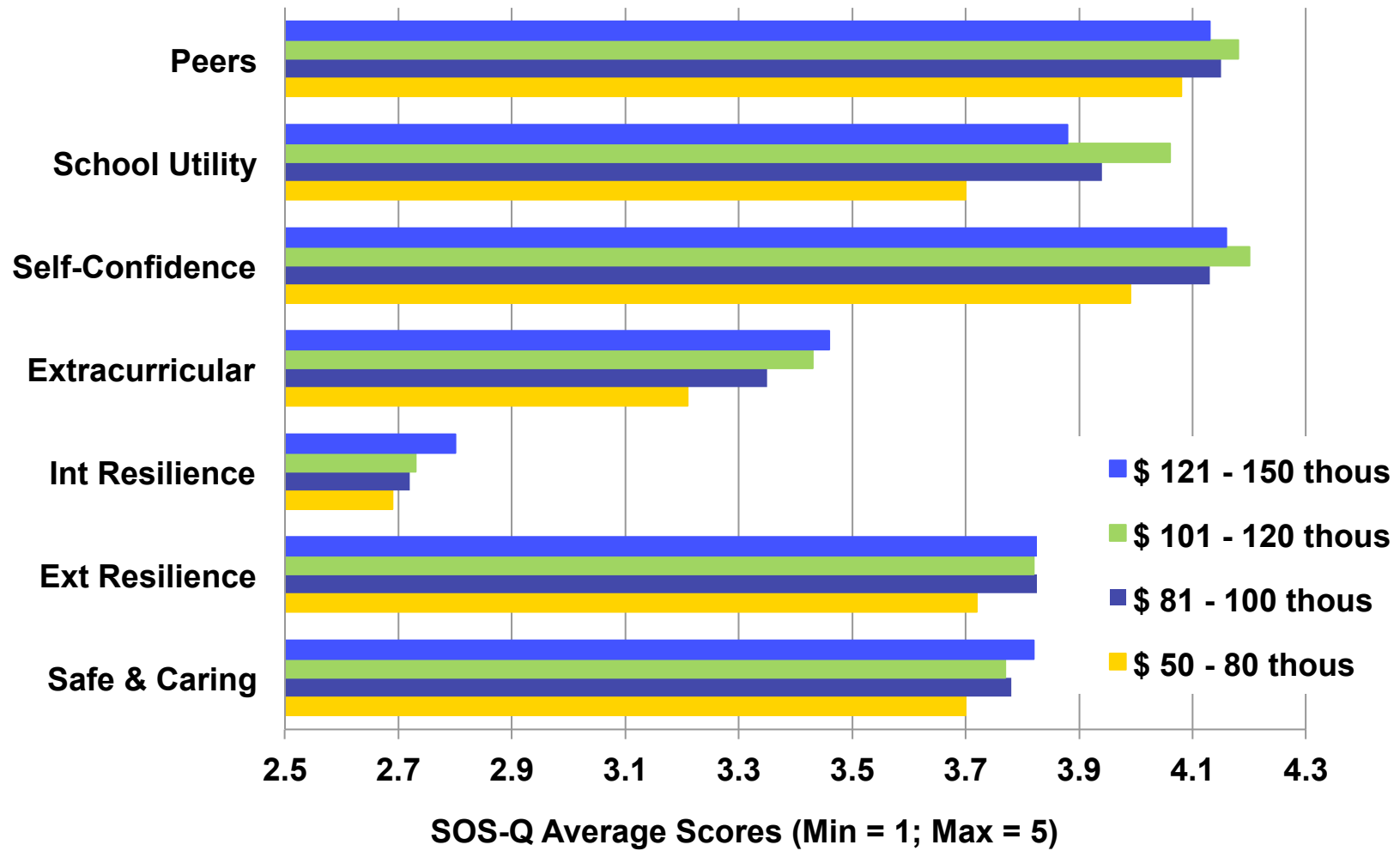
SOS in Various RVS Student Groups: CODED AND NON-CODED

Student Orientation to School in Various Student Groups (Grades 7, 8 and 9; N = 1072)



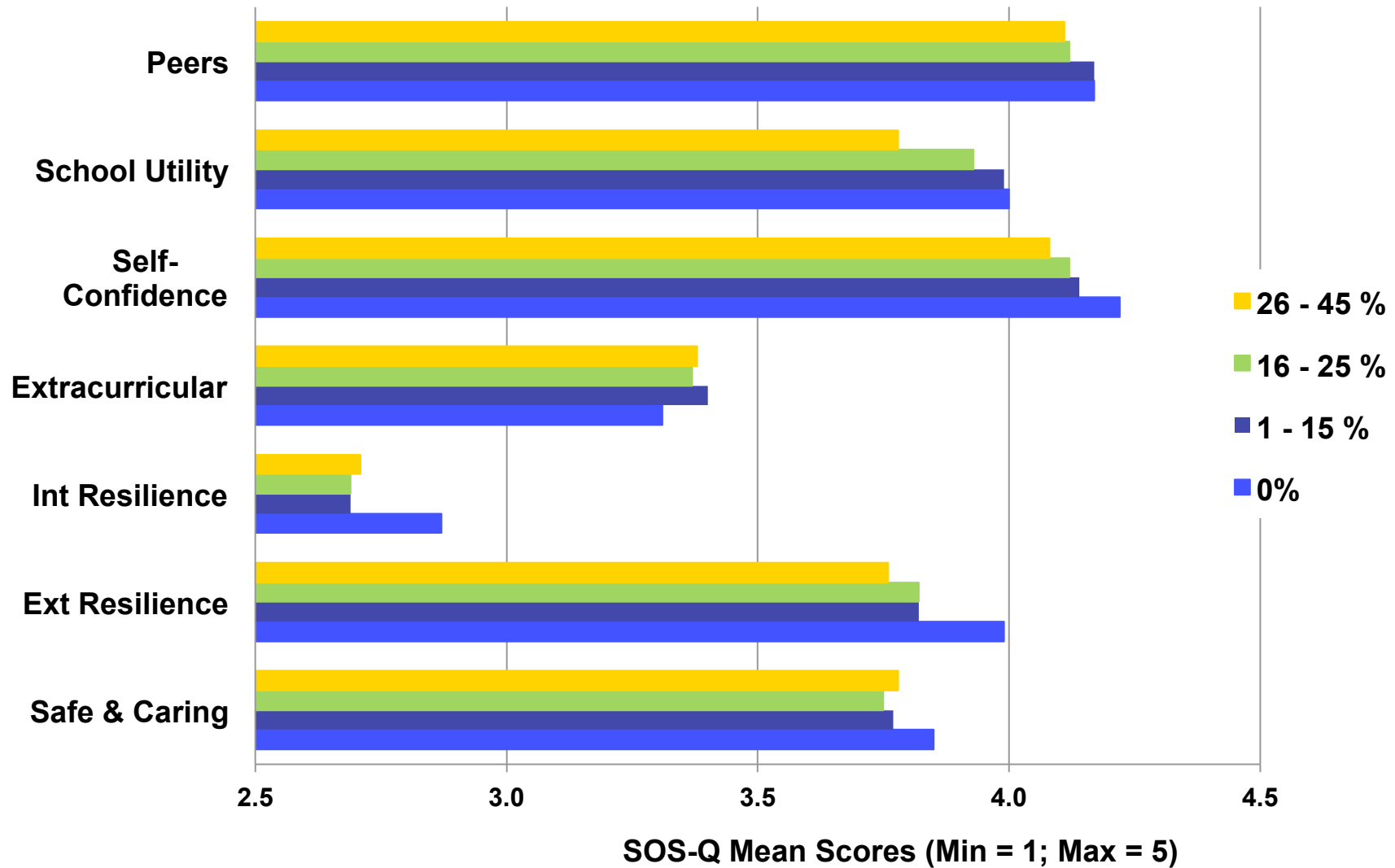
SOS by Socio-Economic Status: AVERAGE FAMILY INCOME (2 RVS Schools)

Student Orientation to School by Average Family Income (Grade 7, 8 and 9)



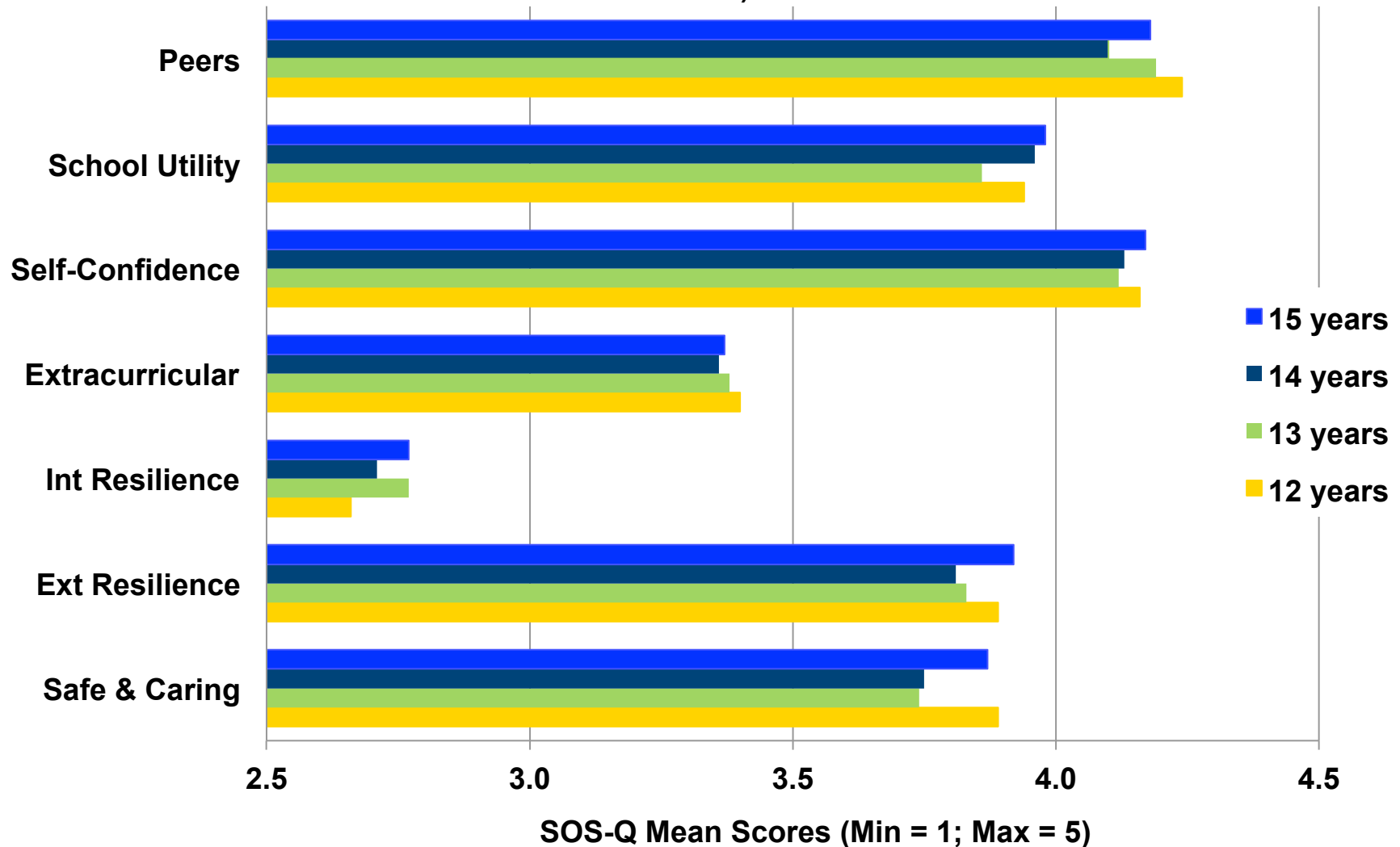
SOS by Socio-Economic Status: PERCENT OF LONE PARENT FAMILIES (2 RVS Schools)

Student Orientation to School by % Lone Parent Families (Grade 7, 8 and 9)



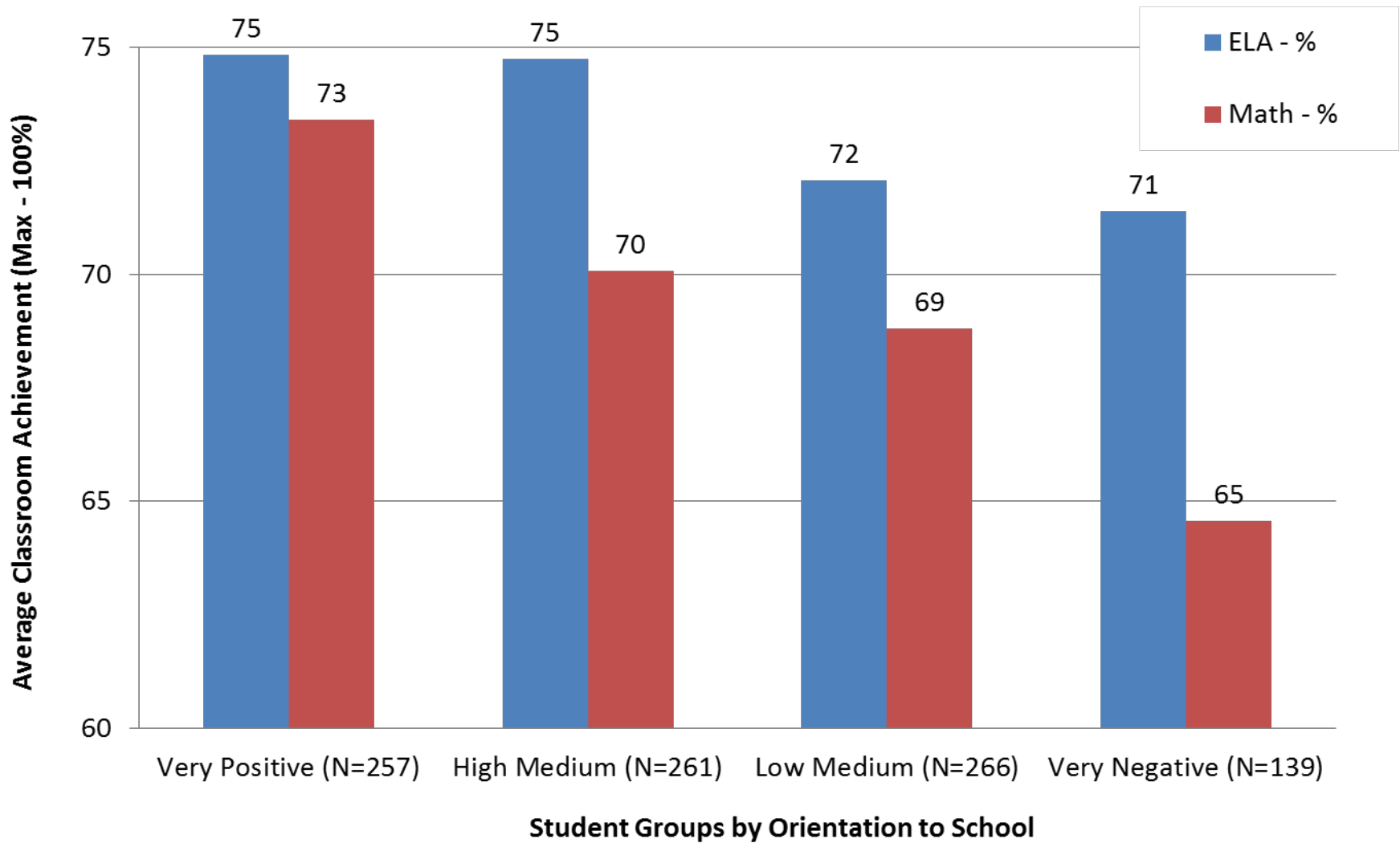
SOS by Socio-Economic Status: AVERAGE YEARS OF MOTHER EDUCATION (2 RVS Schools)

Student Orientation to School by Average Years of Mother Education (Grade 7, 8 and 9)

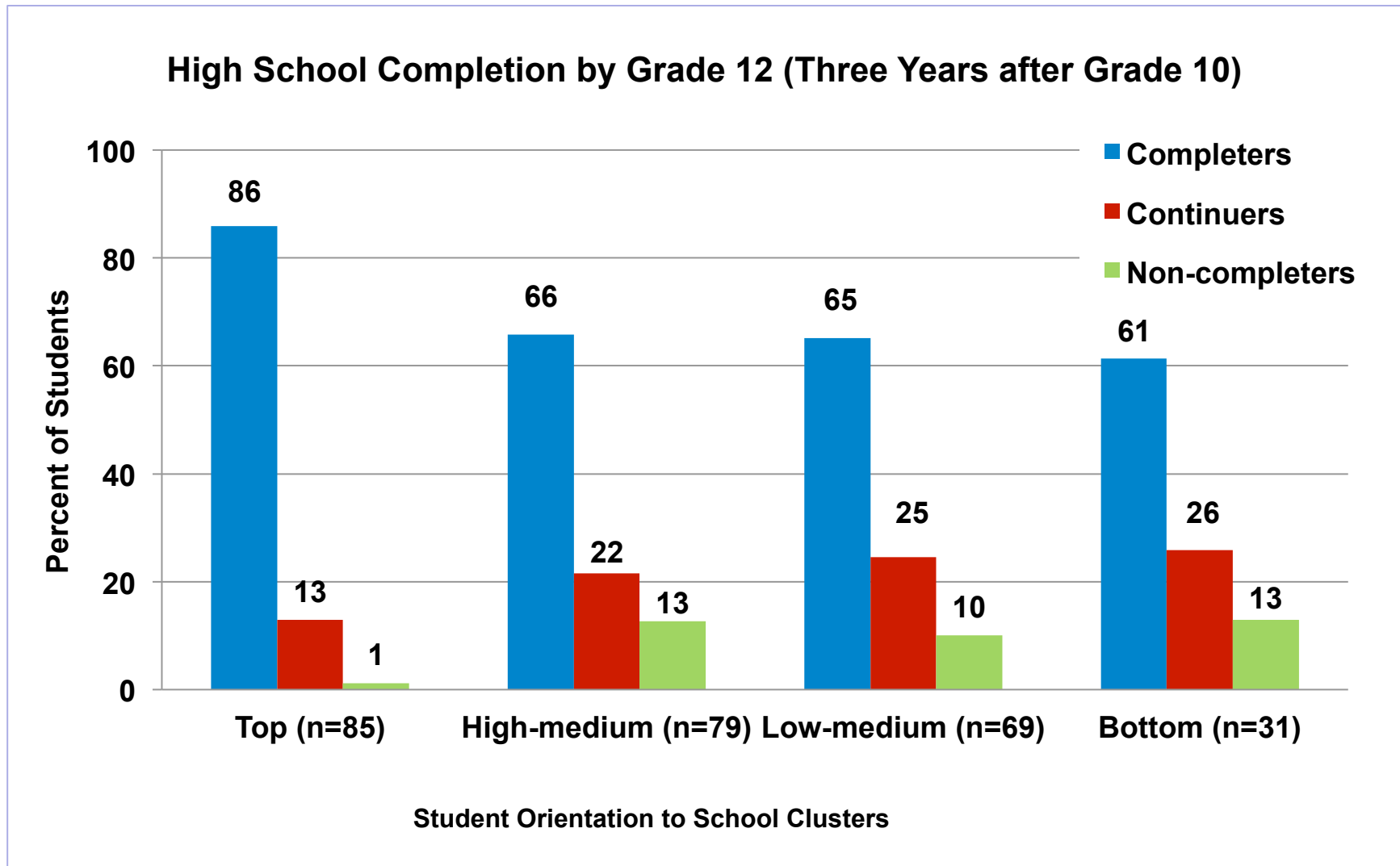


SOS and Classroom Achievement

Classroom Achievement and Student Orientation to School (Grade 7, 8 and 9; N = 923)



High School Completion by 4 SOS-Q Clusters



Qualitative Action Research

- Rocky View Schools (RVS) with a \$45,000 grant from the Alberta Health School Communities Wellness Fund, is engaging in action research on innovative ways to use SOS-Q data to better support students at risk of disengaging from school.
- Currently, 18 schools have administered the SOS-Q in 2013-14.
- Two sessions with CDA's and school administrators have been held to brain-storm intervention supports for disengaging students.
- The SOS-Q Manual has been re-written as an RVS document capturing RVS staff input.

One Schools Analysis

Student Name	safe/careZ	Ext Res Z	Int Res Z	Ext Curr Z	Self-Con Z	Util Sch Z	Peers Z	Total Z	6 PAT Math %	6 PAT ELA %
AH	-0.90	-1.23	-2.28	1.20	-1.07	-0.99	-3.71	-1.28	78	82
NL	-0.20	-0.26	1.21	-2.24	0.57	-3.73	-2.10	-0.96	94	83
RS	-0.80	0.02	0.63	-1.50	-1.07	-2.90	0.73	-0.70	96	77
HS	-0.40	-1.51	-0.24	1.20	-0.25	-0.16	-0.08	-0.21	82	81
JL	0.59	-0.12	1.50	-1.99	0.30	-0.16	0.73	0.12	92	76
RJ	1.59	1.82	-1.99	1.93	1.39	0.93	-3.71	0.28	93	75

- Results show our project cohort (code 80)
- Of interest to us was that most of our gifted students reported low overall z-scores.
- The SOSQ data paints a picture for us that would likely have been overlooked.
- Met with each student and developing strategies to engage them more fully.

CONCLUSIONS

- ✓ 1. Rocky View Schools has assumed copyright and ownership of the SOS-Q instruments.
- ✓ 2. Distinct student profiles illustrate the diagnostic potential of the SOS-Q for identifying students at risk of disengaging from school.
- ✓ 3. Develop on-line versions of the SOS-Q and effect research partnerships with other jurisdictions.
- ✓ 4. Capture SOS-Q data as key inputs to the Student Information System.

Additional Reading

Measuring Students' Orientation to School to Improve High School Completion.”
Cass Connection Magazine.

http://o.b5z.net/i/u/10063916/f/New%202012%20Files/Spring_2008.pdf (p.30)

•“Supporting Students Emotional Connection to School.” Canadian Assoc. of School Administrators Magazine, p. 27 @

http://www.edline.net/files/_mFB4F_/be84f7cf4b30e83745a49013852ec4/LL_Mag_2011-2012_Winter.pdf (p.27)

•“Moving Beyond Achievement Data: Development of the Student Orientation to School Questionnaire as a Noncognitive Assessment Tool.” Journal of Psychoeducational Assessment @ <http://jpa.sagepub.com/content/30/4.toc> on p. 367.

•Ross Green. Lost at School. <http://www.lostatschool.org/>