

# **Pre-trades Report 2008-2013: BY: LELAND OLSON**

## **Outline:**

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  - b. Unique Aspects
  
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## Background:

The Pre-trades and Engineering multiple-option was developed as part of a larger high school curriculum overhaul initiated by the Department of Education. Kugluktuk High School was selected as the pilot location for the program and from 2005 to 2008 the Pre-trades program (as the multiple option will be referred to in this report) was tested and evaluated with support from both the KSO and the Department of Education.

When the Pre-Trades program was initially put forward to parents and students in August of 2005, the goals were already clear:

1. **Improve attendance.**
2. **Have all students graduate high school.**
3. **Have all students pass the Pre-Trades entrance exam of their choice before graduating high school.**
4. **Have students use their high school education as a “stepping stone” to:  
a) either a career or, b) further education in the field of trades or engineering.**

To accomplish these goals, the program would need to combine all the traditional academic high school subjects with more “hands –on” shop courses than were usually offered at the time. It was hoped that by making the link between high school and a future career more tangible, students would be inspired to succeed.

It was **not** designed as a vocational program for students who were unable to handle academic courses, but rather as an alternative academic stream with some practical courses included.

Total enrollment for the years 2005-2006 to 2013-2014 was 74 students. One is deceased and two moved to other communities before completion of the program.

A maximum of ten students was selected each year due to limited resources and shop space. This cap on numbers meant that a selection process needed to be developed. Students were selected for the program based on an application they submitted at the end of Grade 9. The number one factor in selecting students was their interest in studying the trades. However, attendance and academic achievement were also considered if more than ten students applied in any given year. Since 2005, nine cohorts of grade 10 students have been admitted to the pre-trades program. Of those cohorts, only two comprised the maximum number of ten students.

To remain in the program, students had to maintain an average minimum attendance of 60%. Every two-week period student attendance was evaluated. Students below 60% were then placed on contract for the subsequent two-week period. During the first semester of grade 10, failure to improve attendance for the contracted period could result in removal from the program. After that point, all students were considered permanent participants in the program and only left of their own volition.

### **Unique Aspects:**

1. **Ratio of Academic to Practical Courses:** The trades program has morphed over the years due to changing graduation requirements, but has tried to maintain a ratio of approximately 70-80% academic courses and 20-30% trades courses.
2. **Trades Component:** Students are introduced to a wide range of trades courses using Alberta's CTS modules (carpentry, cabinetmaking, mechanics, welding, plumbing, drafting, and cooking). A progression of courses from Introductory level to Advanced level is followed for Carpentry, Cabinet-Making, Welding, and Drafting. A minimum total of 24 CTS credits is recommended.
3. **Academic Component:** Math and Science are adapted to meet the unique needs of the Pre-trades students. The Applied Physics courses for instance were largely conceived as a response to the needs of the Pre-trades program. Students are encouraged to challenge themselves by taking university entrance level courses in all subjects where possible. A minimum of 76 academic credits is required.
4. **Team building:** Students progress through high school in cohorts where possible. This sometimes means teaching several different levels at one time. Students participate in fundraising activities and several "get-togethers" during the school year. Each year the grade 11 class takes a field trip to Edmonton to visit educational institutions.
5. **Tools for attendance:** Students receive points for their attendance that can be used to purchase tools from a predetermined list.
6. **Work Experience:** Grade 10's are placed in trades related jobs for a minimum of one week each May.
7. **Scheduling:** A variety of unique schedules have been tried including the most recent version which features 3 hour blocked classes in the morning for trades courses and regular, semestered, courses in the afternoon for academics.

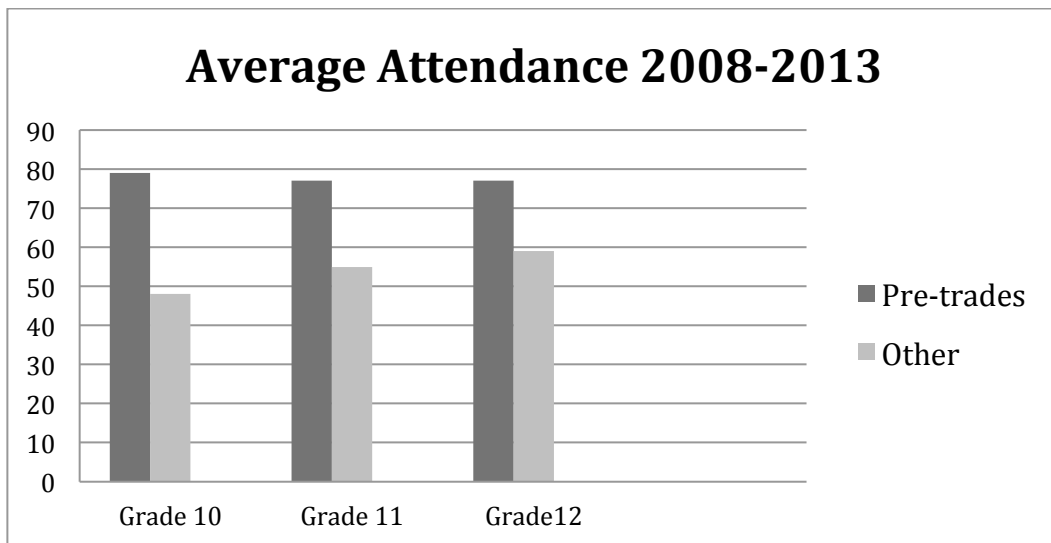
The report that follows seeks to examine in detail the effectiveness of the program in reaching its stated goals. The primary sources of data included the Maplewood data base, CUM files, and personal records. Other secondary sources included the Arcticnet draft report on KHS by Heather MacGregor, and publicly available Statistics Canada data.

## Part One: Attendance

Of all the goals of the pre-trades program attendance is the single most difficult measure to assess. On the face of it, the program has been a resounding success story in regards to attendance. And, indeed, closer examination of the data seems to support the initial impression that the pre-trades program has improved the attendance. However, statistics can be deceiving and must be considered in the proper context. **The attendance measures that have been included attempt to provide the context necessary to accurately evaluate the effect of the Pre-trades program on the attendance of pre-trades students in particular and KHS students as a whole.**

### **1. Attendance Measure 1: Average Attendance Pre-trades versus Regular Program**

This measure is a raw aggregate of the attendance patterns of pre-trades students versus regular studies students for the years 2008-2013. (Note that 2008 was the first year PT students were enrolled in grades 10-12.)

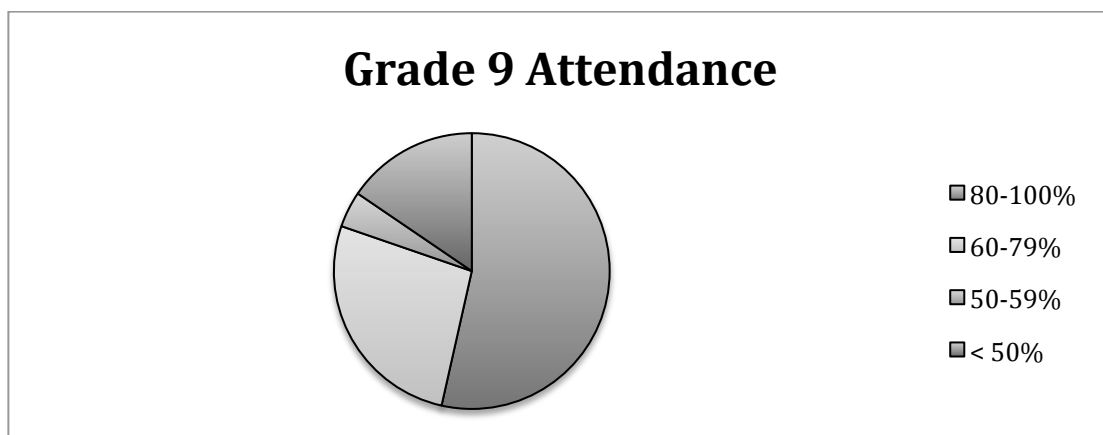


### Summary:

- The PT cohorts consistently have better attendance than the rest of the school by wide margins.
- Also of note, the PT attendance has remained largely stable from grade 10 to 12, while the attendance among regular program students has actually increased. Why? Grade 10 is a critical turning point for students in Nunavut. A large percentage of students drop-out of school in Grade 10. Subsequently, attendance actually rises in Grade 11 and Grade 12 for regular studies students. **The Pre-trades program has been more successful in helping students move from grade 10 to grade 11 and then to grade 12.**

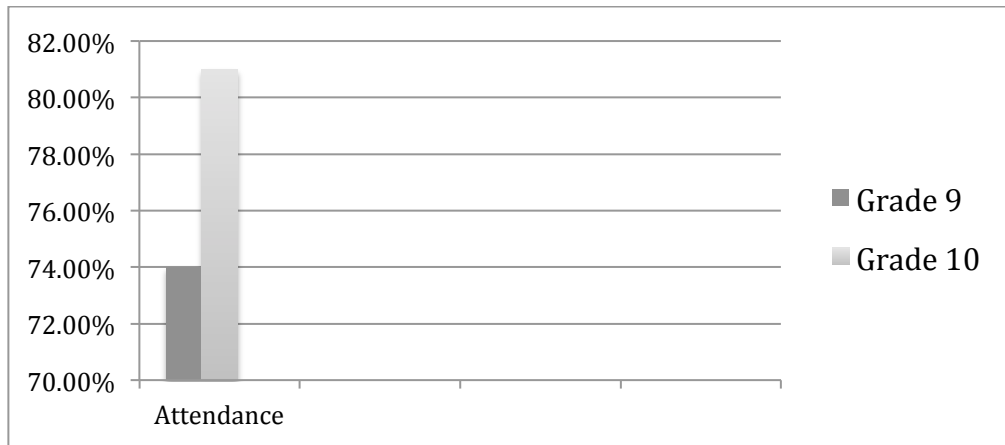
### For Context (Attendance Profile of Students who enter Pre-trades):

Starting in August 2005 through to August 2014, 71 students have entered the Pre-trades program. 54% of those students had attendance greater than 80% in grade 9, while 15% had attendance less than 50% in grade 9. These numbers seem to suggest that the PT program attracts applications from students with higher average attendance than the regular program does. Why that is the case is difficult to pinpoint. It may be simply the fact that students with better attendance are attracted by the stronger academic focus of the PT program. Regardless, there is no doubt that the extremely large gap in attendance patterns between pre-trades and regular program students is at least partially explained by the attendance of students who enter pre-trades versus those who choose regular studies. **For this reason the attendance measures that follow are more useful in evaluating the effectiveness of Pre-trades program.**



## 2. Attendance measure 2: Grade 9 versus Grade 10 Attendance

This measure demonstrates the effectiveness of the Pre-trades program in transitioning PT students from Junior High to High School. The sample size is the 71 students who entered the program in grade 10 for the years 2005 to 2013.



### Summary:

- Clearly the Pre-trades program has been able to support and improve upon the attendance of students who enter the program in grade 10.
- Even more impressive than the 7.1% improvement in average attendance is the context in which this improvement occurs. Typically, Nunavut students entering high school see their attendance fall quite dramatically. According to Heather MacGregor, who authored the Arcticnet report on KHS, “Grade 10 is a critical turning point in the academic careers of students, when as many as many as 50% of students become disengaged from school.”

### For Context:

- A useful base measure is the ability of junior high students in general to transition successfully to the regular high school program Nunavut wide.

Stats available for Nunavut-wide (2005):

Grade 9: 71.14% (days present)

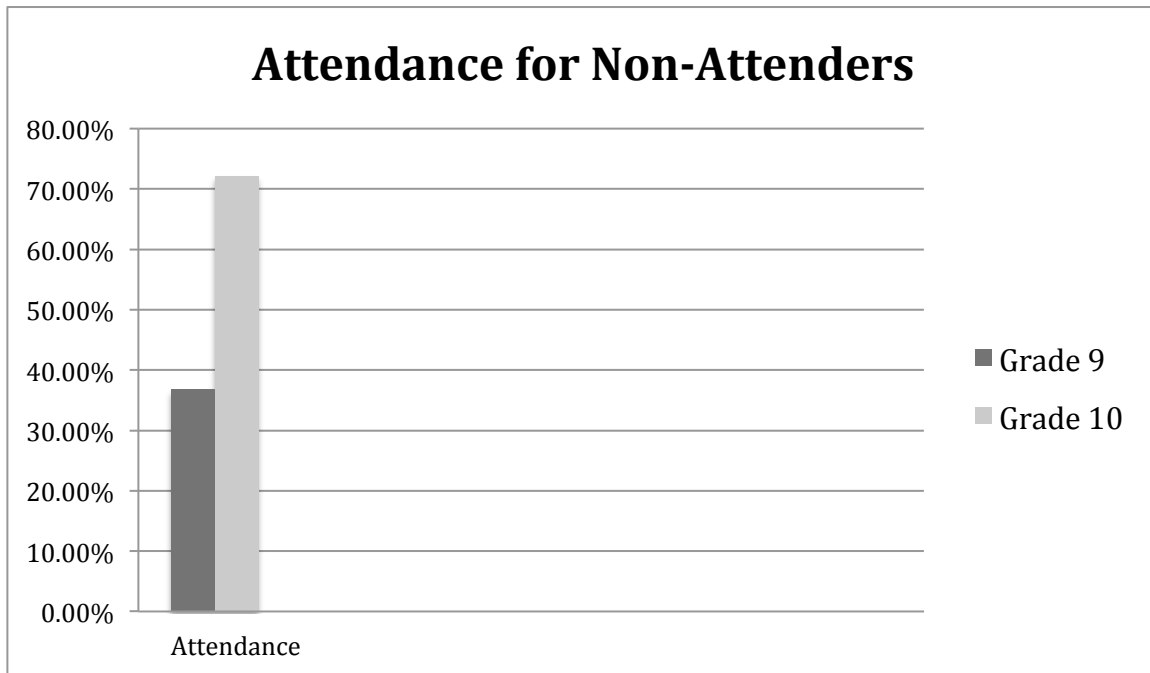
Grade 10: 64.58% (days present)

***More data on the transition from junior high to high school Nunavut-wide would be helpful.***

### 3. Attendance measure 3: Grade 9 Non-attenders

This measure looks at the effectiveness of the Pre-trades program in helping non-attenders (defined as a student with less than 50% attendance) improve their attendance after entering high school.

In the period from 2005-2012 (sample of 71 students), 11 non-attenders were admitted into the program (15.5% of the total intake).



**Summary:**

Clearly the PT program has had some success in helping non-attenders improve upon their attendance in high school. The average improvement in attendance is 35%. Even more telling, all eleven non-attenders showed at least some improvement in attendance in grade 10, with the lowest improvement for a student being +9.4%.

Also interesting to note, five of the non-attenders have graduated from high school already and two are still enrolled in studies.

## 4. Attendance Measure 4: Comparing Rates of Change in Attendance

This measure looks at the rate at which the attendance of PT students changed compared to those students enrolled in the regular program. By using rates of change rather than raw numbers, some bias is removed.

During the first three years of the program pilot (2005-2008), a sample group consisting of **all** grade 9 students (44 in total), was tracked from grade 9 to grade 12 to see how their attendance patterns changed. The results are shown below. .

The sample size for this analysis was 44 students (20 pre-trades and 24 regular).

- The overall difference in average attendance was quite similar to the results reported in a much larger sample elsewhere in this report. **PT students' attendance on average for this period was 44% higher than their counterparts.**

Perhaps most interesting, however, is when we make the comparison directly between students who had similar levels of attendance in grade nine.

1. Looking at students who had **50% or greater** attendance in Grade 9:

Sample Group	Change in Attendance Rate by Grade 12	Drop Out Rate
Pre-Trades	-16%	7%
Regular Studies	-40%	58%

2. Looking at students with **less than 50%** attendance in Grade 9:

Sample Group	Change in Attendance Rate by Grade 12	Drop Out Rate
Pre-Trades	+7%	33%
Regular Studies	-6%	65%

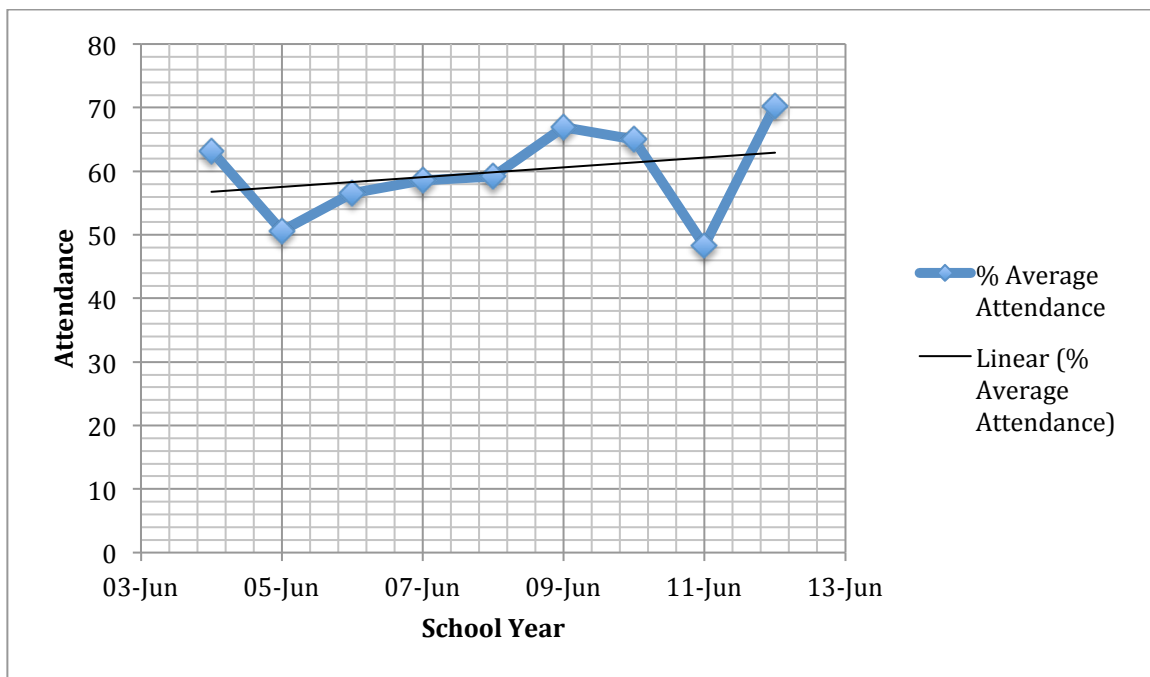
### Summary:

These numbers are statistically significant. By every measure, students with similar attendance patterns in Grade 9 show divergence in their attendance patterns in high school. PT students are able to maintain their attendance with greater success and drop out of high school at a lower rate. Also, the program has had more success in particular at helping students who were non-attenders in junior high, improve their attendance in high school.



## 5. Attendance Measure 5: Overall patterns of Attendance for KHS

This measure looks at the attendance patterns of KHS students as a whole. The year 07/08 is used as a dividing line because that was the first year pre-trades had students enrolled in all grades and the first year pre-trades graduated students.



### Summary:

Again, any conclusions regarding overall attendance are tentative due to changing methods of record keeping. That being said, the available data indicates that attendance as whole at KHS has improved slightly. Notwithstanding the drop in 10/11, the trend line is clearly positive. From **2004 to 2007 attendance averaged 57.25%** and from **2008 to 2012 it averaged 61.92%**. The correlation between improving attendance at KHS and the implementation of the Pre-trades program is difficult to establish due the large number of variables involved. But it is reasonable to conclude that the Pre-trades program has contributed at least in part to the improving attendance numbers.

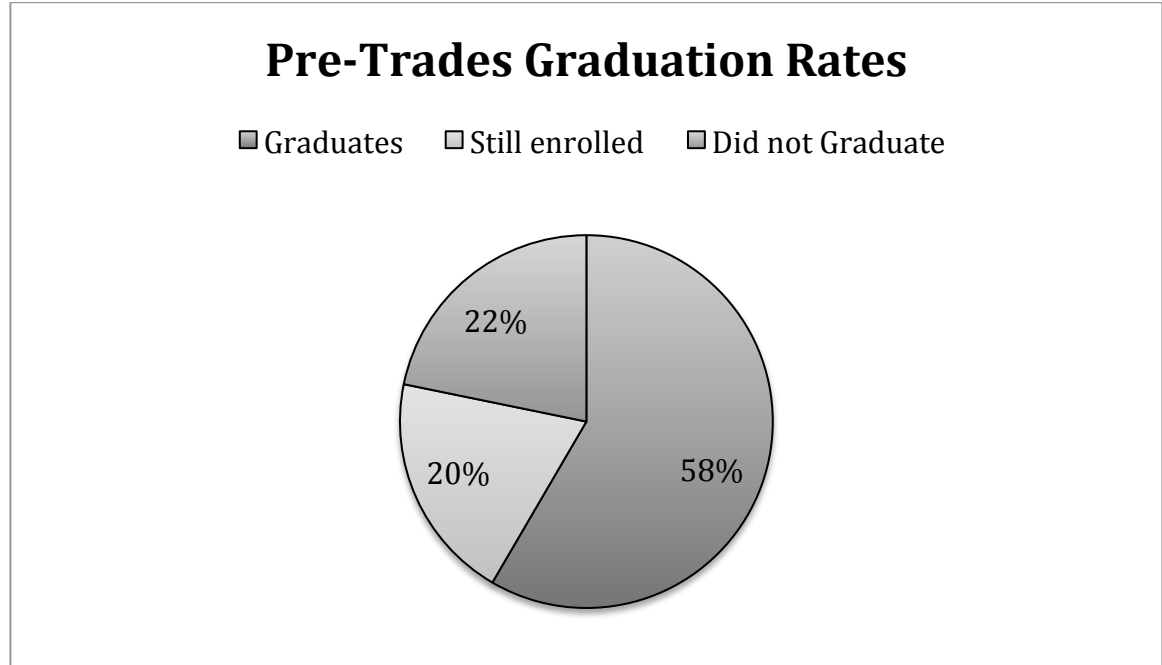
## Part Two: Graduation rates

Graduation rates are a measure that is more easily quantified. Since 2008, the first graduation year for PT students, there have been 30 pre-trades graduates. The following statistical measures have been divided into three categories:

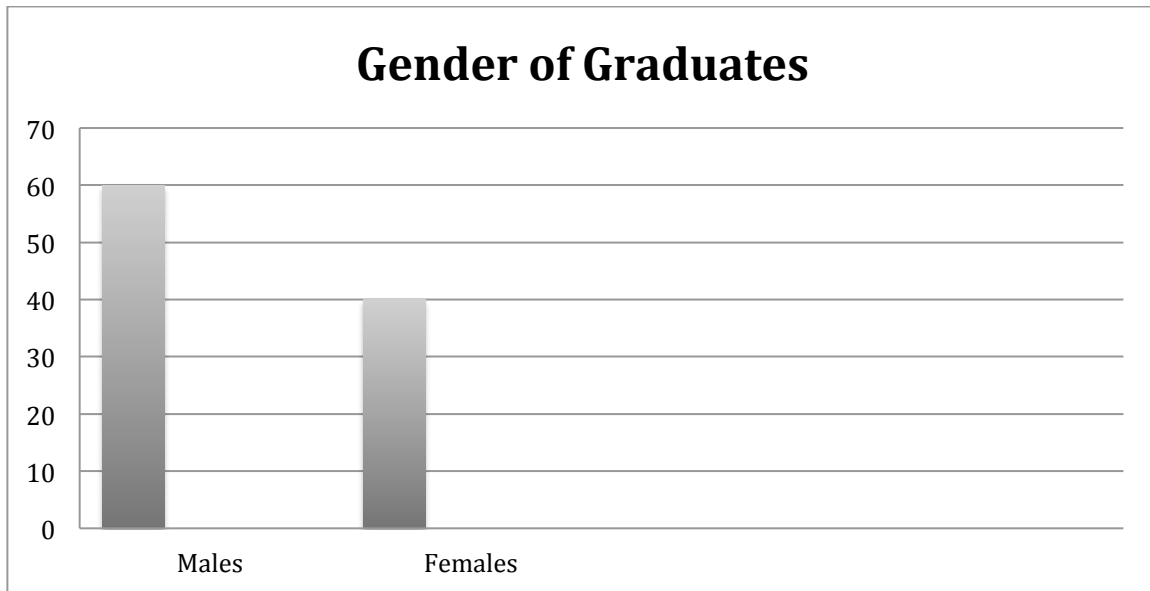
1. Profile of a typical pre-trades Graduate
2. Pre-trades graduates compared to regular studies graduates
3. Years 2002-2007 compared to years 2008-2013

### 1. Profile of a typical Pre-Trades Graduate:

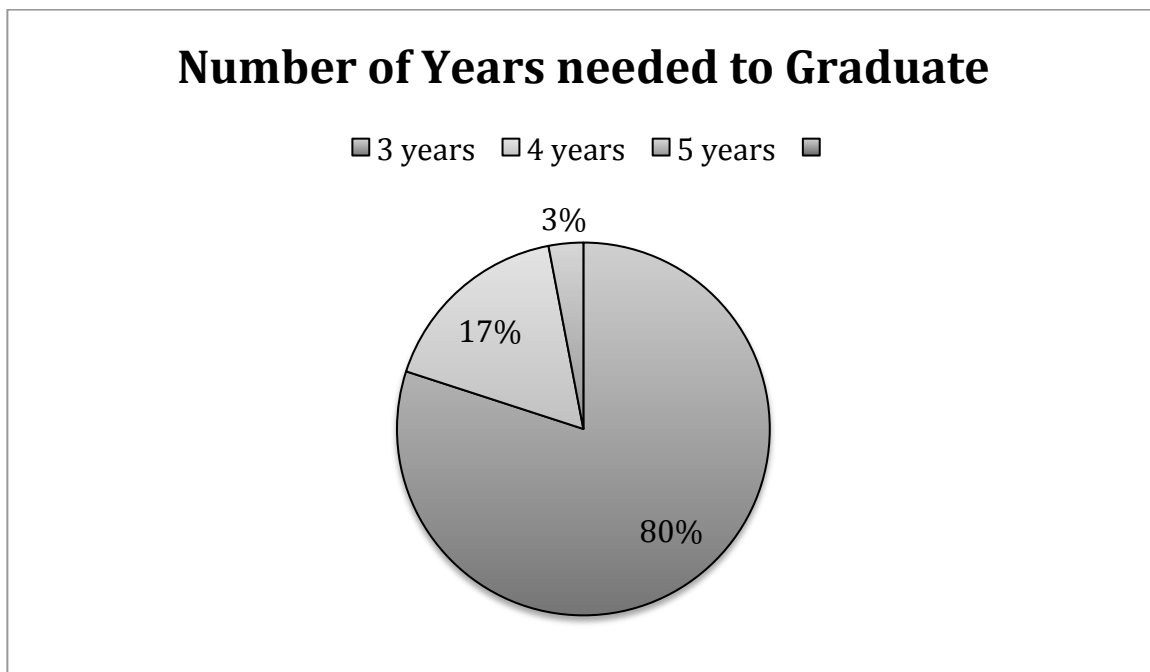
- **Graduation rates:** 59% of students who entered the Pre-trades program in the period from August 2005 to August 2010 have already graduated (graduating classes 2008 to 2013). A further 20% are still enrolled in high school studies. 22% dropped out without completing high school.



- **Gender:** The gender split between Males and Females who Graduate from pre-trades is as follows: 60% male and 40% female. (Initial enrollment gender split was very similar: 62% male and 38% female.)



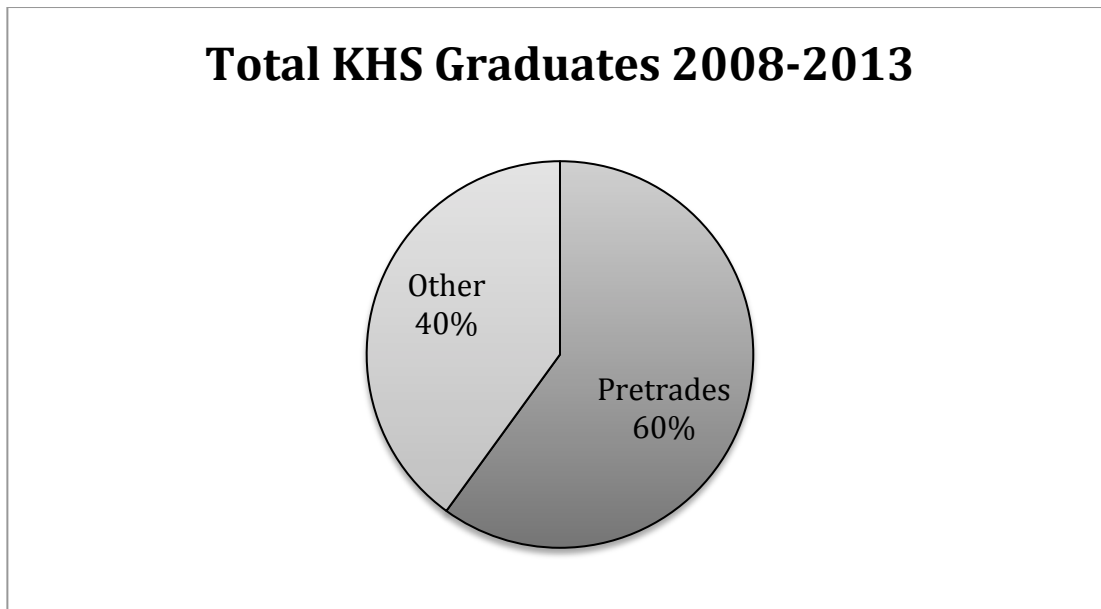
- **Age:** The typical PT graduate is 18.1 years old (mean) and has completed his/her high school education in 3 years.



## 2. Comparisons between Pre-trades Graduates and Regular Program Graduates (2008-2013)

This measure directly compares pre-trades graduates to regular program graduates. The sample size is 50. (30 pre-trades graduates and 20 regular program graduates)

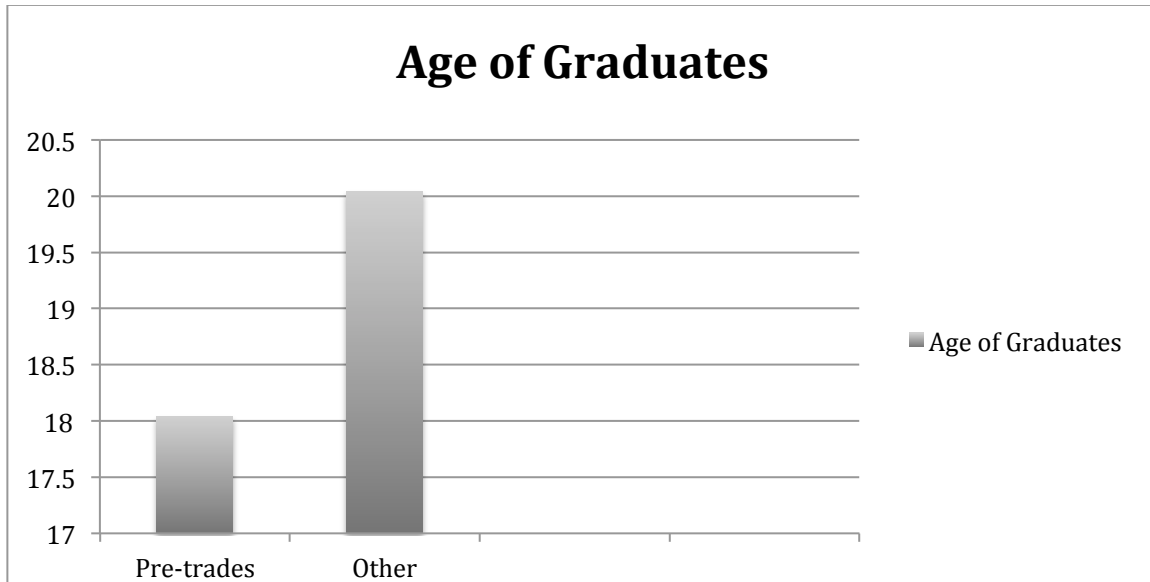
- **Total Numbers:** For the graduating classes 2008-2013, there have been 50 KHS graduates. Of those, 30 were PT students. This means pre-trades accounts for fully 60% of all KHS graduates.



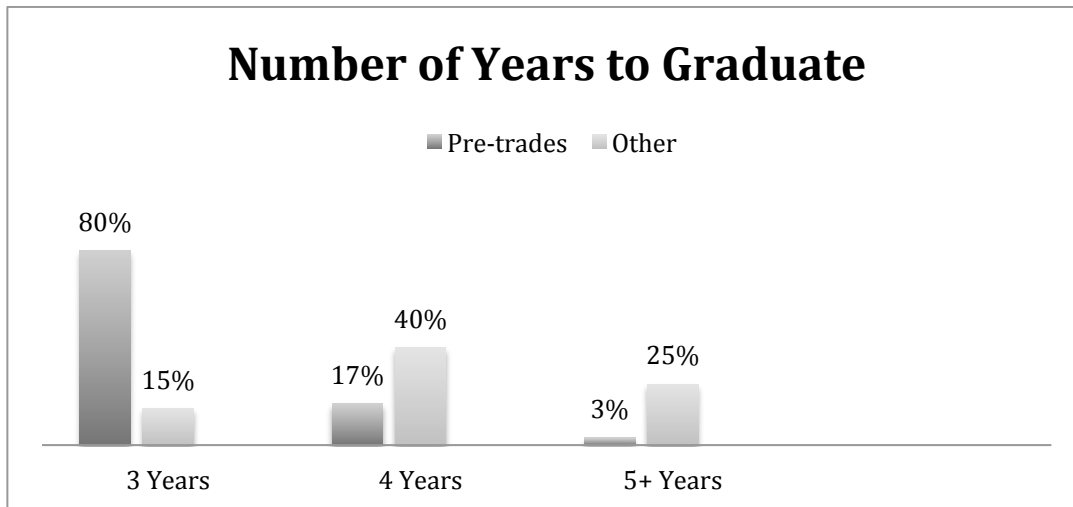
- **Gender:** 60% of PT graduates are male. For regular program graduates, only 30% are male. It should be noted that the gender split for pre-trades closely mirrors the enrollment of males and females in grade 10.

Gender	Pre-Trades Grads	Grads excluding PT
Male	60%	30%
Female	40%	70%

- **Age:** The mean age of a PT graduate is 18.06. The mean age of a regular program graduate is 20.04.



- **Years needed to Graduate:** 80% of pre-trades graduates completed their high school studies in three years. For other graduates, 15% completed high school in three years.



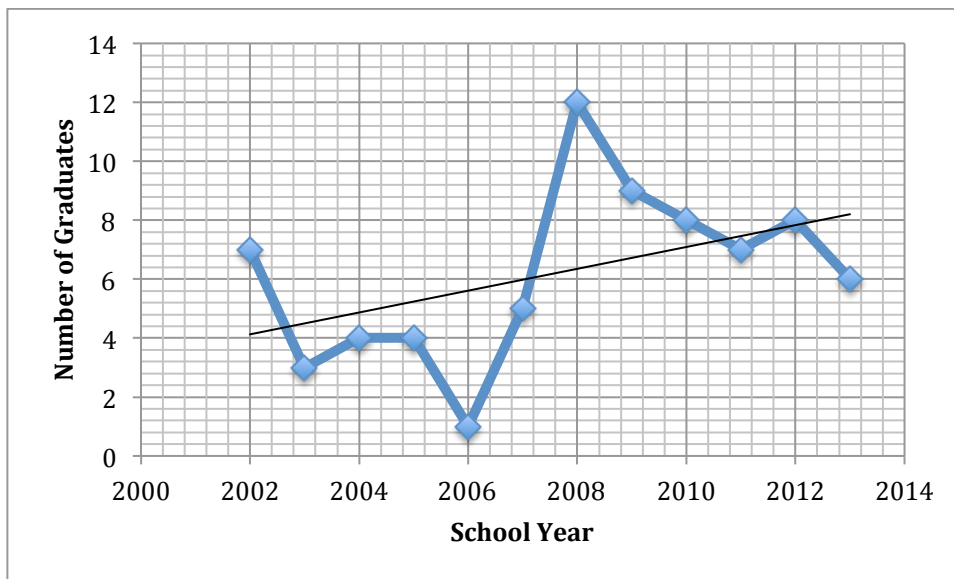
**Summary:**

**The average PT graduate is younger, has graduated in fewer years, and is more likely to be male than his/her counterpart in the regular program.**

### 3. Comparisons between the years 2008-2013 and 2002-2007:

Although it is insightful to compare the pre-trades cohorts to their contemporaries, it is also very useful to make comparisons between the six years pre-trades has graduated students and the six years previous. This data gives some insight into the impact the pre-trades program has had on KHS graduation as a whole.

1. **Total graduates by year:** for the years 2002-2007, KHS graduated 26 students. For the years 2008-2013, KHS graduated 50 students. This represents a **mean increase of 93%**.



#### Summary:

This is the single most telling statistic in the report. Pre-trades clearly did not account for the entire increase in graduates. However, when we consider that the increase in graduates coincides directly with the first year that the program was able to graduate students and remains fairly consistent thereafter, it is reasonable to assume some positive correlation. That correlation is further strengthened by the fact that pre-trades now accounts for 60% of all graduates at KHS.

The next question is whether the increase in graduation numbers was due to the effects of the pre-trades program or was due to other factors such as an increase in enrollment or the lowering of standards.

- **Enrollment Data: 2003-2012 (source: Arctinet draft report )**

Grade	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12
10	27	18	47	31	21	18	20	25	25
11	21	17	24	27	31	24	26	20	28
12	15	6	22	18	32	26	15	11	15
Total	63	41	93	76	84	68	61	56	68

While the enrollment fluctuates quite a bit year to year, **there is no evidence to suggest that the number of students enrolled at KHS has increased.** Indeed, the average number of students actually fell slightly in the years after pre-trades was introduced (68.25 students in 2003-2007 to 67.4 students in 2008-2012).

Also of note, KHS seems to be having **more success than in the past in moving students from Grade 10 to Grade 11, and from Grade 11 to Grade 12.**

### 2003-2007

Grade	Average Number of Students	Percent in each Grade
10	30.75	45%
11	22.25	32.6%
12	15.25	22.4%

### 2008-2012

Grade	Average Number of Students	Percent in each Grade
10	21.8	32%
11	25.8	38%
12	19.8	29%

- **Departmental Exam results:**

The English departmental results were selected as a barometer of the level of achievement of KHS graduates on a standardized test. An appendix included in this report looks at this data in more detail.

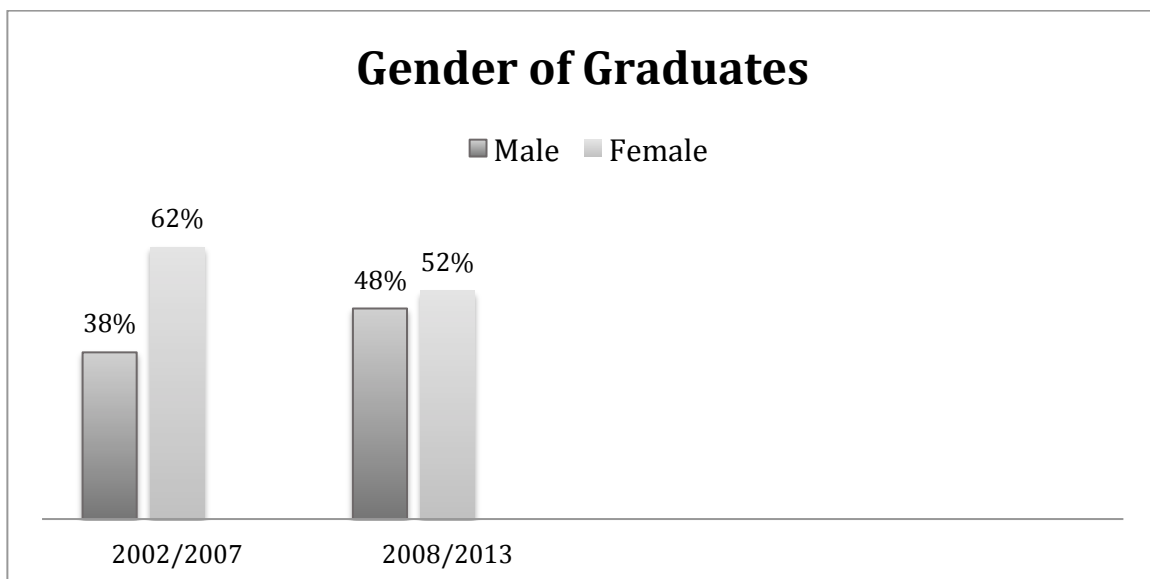
Years	Course Work Mark	Exam Mark	Differential
2002-2007	72%	43.3%	-28.7%
2008-2013	66.3%	47.6%	-18.9%

These findings clearly show that the increase in graduates was not due lowering the standards needed to graduate. In fact, KHS has seen a statistically significant improvement in departmental exam marks and a correspondingly smaller gap between course work and exam marks.

- **Nunavut-wide Context (source: Dept. of Education, GN, 2012)**

The last element to consider is what has been occurring Nunavut-wide over the same time period. For the years 2002–2007 Nunavut averaged 162.5 graduates per year. For the years 2008-2011 Nunavut averaged 231.75 graduates. This represents a mean increase of 42% - a large increase in its own right, but nearly not as large as the 93% increase that occurred at KHS during the same time period.

2. **Gender:** For the years 2008-2013, females represented 52% of graduates and males represented 48%. For the period from 2002-2007, females represented 62% of graduates and males represented 38%.



**For context:**

- General enrollment at KHS for the period in question (2002-2013) was 52% female and 48% male. (Arctic Net source)
- Graduates Nunavut-wide(1999-2011): 53% Female and 47% Male

**Summary:**

A trend to having more male graduates for KHS is quite clear. Here I think the pre-trades, which both enrolls and graduates more males than females, has also had a quantifiable effect. The gender split of graduates now more closely resembles general enrollment in KHS.



### 3. Age of graduates: For years 2002-2007 versus 2008-2013

Years	Average Age	Pretrades Subset	Regular Studies Subset
2002-2007	19.03	-	-
2008-2013	18.85	18.06	20.04

While average age of our graduates has not changed significantly, the average age of the PT graduates is significantly lower than any other subset.

The same trend holds when the ages of graduates are examined in more detail.

Age Group	Pre-trades (2008-2013)	Regular Studies (2008-2013)	KHS (2002-2007)	Nunavut (2004-2011)
17/18	67%	30%	35%	50.05%
19+	33%	70%	65%	49.14%

#### Summary:

Pre-trades has had at least some influence in lowering the age of the average graduate at KHS.

### 4. Years needed to Graduate: For the years 2002-2007 versus 2008-2012

Years	Pre-trades	Regular Studies	2002-2007	2008-2013
3	80%	15%	38%	54%
4	17%	40%	42%	26%
5+	3%	25%	12%	12%
IEP	0	20%	8%	8%
Average years	3.23	4.1	3.54	3.6

#### Summary:

PT graduates complete their studies in a shorter time period than any other subset examined. This strength has translated into an overall improvement at KHS – 2008-2013 shows more students graduating faster than 2002-2007.

## **Part Three: Trades Entrance Exam Results**

The Trades entrance exams are required for all prospective apprentices. There are five levels of exams and students choose the level that matches the trade they wish to pursue. For instance level, a Carpenter would challenge level two, while an electrician would challenge level five. The exam tests general knowledge in three areas of study: Math, Science and English. A score of 70% or higher is considered a pass.

Students in the Pre-trades program are encouraged to write the trades entrance exams in the final semester of their grade 12 year. Early results were mixed, so a specific course was developed in order to better support the students. The Entrance Exam Prep Course consists of 125 hours of instructional time and covers all relevant materials for each level.

Not all students who graduate from pre-trades choose to write the entrance exams. For some students their interests lie in careers that do not require apprenticeship, while for other students it becomes very difficult to fit the course into their schedule – especially students who may have failed a required course at some point.

The Data that follows is from 2008 – 2011. (Note that for the years 2012 and 2013 only pass/fail information was provided by the administrators of the entrance exams and is thus included only in the second chart.)

### **Trades Entrance Exam Results: 2008 – 2011**

Percent Grade	Number of Students	Percent Distribution
80% - 100%	2	10%
70% - 79%	4	19%
60% - 69%	7	33%
50% - 59%	6	29%
0% - 49%	2	10%

### **Pass/Fail Exam Results: 2008 – 2013**

Percent Grade	Number of Students
70% - 100%	9
0% - 69%	22

**Summary:**

It should be noted that this data represents each student's first attempt at the exam and in several cases students who failed, subsequently rewrote the exam and passed. Also of interest, eight of the nine students who passed the exam on the first try are employed full-time including four apprentices.

However, the data also highlights an area of weakness that needs to be addressed. Perhaps the goal of having all Pre-trades students pass the Trades entrance exam of their choice was too optimistic. For those students who scored less than 50%, apprenticeship may not be a realistic option. Those students may need to consider other trades related fields. As for the larger group of students who scored between 50% and 69% the problem still appears to be one of preparation. Basic math skills, science knowledge, study skills, and exam writing skills need to improve for many students.

## **Part Four: Post-Graduation**

A survey was also undertaken to find out what kind of success pre-trades has had in helping graduates reach their goals of working in the trades. Post secondary education, apprenticeships, full and part-time work were all surveyed. An appendix at the end of this report provides further details in this regard as well as anecdotes from former students.

The 29 graduates surveyed range in age from 18 to 24 years old. 2 graduates were currently in post secondary studies, 3 graduates were not actively seeking work, and 24 graduates were in the labor force.

### **Total employment data:**

<b>Category</b>	<b>Number Employed</b>	<b>Total Number Labor Force</b>	<b>Percent</b>
<b>Employment Rate</b>	<b>17</b>	<b>24</b>	<b>71%</b>
<b>Full-time</b>	<b>12</b>	<b>24</b>	<b>50%</b>
<b>Part-time/Casual</b>	<b>5</b>	<b>24</b>	<b>21%</b>

### **Trades Specific data:**

<b>Category</b>	<b>Number employed</b>	<b>Total Number Labor Force</b>	<b>Percent</b>
<b>Total Trades Related Jobs</b>	<b>10</b>	<b>24</b>	<b>38%</b>
<b>Apprenticeships</b>	<b>5</b>	<b>24</b>	<b>19%</b>
<b>Semi-Skilled</b>	<b>2</b>	<b>24</b>	<b>8%</b>
<b>Unskilled</b>	<b>3</b>	<b>24</b>	<b>12%</b>

### **Post-Secondary Education Data:**

**10 students have attended some level of post secondary education out of 29 total graduates or 35%.**

### **For Context:**

**The Employment Rate for the Inuit population of Kugluktuk (age 15 and over) was 42.5% according to the StatsCan 2006 census.**

### **Summary:**

More data on all graduates in Kugluktuk and Nunavut is needed to draw any firm conclusions. It can be ventured, however, that the program has had some success in producing graduates that are attaining employment in trades-related fields.

## Conclusions:

- **Increased Attendance:** While overall attendance at KHS has marginally improved since the inception of the pre-trades program, it is difficult to draw any firm conclusions in this regard due to variability in record keeping. However, several conclusions can be made about the attendance of pre-trades students specifically. Without question pre-trades has had a positive effect on the attendance of students in the program. The average pre-trades student's attendance remains more stable throughout high school than his or her counterpart in regular studies. The average pre-trades student is also less at risk of dropping out in high school. Lastly, non-attenders in junior high who enter the pre-trades program see their attendance improve.

### Why?

Many factors must be considered when looking at the relatively strong attendance figures in Pre-Trades.

1. **The Halo Effect:** Because pre-trades is to some extent set apart from the rest of the high school, and because it has a positive status and reputation, students in pre-trades feel special. Teachers have even gone so far to label this group as "elitist", and while that is somewhat exaggerated, there is no doubt that the students view themselves as part of something different from regular school.
2. **Group Dynamics:** As discussed previously, in most of the grade 10 cohorts a majority of the students had good attendance prior to entering pre-trades. Students with poor attendance were a distinct minority. This mix of students, along with the strong attendance expectations of the program, created an atmosphere where good attendance was the norm, and, as shown by the data, good attenders were able to maintain their attendance while poor attenders actually raised their attendance.
3. **Increased Opportunities:** Students were given several unique opportunities over the course of their high school studies. Field trips, work experience, NAIT instructors etc.
4. **Career Focus:** The constant reinforcement of the potential for careers in the trades made many classes more meaningful for students. They began to connect what they were doing in school with what they might do for a career.
5. **Hands On Work:** As is widely accepted, students possess different learning styles and students who tend to gravitate towards the trades tend to also excel in classes that place a premium on hands on projects.

6. **Attendance Policy:** There is no doubt that having an attendance policy that required a minimum of 60% attendance to remain in the program had a desired effect. Students wanted to stay in the program and improved their attendance in order to do so.

These conclusions have implications that go beyond narrow focus of this study. Poor attendance rates have plagued Nunavut schools since its inception. Teachers and parents realize that attendance is the number one priority in our schools and yet attendance rates remain stubbornly low. Many different policy initiatives have been implemented that attempt to address the problem, but most help only at the margins and do nothing to solve attendance issues permanently.

Perhaps the main reason policies seem to have little effect on attendance rates is that they all fail to acknowledge a fundamental rule of both psychology and sociology – accepted norms, whether good or bad, tend to reinforce the behavior of the masses. In other words, attendance rates are low in the community of Kugluktuk precisely because poor attendance is accepted as normal by the community in general and the school in particular.

Indeed, many of the solutions to attendance issues may in fact exacerbate them. For example, KHS operates under an inclusion model. The pre-trades classroom demonstrates how inclusion can have a positive effect on attendance – the core group of good attenders seemed to influence the attendance of non-attenders. However, this suggests that the opposite may also be true. In the average classroom at KHS, poor attenders outnumber good attenders. The established norm is one of poor attendance and as a result good attendance may be undermined rather than supported.

The Pre-Trades program was able to break this cycle of negative reinforcement by having smaller cohorts of students that had better attendance than the high school at large. Poor attenders within the group actually improved their attendance to match their peers. Stricter attendance policies only served to reinforce the better attendance rates evident in the program.

It is possible that more targeted initiatives that focus on meeting the unique needs of chronic non-attenders would be more effective than simply placing them in the general high school population and hoping for the best. Transition programs such as the “storefront” model have been used in other jurisdictions and could be replicated in Nunavut. Certainly such an approach would have the added benefit of improving the attendance norms in the average classroom – creating a cycle of positive reinforcement that mirrors the environment found in the average Pre-trades classroom.

- **Improving Graduation numbers:** The number of graduates at Kugluktuk high school has surged since the inception of the pre- trades program. A 93% increase in the number of graduates is noteworthy in any context, but give a largely stable enrollment, it is very impressive indeed. Several factors have most likely contributed to this increase, but since pre-trades accounts for a full 60% of graduates, it is reasonable to attribute at least some of the increase in the number of graduates to the pre-trades program.

### Why?

1. **Attendance:** Increased attendance accounts for at least some of the increased graduation rates. but since overall attendance at KHS improved only slightly while overall graduation rates improved markedly, other factors discussed below may have had a greater impact.
  2. **Group Dynamics:** For the same reasons that attendance was supported by the mix of students within each cohort, graduation rates were also supported. Students who were on a path to graduate positively influenced those who might not have graduated in other circumstances.
  3. **Career Focus:** Students in the pre-trades program are encouraged to spend time considering career options. The shop classes, field trip to NAIT, mine visits, work experience course and the trades entrance exam course all help in this regard. When students become aware that they need to graduate in order to reach a tangible goal, their attitude to school changes. School becomes a means to an end and this leads to a more mature attitude towards school.
  4. **Role Models:** Momentum cannot be discounted when it comes to increasing graduation rates. Early successes in the program produced graduates that quickly demonstrated to current students that graduation was not just possibility, but an expectation.
  5. **Expectations:** Simply put: Students are expected to graduate. This culture is reinforced over and over both overtly and tacitly. Even the ceiling tiles with the names of past graduates inscribed overhead remind students who lose momentary focus of their reason for being in school.
- **Success on Departmental Exams:** One of the more interesting findings in this report is the improving marks that students are achieving on departmental exams. This finding dispels the notion that KHS is increasing graduation rates merely by lowering standards. The opposite is in fact happening. Students are seeing their course work marks actually go down and their departmental exam marks go up.

### Why?

Again, it comes down to **increased expectations** and a **stronger career focus**. Students who have a reason to achieve at a higher level - a future career for instance - will have greater success than students who do not know why they are in high school.

- **Trades Entrance Exams:** The results on the trades entrance exams are mixed. It is worth highlighting the fact that 9 students have passed the exam, but it is also sobering to realize that 22 students did not. Without the context provided by Nunavut wide numbers it is difficult to surmise how typical these results are. Regardless, the original goal of having 100% success rate has not been reached.

### Why?

First, as noted earlier the original goal was a little naïve. Some of the students admitted to the pre-trades program use IAP's for their studies and may not be capable of passing the entrance exams. Second, for the majority of students the problem seems to be one of preparation. Increased focus on academics, specifically math and science, needs to be a priority going forward.

- **Youth movement:** The youth of pre-trades graduates has lowered the age of the average graduate at KHS by a significant amount.

### Why?

The answer here is quite simple. Higher attendance and more graduates leads quite quickly to a younger student body which only serves to further reinforce this positive trend KHS.

- **Gender Parity:** One of the major reasons for starting the pre-trades program was the concern that male students were not graduating from KHS at the same rate as their female counterparts. That is no longer the case. The ratio of female to male graduates at KHS is now much more closely aligned with enrollment numbers.

### Why?

The average male student has a greater interest in the trades than the average female student. This leads to a higher initial enrollment of males than females in the program and eventually to more male graduates. This does not mean that females who enter the pre-trades program are



unsuccessful. On the contrary, females in the program actually have a slightly greater graduation rate than males.

- **Employment:** Admittedly, this measure needs to be studied over a longer period of time. However, pre-trades students are not only having success finding employment, they are also increasingly able to find employment in trades related fields and as apprentices.

### Why?

1. **Special Skill Set:** Trades students have some familiarity with both tools and methods in a variety of trades. They also have safety training.
2. **Business sponsors:** Of special note in this regard is the assistance of Dominion Diamond Corp (formerly BHP Billiton). Over the years they have not only provided tools, materials and instructors, but they have been very proactive in the hiring of former students and providing apprenticeship opportunities for several graduates.
3. **Trades Entrance Exam:** All students are expected to write the trades entrance exam before graduation. Although the sample size is small, there is a strong positive correlation between passing the exam and gaining employment in the trades.
4. **Career focus in school:** Job experience courses, career planning, and college/university tours are just some of the ways in which students are encouraged to begin thinking about life after high school well before they graduate.
5. **Attendance:** Employers constantly tell us that punctuality and regular attendance are the most important factors in their employees' success. As discussed at length, PT students have higher attendance than their counterparts in regular studies – enhancing their employability.

## Recommendations for the future:

One of the major strengths of the pre-trades program is the cohort model itself. Students progress through high school in small groups with their peers. They encourage and support each other and truly do view their membership in pre-trades with some degree of pride. They are streamed into courses that are more relevant to their future careers and are introduced to a wide variety of trades.

Unfortunately, the cohort model creates several issues, not the least of which is staffing. It is very difficult to offer students a truly unique program of study within the limited resources and staffing of a small school. Compromises must continually be made. For example, the original intent of the program was for pre-trades students to progress through all high school classes as a group, not just in shop classes. This allowed teachers to plan and teach for the unique needs of this group of students. It also allowed for creative scheduling and the ability to bring in trades people to teach blocked courses.

However, pressures from reduced staffing have gradually changed this crucial element. First, the freedom to schedule the program in creative ways was gradually undermined by the need to make schedules that accommodate the school as a whole. Second, it became necessary to group pre-trades students in with regular programmed students in classes such as English, Social Studies, and Aulajaaqtut to make better use of a limited number of teachers. Over time, the pressure has only increased to the point where even Math and Science courses are sometimes mixed groups of students. There is a real danger that as the Pre-trades program is forced to become more integrated into the larger student body its authenticity becomes lost. It becomes just another shop class.

If the Pre-trades program is to survive and thrive in the future several needs have to be addressed:

1. Increase in staff levels at KHS. A minimum of two full time staff members should be allocated to the program to deliver the Math, Science and CTS courses. This would require the restoration of the .5 position that was lost in previous years.
2. Increased levels of funding above the current \$10000.00 budget for shop supplies in order to continue the development and expansion of the trades courses that are currently offered.

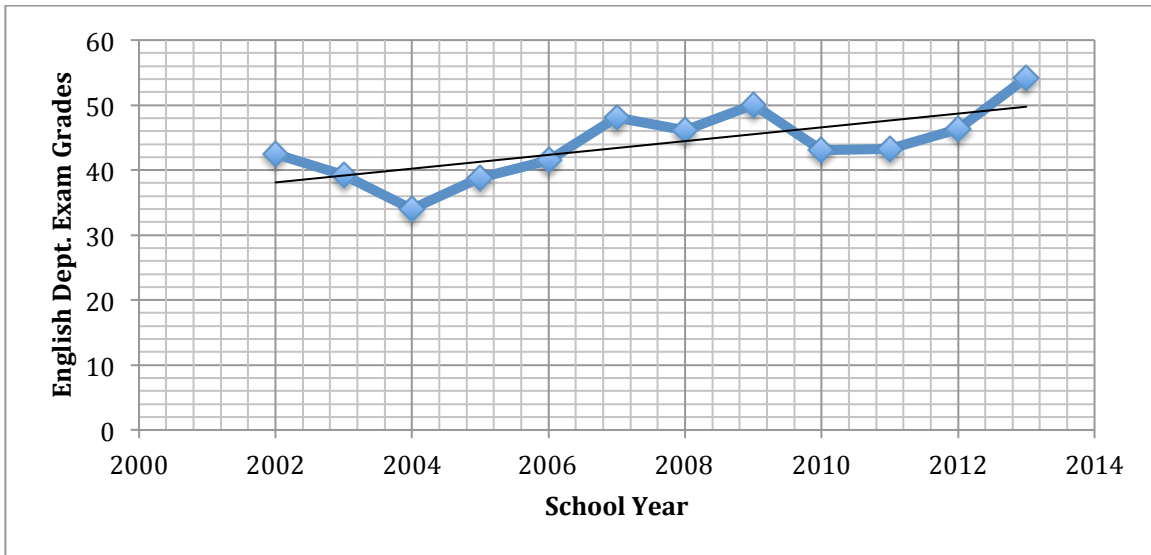
3. Increased focus on academics – especially in the areas of Math and Science. Year-long courses, rather than semestered courses, are recommended as a first step in this direction. In addition, most trades students should be taking grade 12 Math and Science courses even though they are not currently required for graduation. This would necessitate removing other courses required for graduation – perhaps Aulajaqtuut could be reduced from 15 credits to 10 credits.
4. Partnerships between Arctic College and KHS to bring in instructors to offer advanced level trades courses.
5. The building of multi-use trades facility.
6. More active involvement from various Government agencies especially in supporting graduates find suitable job experiences and apprenticeships.

With these changes, I am confident that the pre-trades program will continue to produce graduates that will not only go on to fill the needs of industry in the north, but also become the future group of leaders that Kugluktuk and Nunavut need if we are to be competitive in what is increasingly a global world.

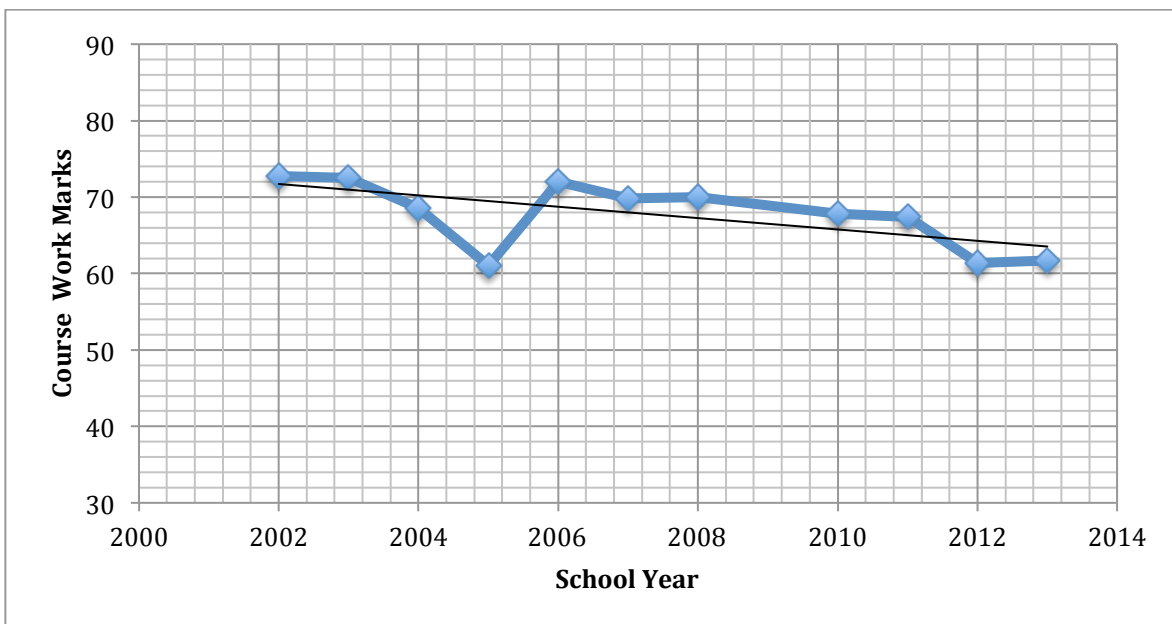
Leland Olson  
KHS

# Trends in English Departmental Exams Results (2002-2013)

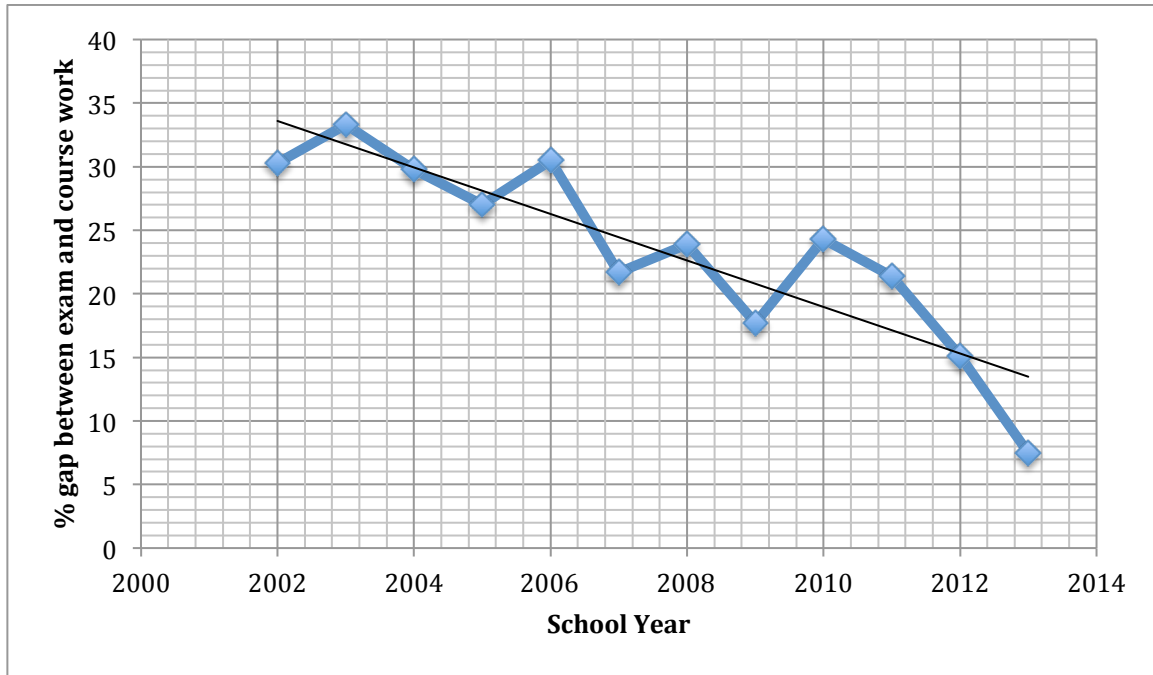
## 1. Grade 12 Departmental Exam Marks:



## 2. Grade 12 English Course Marks:



### 3. Gap between Course work and Departmental exams:



#### Summary:

The trend lines for this data set are quite striking and should be encouraging for all teachers who work at KHS. However, the root causes of these results are largely speculative. There is some positive correlation between the introduction of the Pre-Trades program and improving exam results, but exactly how much correlation is difficult to determine. Other factors that may play a role include:

1. Increased emphasis on literacy at the junior high level.
2. More effective teaching methods in high school English classes.
3. A school-wide environment of learning fostered by the principal and staff at KHS.