Interpretive Discussion of Mission's EDI Change Maps

Change maps for Mission are based on the results and comparisons of Cycle 1 (2003) & Cycle 2 (2006) EDI assessments of kindergarten children in

School District #75

Mapping Early Child Development

- Involves mapping child development, socio-economic characteristics and community assets of communities.
- The EDI (Early Development Instrument) is the child development portion of the mapping project.
- Measuring children's readiness for school is important because it reflects children's early development and it can predict their performance later in life.

The 5 Domains of the EDI

- The EDI has 5 scales that are derived from the domains of ECD recognized in the Convention on the Rights of the Child.
  - Physical Health and Well-Being
  - Social Competence
  - Emotional Maturity
  - Language and Cognitive Development
  - Communication Skills and General Knowledge

Mapping Child Development

- Teachers complete a checklist for each child that measure's a child's development in the 5 domains.
- The data from each assessment is then 'cleaned-up' and aggregated at the school, neighbourhood, and school district (site) level.
- We work with the neighbourhood and district level data – Mission has 7 distinct neighbourhoods.

Mapping Child Development…

- The aggregated neighbourhood and site data is partitioned into quintiles and is measured against the provincial normative data set accumulated over cycle 1 and cycle 2.
- Average and vulnerability cut-offs have been established based on the range of EDI scores provincially (HELP) – and nationally (Offord).
- Vulnerability or ‘at risk’ is defined as the lowest 10% of the last quintile (bottom 20%).

Mapping Child Development...

- Mission is one of only a few districts in the province that has improved its averages and decreased its vulnerabilities in many domains for many neighbourhoods
  - Provincially, Mission (SD #75) has moved up 1 quintile to now rank amongst average districts.
  - In many neighbourhoods these average scores have increased by over .5 and vulnerabilities have decreased by over 10%.
  - These figures equate to ‘considerable change’ and are of ‘extreme interest’.

Mapping Child Development...

- Even with this great news vulnerabilities have increased in 2 neighbourhoods – marginally in Silverhill and moderately in Hatzic.
- Oddly, both these neighbourhoods ranked very well in cycle1.

Deciphering the Maps!

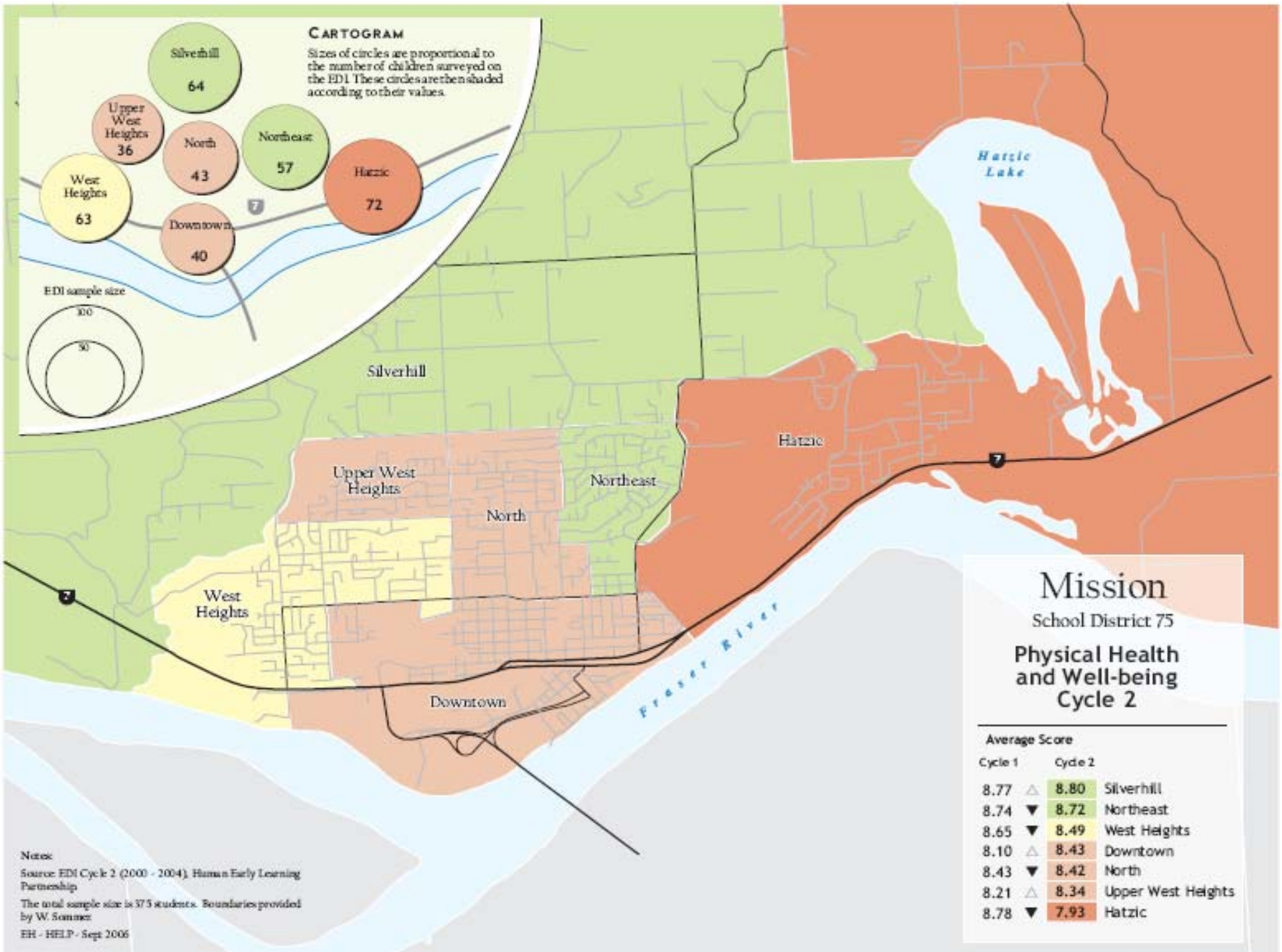
- The maps show the most urbanized neighbourhoods and a small portion of the two rural neighbourhoods.
- These neighbourhoods are colour coded to the legend that represents cycle1/2 average scores and % of children deemed vulnerable.
- The colours of the neighbourhoods are ranked at the provincial norms. Dark green is the upper most quintile (falls within highest scores or % most ready for school entry) and dark red is the bottom most quintile (falls within the lowest scores or % least ready for school entry – with the bottom 10% being vulnerable or at risk) .

Deciphering the Maps!

- For average scores we are looking for the average between cycles to increase and the range between neighbourhoods to decrease.
- For vulnerabilities we are looking for the % vulnerable to decrease and the range between neighbourhoods to decrease.

Physical Health & Well-Being

- Measures fine and gross motor development; levels of energy; daily preparedness for school (tired, late, hungry); washroom independence; and established handedness.
- Some community factors that may impact this domain are: access to formalized recreation services; food security; and access to safe, outdoor play spaces.


CARTOGRAM
Sizes of circles are proportional to the number of children surveyed on the EDI. These circles are then shaded according to their values.
Silverhill 64
Upper West Heights 36
North 43
Northeast 57
Hatzic 72
West Heights 63
Downtown 40
EDI sample size
100
50
Hatzic Lake
Silverhill
Hatzic
Upper West Heights
Northeast
North
West Heights
Downtown
Fraser River
Mission
School District 75
Physical Health and Well-being
Cycle 2
Average Score
Cycle 1
Cycle 2
8.77 △ 8.80 Silverhill
8.74 ▼ 8.72 Northeast
8.65 ▼ 8.49 West Heights
8.10 △ 8.43 Downtown
8.43 ▼ 8.42 North
8.21 △ 8.34 Upper West Heights
8.78 ▼ 7.93 Hatzic
Notes:
Source: EDI Cycle 2 (2000 - 2004), Human Early Learning Partnership
The total sample size is 375 students. Boundaries provided by W. Sommer.
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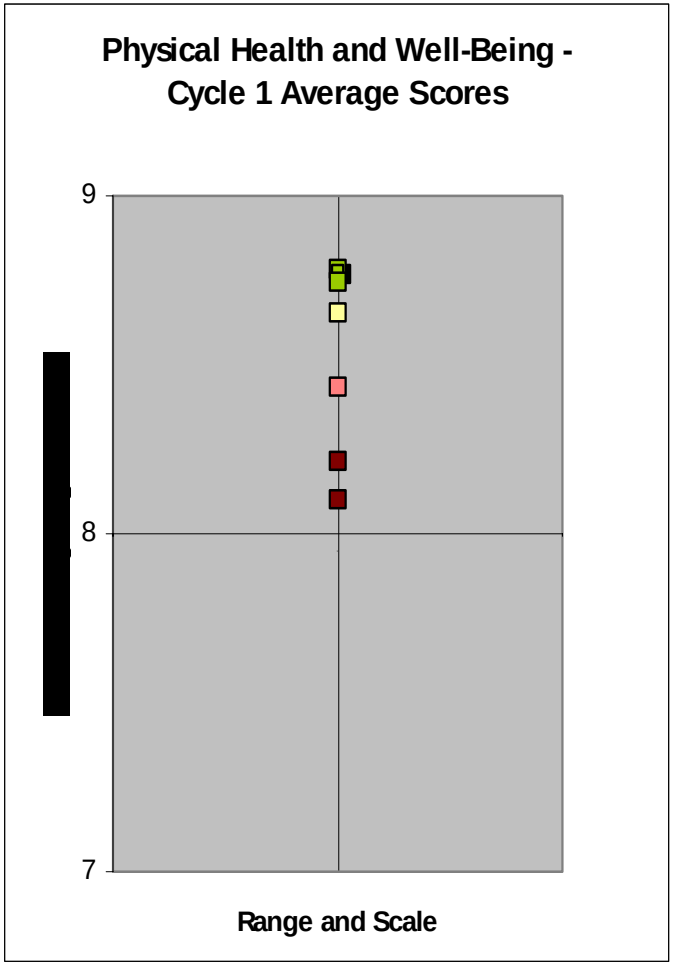
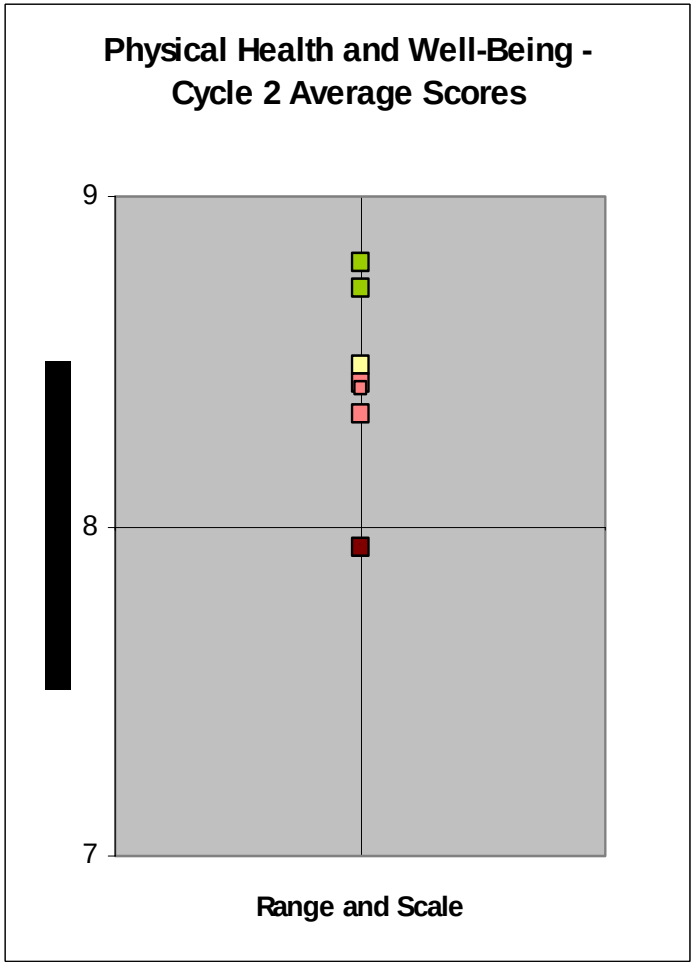
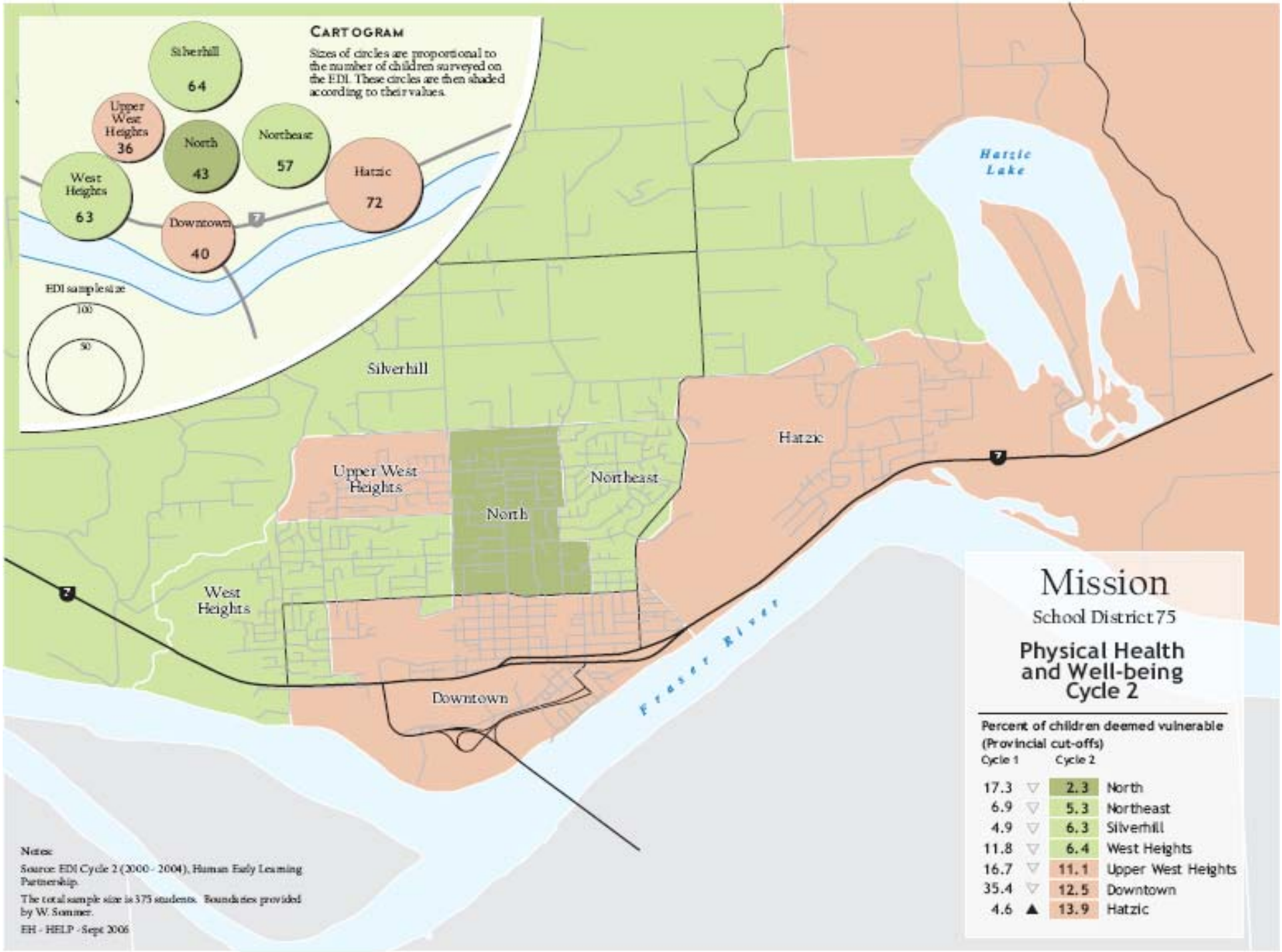
Physical Health & Well-Being



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Hatzic 72
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Downtown 40
EDI sample size
100
50
Hatzic Lake
Silverhill
Upper West Heights
North
Northeast
Hatzic
West Heights
Downtown
Fraser River
Mission
School District 75
Physical Health and Well-being Cycle 2
Percent of children deemed vulnerable (Provincial cut-offs)
Cycle 1
Cycle 2
17.3 ▽ 2.3 North
6.9 ▽ 5.3 Northeast
4.9 ▽ 6.3 Silverhill
11.8 ▽ 6.4 West Heights
16.7 ▽ 11.1 Upper West Heights
35.4 ▽ 12.5 Downtown
4.6 ▲ 13.9 Hatzic
Notes:
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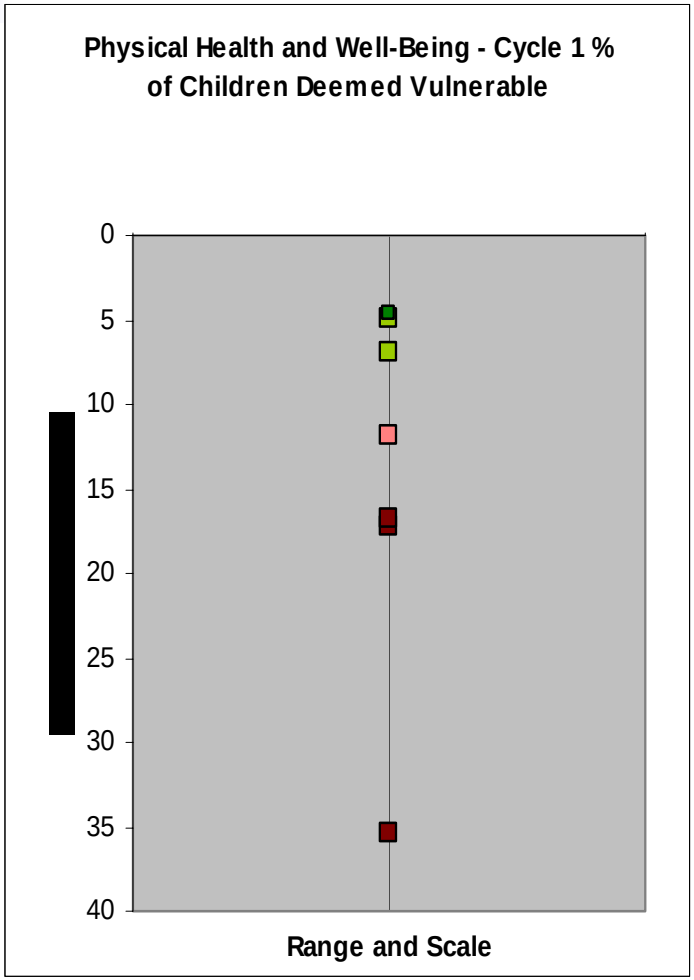
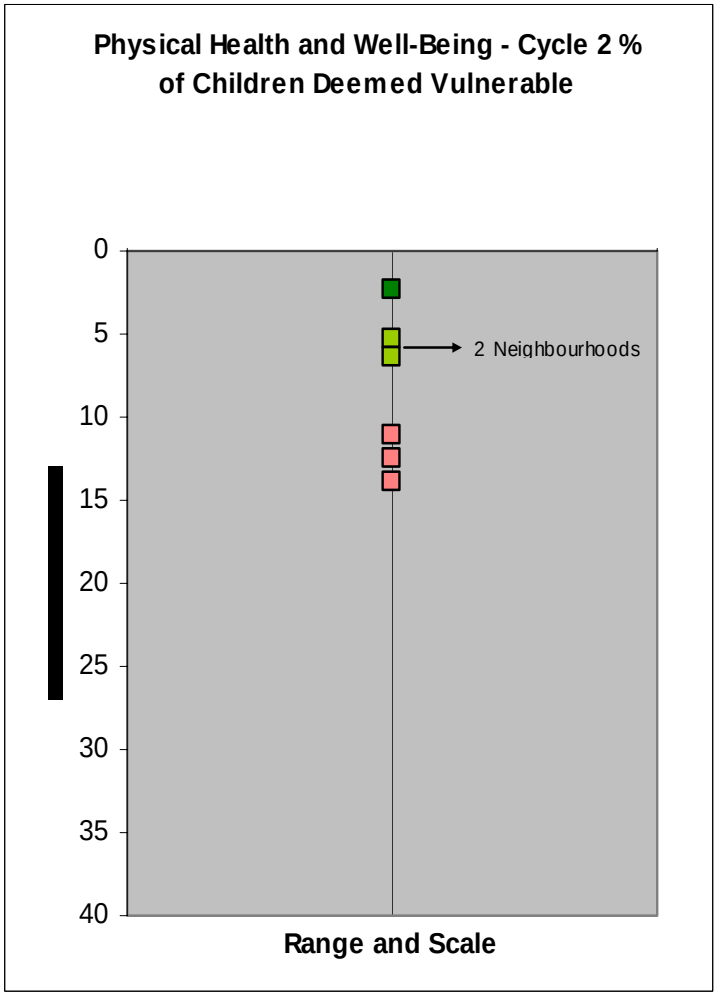
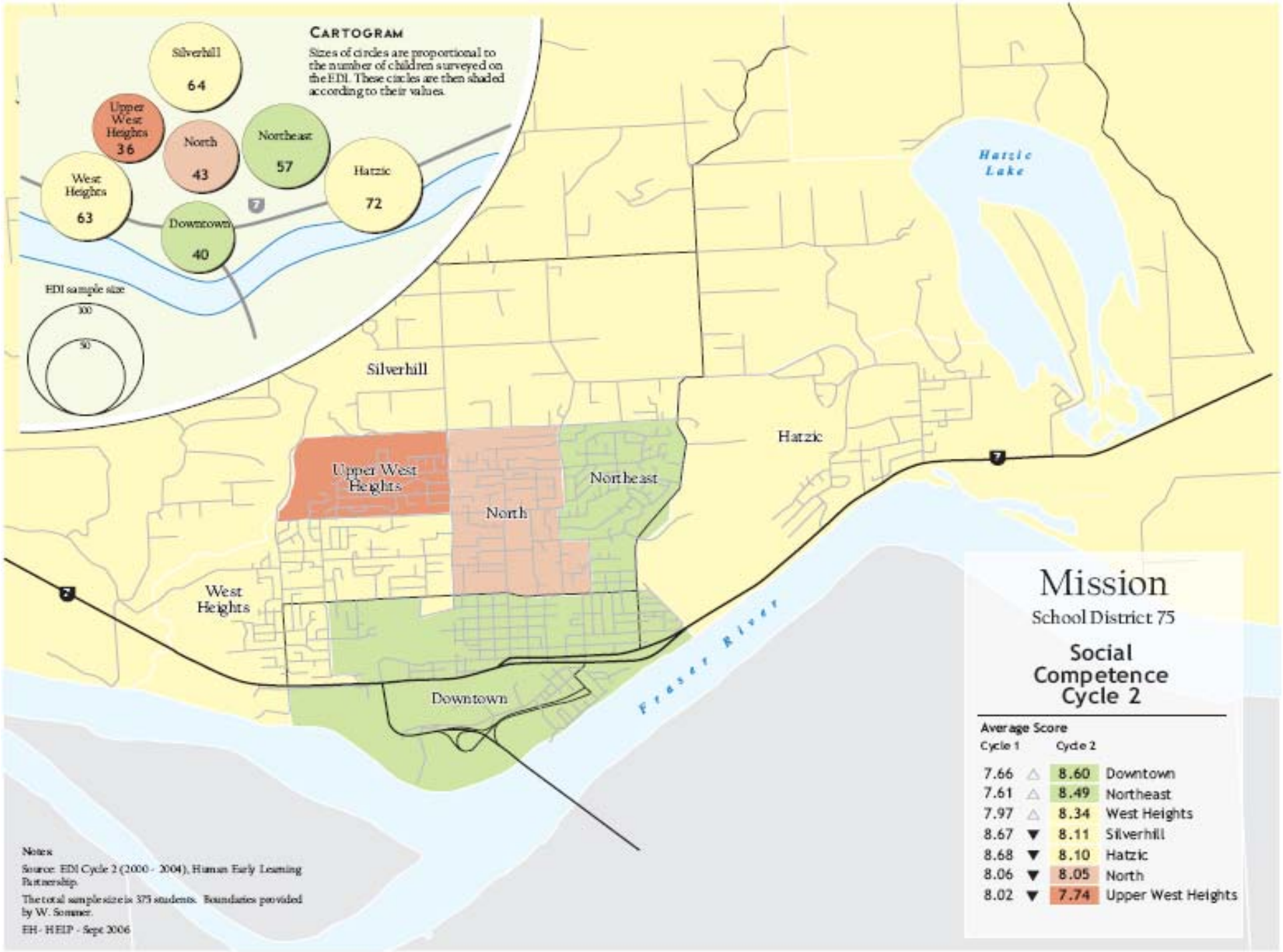
Physical Health & Well-Being





Social Competence

- Measures being cooperative and respectful to others (children and adults); able to work within the school environment; socially appropriate in behaviour during school activities; and self-control/self-confidence.
- Some community factors that may impact this domain are: access to quality child care and structured community programs; parent education programs; and neighbourhood cohesion with localized access to services.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Northeast 57
Hatzic 72
West Heights 63
Downtown 40
EDI sample size
300
90
Hatzic Lake
Silverhill
Hatzic
Upper West Heights
North
Northeast
West Heights
Downtown
Fraser River
Mission
School District 75
Social Competence Cycle 2
Average Score
Cycle 1 Cycle 2
7.66 △ 8.60 Downtown
7.61 △ 8.49 Northeast
7.97 △ 8.34 West Heights
8.67 ▼ 8.11 Silverhill
8.68 ▼ 8.10 Hatzic
8.06 ▼ 8.05 North
8.02 ▼ 7.74 Upper West Heights
Notes
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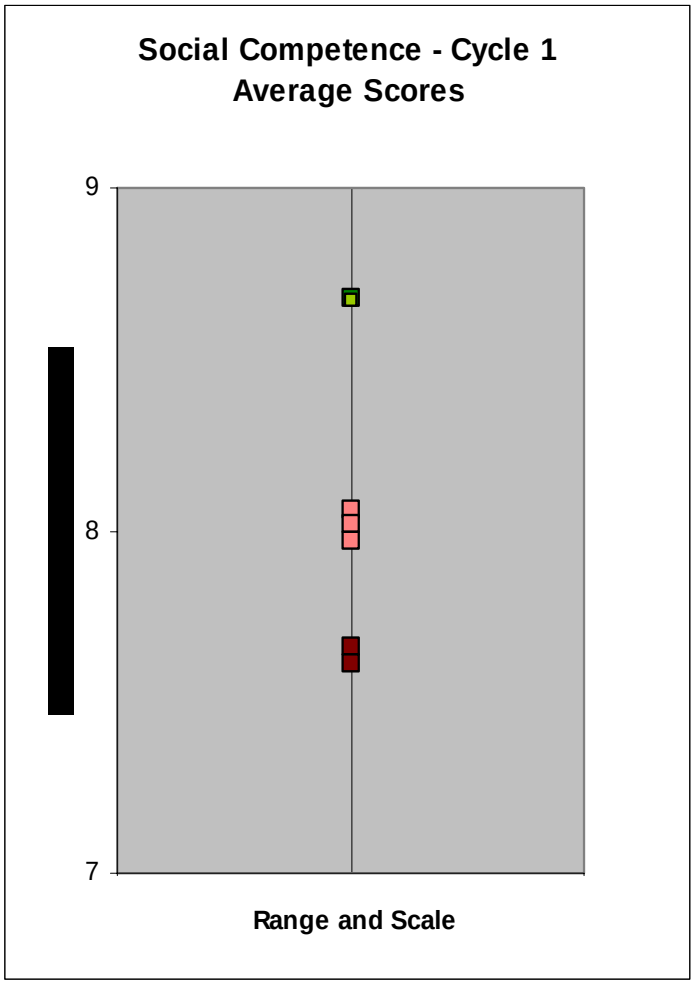
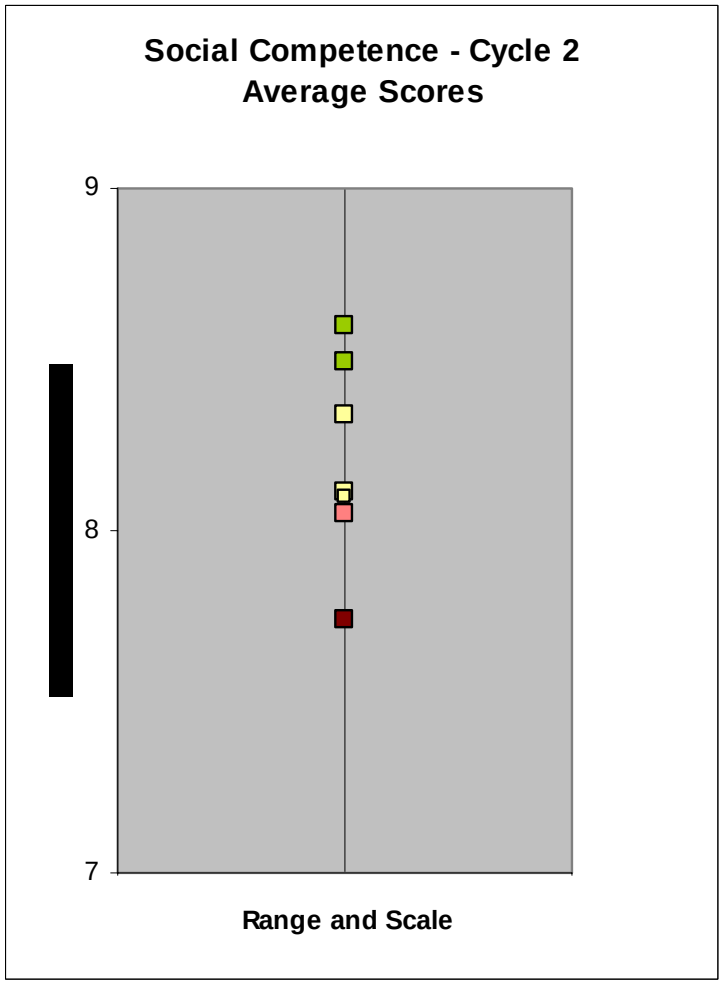
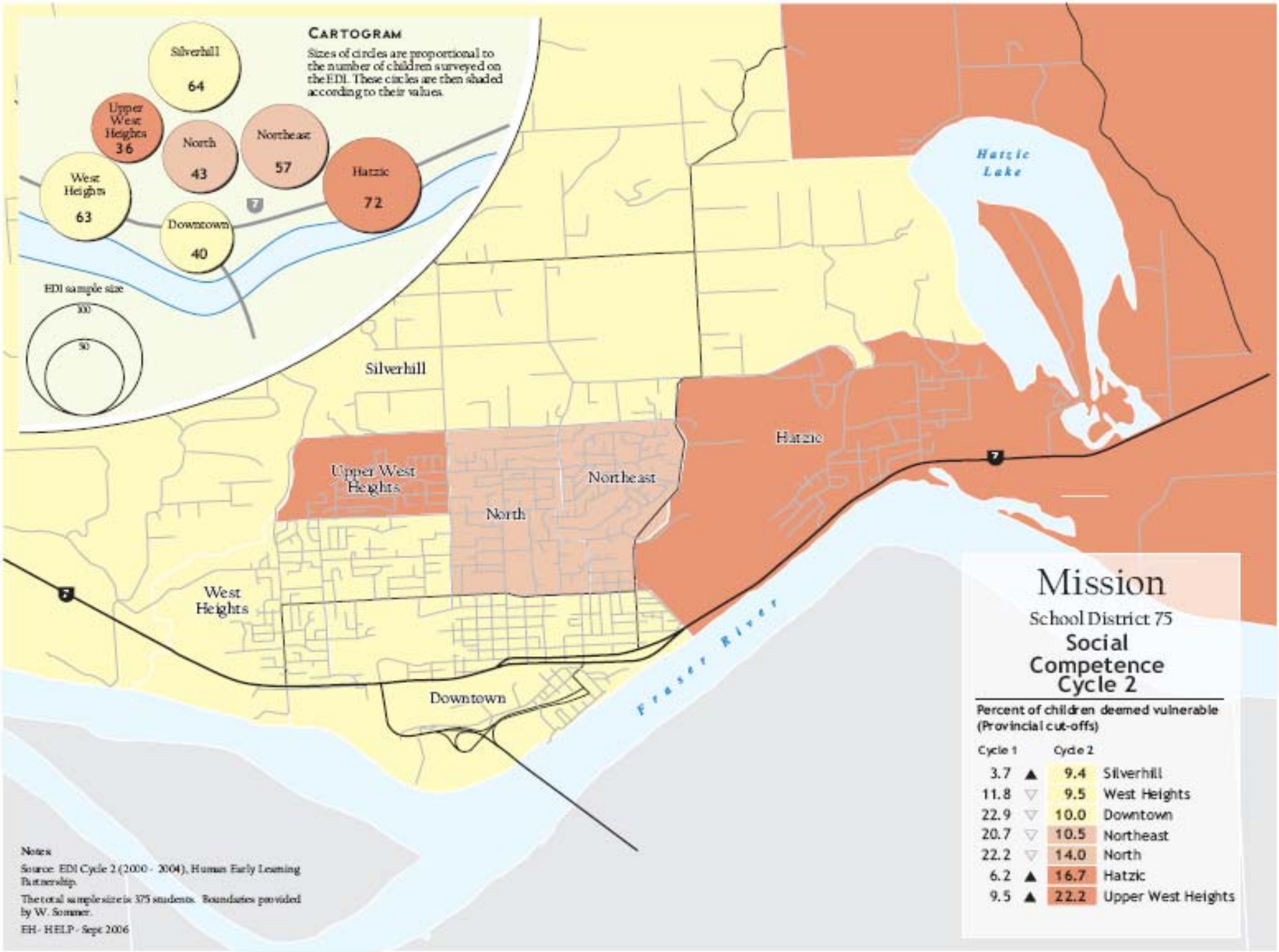
Social Competence



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Hatzic
West Heights
Downtown
Fraser River
Mission
School District 75
Social Competence Cycle 2
Percent of children deemed vulnerable (Provincial cut-offs)
Cycle 1
Cycle 2
3.7 ▲ 9.4 Silverhill
11.8 ▽ 9.5 West Heights
22.9 ▽ 10.0 Downtown
20.7 ▽ 10.5 Northeast
22.2 ▽ 14.0 North
6.2 ▲ 16.7 Hatzic
9.5 ▲ 22.2 Upper West Heights
Notes
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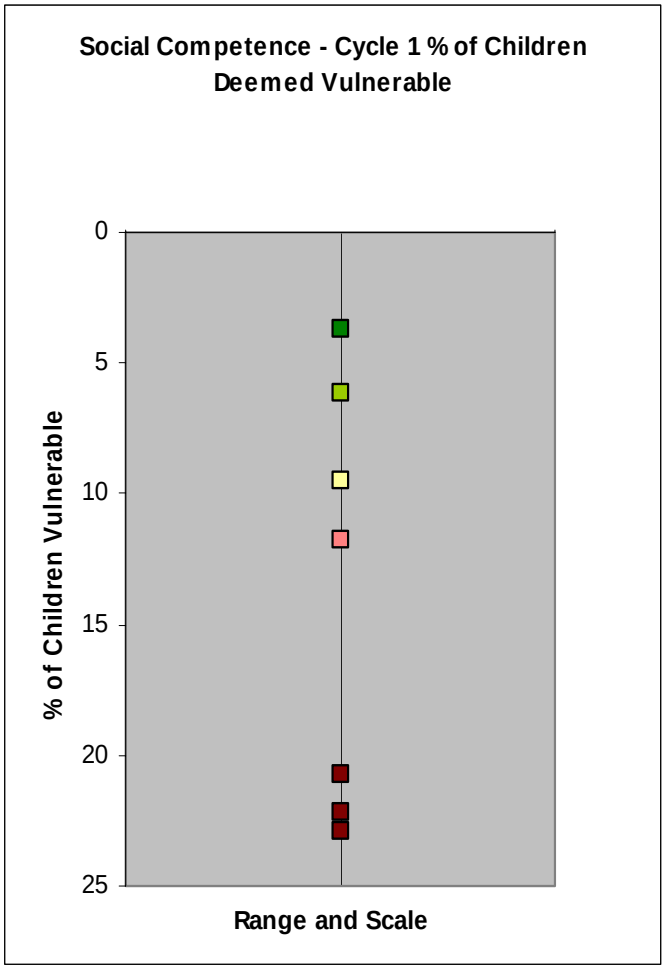
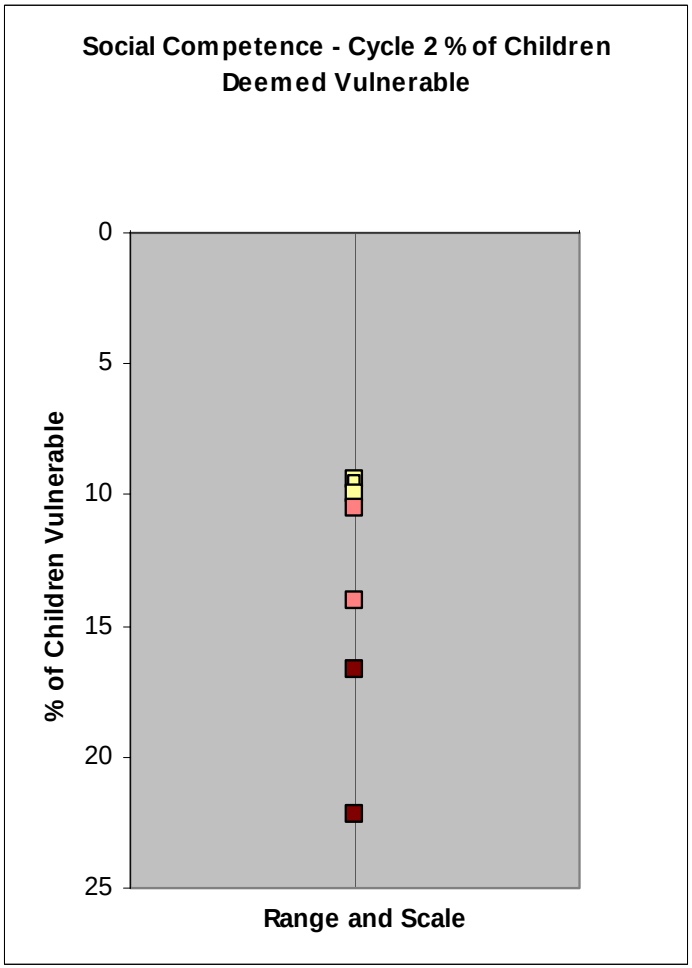
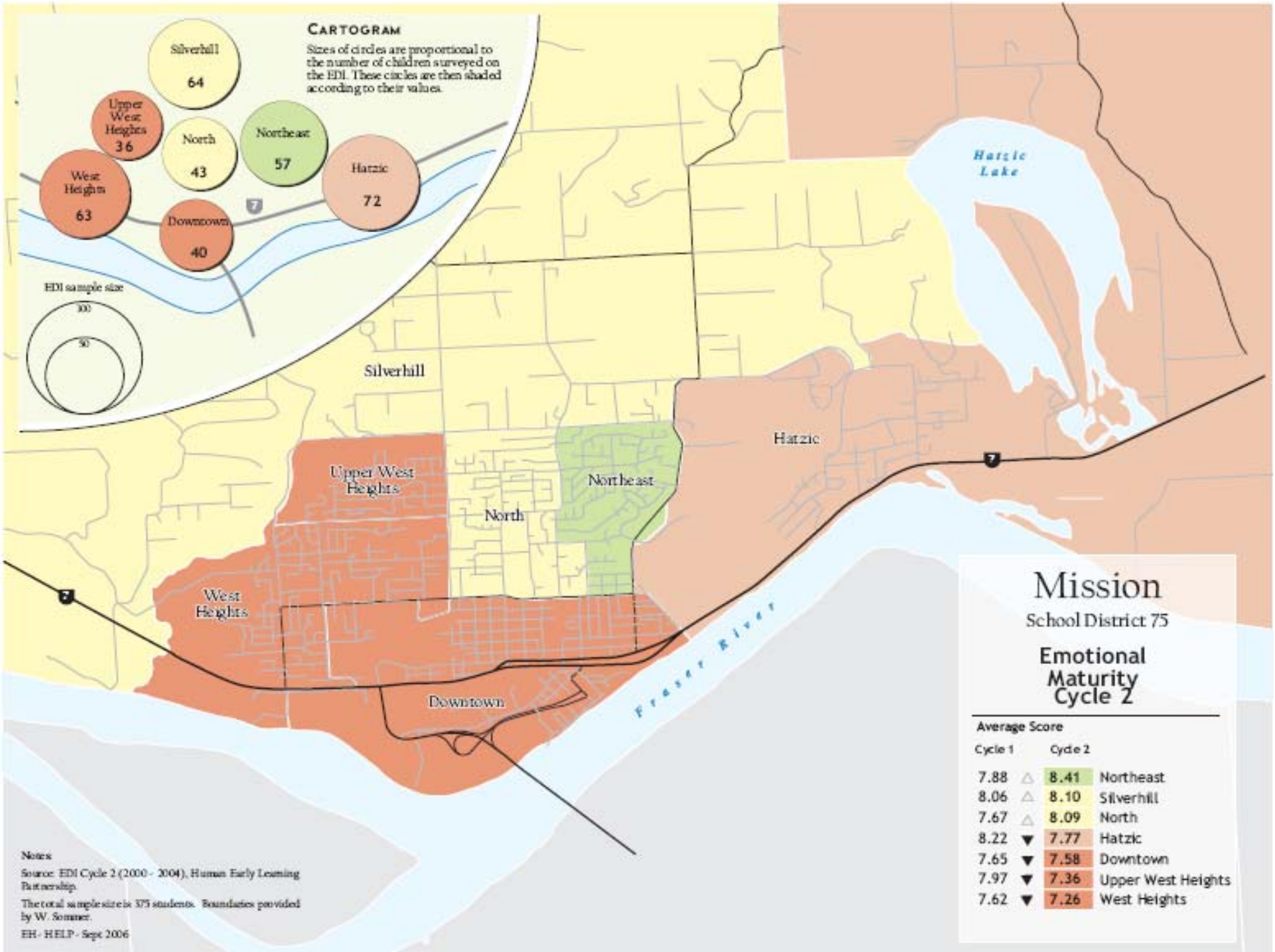
Social Competence





Emotional Maturity

- Measures pro-social behaviour (helping, tolerance, empathy) as opposed to aggressive behaviour (anxiety, hyperactivity, inattention, impulsiveness); and informal, peer-to-peer interaction – as opposed to the more structured interaction measured on the social competence scale.
- Some community factors that may impact this domain are: access to diverse environments (i.e. mixed housing developments that allow children to interact with others from a variety of socio-economic and cultural backgrounds); access to quality child care; and informal opportunities to interact with peers.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EDI sample size
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Silverhill
Upper West Heights
North
Northeast
Hatzic
West Heights
Downtown
Fraser River
7
Mission
School District 75
Emotional Maturity Cycle 2
Average Score
Cycle 1
Cycle 2
7.88 △ 8.41 Northeast
8.06 △ 8.10 Silverhill
7.67 △ 8.09 North
8.22 ▼ 7.77 Hatzic
7.65 ▼ 7.58 Downtown
7.97 ▼ 7.36 Upper West Heights
7.62 ▼ 7.26 West Heights
Notes
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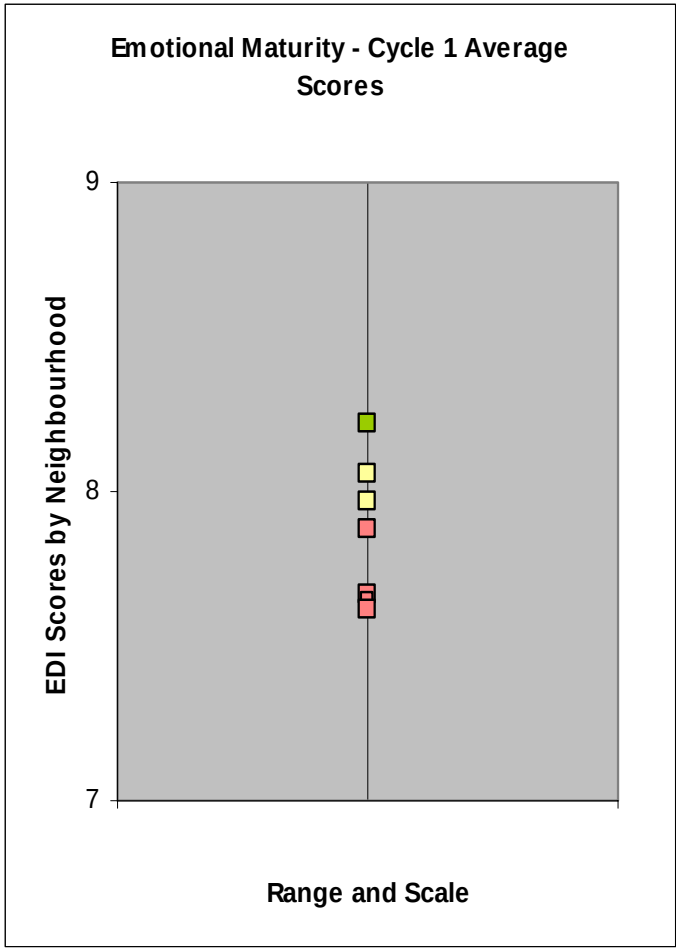
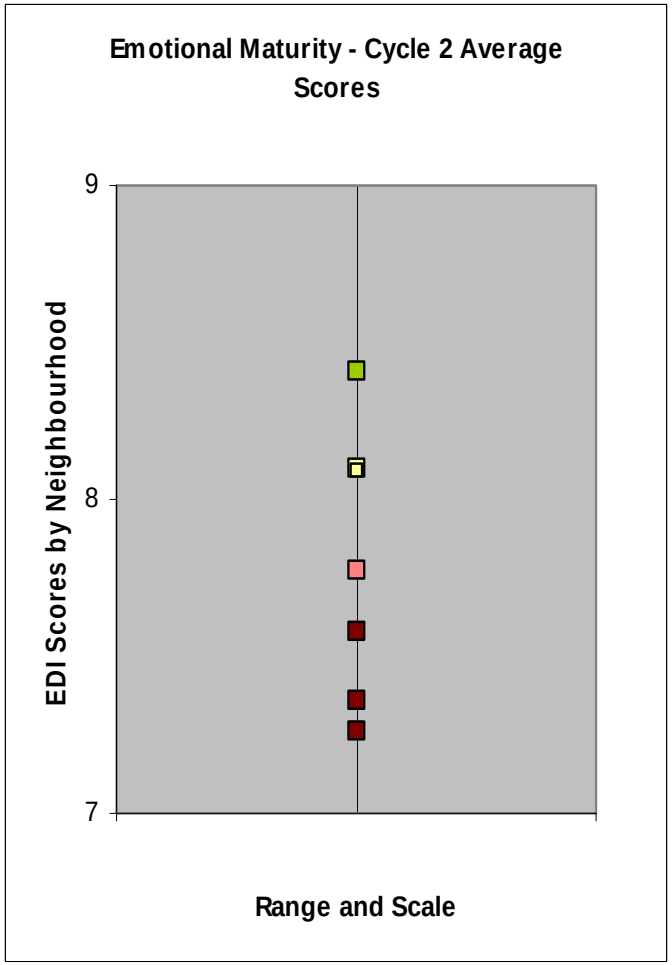
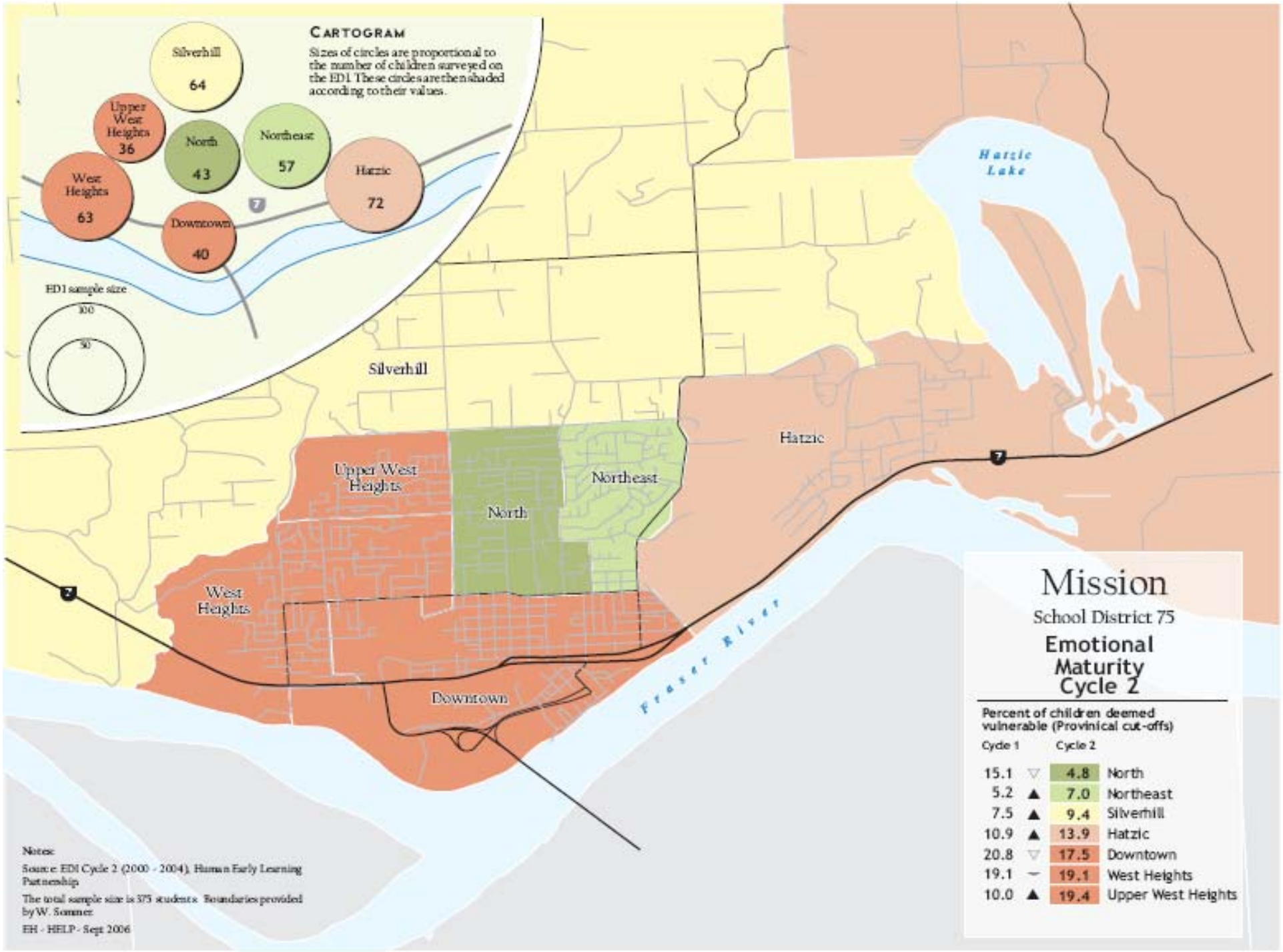
Emotional Maturity



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North 43
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Downtown 40
ED1 sample size
100
50
Hatzic Lake
Silverhill
Hatzic
Upper West Heights
North
Northeast
West Heights
Downtown
Fraser River
7
Mission
School District 75
Emotional Maturity Cycle 2
Percent of children deemed vulnerable (Provinical cut-offs)
Cycle 1
Cycle 2
15.1 ▽ 4.8 North
5.2 ▲ 7.0 Northeast
7.5 ▲ 9.4 Silverhill
10.9 ▲ 13.9 Hatzic
20.8 ▽ 17.5 Downtown
19.1 – 19.1 West Heights
10.0 ▲ 19.4 Upper West Heights
Notes:
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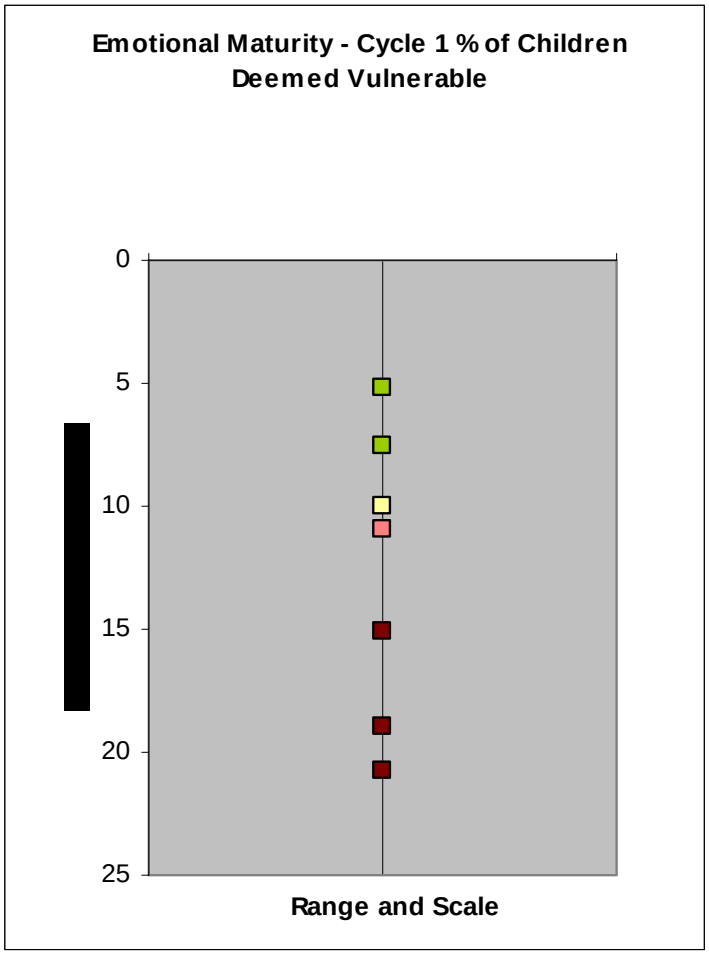
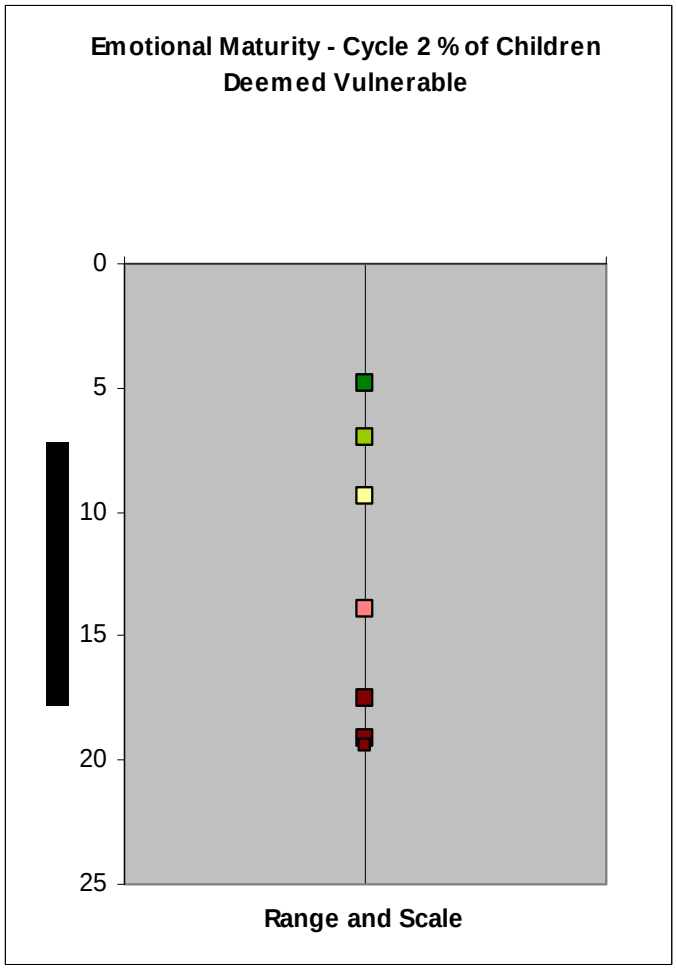
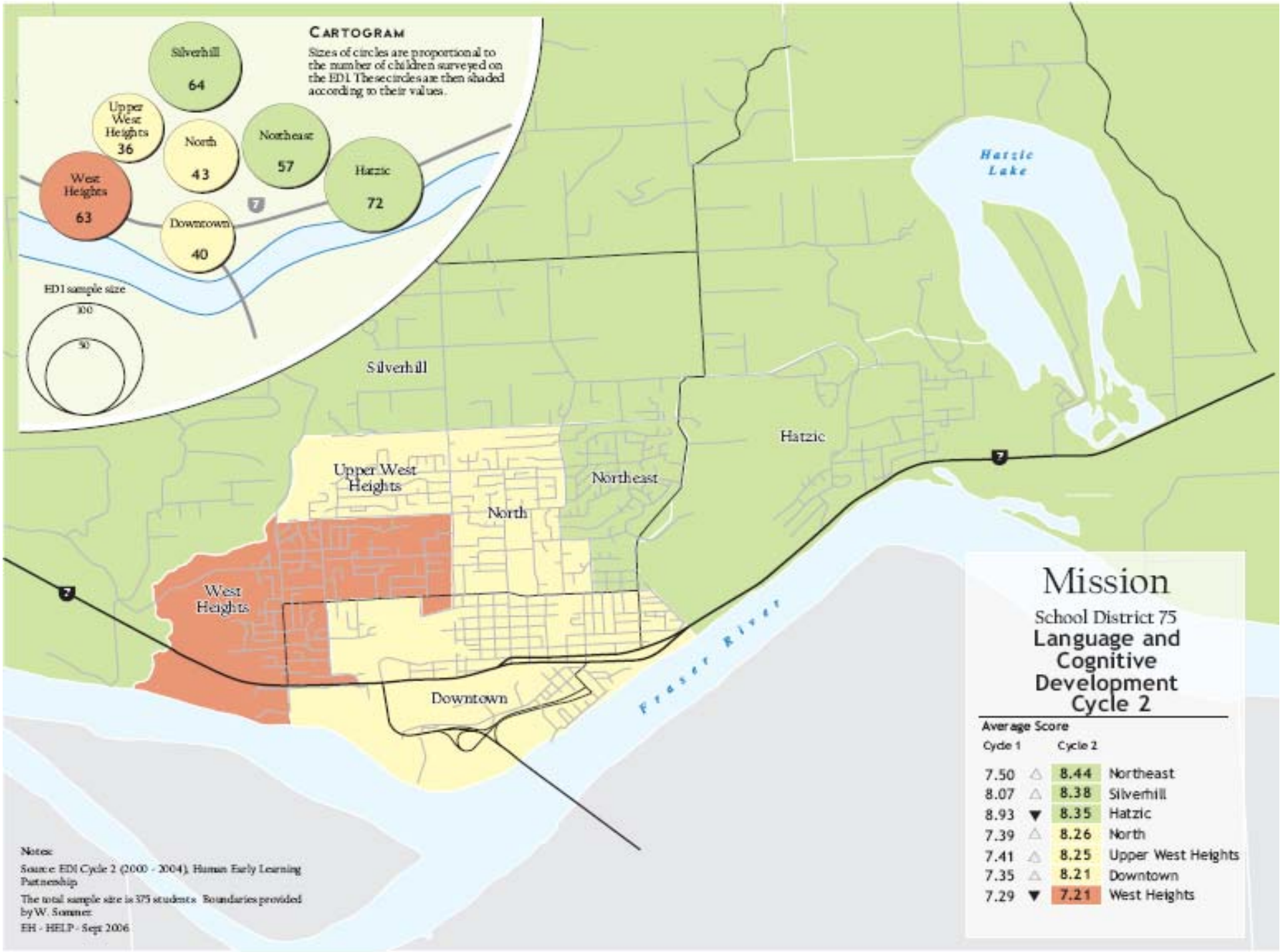
Emotional Maturity





Language and Cognitive Development

- Measures interest in books, reading, language-related activities (rhyming, group reading); literacy issues (ability to recognise letters, read and write simple words); interest in simple math related activities; and numeracy issues (ability to recognise and compare numbers, count, sort, etc.)
- Some community factors that may impact this domain are: literacy programs that include both young children and adults; accessible library services; and partnerships between early child development programs and the local school district.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North 43
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West Heights 63
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ED1 sample size
100
50
Hatzic Lake
Silverhill
Hatzic
Upper West Heights
Northeast
North
West Heights
Downtown
Fraser River
7
Mission
School District 75
Language and Cognitive Development Cycle 2
Average Score
Cycle 1 Cycle 2
7.50 △ 8.44 Northeast
8.07 △ 8.38 Silverhill
8.93 ▼ 8.35 Hatzic
7.39 △ 8.26 North
7.41 △ 8.25 Upper West Heights
7.35 △ 8.21 Downtown
7.29 ▼ 7.21 West Heights
Notes:
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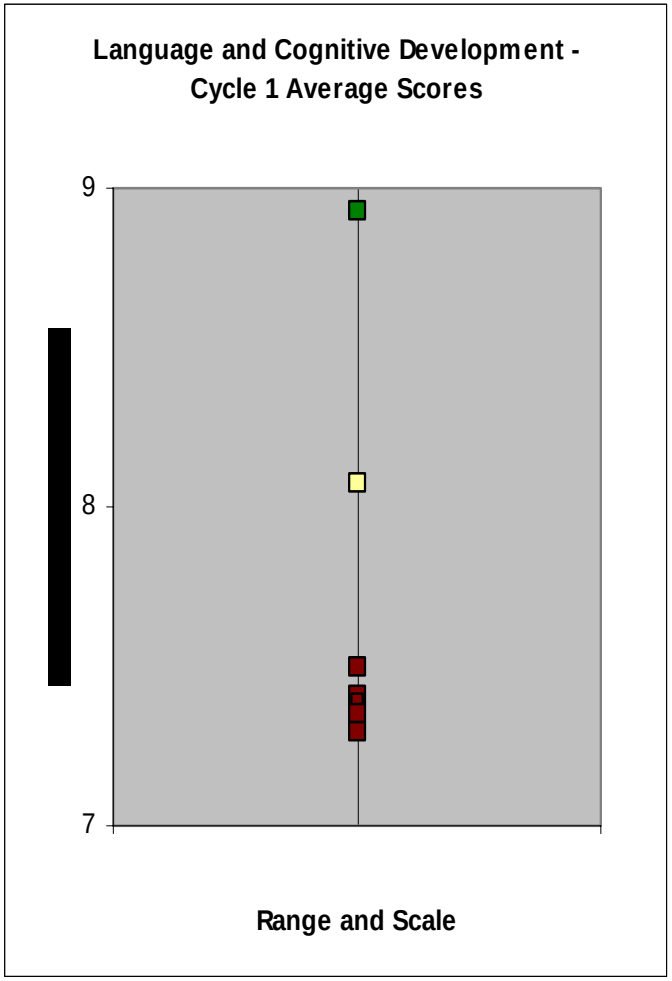
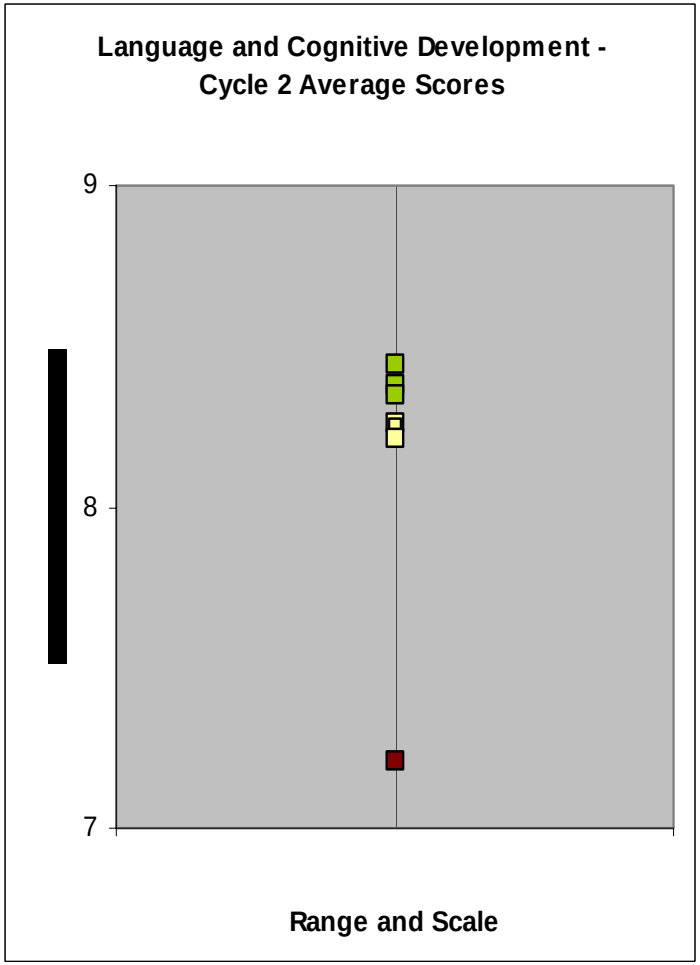
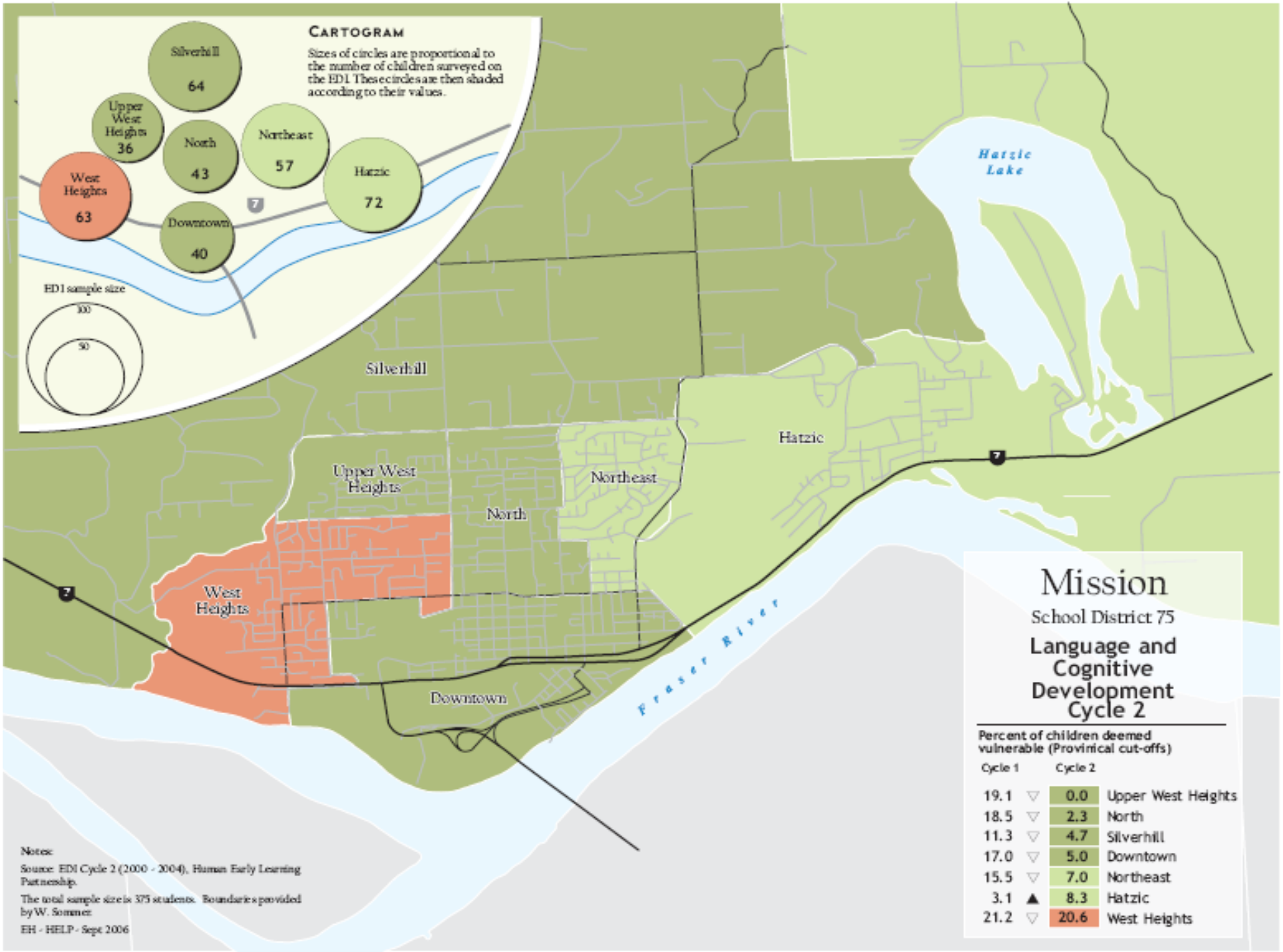
Language and Cognitive Development



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Downtown
Fraser River
7
Mission
School District 75
Language and Cognitive Development Cycle 2
Percent of children deemed vulnerable (Provinical cut-offs)
Cycle 1
Cycle 2
19.1 ▽ 0.0 Upper West Heights
18.5 ▽ 2.3 North
11.3 ▽ 4.7 Silverhill
17.0 ▽ 5.0 Downtown
15.5 ▽ 7.0 Northeast
3.1 ▲ 8.3 Hatzic
21.2 ▽ 20.6 West Heights
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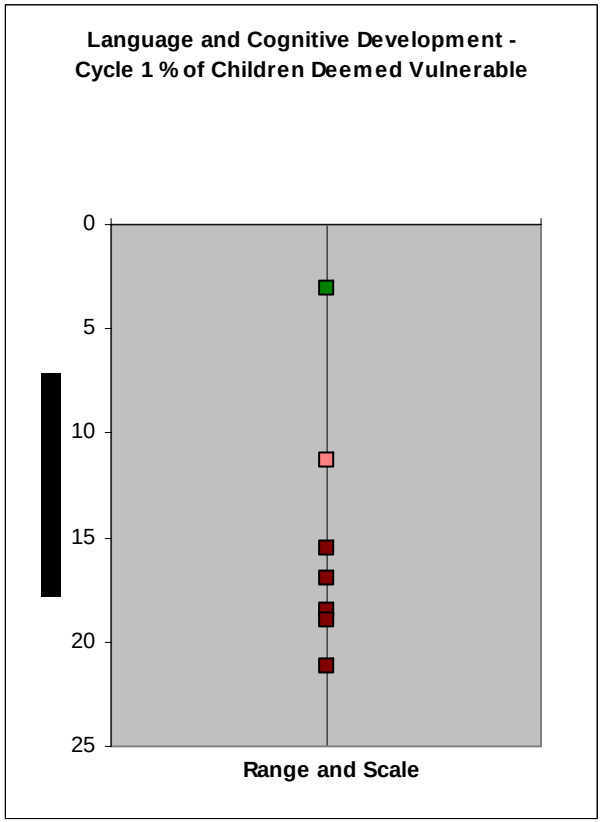
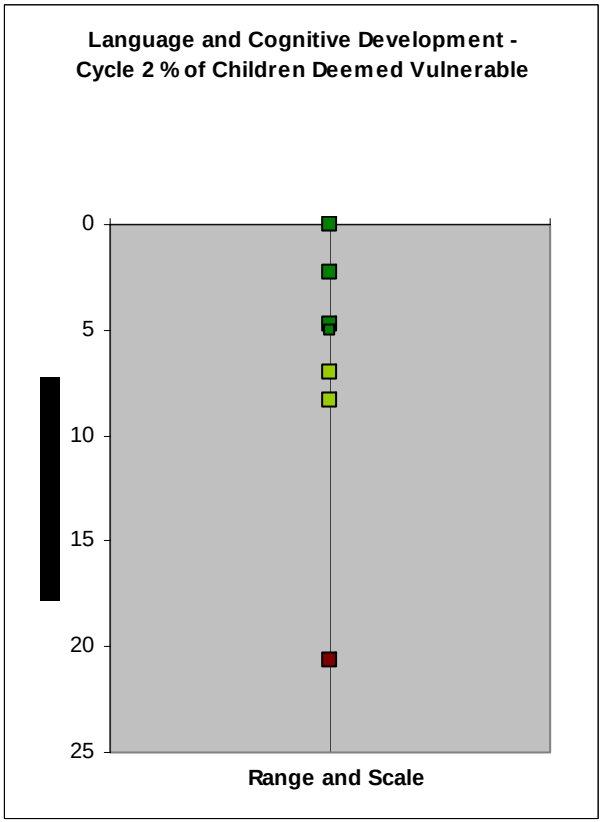
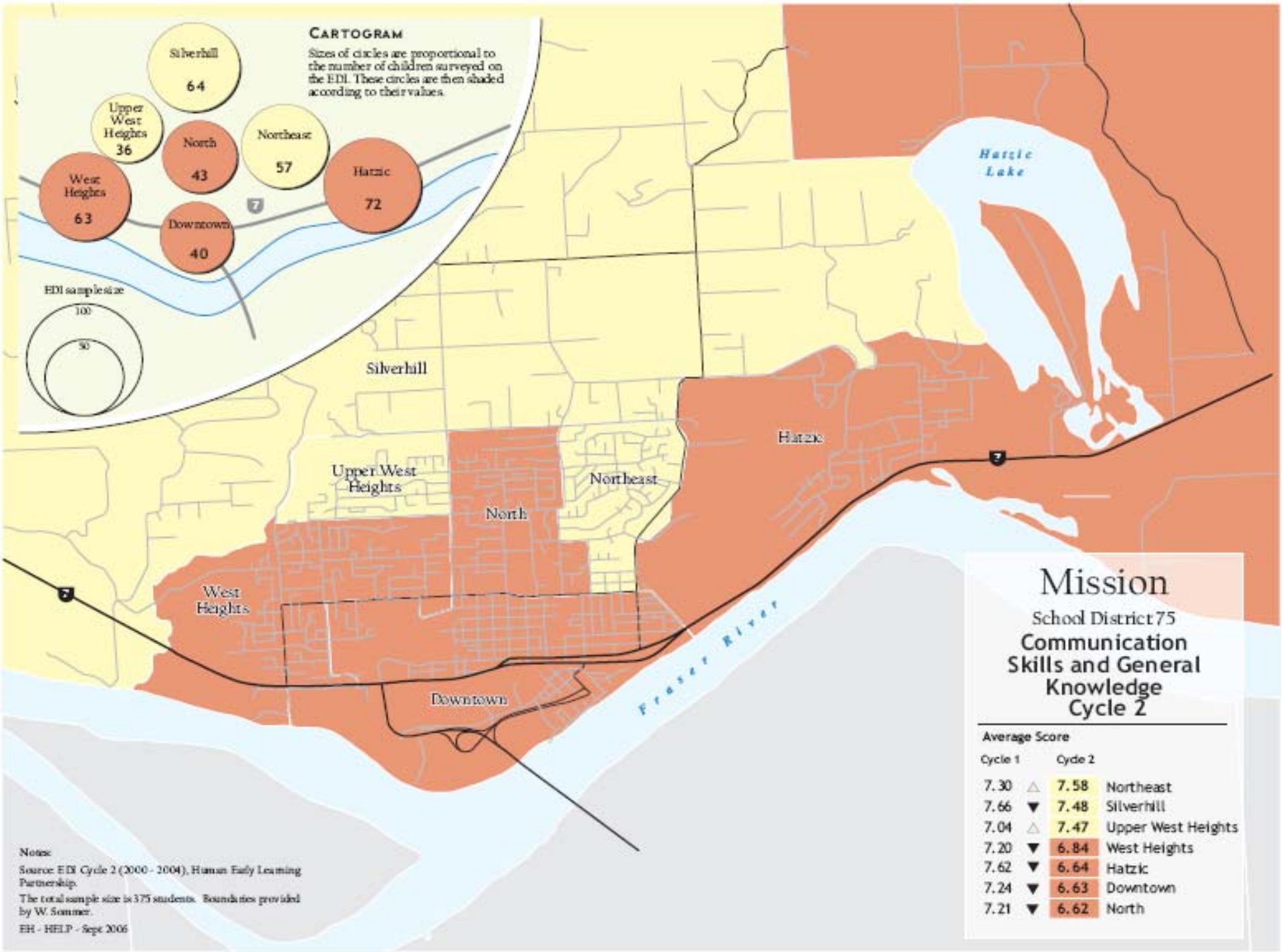
Language and Cognitive Development





Communication Skills and General Knowledge

- Measures the ability to clearly communicate one's own needs and understand others; clear articulation; active participation in story-telling (not necessarily with good grammar and syntax); and interest in and general knowledge about the world.
- Some community factors that may impact this domain are: proportion of the population that speaks English as a second language; and access to rich oral language environments.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Mission
School District 75
Communication Skills and General Knowledge
Cycle 2
Average Score
Cycle 1 Cycle 2
7.30 △ 7.58 Northeast
7.66 ▼ 7.48 Silverhill
7.04 △ 7.47 Upper West Heights
7.20 ▼ 6.84 West Heights
7.62 ▼ 6.64 Hatzic
7.24 ▼ 6.63 Downtown
7.21 ▼ 6.62 North
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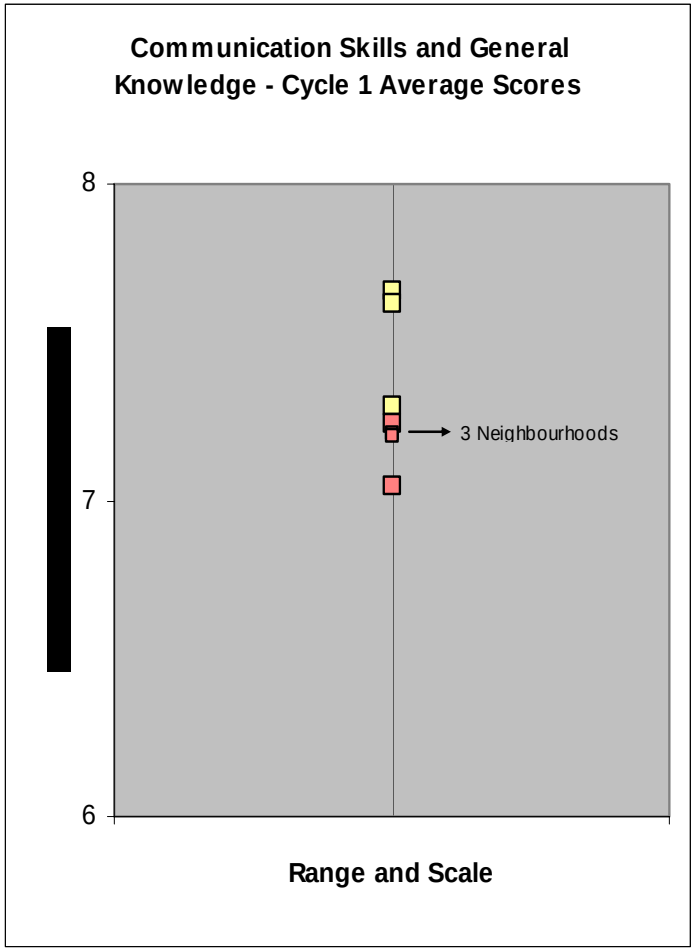
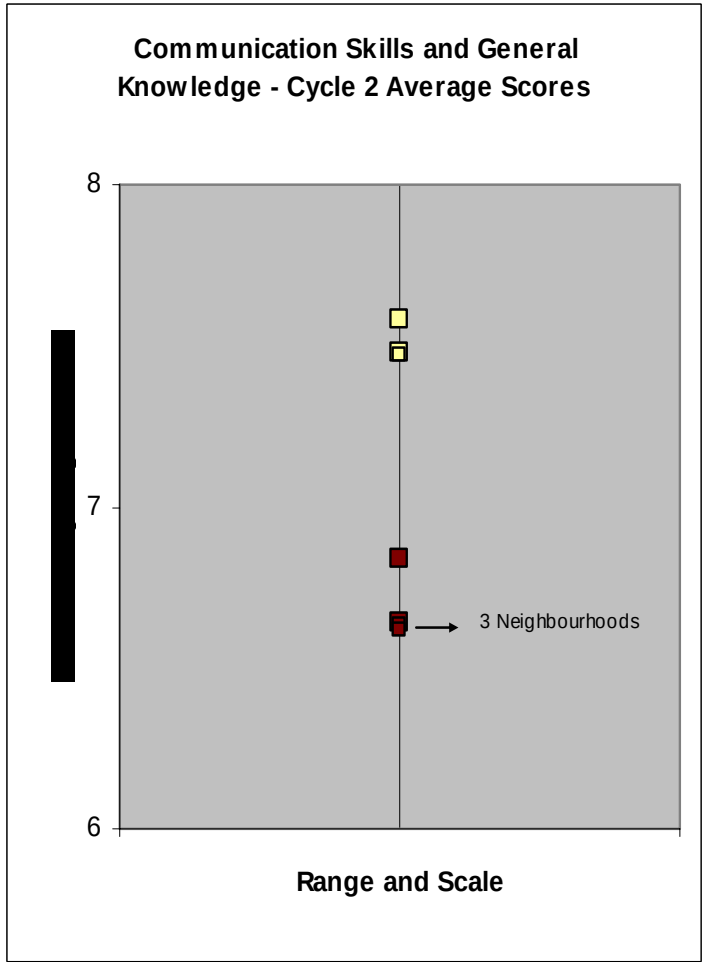
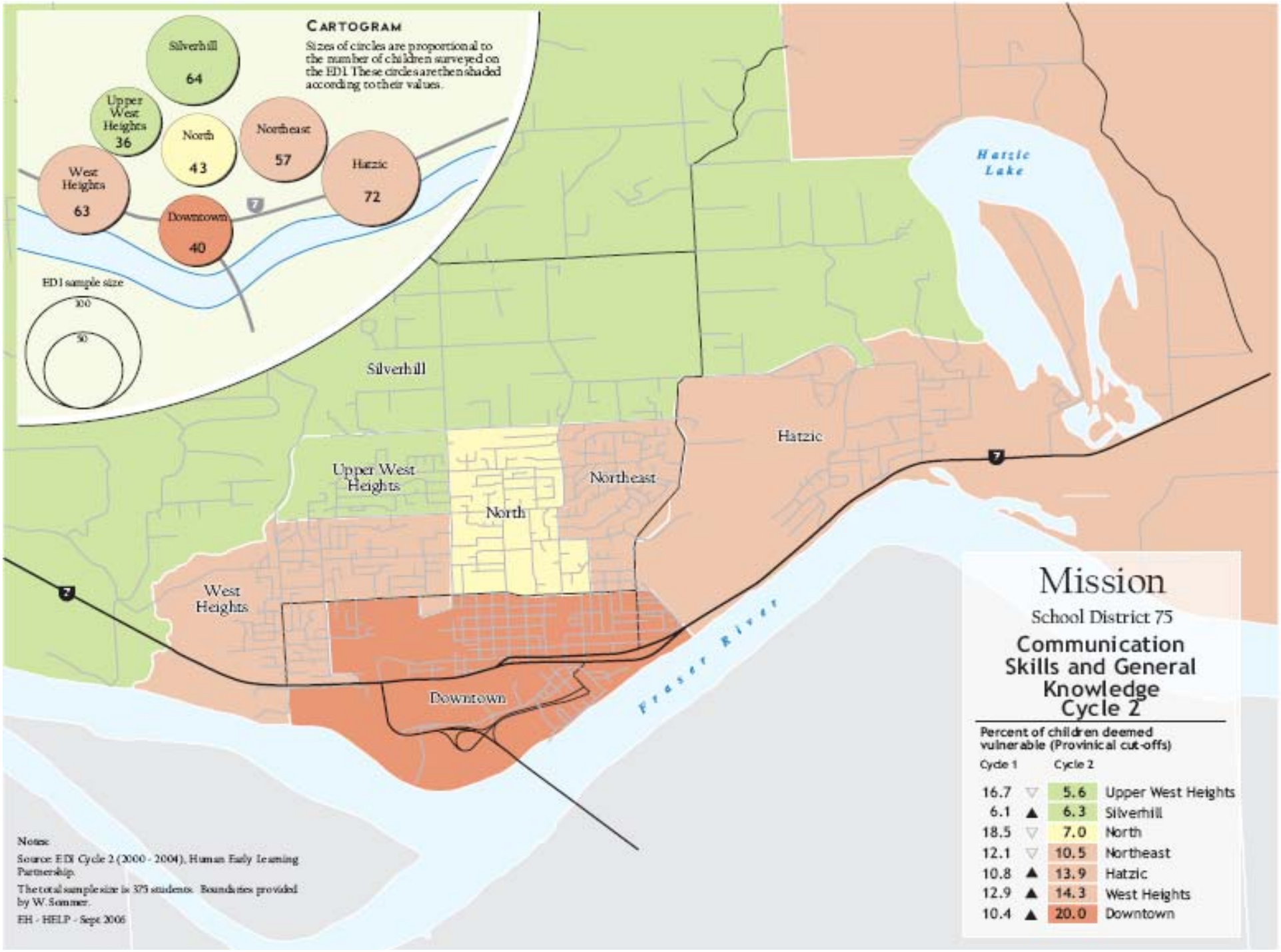
Communication Skills and General Knowledge



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Communication Skills and General Knowledge Cycle 2
Percent of children deemed vulnerable (Provinical cut-offs)
Cycle 1 Cycle 2
16.7 ▽ 5.6 Upper West Heights
6.1 ▲ 6.3 Silverhill
18.5 ▽ 7.0 North
12.1 ▽ 10.5 Northeast
10.8 ▲ 13.9 Hatzic
12.9 ▲ 14.3 West Heights
10.4 ▲ 20.0 Downtown
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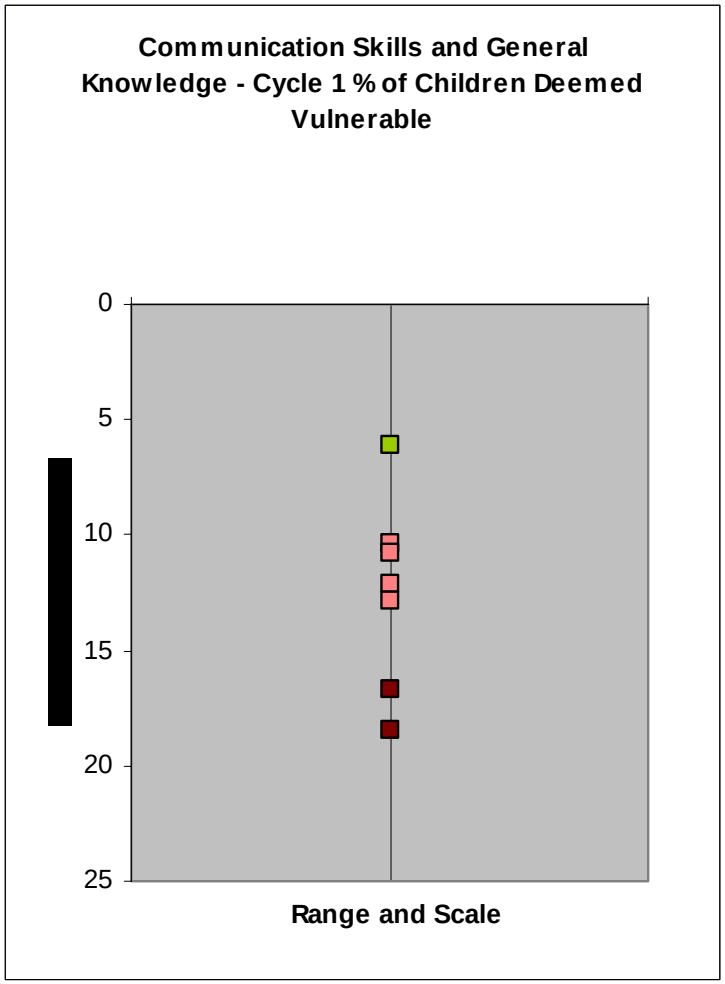
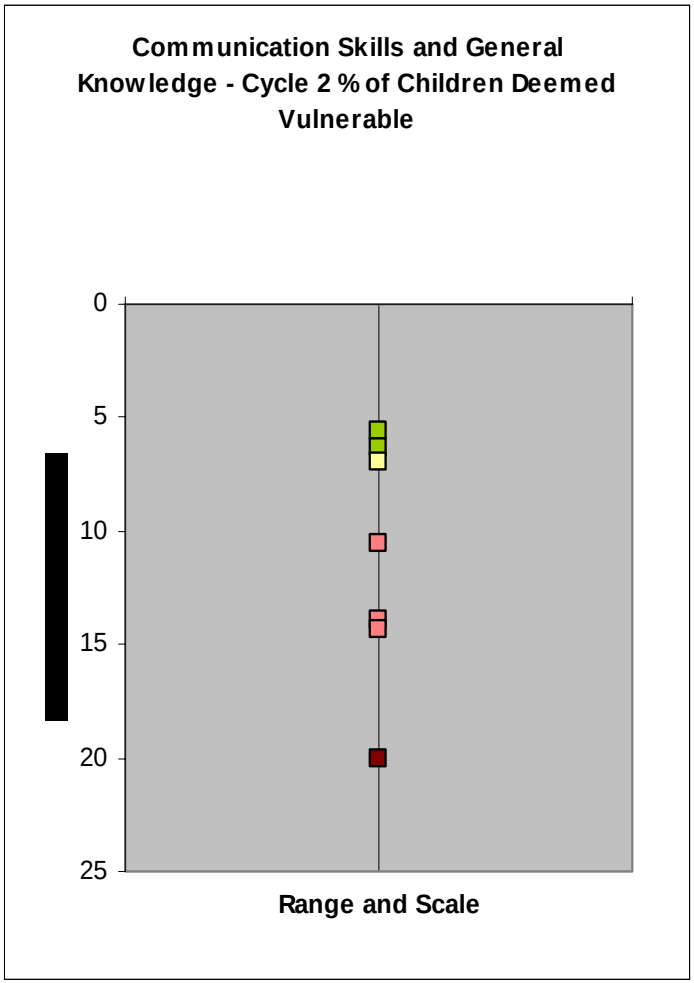
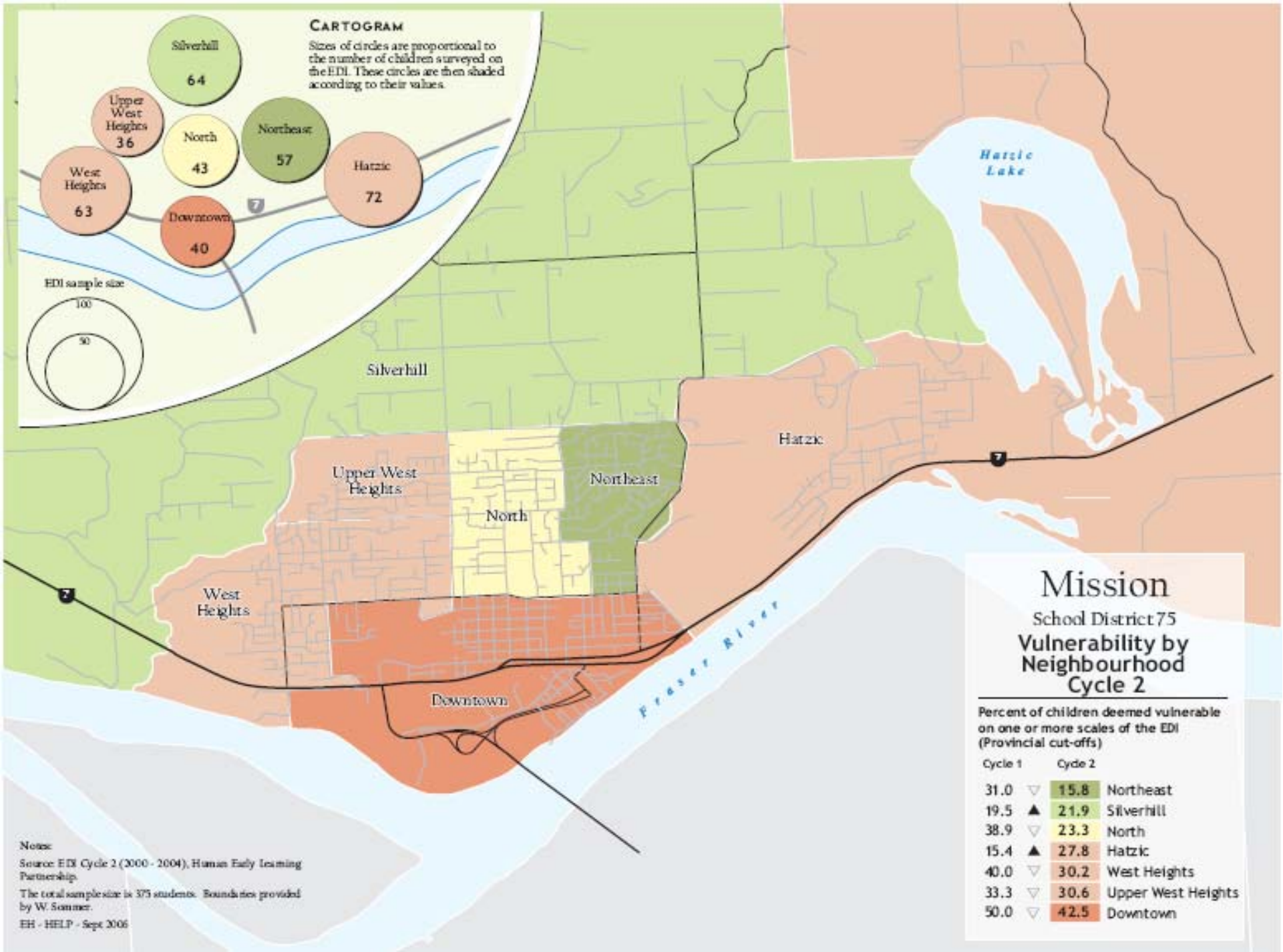
Communication Skills and General Knowledge



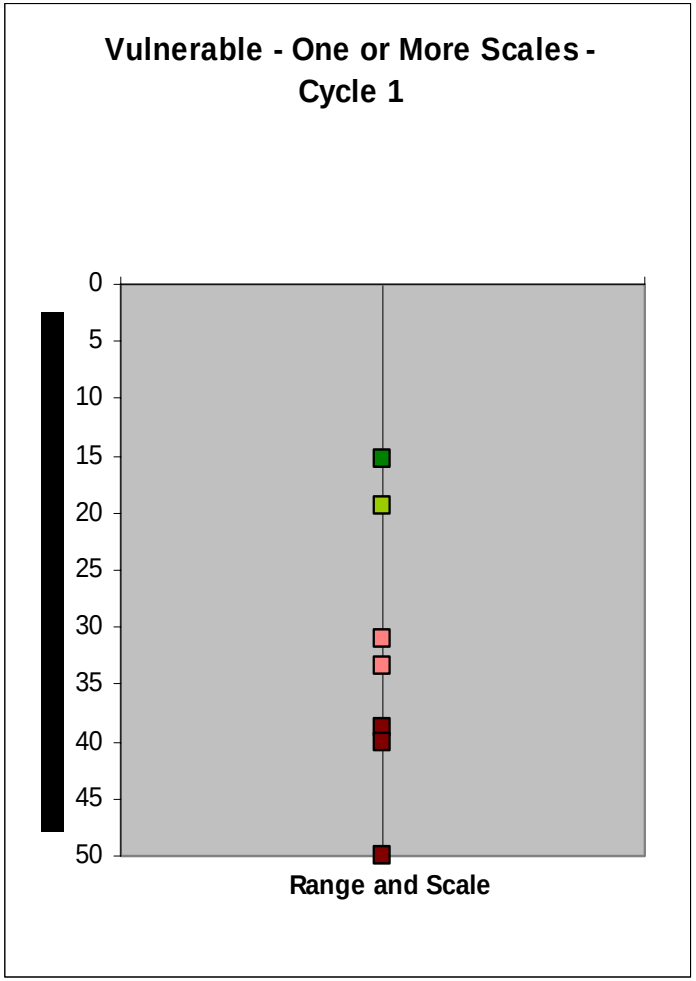


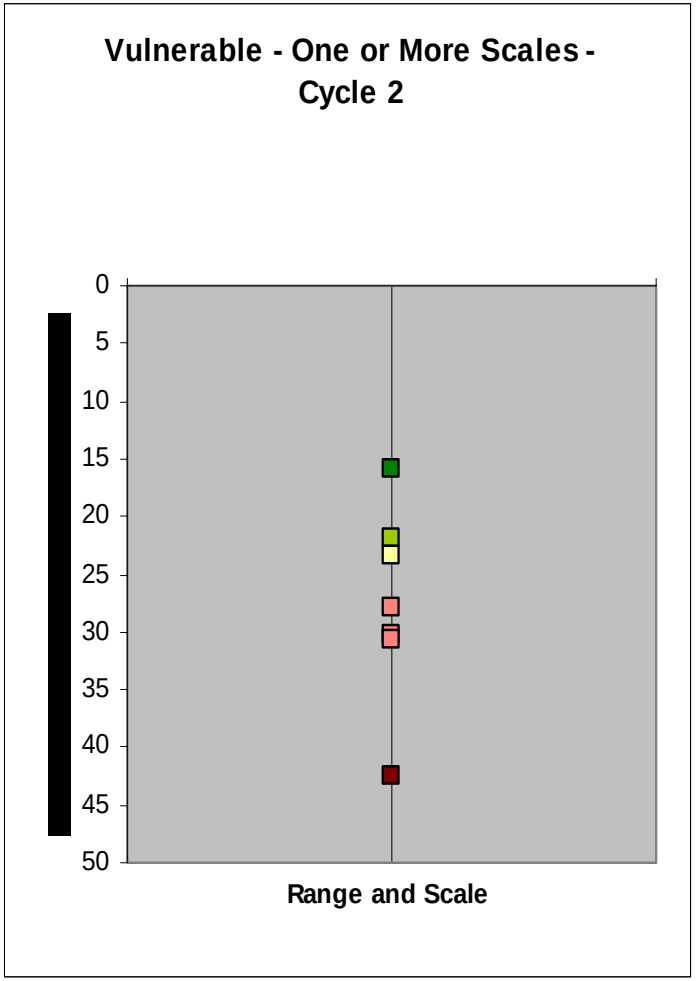
Neighbourhood Vulnerability on One or More Scales

- This is where Mission is ranked provincially against the normative data set.
- We have moved up one quintile from light red to yellow and are one of a few districts to improve overall.


CARTOGRAM
Sizes of circles are proportional to the number of children surveyed on the EDI. These circles are then shaded according to their values.
Silverhill 64
Upper West Heights 36
North 43
Northeast 57
Hatzic 72
West Heights 63
Downtown 40
EDI sample size
100
50
Hatzic Lake
Silverhill
Hatzic
Upper West Heights
North
Northeast
West Heights
Downtown
Fraser River
7
7
Mission
School District 75
Vulnerability by Neighbourhood Cycle 2
Percent of children deemed vulnerable on one or more scales of the EDI (Provincial cut-offs)
Cycle 1
Cycle 2
31.0 ▽ 15.8 Northeast
19.5 ▲ 21.9 Silverhill
38.9 ▽ 23.3 North
15.4 ▲ 27.8 Hatzic
40.0 ▽ 30.2 West Heights
33.3 ▽ 30.6 Upper West Heights
50.0 ▽ 42.5 Downtown
Notes:
Source: EDI Cycle 2 (2000 - 2004), Human Early Learning Partnership.
The total sample size is 375 students. Boundaries provided by W. Sommer.
EH - HELP - Sept 2006

Vulnerability by Neighbourhood





Mission

School Districts 35

Summary Table: Average Scores

	Number of Children Sampled			*Physical Health and Well Being*			*Social Competence*			*Emotional Maturity*			*Language and Cognitive Development*			*Communication Skills and General Knowledge*			
	Cycle1	Cycle2	Chg	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	
Northeast	58	57	-1	8.74	8.72	-0.02	7.61	8.49	0.88	7.88	8.41	0.53	7.50	8.44	0.94	7.30	7.58	0.28	Northeast
Silverhill	82	64	-18	8.77	8.80	0.04	8.67	8.11	-0.56	8.06	8.10	0.04	8.07	8.38	0.32	7.66	7.48	-0.18	Silverhill
North	54	43	-11	8.43	8.42	-0.01	8.06	8.05	-0.01	7.67	8.09	0.43	7.39	8.26	0.87	7.21	6.62	-0.60	North
Hatzic	65	72	7	8.78	7.93	-0.86	8.68	8.10	-0.57	8.22	7.77	-0.45	8.93	8.35	-0.58	7.62	6.64	-0.98	Hatzic
West Heights	85	63	-22	8.65	8.49	-0.16	7.97	8.34	0.37	7.62	7.26	-0.36	7.29	7.21	-0.08	7.20	6.84	-0.36	West Heights
Upper West Heights	42	36	-6	8.21	8.34	0.13	8.02	7.74	-0.28	7.97	7.36	-0.61	7.41	8.25	0.84	7.04	7.47	0.43	Upper West Heights
Downtown	48	40	-8	8.10	8.43	0.33	7.66	8.60	0.94	7.65	7.58	-0.07	7.35	8.21	0.86	7.24	6.63	-0.61	Downtown

Note: Data sorted by the percentage of children vulnerable on one or more scales (Cycle 2), see next page.

Notes:

Source: EDI Cycle 1 (2000-2004) and Cycle 2 (2006), Human Early Learning Partnership

HH - HELP - Sept 2006

Mission

School Districts 35

Summary Table: Percent Vulnerable

	Physical Health and Well Being			*Social Competence*			*Emotional Maturity*			*Language and Cognitive Development*			*Communication Skills and General Knowledge*			*Neighbourhood Vulnerability on One or More Scales*			
	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	Cycle1	Cycle2	Change	
Northeast	6.9	5.3	-1.6	20.7	10.5	-10.2	5.2	7.0	1.9	15.5	7.0	-8.5	12.1	10.5	-1.5	31.0	15.8	-15.2	Northeast
Silverhill	4.9	6.3	1.4	3.7	9.4	5.7	7.5	9.4	1.9	11.3	4.7	-6.6	6.1	6.3	0.2	19.5	21.9	2.4	Silverhill
North	17.3	2.3	-15.0	22.2	14.0	-8.3	15.1	4.8	-10.3	18.5	2.3	-16.2	18.5	7.0	-11.5	38.9	23.3	-15.6	North
Hatzic	4.6	13.9	9.3	6.2	16.7	10.5	10.9	13.9	3.0	3.1	8.3	5.3	10.8	13.9	3.1	15.4	27.8	12.4	Hatzic
West Heights	11.8	6.4	-5.4	11.8	9.5	-2.2	19.1	19.1	0.0	21.2	20.6	-0.6	12.9	14.3	1.4	40.0	30.2	-9.8	West Heights
Upper West Heights	16.7	11.1	-5.6	9.5	22.2	12.7	10.0	19.4	9.4	19.1	0.0	-19.1	16.7	5.6	-11.1	33.3	30.6	-2.8	Upper West Heights
Downtown	35.4	12.5	-22.9	22.9	10.0	-12.9	20.8	17.5	-3.3	17.0	5.0	-12.0	10.4	20.0	9.6	50.0	42.5	-7.5	Downtown

Sorted by

Province-wide Vulnerability Cut-offs:

EDI Scale	*Cut-off Value*
Physical Health and Well-being	6.92
Social Competence	5.58
Emotional Maturity	5.83
Language and Cognitive Development	5.38
Communication and General Knowledge	3.89

Notes:

Source: EDI Cycle 1 (2000-2004) and Cycle 2 (2006), Human Early Learning Partnership.

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Implications for Community Planning

- These results can be used as one tool to guide planning for families but must be considered within the context of changing socio-economic conditions.
- Vulnerabilities exist in all neighbourhoods and across all domains – there is no one neighbourhood that has either the most or the least children vulnerable across each of the scales.
- Overall the results within Mission indicate considerable disparity or difference between neighbourhoods and domains of development. Often this disparity increases with increasing urbanization. Questions of affordable housing, transportation and equal access to services should be considered.

Implications for Community Planning continued…

- Vulnerabilities decreased in 5 of the 7 neighbourhoods and in four of five domains of development!!!
- Over 40% of children in downtown are still vulnerable, however; there has been a decrease of -7.5%.
- Three neighbourhoods have less than 25% of children vulnerable with North and Northeast decreasing by over 15%!!

Implications for Community Planning continued…

- Two neighbourhoods increased in vulnerabilities – Silverhill (2.4%) and Hatzic (12.4%).
- The largest proportion of vulnerability, and the only increases, were found in the Emotional Maturity and Social Competence domains.
- The lower proportion of children vulnerable on the Language and Cognitive Development suggests that a focus on early literacy supports in Mission have been effective.