```
---
title: "AIP Data 2015 to 2017"
output: pdf_document
---

```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = TRUE)

library(tidyverse)
library(readxl)
library(kableExtra)
library(knitr)
require(rlang)
setwd("C:/Users/09286014/Dropbox/Data Analysis/CompassReporting/")
SchoolData = read_csv("DataFile2014-2017.csv", col_names = TRUE, col_types = NULL, na = "", trim_ws = TRUE, skip = 0,
n_max = Inf)
SchoolData <- filter(SchoolData, ExitTermID != EntryTermID) # Remove less than one term students
PeriodData <- filter(SchoolData, ExitTermID == 14)

PeriodSummary <- function(DataSet, Filterby, FilterVal, GroupBy, ValueReq, ColTitle){
  quo_GroupOn <- enquo(GroupBy)
  quo_Filterby <- enquo(Filterby)
  quo_FilterVal <- enquo(FilterVal)
  quo_ValueReq <- enquo(ValueReq)
  quo_ColTitle <- quo_name(ColTitle)

  DataSet <- filter(DataSet, (!!quo_Filterby) == FilterVal)
  DataSet <- group_by(DataSet, !!quo_GroupOn)

  return <- summarize(DataSet, !!quo_ColTitle:=mean((!!quo_ValueReq), na.rm=TRUE), Count=n())

}

PeriodSummaryAgg <- function(DataSet, ValueReq, PlotTitle, Title)
{
  quo_ValueReq = enquo(ValueReq)


  A1 <- PeriodSummary(DataSet, ExitTermName, "2015 T1", ABS, !! quo_ValueReq, "Term 1")
  A2 <- PeriodSummary(DataSet, ExitTermName, "2015 T2", ABS, !! quo_ValueReq, "Term 2")
  A3 <- PeriodSummary(DataSet, ExitTermName, "2015 T3", ABS, !! quo_ValueReq, "Term 3")
  A4 <- PeriodSummary(DataSet, ExitTermName, "2015 T4", ABS, !! quo_ValueReq, "Term 4")


  Agg <- full_join(A1, A2, by = "ABS") %>% full_join(A3, by = "ABS") %>% full_join(A4, by = "ABS")


  Aggb <- select(Agg, ABS, "Term 1"= Count.x, "Term 2" = Count.y, "Term 3" = Count.x.x, "Term 4" = Count.y.y)

  Agg <- select(Agg, ABS, "Term 1", "Term 2", "Term 3", "Term 4")
  Agg2 <- gather(Agg, Term, Mean, "Term 1", "Term 2", "Term 3", "Term 4")

  Agg2b <- gather(Aggb, Term, Count, "Term 1", "Term 2", "Term 3", "Term 4")

  Agg2 <- full_join(Agg2, Agg2b)

  cat('\n')



  print(ggplot(data=Agg2, aes(x = Term, y = Mean, fill=ABS)) + geom_bar(colour="black", stat="identity",
position=position_dodge()) +ylab("Mean Increase") +xlab(Title) +
    geom_hline(yintercept=2.0) +ggtitle(PlotTitle) + geom_text(aes(label = Count),position = position_dodge(width =
1)))
  cat('\n')
  print(kable(Agg))


  return <- Agg
}

PeriodSummaryAgg3 <- function(DataSet, Title)
{
  PeriodSummaryAgg(DataSet, ValueReq = ISL, "Mean Increase Speaking and Listening", Title)
  PeriodSummaryAgg(DataSet, ValueReq = IR, "Mean Increase Reading", Title)
  PeriodSummaryAgg(DataSet, ValueReq = IW, "Mean Increase Writing", Title)
}

TotalSummaryAgg <- function(DataSet, ValueReq, PlotTitle, Title)
{
  quo_ValueReq = enquo(ValueReq)


  A1 <- PeriodSummary(DataSet, ExitYear, 2015, ABS, !! quo_ValueReq, "2015")
  A2 <- PeriodSummary(DataSet, ExitYear, 2016, ABS, !! quo_ValueReq, "2016")
```
```

```
  A3 <- PeriodSummary(DataSet, ExitYear, 2017, ABS, !! quo_ValueReq, "2017")
  A4 <- PeriodSummary(DataSet, ExitYear, 2018, ABS, !! quo_ValueReq, "2018")


  Agg <- full_join(A1, A2, by = "ABS") %>% full_join(A3, by = "ABS") %>% full_join(A4, by = "ABS")
  Agg2 <- gather(Agg, Term, Mean, "2015", "2016", "2017", "2018")



    cat('\n')
    cat(paste("## ", Title))
  print(ggplot(data=Agg2, aes(x = Term, y = Mean, fill=ABS)) + geom_bar(colour="black", stat="identity",
position=position_dodge()) +ylab("Mean Increase") +xlab(Title) +
    geom_hline(yintercept=2.0) +ggtitle(PlotTitle))
  cat('\n')
  print(kable(Agg))

  return <- Agg
}

TotalSummaryAgg3 <- function(DataSet, Title)
{
  TotalSummaryAgg(DataSet, ValueReq = ISL, "Mean Increase Speaking and Listening", Title)
  TotalSummaryAgg(DataSet, ValueReq = IR, "Mean Increase Reading", Title)
  TotalSummaryAgg(DataSet, ValueReq = IW, "Mean Increase Writing", Title)
}
```

Mean Increase

Mean increase in substages over time at Noble Park English Language School

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Students who exited in 2015

Age equivalent students

```{r 2015 Prior Students, echo=FALSE, results='asis',  fig.height=3.0}
filter(SchoolData, PriorSchooling == "Age equivalent") %>% PeriodSummaryAgg3("Age equivalent")
```

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International students

```{r AIP Data, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "International") %>% PeriodSummaryAgg3("International")
```

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Interupted education students

```{r Interupted, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "Interupted") %>% PeriodSummaryAgg3("Interupted")
```

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No prior schooling students

```{r No schooling, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "No schooling") %>% PeriodSummaryAgg3("No schooling")
```

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Students who exited 2015 to 2018

Age equivalent students

```{r 2Total 015 Prior Students, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "Age equivalent") %>% TotalSummaryAgg3("Age equivalent")
```

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International students

```{r Total AIP Data, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "International") %>% TotalSummaryAgg3("International")
```

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Interupted education students

```{r Total Interupted, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "Interupted") %>% TotalSummaryAgg3("Interupted")
```

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No prior schooling students

```{r Total No schooling, echo=FALSE, results='asis'}
filter(SchoolData, PriorSchooling == "No schooling") %>% TotalSummaryAgg3("No schooling")
```

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Notes

Students who exited after less than one term at Noble Park English Language School have been excluded from mean increases.