



YOUNG BERMUDIAN ADULTS AND LITERACY

A Supplementary Report to Literacy in Bermuda



Bermuda Government
Department of Statistics



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Cedar Park Centre, 48 Cedar Avenue, Hamilton HM11
P.O. Box HM 3015, Hamilton HM MX, Bermuda

Tel: (441) 297-7761 • Fax: (441) 295-8390
E-mail: statistics@gov.bm • Website: www.statistics.gov.bm

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Background

In an effort to produce benchmark data on adult literacy, Bermuda took part in the 2003 Adult Literacy and Life-Skills (ALL) Survey. This was the world's second international assessment of literacy for adults aged 16 to 65 years.

The report, *Literacy in Bermuda*, was written to summarize the national findings and overall performance of the Island's adult population. This supplementary brief seeks to highlight one group in particular – Bermudians aged 16 to 25.

For the ALL Survey, persons in the 16 to 25 age group were referred to as young adults. These individuals comprised the lowest 10-year age

cohort studied during the survey. They include the newest members of the Bermuda workforce as well as those who are studying to be future participants.

While conducting the main analysis of the Island's adult population, it was discovered that high proportions of young Bermudian adults had achieved literacy scores that were below the internationally established adequate level. This immediately became a cause of concern and prompted a more in depth study of this group.

Young Adults at Risk

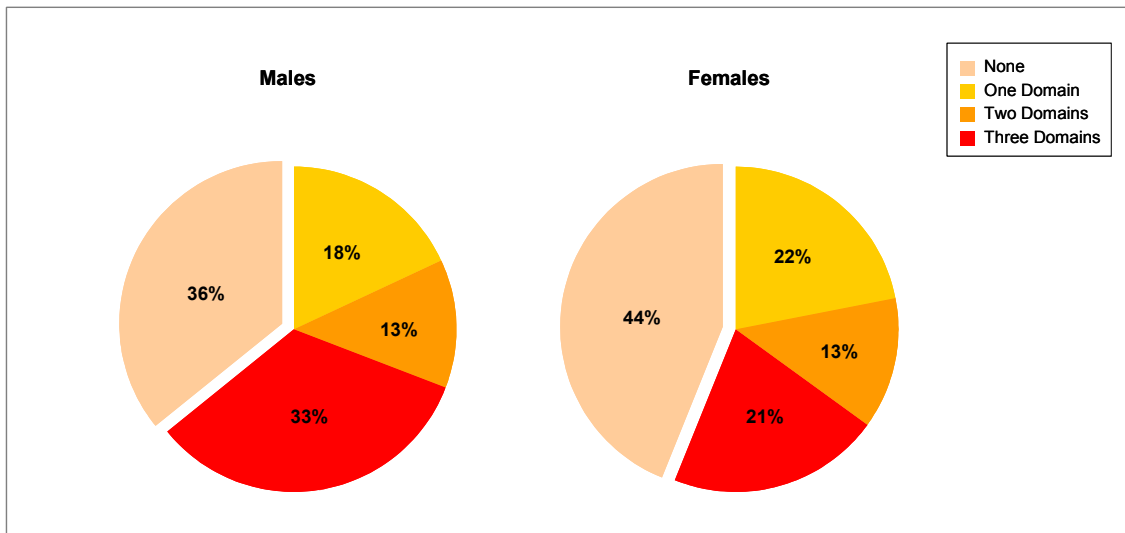
The ALL Survey measured literacy skills in four domains, which included the ability to read and understand text (prose), utilize graphs and charts (document), employ mathematical concepts (numeracy) and exercise analytical reasoning (problem solving).

Persons who scored below the adequate mark of 275 points in one or more of the first three domains were classified as 'at risk'.

The fourth domain was measured using a different scale and was not used to classify persons at risk.

Chart 1 illustrates the percentage of young adults by number of domains classified as 'at risk'.

Chart 1
Percentage of Bermudians Aged 16 to 25 by Sex and Number of Domains Classified as 'At Risk'



Sixty-four (64) percent of the young males tested achieved scores that were below the adequate level in prose, document literacy, numeracy or a combination of these domains. Eighteen (18) percent scored below the adequate level in one domain while 13 percent scored below this level in two domains. A third, or 33 percent, of young men attained inadequate scores in all three domains.

Though the proportion of females falling into the 'at risk' category was lower than their male counterparts, it was also significant at 56 percent. Twenty-two (22) percent performed below the adequate level in one domain, 13 percent in two domains and 21 percent in all three literacy domains.

The ALL survey described individuals 'at risk' as persons who lacked the skills to fully function in

a knowledge-based society. These individuals have the ability to carry out basic tasks, but may struggle when learning a new task. This definition may be appropriate for older adults who have reached a plateau in their personal and career development, but may not hold entirely true for younger adults.

The average scores for most young adults classified as 'at risk' fell just short of the adequate level. It is important to note that individuals in the 16 to 25 age group are at an early stage of life, with many still preparing themselves to participate in the community. As these individuals complete their education and firmly establish themselves in the workforce, improvements in overall literacy skills can be expected.

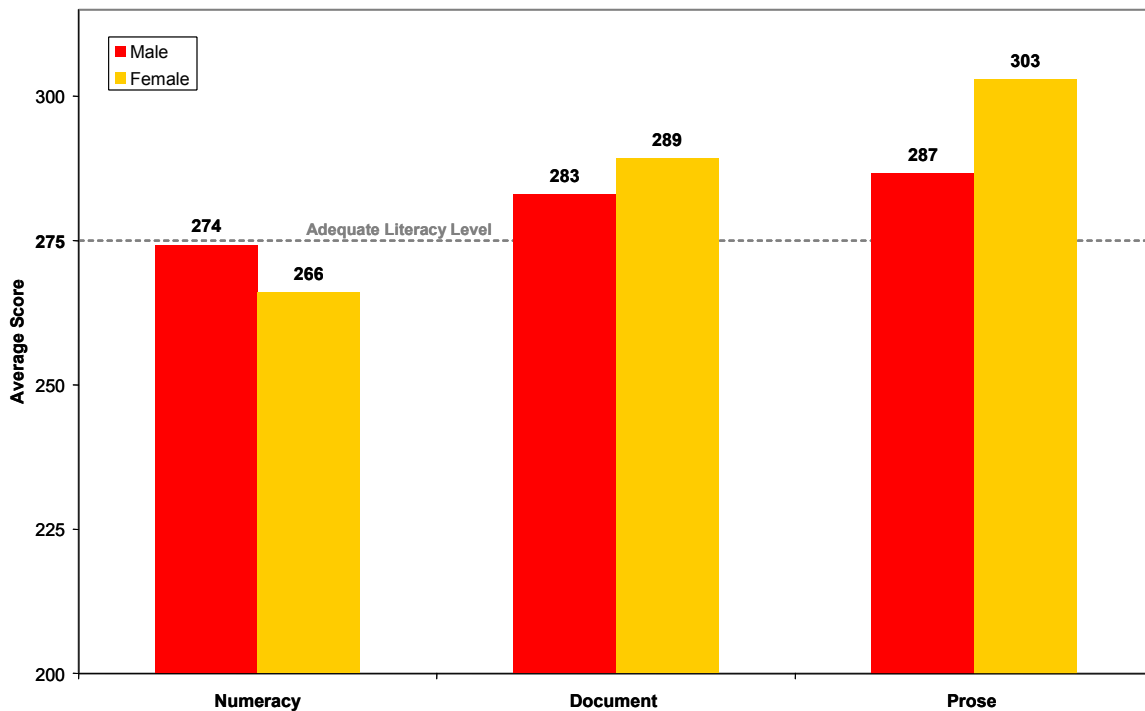
Overall Performance in Literacy

Although a high proportion of young adults achieved individual scores that indicated some level of risk, their overall average scores were generally above the adequate literacy level. The only exception was the numeracy domain, where average scores were slightly below the adequate mark.

Chart 2 provides an illustration of the average scores achieved by Bermuda's young men and women.

Numeracy measured competence in the basic mathematical skills needed to cope with everyday life and the understanding of

Chart 2
Average Overall Scores for Bermudians Aged 16 to 25 by Sex



information presented in mathematical terms. Examples include the ability to figure out a sale price given a percentage discount, estimate a future value based on a percentage increase, or convert a measure from one unit to another, such as miles to kilometers.

Similar to observations made in the main analysis, young males achieved overall numeracy scores that were higher than their female counterparts. Their average score was one point shy of the adequate literacy level while the score for young women fell nine points short.

Document literacy measured the ability to locate and use information contained in various formats, such as graphs and charts. This domain also assessed how well an individual could fill various forms, such as a job application.

Overall scores in this domain were somewhat better than those attained for numeracy. Both sexes achieved average scores that exceeded the adequate mark. While females scored higher in this domain, their average score was only slightly higher than the score achieved by males.

Prose literacy measured the ability to read and understand continuous text, such as the print found in newspapers, magazines and novels. This area of literacy proved to be the strongest for young adults as average scores were higher than the other domains. Though prose literacy was a strong point for both sexes, young women performed better than their male complements. In fact, this domain saw the largest variance in scores between the sexes with average scores for young females exceeding that of males by 6 percent.

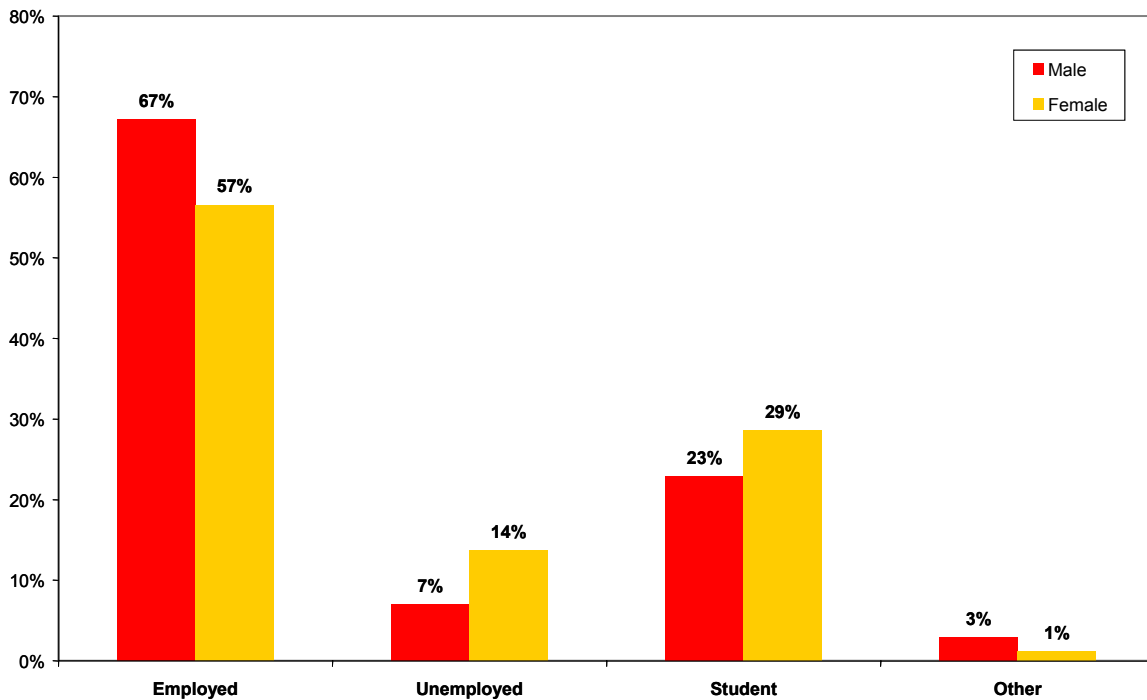
Economic Activity

The results of the main analysis, which studied adults aged 16 to 65, showed a clear correlation between employment status and literacy scores. When persons were employed, they generally scored better than those who were not. This relationship was less clear when studying young adults aged 16 to 25. No significant differences in literacy scores were observed between the

employed and unemployed. Scores for students, however, were somewhat higher than those who were members of the workforce.

The majority of young adults were employed during the survey period. Sixty-seven (67) percent of young men were working compared to 57 percent of young women.

Chart3
Work Status During the Survey Period for Bermudians Aged 16 to 25 by Sex



An analysis of occupation type revealed that almost a third of young men were employed as skilled trade and agricultural workers. This occupation group includes vocations such as construction workers, carpenters and landscapers. The second most common occupation group was clerical and sales workers, which represented one-fifth of employed young men. Technical & associated professionals, such as electricians and computer repair technicians, represented just over a tenth of young employed males.

The number one occupation group for young women included clerical and sales workers, where just over half were employed in these jobs. One-third of young women were employed in technical and associated professions. Unlike their male counterparts who made up this occupation group, young women were more concentrated in administrative, health and education type professions. The bulk of young women were found in these two occupation groups with less than 10 percent found in each of the remaining employment categories.

Relative to the national average, high proportions of young adults were unemployed. According to the 2004 Household Expenditure Survey the national unemployment rate was 2.14 percent. The ALL survey found 7 percent of young men who were without a job and seeking work while twice as many females (14 percent) were in the same situation. Due to the timing of the ALL survey, it is likely many of these young adults had just completed school and had not yet secured employment.

Young women were more likely to delay entering the workforce for educational purposes. More than a quarter reported they were students compared to a fifth of young men who were also engaged in school. The type of education pursued can help explain differences in economic activity and the variance in literacy scores between the sexes.

Educational Attainment

The relationship between literacy scores and educational attainment observed in the main analysis was mirrored when studying young adults. As education increased, so did the scores in the literacy domains. Chart 4 provides an illustration of educational attainment for young Bermudian adults aged 16 to 25.

The measurement of educational attainment differs from highest level of education received as it looks only at education levels completed. Though individuals may be classified at one level, it is possible they have begun or are in the process of completing a higher level.

A few young adults had only completed a primary to lower secondary level of education. Most of these individuals were currently in the process of completing their senior secondary education.

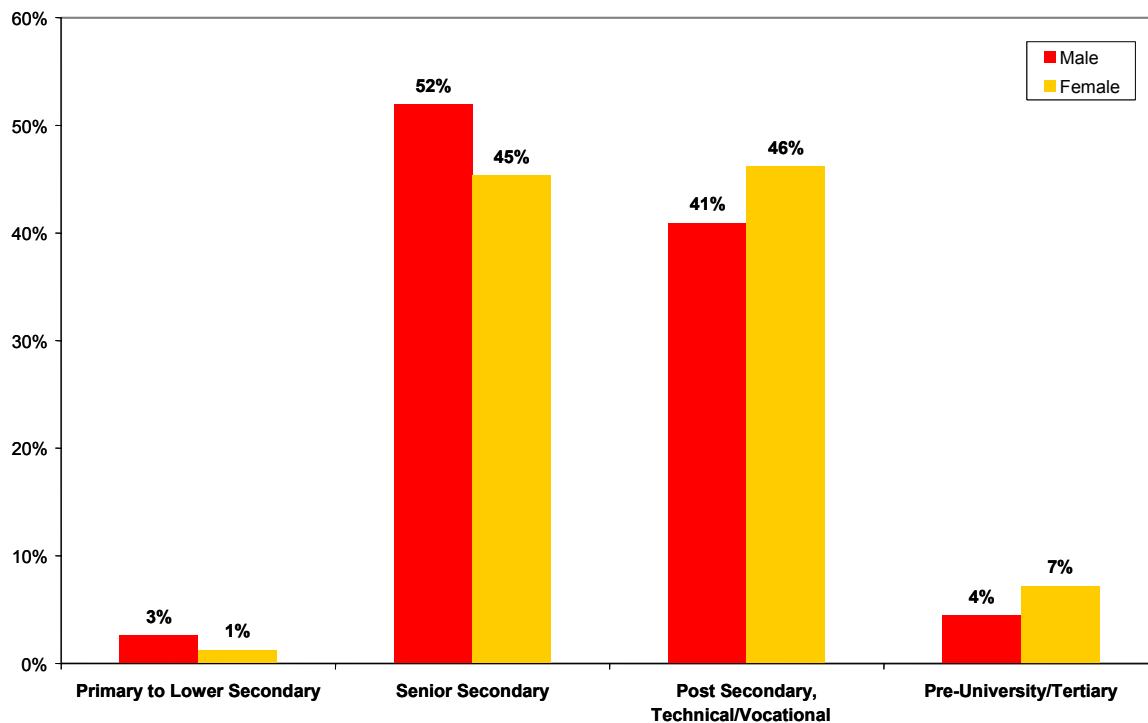
Just over half, or 52 percent, of the young men sampled reported secondary school as their highest level of education. This compared to 45 percent of young women.

After completing high school, young women were more likely than males to pursue a higher level of education. More than half (53 percent) of young women had completed a level of education beyond high school compared to 45 percent of young men.

The majority of young adults who had completed a post-secondary certification did so by engaging in vocational education or training, such as learning a trade or involving themselves in other technical studies. These types of studies lead to certificates in construction and other mechanical fields as well as secretarial and business diplomas. Forty-one (41) percent of the young men sampled had attained this level of education compared to 46 percent of young women.

To some extent, young women engaged in tertiary education, such as academic degrees earned in university, more often than their male equivalents. Just over 7 percent of young women had achieved this level of education compared to 4 percent of young men.

Chart 4
Educational Attainment for Bermudians Aged 16 to 25 by Sex



Educational Attainment and Literacy Proficiency

As expected, those at the primary to lower-secondary level achieved scores that were lower than young men and women with more advanced levels of education. Males attained numeracy scores that were higher, while their female complements scored higher in document and prose literacy. (Chart 5.1)

Improvements in literacy were observed for young adults at the senior secondary level. In each domain, young adults achieved average scores that came closer to, or exceeded, the adequate literacy level. Young men continued their domination in numeracy while improving their document score to a level comparable with their female school mates. Young women held their ground in prose literacy with an average score that was 14 points higher than the 279 points achieved by males. (Chart 5.2)

Literacy proficiency grew stronger as education increased. Those who had completed a vocational or technical education programme demonstrated literacy skills that were superior to those at earlier school levels. Again, males showed a stronger aptitude for numeracy while females took the lead in prose literacy. Though average scores for females were slightly higher,

a level of equality was still present in document literacy. (Chart 5.3)

Young adults who completed the highest levels of education, which included pre-university to advanced levels of research, performed best in the literacy domains. All scores exceeded the adequate level of literacy by a significant margin and in most cases reflected higher order literacy skills. (Chart 5.4)

This education level saw young women achieving average scores that were deemed higher order in each area of literacy. They surpassed their male colleagues in all domains, including numeracy for the first time. Young women surpassed the higher order mark in numeracy by 30 points, while scores for young men exceeded the higher order mark by only 3 points.

The strongest performance for young men was seen in prose literacy, where their average scores exceeded the higher order mark by 7 points. A slightly weaker performance was observed in document literacy where average scores for males missed the higher order mark by 6 points.

Chart 5.1
Average Scores for Bermudians Aged 16-25 with a Primary to Lower-Secondary Education by Sex

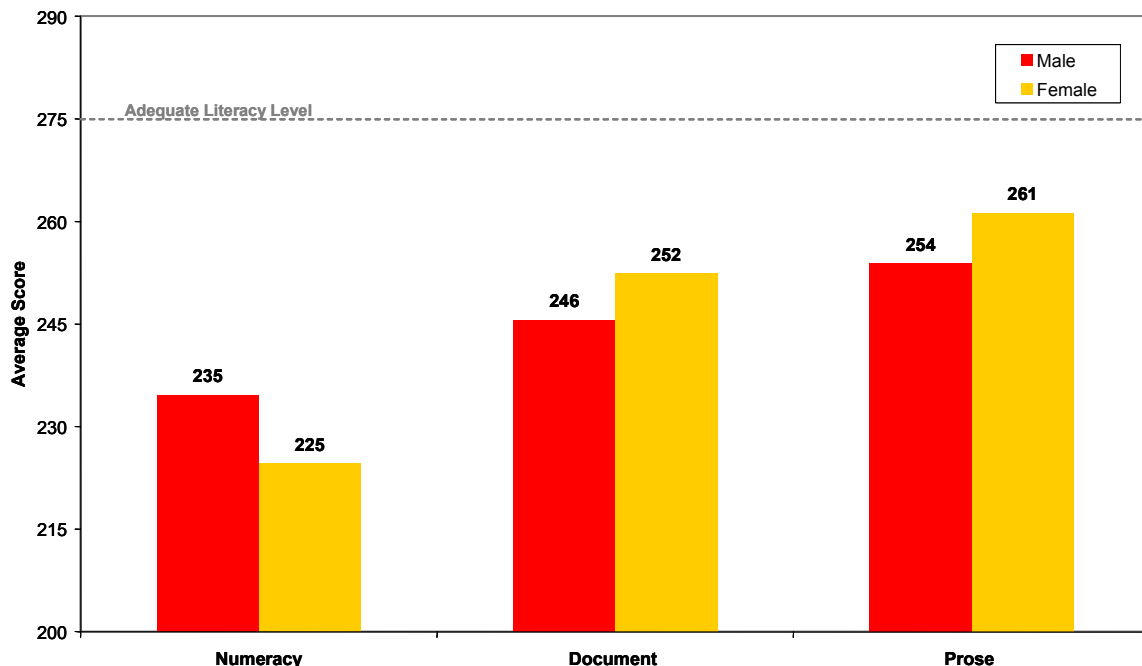


Chart 5.2
Average Scores for Bermudians Aged 16-25 with a Senior Secondary Education by Sex

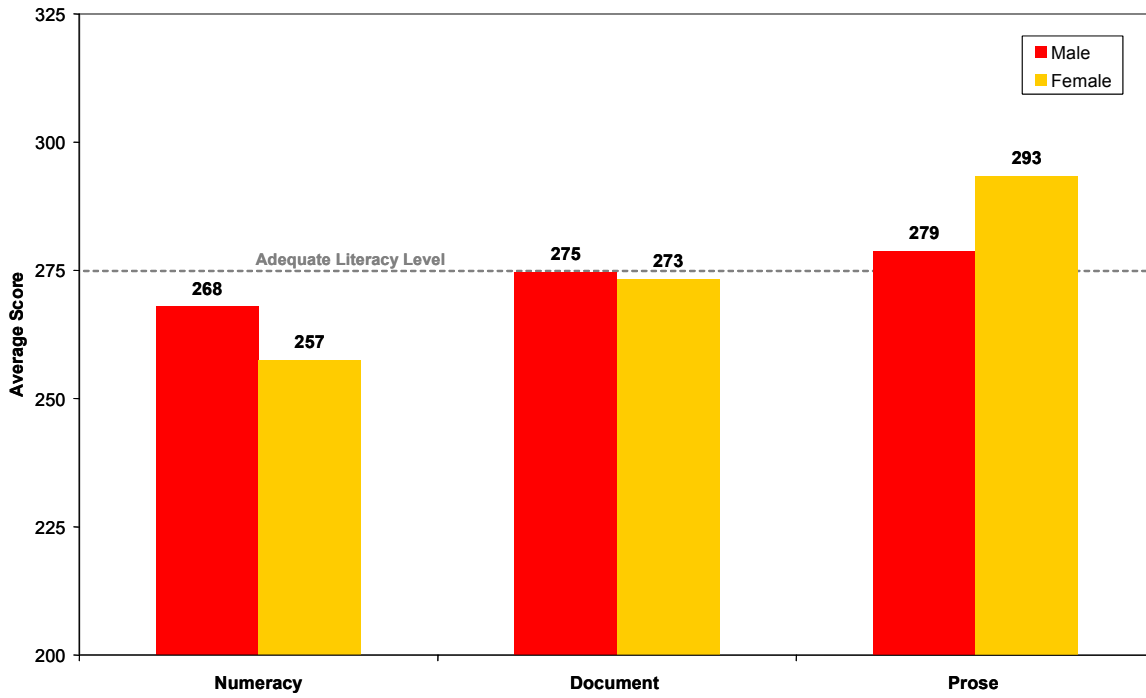


Chart 5.3
Average Scores for Bermudians Aged 16-25 with a Vocational/Technical Education by Sex

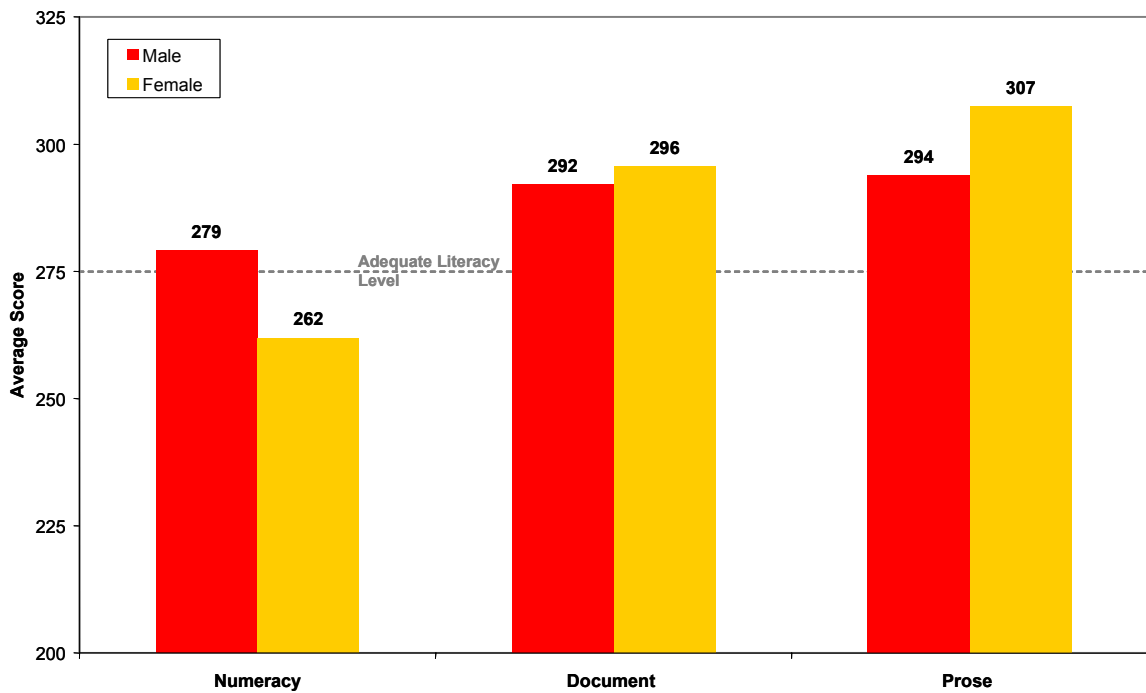
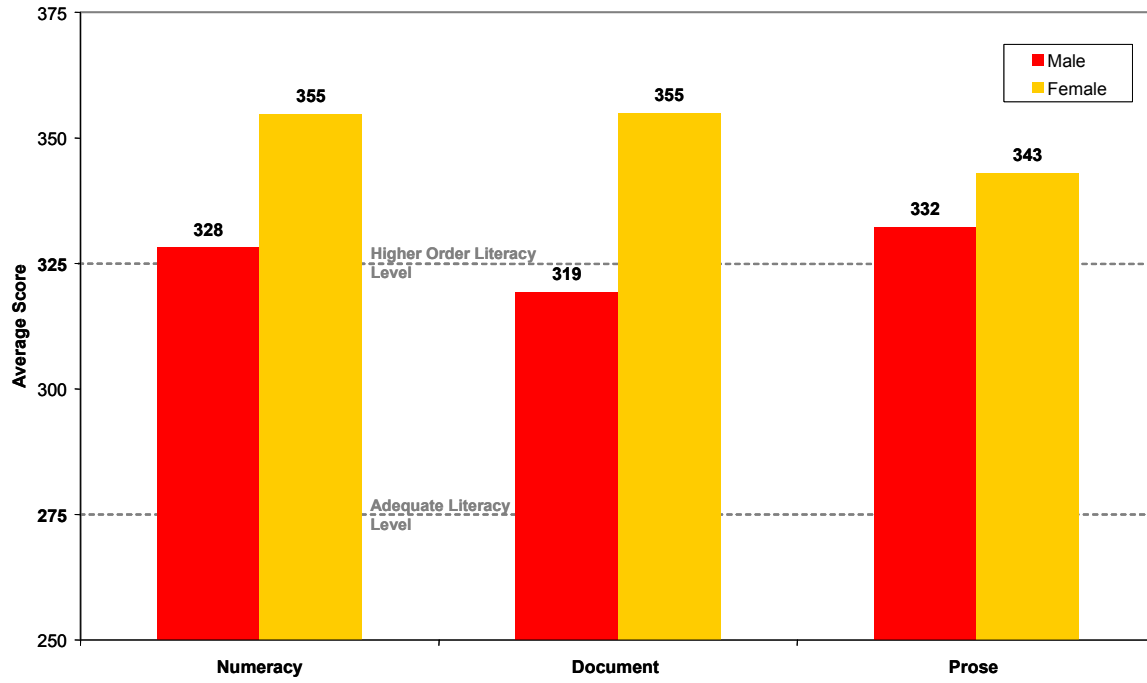


Chart 5.4
Average Scores for Bermudians Aged 16-25 with a Pre-University or Tertiary Education by Sex



Reading Habits

It is generally believed that people who read more perform better in school and in the workplace. The ALL Survey provided evidence to support this theory as people who were engaged in regular reading activities achieved literacy scores that were higher than those who did not read habitually.

A prerequisite for routine reading outside of work or school is having an interest in reading. When asked their feelings towards reading, young women were more optimistic than their male peers. Two-thirds, or 66 percent, of young women considered reading to be among their favorite activities, compared to 41 percent of young men.

Some young adults showed much less enthusiasm toward reading with 37 percent of males and 21 percent of females stating that they read only when they had to.

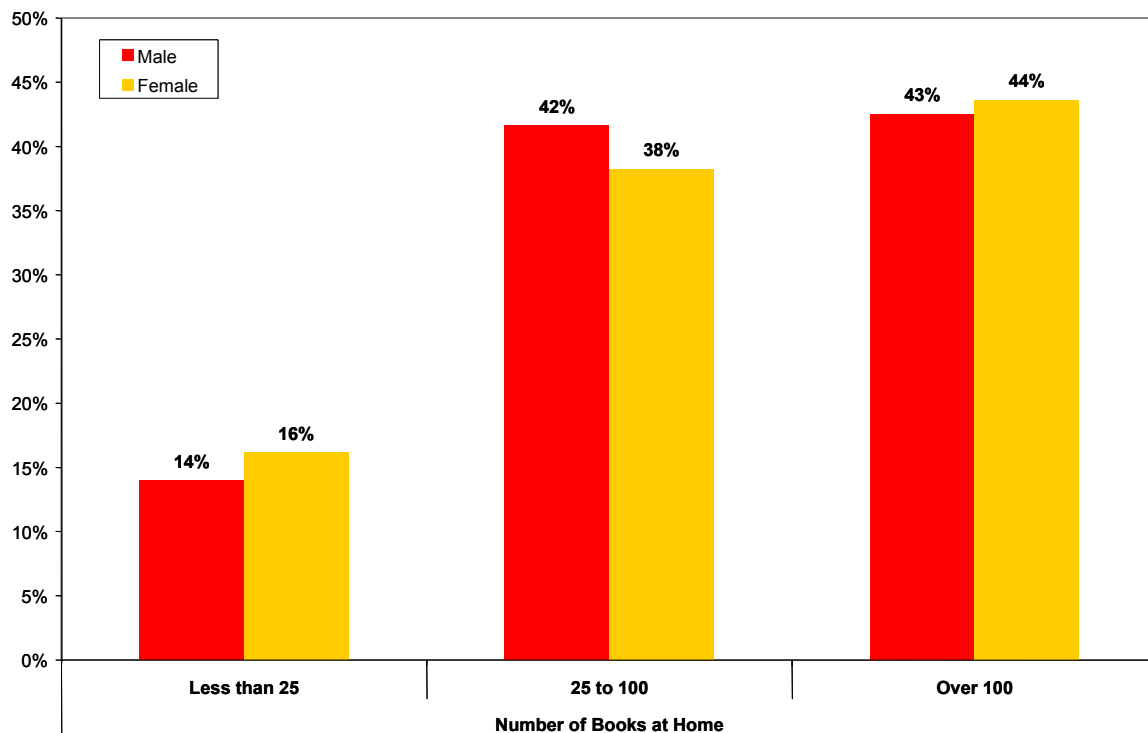
Another factor influencing the amount of reading at home is access to books in the residence. A study of young adult households did not reveal

significant differences between the sexes in terms of the number of books at home. Most households had a home collection greater than 25 books.

Households with a home collection greater than 25 books generally produced young adults who had stronger literacy skills than those from homes with fewer books. Chart 7 gives an illustration of the literacy scores achieved relative to the number of books at home. As the number of books increased, so did the literacy scores for young men and women.

Though information on book purchases by other household members was not collected, the survey revealed that young men were less likely to visit a bookstore compared to young women. Nearly a third (32%) of young men reported that they had not paid a visit to a bookstore within the last year. This compared to 12 percent of young women.

Chart 6
Number of Books at Home for Bermudians Aged 16-25 by Sex



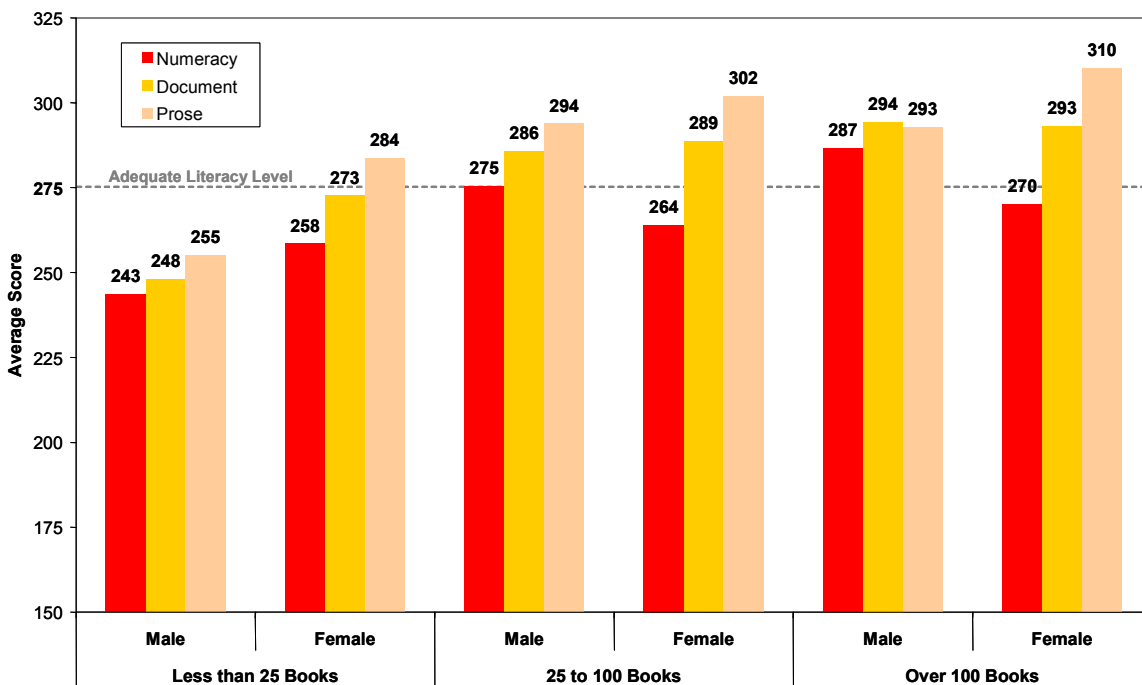
In addition to patronizing book stores more frequently, young women visited public libraries more often than young men. Of the young men surveyed, nearly half did not use a library in the twelve months preceding the survey compared to a third of young women. The proportion of young women who spent time at a library at least once a month was twice that of their male counterparts, 38 versus 19 percent.

showed more devotion to the news as 83 percent read the paper at least once a week compared to 76 percent of females. Magazine readership was higher among young women with 61 percent reading these periodicals compared to 52 percent of young men.

A more detailed analysis into the reading habits of young adults revealed further differences and similarities between males and females. The largest disparity between the sexes occurred in the reading of fictional novels or non-fictional writings. Fifty-nine (59) percent of young women spent time reading books at least once a week versus 39 percent of young men who read with the same frequency. The proportion of young males who reported reading books rarely or not at all was 5 times higher than young females, 15 compared to 3 percent.

Young adults demonstrated a strong interest in current events as high proportions of each sex read the newspaper at least once a week. Males

Chart 7
Average Scores for Bermudians Aged 16-25 by Sex and Number of Books at Home



Time Spent Watching Television

An examination of the ALL Survey data revealed a clear pattern between television watching and literacy. It was revealed that persons who viewed more than two hours of television per day performed lower in the literacy domains than those who tuned in less. In fact, 43 percent of these persons were classified as 'at risk' during the main analysis.

With regards to young adults, high proportions of each sex were involved in prolonged television viewing. Sixty (60) percent of young men watched more than 2 hours of TV per day, compared to 47 percent of young women. Of this group, 13 percent of males and 11 percent of females admitted watching in excess of five hours of TV per day. (Chart 8)

On average, young men watched 2 hours and 45 minutes of television per day, 19 minutes more than the average for young women.

Chart 9 gives an illustration of the average scores achieved by hours of television viewing. The same correlation observed during the main analysis was found when studying young adults.

Young men and women who watched less than two hours of television per day achieved scores that were superior to those who tuned in for longer periods of time.

Though the survey asked what types of material a respondent read, it did not collect information on the types of television programs watched. For this reason, a more detailed analysis into television viewing was not possible.

Chart 8
Hours Spent Watching Television for Bermudians Aged 16 to 25 by Sex

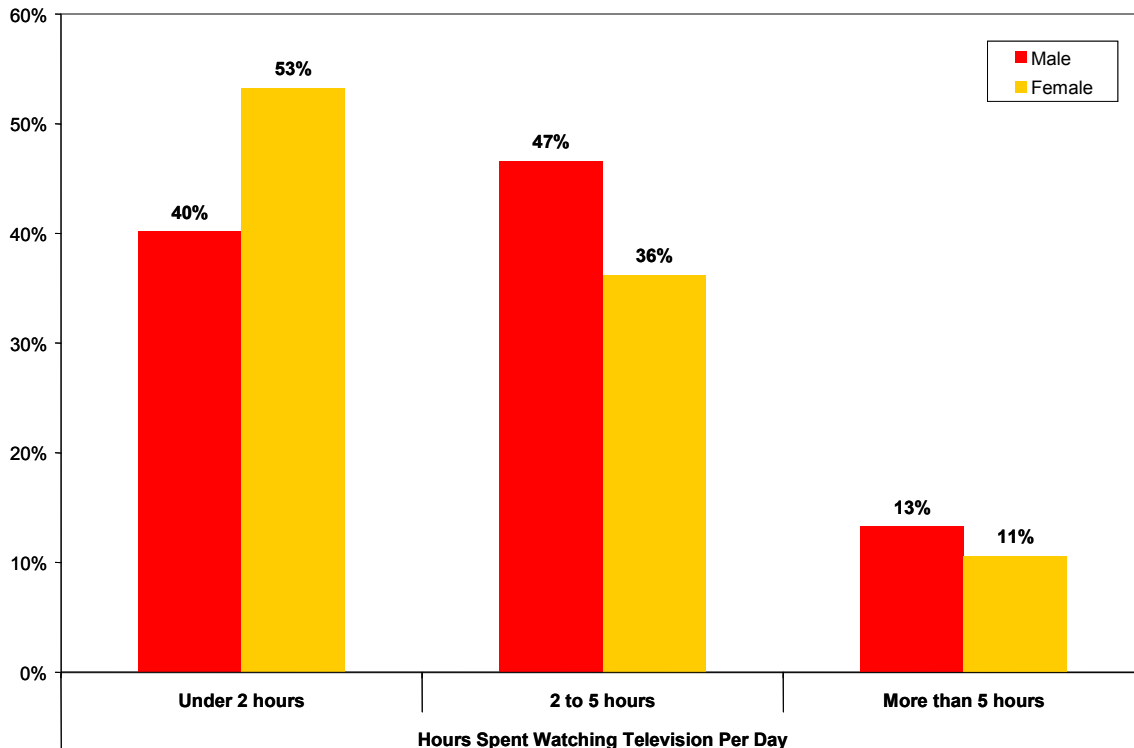
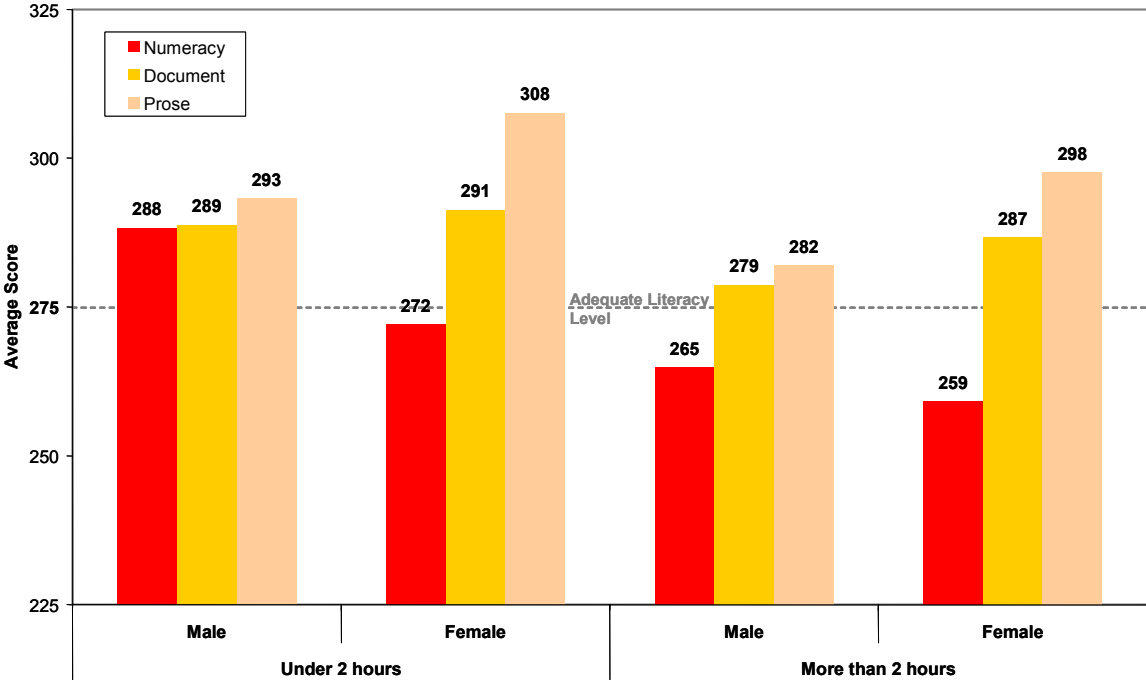


Chart 9
Average Scores for Bermudians Aged 16-25 by Sex and Hours of Television Watched



Information Communication and Technology

There exists a strong relationship between computer ownership and literacy scores. For all literacy domains tested during the ALL Survey, scores were higher if the respondent had access to a computer at home. A similar correlation was seen in respect to young adults.

Those who had a computer at home achieved literacy scores that were somewhat higher than young adults who did not have a computer. Chart 10 gives an illustration of the average literacy scores achieved by home computer access.

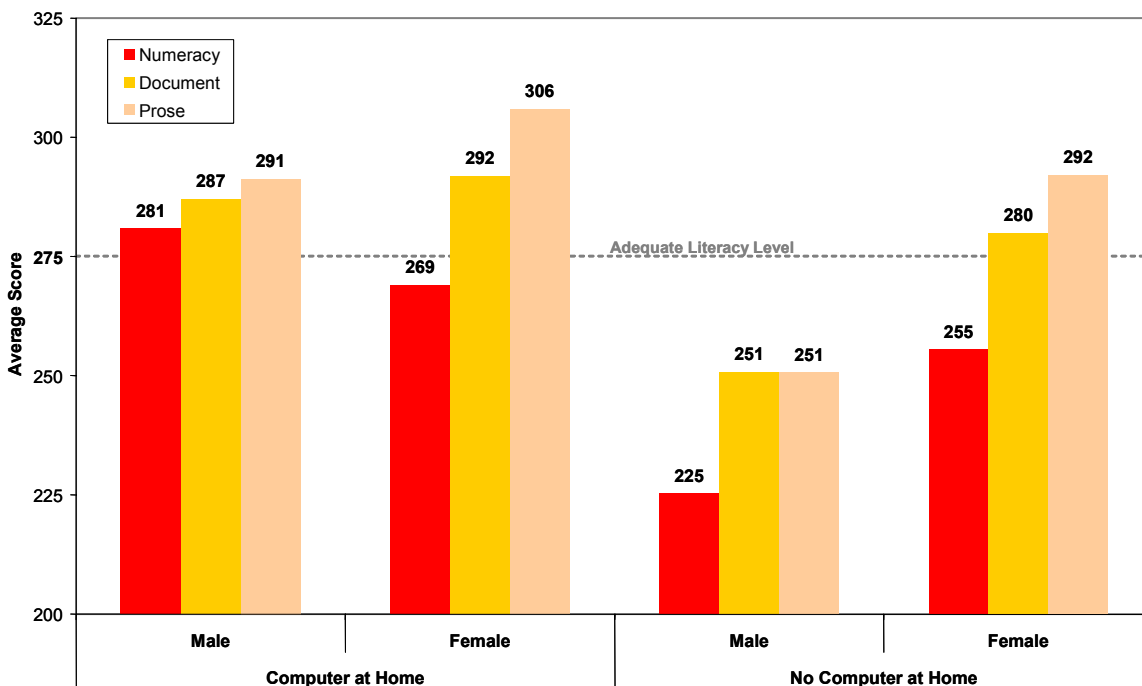
The survey results were very encouraging as high proportions of young men and women were found with computers at their residence. Eighty-eight (88) percent of males had access to a computer at home compared to 79 percent of females. Of those males who had a computer at home, the vast majority (91 percent) reported having an internet connection, while a slightly lower proportion of females (79 percent) reported the same.

Though the proportion of young women having an internet connection at home was less than their male counterparts, they spent more time using the technology. In a typical month, young women spent an average of 23 hours and 48 minutes surfing the web, compared to 21 hours and 55 minutes for males.

Young adults utilized the internet most for the sending and receiving of electronic mail. Following e-mail, the most common internet use by young women was for on-line shopping. Once again, young men demonstrated a strong interest in current events and news, as searches for this type of information took second place for this gender.

The navigation and use of these internet sites often requires a fair level of document and prose proficiency and, of course, some level of computer literacy. Continuous use of these web sites may have been beneficial in strengthening these areas of skill.

Chart 10
Average Scores for Bermudians Aged 16-25 by Computer Access at Home and Sex



Summary

Results from the ALL Survey suggest that a high proportion of young Bermudians may have their literacy skills at risk. Males may be more prone to risk as the survey saw more young men than women with their literacy scores falling below the adequate level. This is not to say that young Bermudians can not be productive in society, rather that they may be hindered in their ability to achieve goals, develop their knowledge and reach their potential.

Nonetheless, one should not be hasty in defining young adults as an 'at risk' group, as they may possess an adequate skill level to perform well in their chosen professions at their current level. Young adults aged 16 to 25 are at a developmental stage in life, leaving a high potential for improvements in literacy.

Among other factors, it is likely that daily routines and individual choices, whether they are influenced by socioeconomic circumstances or not, are underlying causes of the lower literacy scores achieved by young adults.

Reading habits and type of education pursued were the two areas that differentiated the genders most. Young women pursued academic degrees more often and read more frequently than their male counterparts. However, high proportions of each sex were engaged in prolonged television watching, an activity that could put their literacy skills at risk.

The fact that a large percentage of young Bermudians are pursuing an education level beyond high school is very encouraging. It seems young adults are taking advantage of the educational opportunities afforded them, which will promote both personal and economic development.

Another inspiring fact is the high proportion of young adults who have access to computers and the internet at home. Familiarity with computers not only presents a learning opportunity, but is also beneficial as information communication and technology becomes an important part of everyday life.

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