

Providing transitional supports for ELLS from high school to university

By Hetty Roessingh

University of Calgary




Outline

- Context and background information
- A pilot study
- An intervention providing ELLs academic literacy support in a Canadian university
- Starting young: Priorities for early intervention and ongoing support

Background

- Canada immigration sets a target of about 240,000 new Canadians each year
- Canada has a selective immigration policy that favors the best and the brightest
- Vancouver and Toronto schools report 50%+ ELLs in their k – 12 schools. Calgary reports about 25% (about 23,000 in a total of 95,000). Increasingly, they are young arrivals and Canadian born. Gen. 1.5
- ELLs graduate high school proportionate to the general HS population (76% in Alberta), but are disproportionately over-represented in first year university admissions data (U. of C. approx. 45%)





Lack of academic proficiency among ELLs as seen in Eng. 30 results

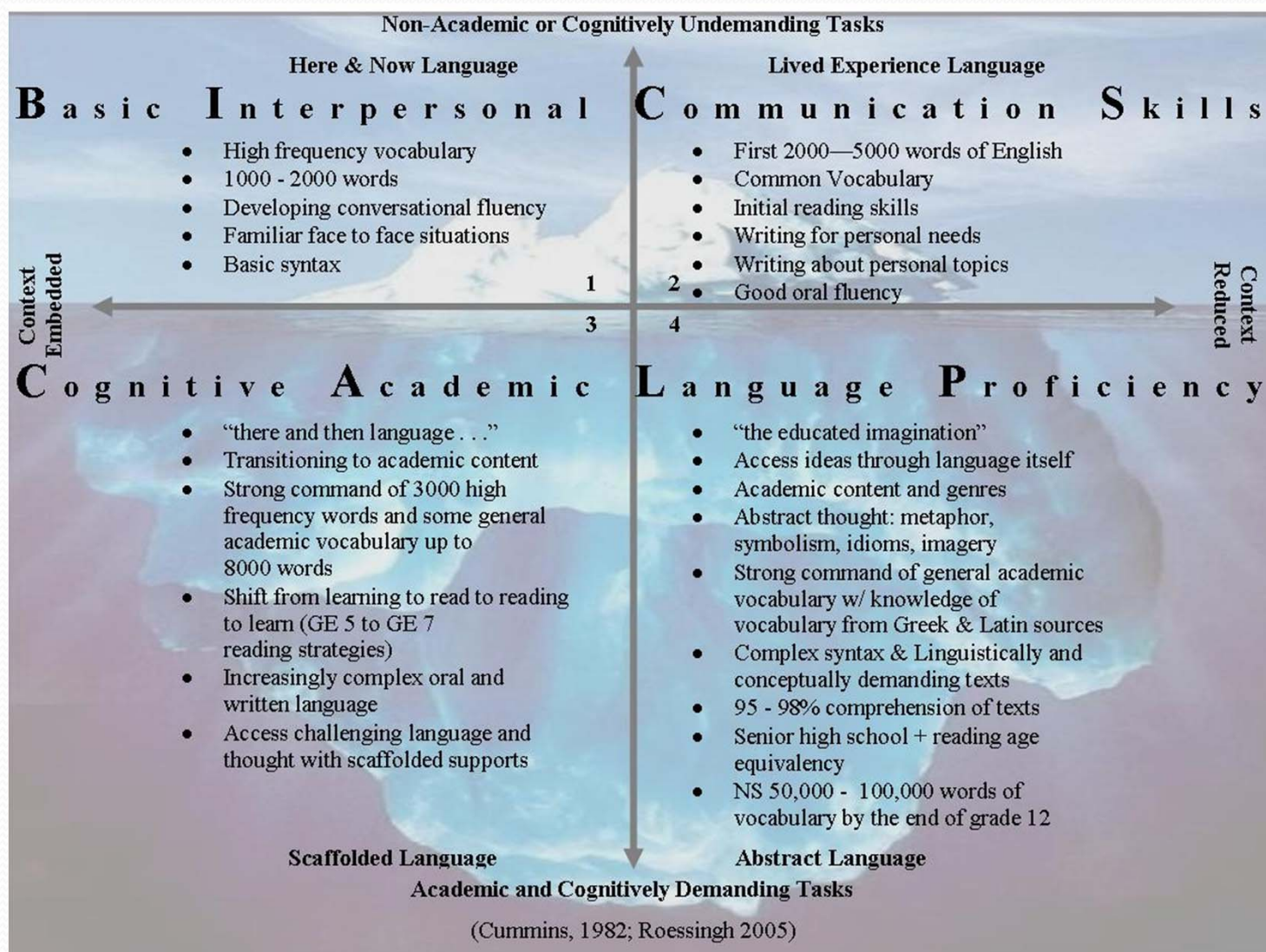
- 45% of first year admissions to U of C are of an ELL background (i.e. approximately 2,000 first year admissions)
- Some 500 first year admissions are rejected; the vast majority assumed to be of ELL background
- Approx. 700 of the admitted students failed the Eng. 30 diploma examination. The remainder overwhelmingly failed to meet the threshold for exemption for the Effective Writing Test (i.e. 75% on the exam, or 80% combined course mark).



Theoretical Framework

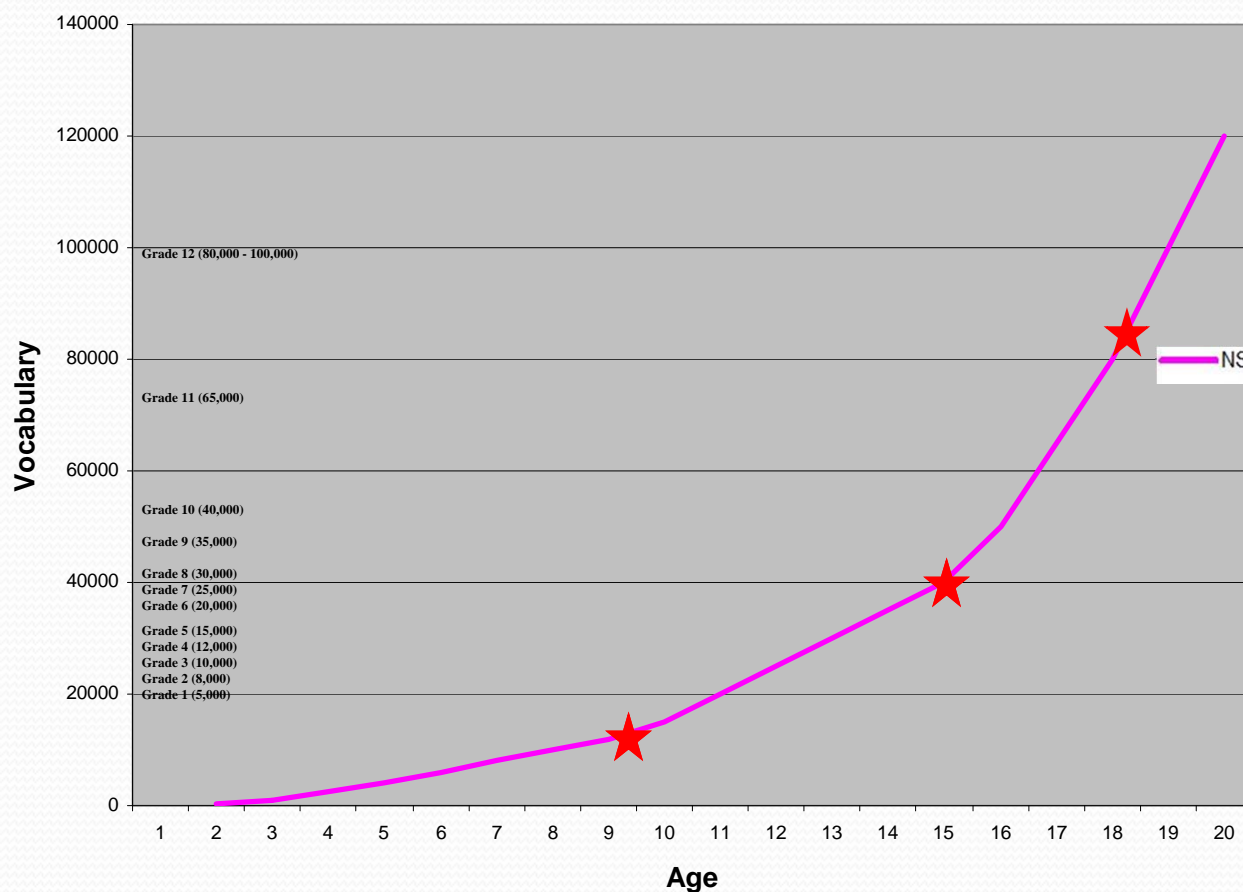
- Reading comprehension, vocabulary and academic achievement (Biemiler, 2007; Laufer, 1997; Nagy, Anderson, & Herman, 1987; Stahl & Nagy, 2006; Stanovich, 1986)
- Douglas (2010) finds that vocabulary is the key underlying variable that accounts for academic success at university, as seen on various indices of academic success

Conversational vs. Academic English

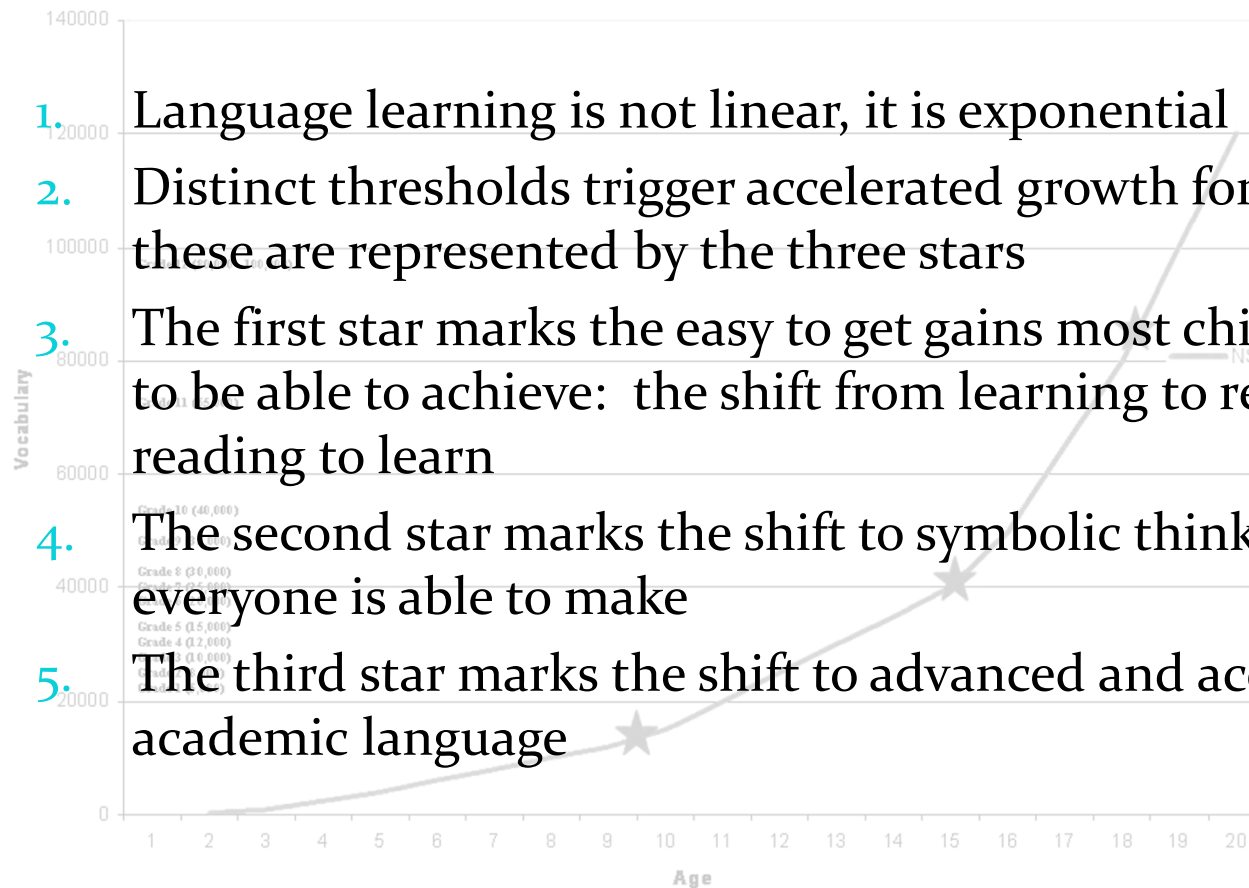


Language Learning Trajectories

L1 trajectory (high socio-economic status) (pink line)



Things to notice about the trajectory



1. Language learning is not linear, it is exponential
2. Distinct thresholds trigger accelerated growth forward, and these are represented by the three stars
3. The first star marks the easy to get gains most children seem to be able to achieve: the shift from learning to read to reading to learn
4. The second star marks the shift to symbolic thinking that not everyone is able to make
5. The third star marks the shift to advanced and accelerated academic language

The Tipping Point

- The point in the trajectory at which you no longer have recourse to L1
- At each AOA there is benefit to having recourse to L1
- For every AOA there is a certain meltdown of L1 that puts students at risk
- Additive bilingualism: older arrivals
- Subtractive bilingualism: younger arrivals
- Regardless of AOA, for all of them there is a tipping point at a certain point in time.
- All of the K-12 cohorts at are at risk in higher education

To sum up:

- High SES backgrounds
- High academic expectations
- Desire for post-secondary studies at university
- Want careers in professions (engineering, business, and sciences)
- Determined, smart, tenacious
- Canada NEEDS them to succeed in post-secondary settings in order to integrate into the workplace and to compete in the global economy. This requires high levels of literacy.
- English diploma results suggest these students are missing the mark.





A pilot study at U. of C.

- We identified the files of 128 ELLs who arrived from local high schools: 74 were 'older arrivals' (aged 14+); and 54 were younger arrivals. They attended U of C between 1996 – 2002, and all have graduated, been required to withdraw, or voluntarily terminated their studies at U of C
- We secured the files (masked) of 120 NS for comparison purposes.
- We analyzed the data on various measures of academic achievement

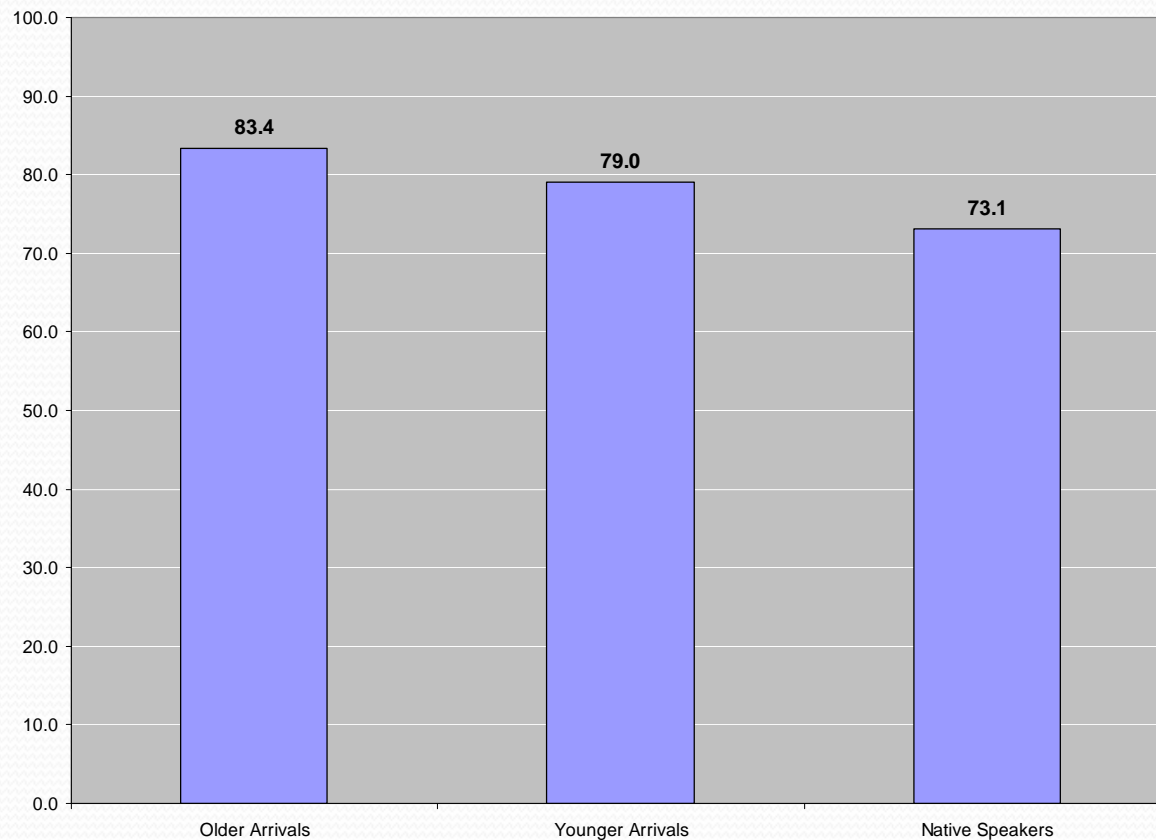


How do ELLs stack up?

- Math marks from high school
- English (blended) marks vs Math marks
- Diploma exam vs class scores in English
- Fail rates on the diploma exam
- Graduation rates from university

Math 30 Blended Comparison

A Comparison of Math 30 Blended Grades

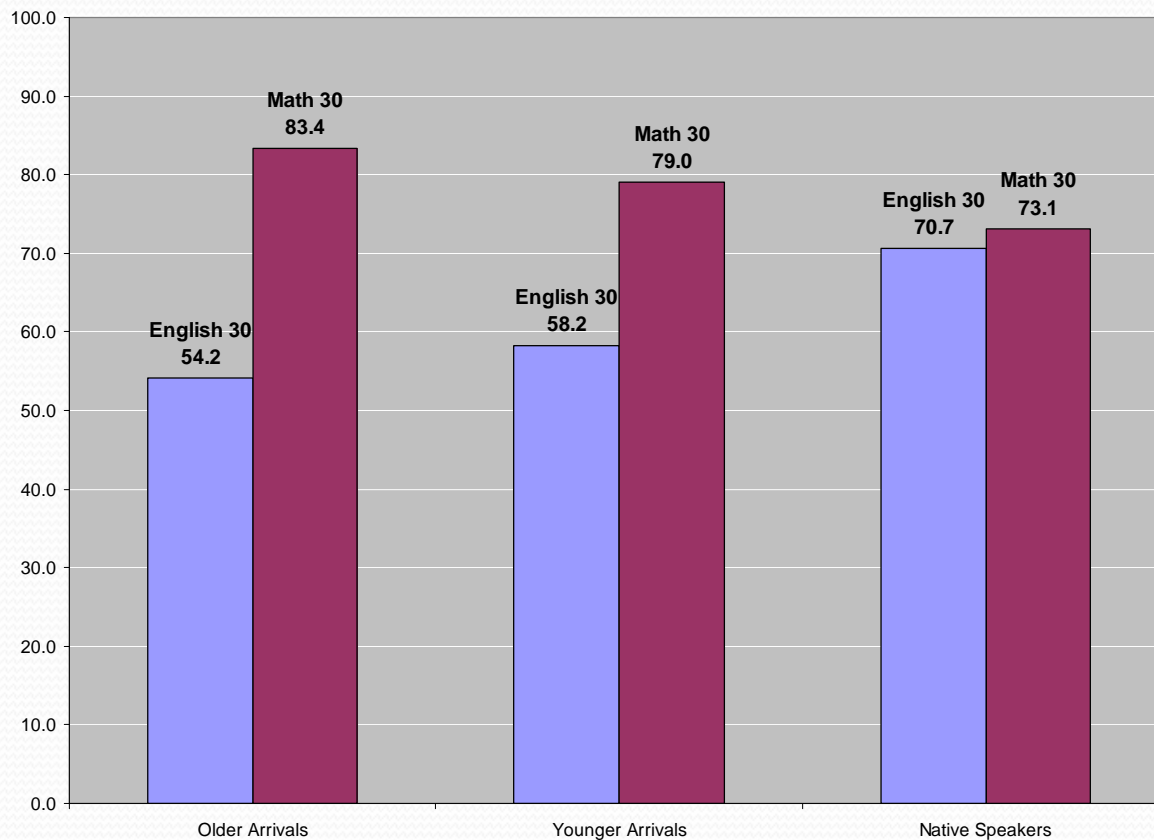


A simple analysis of variance (ANOVA) and the Scheffe Test were used to determine that while there is no statistically significant difference between the Math 30 grades for older and younger arriving ESL students, there is a statistically significant difference between the ESL students as a whole and their NS counterparts.

Math is an area of distinct strength of ELLs, and we take it as an indicator of academic promise/competence.

English 30 vs. Math 30

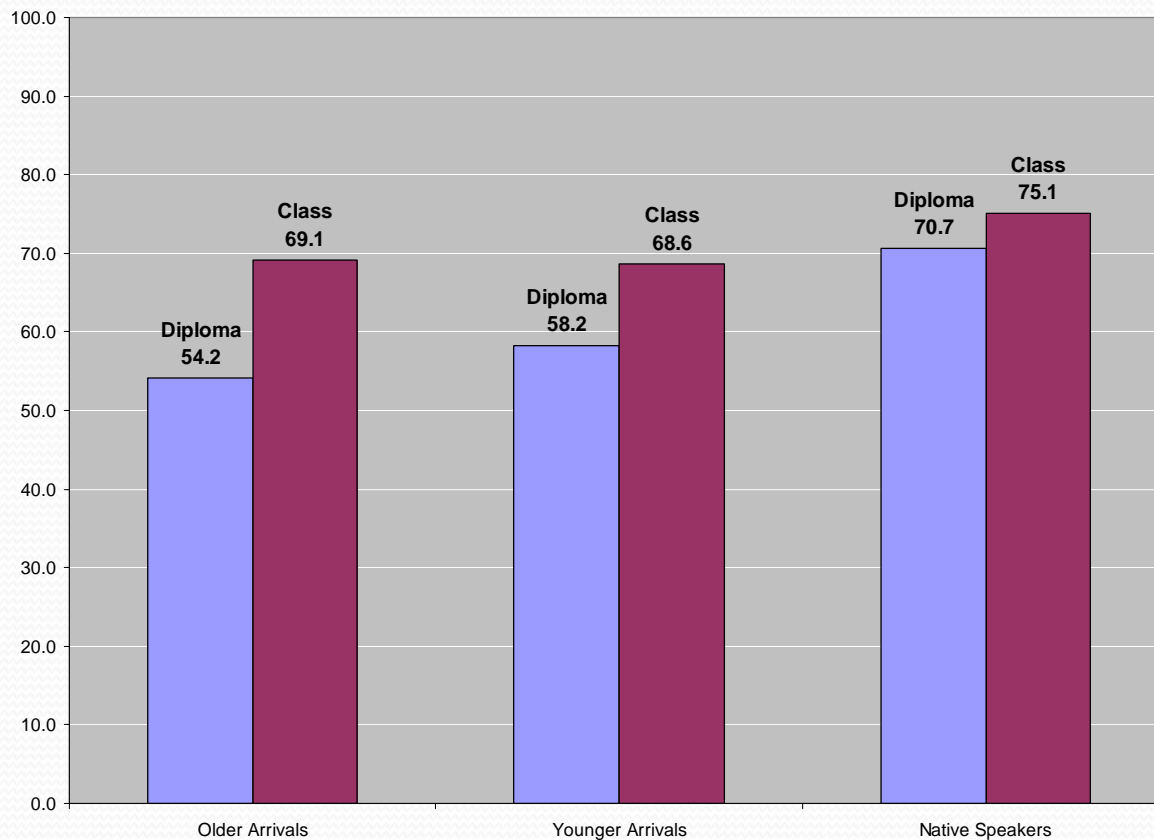
A Comparison of English 30 Diploma Exam and Math 30 Blended Grades



A simple analysis of variance (ANOVA) reveals a statistically significant difference between the English 30 Diploma exam grades and the Math 30 grades for both the older and the younger arriving ESL students. However, there is no significant difference between the English 30 Diploma exam grades and the Math 30 grades for NS students.

English 30 Diploma vs. Class Grade

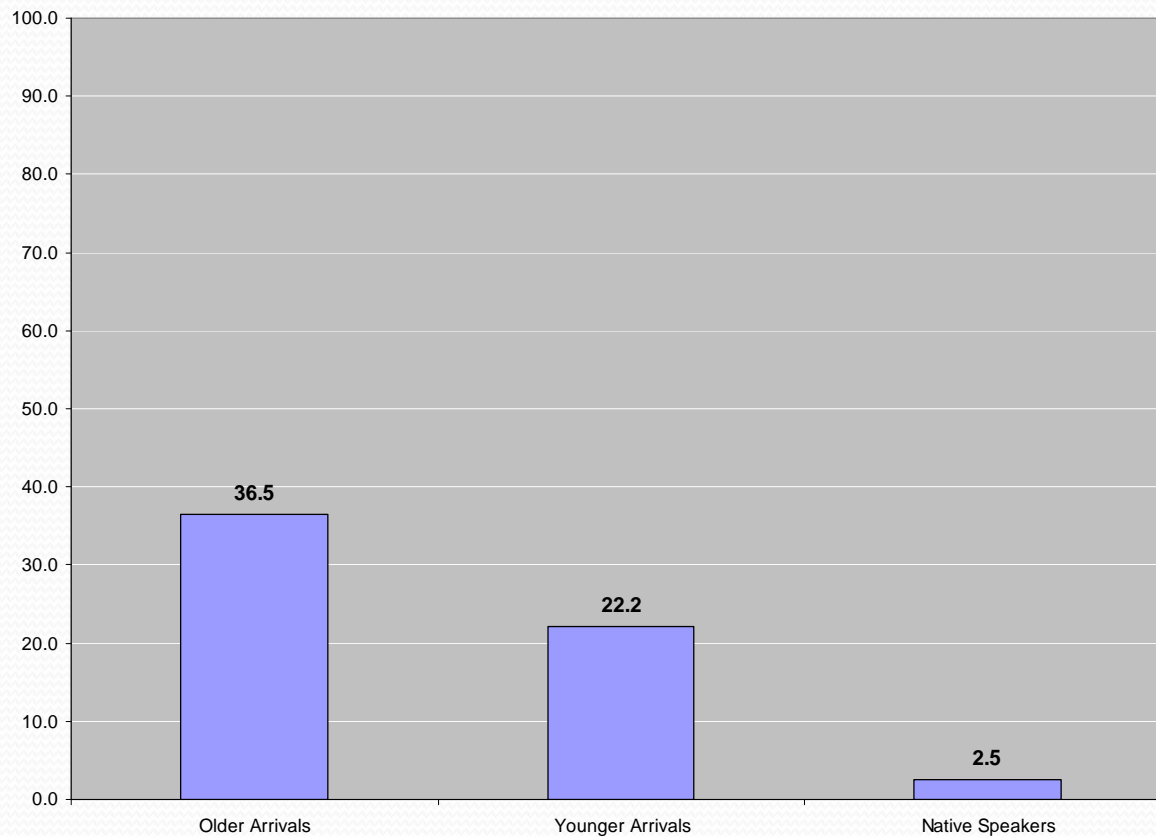
A Comparison of English 30 Diploma Exam and English 30 Class Grades



A simple analysis of variation (ANOVA) reveals a statistically significant difference between the English 30 Diploma Exam grades and the English 30 Class grades for all three groups: older arriving ESL students, younger arriving ESL students, and their NS counterparts. Notice that the difference is much more pronounced for the ESL students.

English 30 Diploma Failure Rate

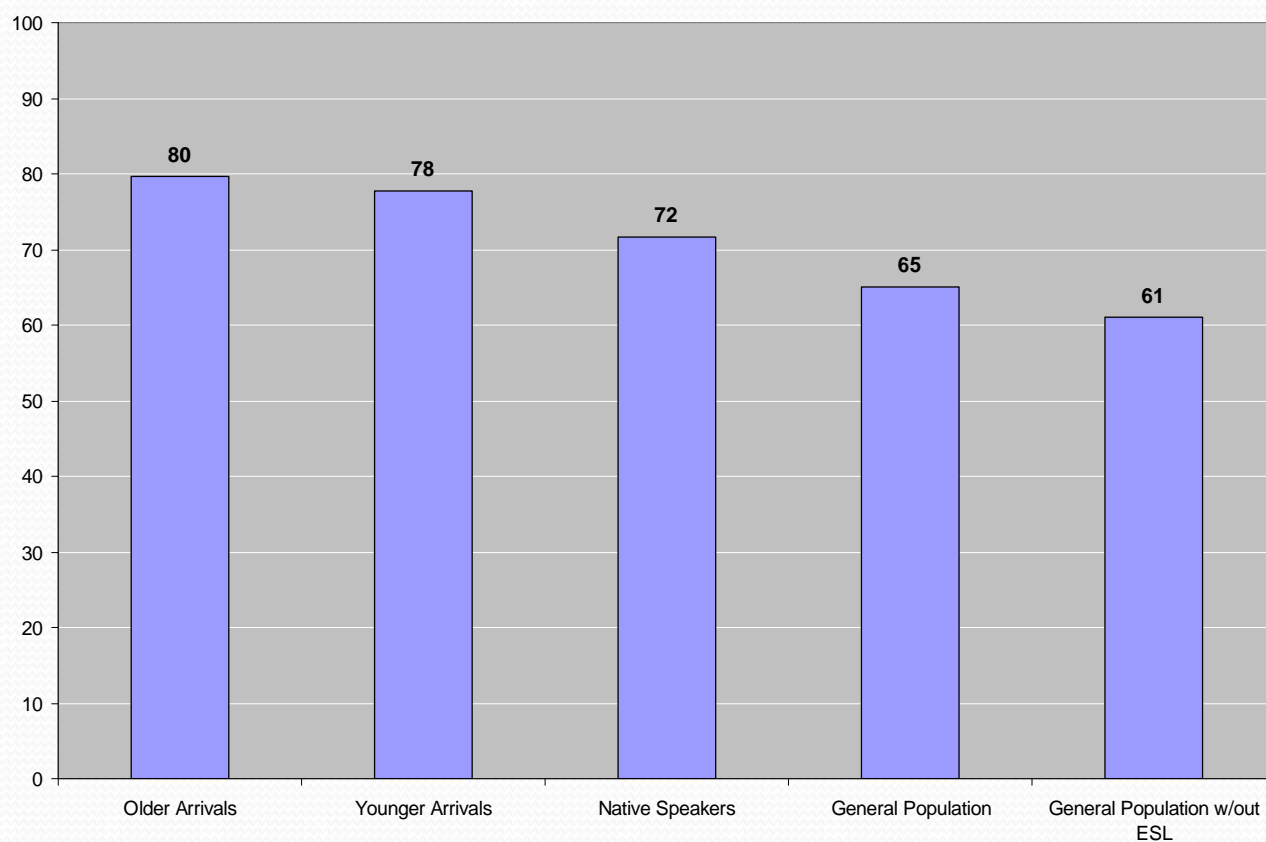
English 30 Diploma Exam Fail Rate



A significant number of older and younger arrivals fail the English 30 Diploma exam in comparison to their NS counterparts.

Graduation Rates

A Comparison of Graduation Rates at the University of Calgary



ESL students are graduating from the University of Calgary in greater numbers than their NS counterparts who used Math 30 as part of their matriculation scores to enter the U of C. All three groups are graduating in higher numbers from the University of Calgary than the general university population, which may not have taken Math 30 in order to enter the university.



To sum up:

- ELLs are smart, hard working and tenacious! They attend and graduate university in disproportionate numbers. BUT, they struggle:
 - Low marks on the English diploma exam suggest that ELLs are not well prepared for the demands of higher levels of academic study. This is seen in the following:
 - Longer time to degree completion (6 years)
 - Lower GPA over time
 - More failed and repeated (core)courses
 - More often on academic probation

Quick Questions

- 1. At what grade level is the Calgary Herald written?
 - Grade ?
- 2. At what grade level is a Biology 20 textbook written?
- 3. How well do you have to read to graduate from high school?
 - Grade ?
- 4. At what grade level are university textbooks written?
 - Grade ?
- 5. How long does it take for a child to learn conversational English?
 - Years ?
- 6. How long does it take for a child to learn academic English?
 - Years ?



The gap:

- ELLs in general may be reading at approximately a GE 9 (and lower) upon graduating high school. They succeed with grade level materials in hs due to: smaller class sizes, scaffolds, teacher mediation, extra time, group work and other forms of differentiated instruction.
- NS on their way to university read well ABOVE grade (they are in the upper quintile).
- First year texts are written between GE 14 – 20. Lectures, large class sizes, expectations for independent research and reading place enormous demands on ELLs. They need ongoing support!

Reading Sample: Biology 20

Adaptation and Change, Chapter 4, pp 96 – 115, Biology, Nelson

- **Theory of Natural Selection:**
- Darwin's theory of evolution by natural selection can be divided into five distinct ideas:
- Overproduction
- Struggle for existence (competition)
- Variation
- Survival of the fittest (natural selection)
- Origin of new species by inheritance of successful variations
- By briefly examining the main ideas, it is possible to understand the basis of Darwin's theory of evolution by natural selection.
- **Overproduction.** In simple terms, overproduction means that the number of offspring produced by a species is greater than the number that can survive, reproduce, and live to maturity. For example, if the millions of eggs laid annually by a female codfish were to survive to adulthood, the oceans would be filled solid with codfish in a few short years. However this does not happen, because only a few survived and reproduce.
- Darwin's concept of overproduction was influenced by Thomas Malthus's *Essay on population*, written in 1798. The essay pointed out that while populations of organisms increase geometrically, the arithmetic progression. The resulting gap between the two explains the idea of overproduction.
- **Struggle for existence.** (competition). Because of overproduction, organisms of the same species, as well as those of different species, must compete for limited resources such as food, water, and a place to live.
- **Variation.** Differences among traits occur among members of the same species. Therefore, no two individuals are exactly alike. Darwin believed that these variations (including acquired variations) are passed on to the next generation.
- **Survival of the fittest.** (natural selection). Those individuals in a species with traits that give them an advantage (those that are well adapted to their environment) are better able to compete, survive, and reproduce. All others die off without leaving offspring. Since nature selects the organisms that survive, the process is called natural selection.
- **Origin of new species** (speciation). Over numerous generations, new species arise by the accumulation of inherited variations. When a type is produced that is significantly different from the original, it becomes a new species.
- **FK Grade Level: 10.8**
- **Web VP v3 (Cobb 2009) Vocabulary Profile:**
- K1-K2 82.16 / AWL 10.15 / Off-List 7.69
- BNC 99%: 8,000 / BNC Stretch: 17,000

FK Grade Level **10.8** 99% Coverage **8,000 words** Stretch **17,000 words**



Although the **atom** is the smallest unit having the **physical** and **chemical** properties of its **element**, these **tiny** bits of matter are composed of even smaller parts called **subatomic** particles. **Physicists** have split the **atom** into more than a hundred types of particles, but only three kinds of particles are **stable** enough to be of **relevance** here: **neutrons**, **protons**, and **electrons**. **Neutrons** and **protons** are packed together tightly to form a **dense core**, or **nucleus**, at the center of the **atom**. The **electrons** move about this **nucleus** at nearly the speed of light (Figure 2.3).

- FK Grade Level 14.4 99% Coverage 10,000 words Stretch 10,000 words**



iEAP: From high school to uni

- NOT a remedial class!
- Raise the general language proficiency to at least GE 10
- Begin to 'spike' or tunnel vocabulary and concept information to Engineering, Sciences, Business
- Provide program advice and career counseling
- Ongoing tracking
- Mini-workshops along the way on areas of need



iEAP

* Preparation for university or college:

- academic writing: essays, reports, summaries, analyses, critiques
- lectures/note-taking, formal presentations
- language learning strategies
- reading: volume! academic vocabulary

- 125 contact hours plus 125 hours of home study materials and assignments




Other needs

- ❏ avoiding plagiarism
- ❏ critical thinking
- ❏ academic strategies (e.g. time management)
- ❏ relevant socio-cultural information
- ❏ academic discourse & register

Putting the course together

Theme: *Plan-It Calgary* - 3 Units of Inquiry & Schedule



Pre-Testing					
Content Area	1st period (Academic Writing & Grammar)		2nd period (Academic Reading Comprehension & Proficiency)		3rd period (Academic Communication Skills)
I Social sciences and Humanities	Report 1	Essay 1	Selected university text-book readings: History, Design; <i>Plan-It Calgary</i> documentation	Extended Reading 1	Presentation 1 (City Council Debate)
II Science and Engineering	Lab / Scientific Report		Selected university text-book readings: ecology, chemistry, engineering; <i>Plan-It Calgary</i> documentation	Extended Reading 2	Presentation 2 (Research Report)
III Business and communications	Market Analysis / Business Plan		Selected university text-book readings: Finance, Business, Communications; <i>Plan-It Calgary</i> documentation	Extended Reading 3	Presentation 3 (Business Plan)
Post-Testing					



Students

- ✱ Various language backgrounds (Gujarati, Punjabi, Mandarin, Cantonese, Urdu, Azeri)
- ✱ All ~18 years old
- ✱ Lengths of residency ranged:
 - from Canadian born to 3 years in Canada
- ✱ Target programs: Health Sciences, Business, Communications and Culture, Psychology, Engineering



Pre & Post Testing

- ✱ Students showed improvements on all tests
- ✱ Vocabulary (both general and academic) improvement was especially notable
- ✱ A lot of gains can be made in six weeks
- ✱ It's still not enough to make up the difference (i.e. Post-test class average still well below university equivalent)



Priorities for early intervention

- www.duallanguageproject.com
- Balanced early literacy and language development. ELLs are 'stuck' with a small vocabulary of high frequency words ... must move them along!
- Monitoring vocabulary growth
- Thematic, integrated, cross-curricular teaching
- On-going support
- Direct, explicit instruction of vocabulary and grammar
 - Examples: Literacy journals, missed opportunity!



Conclusion and Implications

- iEAP can accelerate language learning: we think ELLs have latent potential that can be ‘kick started’ anytime
- Start interventions early!
- Provide other types of services and programmatic support



Remaining Questions

✱ What are your thoughts or ideas?



Thank you

Email: hroessin@ucalgary.ca

