AITI

Authority for
Info-communications
Technology
Industry of Brunei Darussalam

BRUNEI DARUSSALAM HOUSEHOLD ICT SURVEY REPORT

2013

disclaimer

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message
from the Chief Executive

This report represents the second publication of the Household ICT Survey conducted in 2013 by Authority for Info-communications Technology Industry of Brunei Darussalam (AITI). Along with the series of questions used for the first time in 2010, this survey has been extended to include findings on broadcasting, broadband and social media to ensure that the statistics gathered remain relevant.

This report provides basic indicators of the ICT situation in households in Brunei Darussalam. It also facilitates an assessment and monitoring of the extent to which Bruneian households have access to ICT and its related facilities.

The 2013 survey shows a marked increase in mobile data growth driven by the rise of affordable mobile devices and social media use most probably caused by the fact that users prefer to get their information instantly no matter where they are. There is a corresponding decrease in household use of desktops, further supporting the finding that device and internet use has become more personal to the user. This is consistent with global trends which show a rise in the time spent using social networking, gaming and eCommerce apps as opposed to communications on their smart devices.

The response to the survey is very encouraging and I would like to thank those who responded to the survey and the people who involved in compiling, designing and contributing to the development of this report for without their cooperation this survey would not be a success.

Haji Yahkup bin Haji Menudin
Chief Executive
Authority for Info-communications Technology
Industry of Brunei Darussalam (AITI)

introduction

The Authority for Info-communications Technology Industry of Brunei Darussalam (AITI) has conducted its second Household ICT Survey in February 2013, the first was conducted in 2010. Rennovo Solutions Sdn Bhd was engaged to gather a selected set of ICT related data which enables analysis of ICT penetration in Brunei households; it provides data on basic indicators of the ICT situation in households, its trends and usage. The survey covered 8,007 households and individuals across the entire country.

The survey was divided into two parts – household and individual. This allows capturing information about both units, for example how many households have access to the internet (household level), as well as the type and of frequency of online activities (individual level). Given the sampling design, i.e. stratified random sampling, results are representative for both households and individuals.

This report shows key findings from the information areas addressed in the survey questionnaire. Additional information was included in this year's survey involving questions on broadcasting, broadband and social media in Brunei Darussalam.

From the survey results, the key findings of the household and individual sections are:

Household Section

All households surveyed have access to electricity, have a TV and mobile phones.

About half of the households surveyed have access to the internet – there is a very minimal increase since 2010.

Within the households with internet access, an average of 4.6 household members are using the internet.

The majority of households access the internet via fixed broadband.

Households with no internet access claim costs as the main reason.

Individual Section

About 2 out of 3 individuals in Brunei are using the internet – there is a slight increase in personal usage compared to 2010.

There seem to be an issues with the quality of internet access as well as cost - overall quality is perceived as rather poor, and cost as too high.

The ideal fee for internet is on average B$34.

There is a clear increase in individuals accessing the internet via a mobile device (50% compared to 38% in 2010).

The main reason for using the internet is entertainment, information about goods and services, and emails.

Individuals not using the internet claim lack of interest and costs as key reasons.

methodology

2.1 Overview

• **Topic:**	Info – Communications Technology
• **Coverage:**	Nationwide
• **Approach:**	Representative household survey
• **Sampling Method:**	Stratified, multi – stage random sampling
• **Selection of Respondent:**	Kish Grid
• **Sample Size:**	8,007 interviews (approximate of all 12% of household)
• **Respondents:**	Household members age 5 – 75
• **Method:**	Paper & Pencil Interview (Self – completion)
• **Timelines:**	February - April 2013
• **Reporting and statistical units:**	Households and Individuals
• **Sampling Error:**	1.1 (95% confidence interval for total sample)

Number Size	Error
• 8007	±1.1%
• 4000	±1.5%
• 1000	±3.1%
• 500	±4.4%

The sampling methodology and approach had to take into consideration the specific situation of Brunei, i.e. its division into 4 Districts (Daerah), 38 Sub-Districts (Mukims) and almost 400 villages (kampongs).

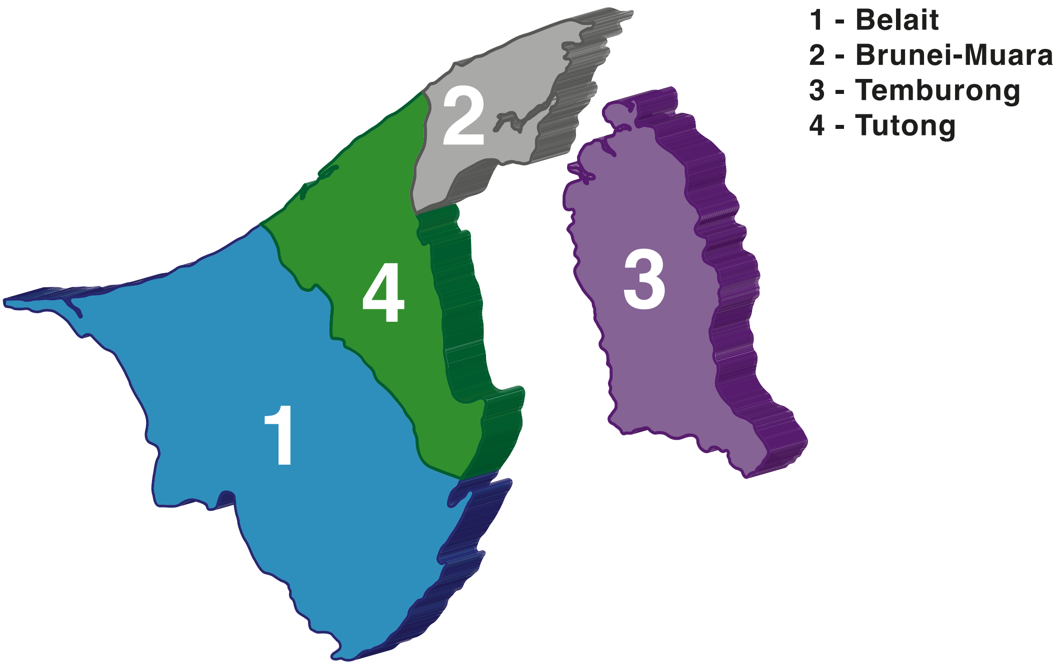
To collect the ICT information, we employed a **probability sampling** design. This means that every single population unit (i.e. household and individual) in the sampling frame had a known and non-zero chance of being selected into the survey sample.

Based on available census information about Brunei, we could allocate the respective number of households to be surveyed for each district, sub-district and villages. The smallest sampling unit was a village.

Selection of households within each village was done using a randomly selected starting point, and then following a standard random route approach, i.e. interviewers were advised to contact every n^{th} household.

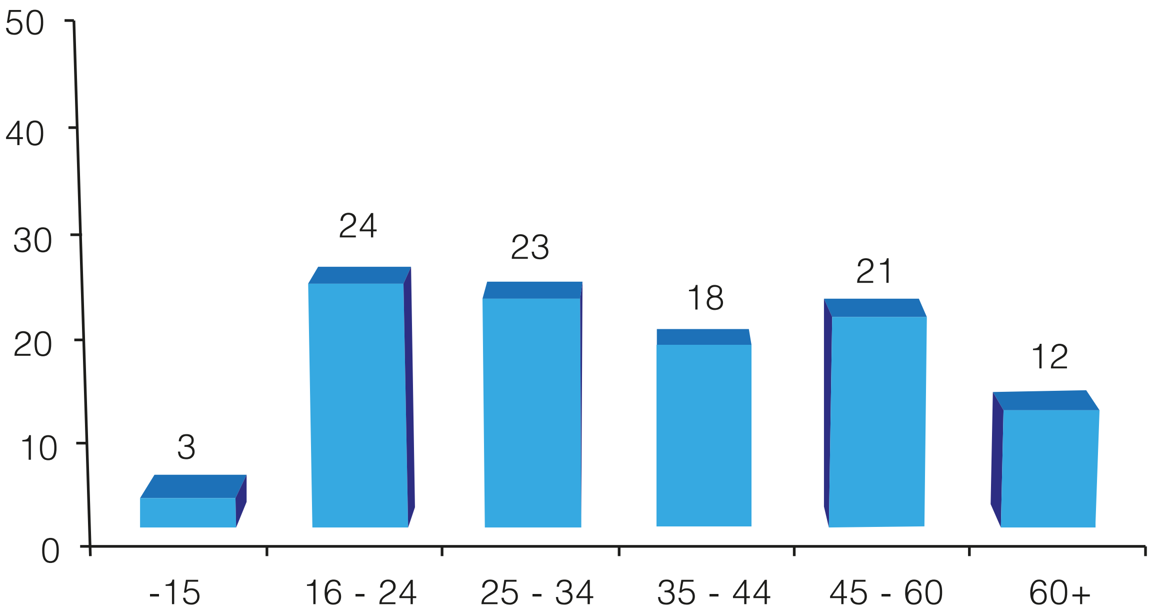
The respondents for the survey were selected among all eligible members of the household using a **Kish tables / Kish Grid**. Kish tables provide a method by which each eligible person in a household has an equal probability of selection into the survey sample. The selected respondent then gave information on a household level (e.g. Internet Access available?) as well as personal level (e.g. what is the internet used for?).

2.2 Geographical Diagram (by Districts)

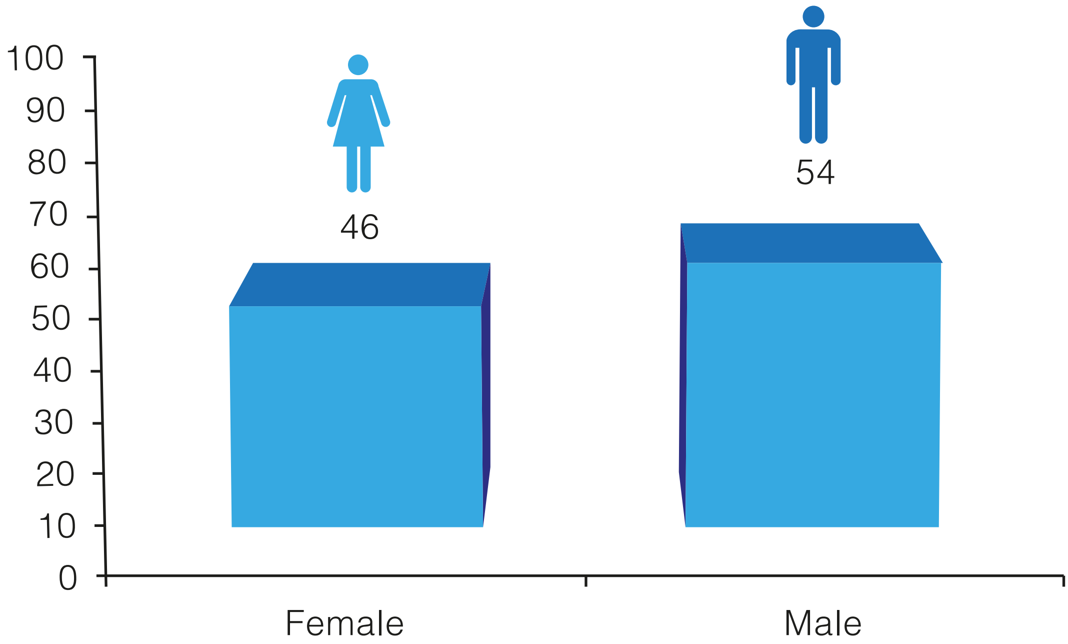


2.3 Structure (Demographic Information)

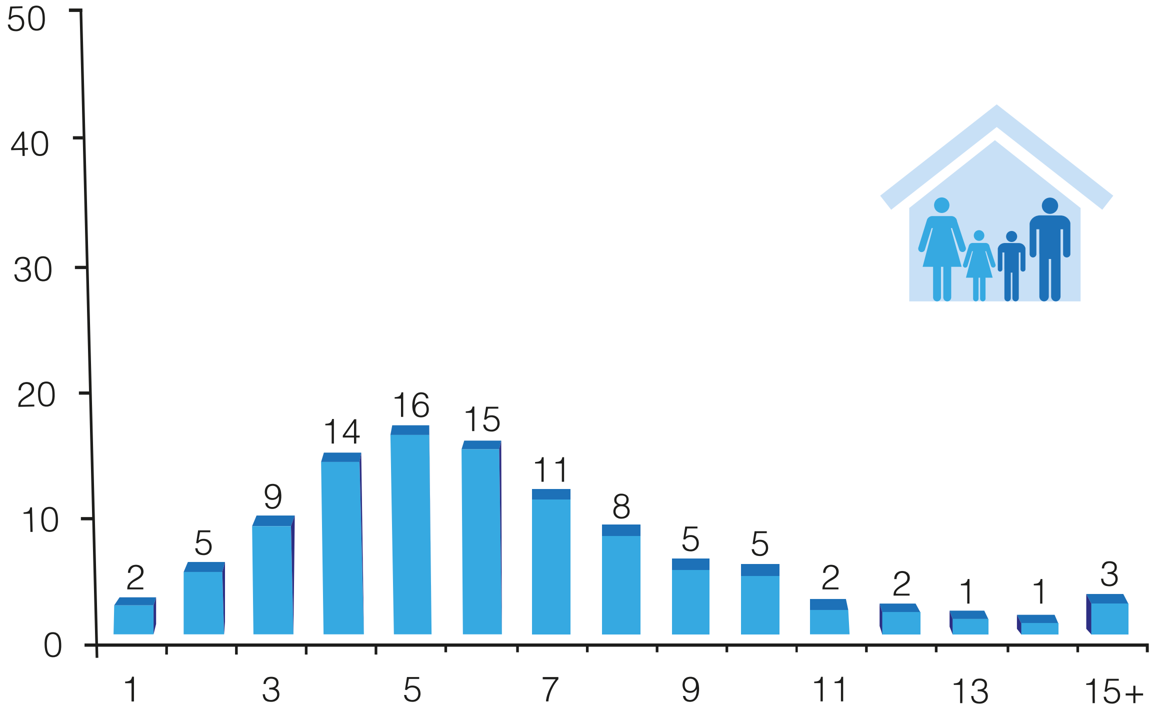
Age distribution



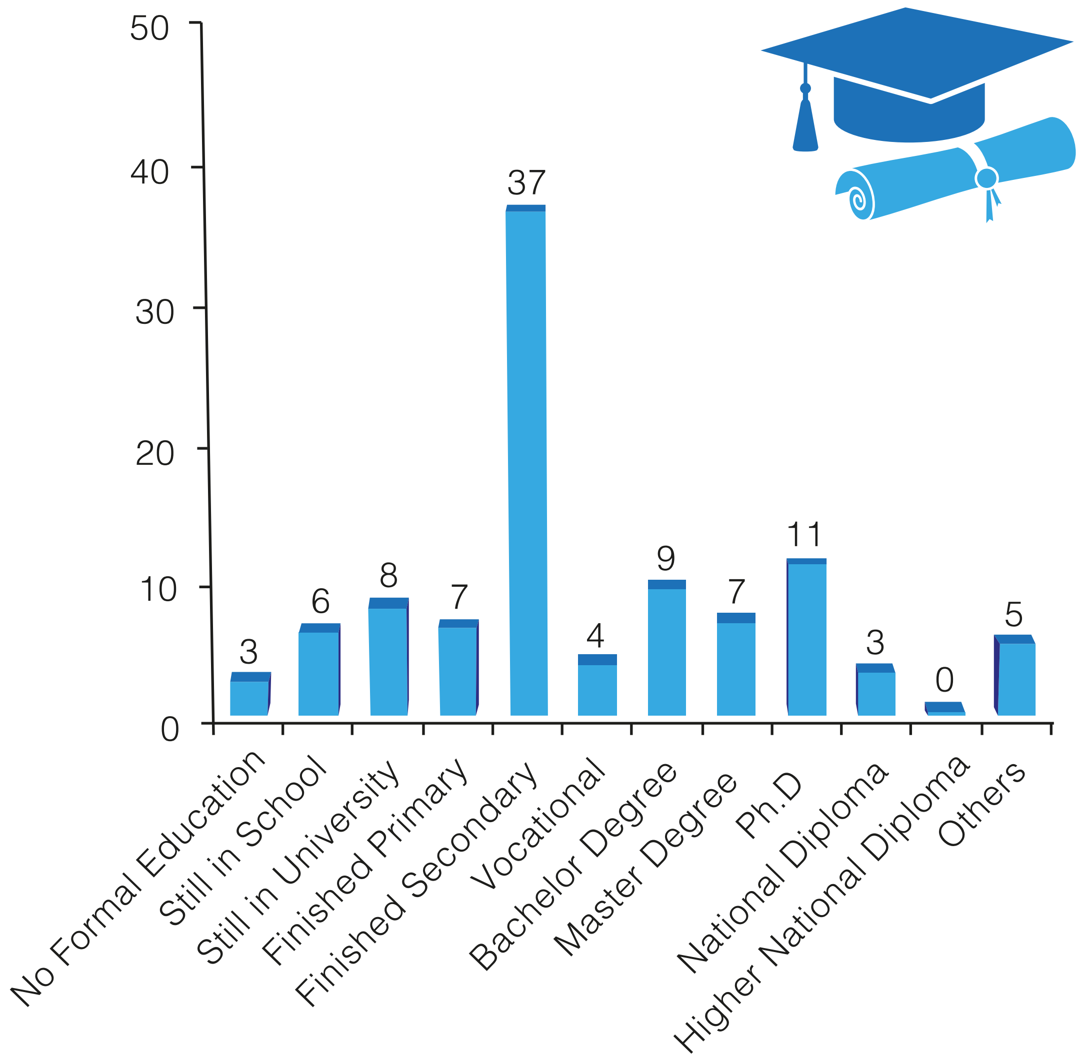
Gender distribution



Household size distribution



Education distribution



findings
of the Household ICT Survey

3.1 Household Section

3.1.1 Available Services And Devices In Households

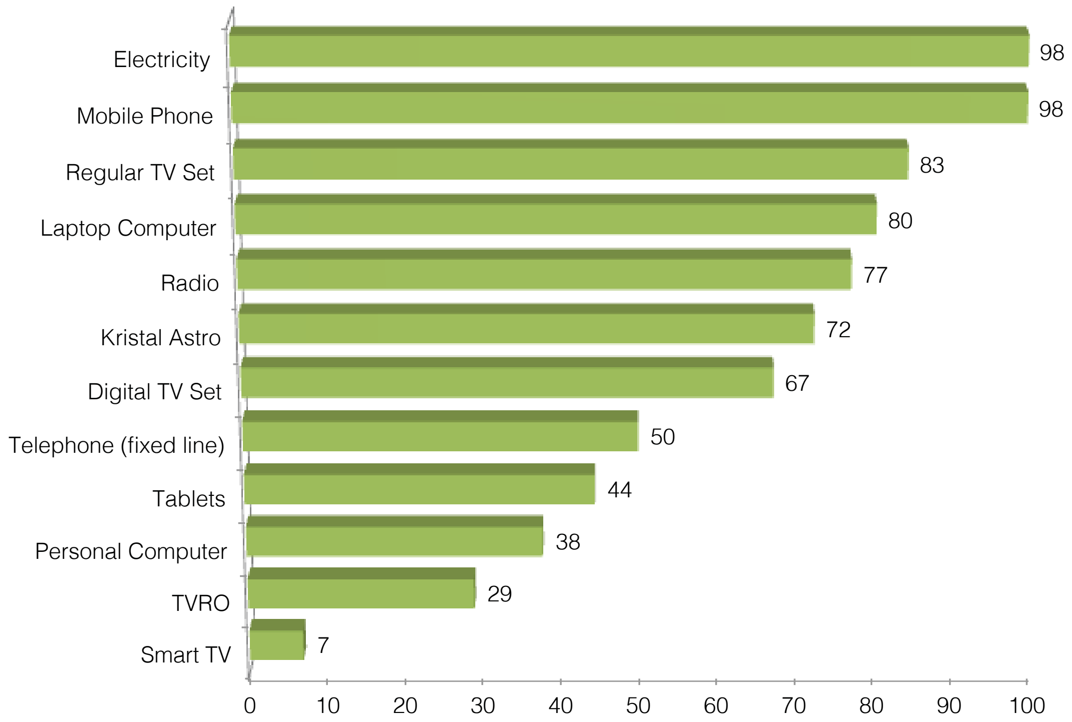


fig 3.1.1a: Available Services And Devices In Households

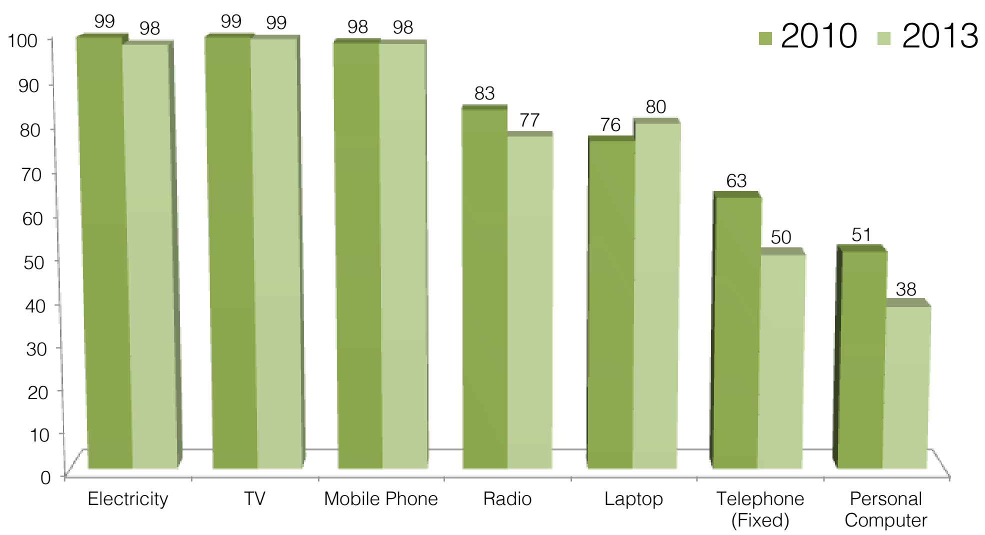


fig 3.1.1b: Comparison of service availability and devices in households by year (2010 and 2013)

Figure 3.1.1a shows the number of services available in each household which shows that almost all households in Brunei have access to electricity; own at least one TV set and mobile phone. However, there is a decrease in the ownership of radio, fixed telephone and personal computers as shown in figure 3.1.1b. This indicates that people prefer to own mobile devices for on-the-go access.

There is a strong correlation between income (personal and household) and the availability of certain devices, especially laptop computers, Kristal-Astro, regular and digital TV, tablets and smart TVs, i.e. the higher the income the more devices are available in the households. Tablets and smartphones are overall more popular among younger respondents.

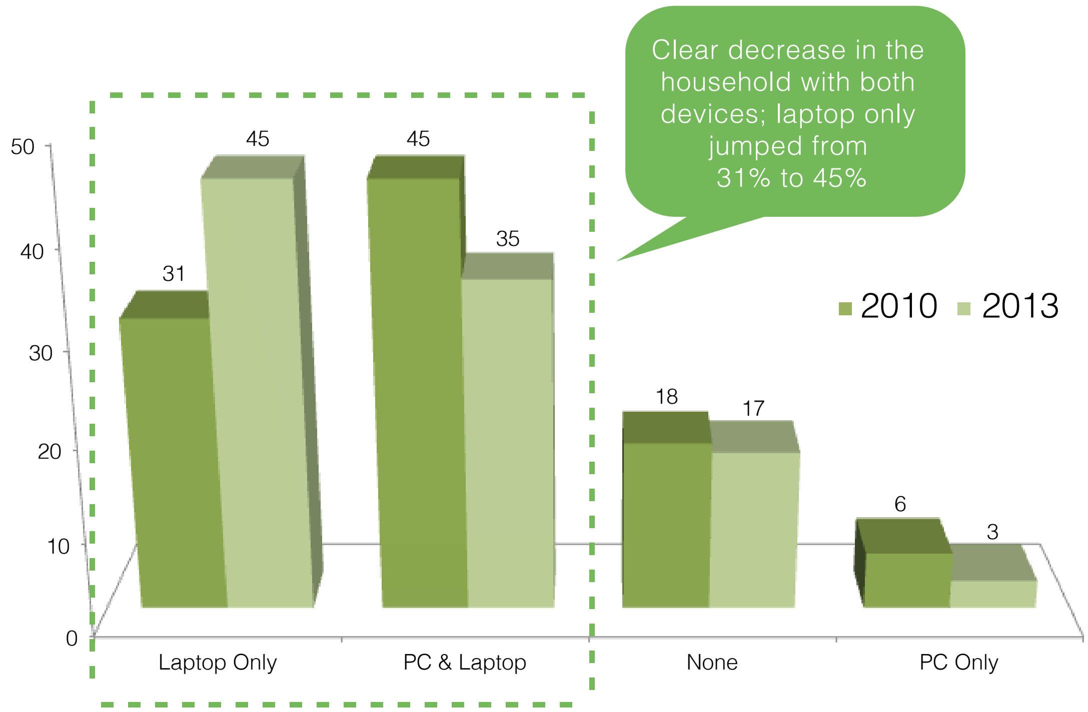


fig 3.1.1c: Comparison of service availability and devices in households by year (2010 and 2013)

Overall, the household penetration for laptop computers is 80% (up from 76% in 2010), PC is 38% (down from 51% in 2010). About one-third of all households in Brunei (35%) have both devices (PC and Laptop). 17% of households (down from 18% in 2010) has neither a PC nor a Laptop at home. 45% (up from 31% in 2010) of households only have laptops, while 3% (down from 6% in 2010) have only PC at home. **There is a clear trend for increased usage of laptop exclusively.**

3.1.2 Number of Devices in Households

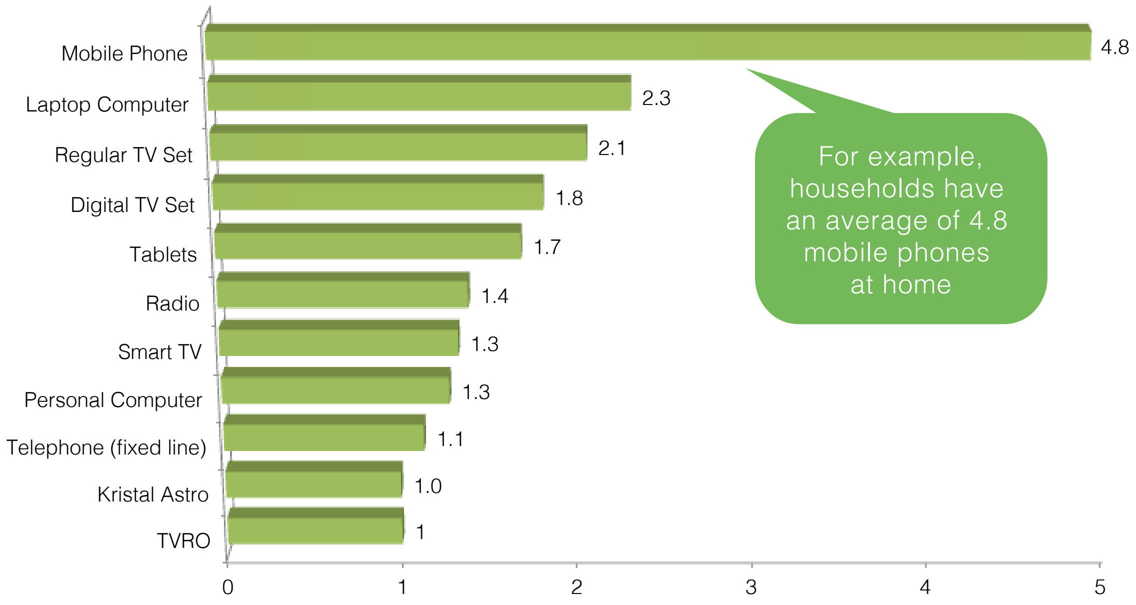


fig 3.1.2a Number of devices in households

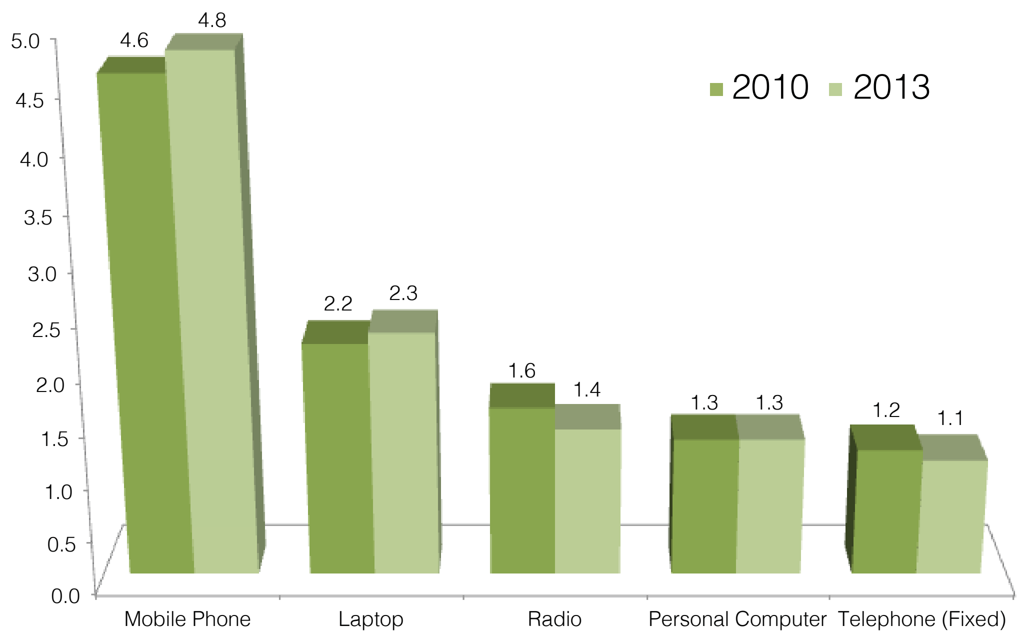


fig 3.1.2b Comparison of Number of devices in households by year (2010 and 2013)

There is a slight increase in number of mobile phones and laptops from 2010 to 2013. This suggests a clear trend away from desktop PC usage.

3.1.3 Internet Access In Households

Results in 2013 indicate a slight increase in total household internet access – 63% in 2013 compared to 60% in 2010.

Internet access: Household and mobile	2010	2013
Yes	**60**	**63**
No	40	37

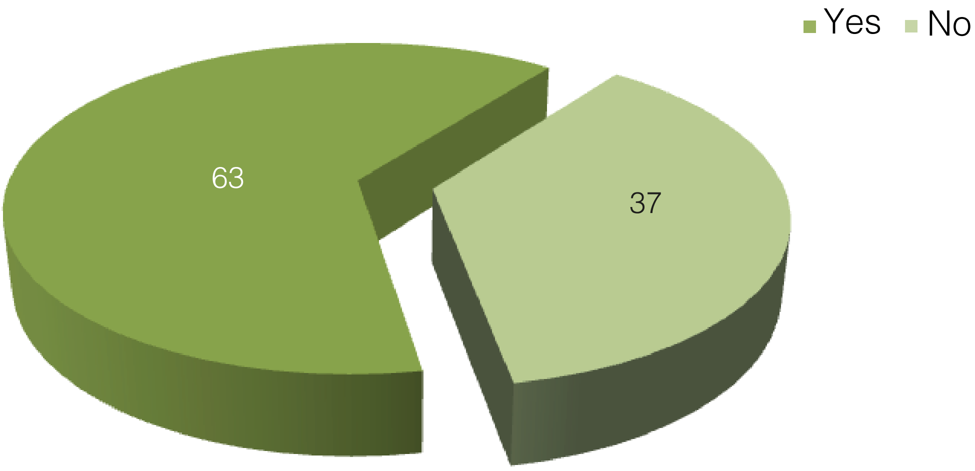


fig 3.1.3a Internet access in households for 2013

The highest access rate can be found in Brunei Muara, followed by Belait, Tutong and Temburong. Access to the internet is especially high in households with children still in school / university and in high-education households. Access to the internet is also strongly correlated to household income. Generally speaking, high income household shows higher internet penetration.

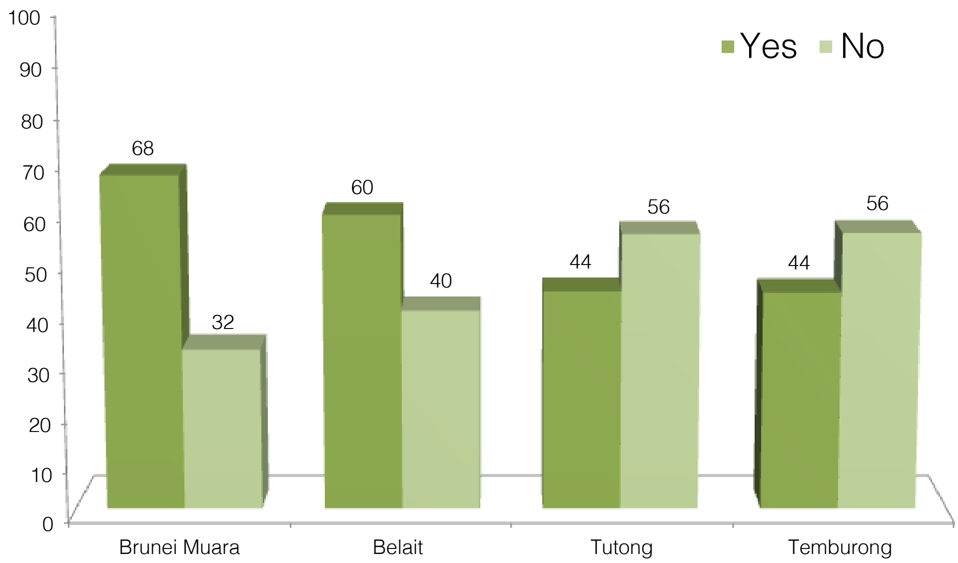


fig 3.1.3b Internet access in households for 2013 by district

3.1.4 Amount of Household Members Using The Internet

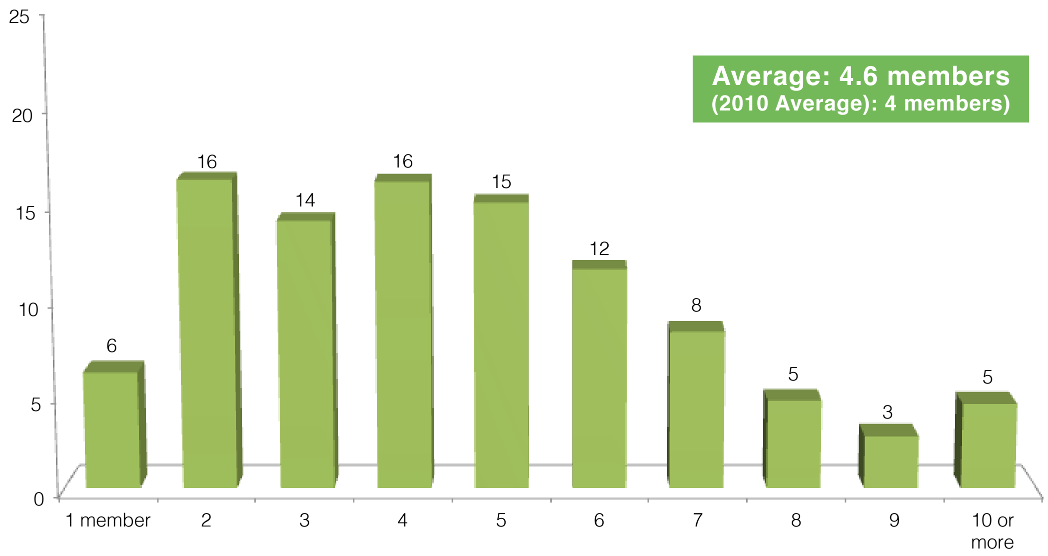


fig 3.1.4a Number of household members using the Internet

Figure 3.1.4a shows the average number of household members using the internet to be is 4.6 members. This is an improvement from 4 members in 2010. The increased number of broadband (fixed and mobile) subscribers contributes to this growing number.

3.1.5 Type of Internet Access

The chart shows the type of internet access available in the household. There is no major change in terms of preferred internet access in household. The majority of households are using fixed broadband to access the internet, followed by mobile broadband. Other means of accessing the internet are hardly used.

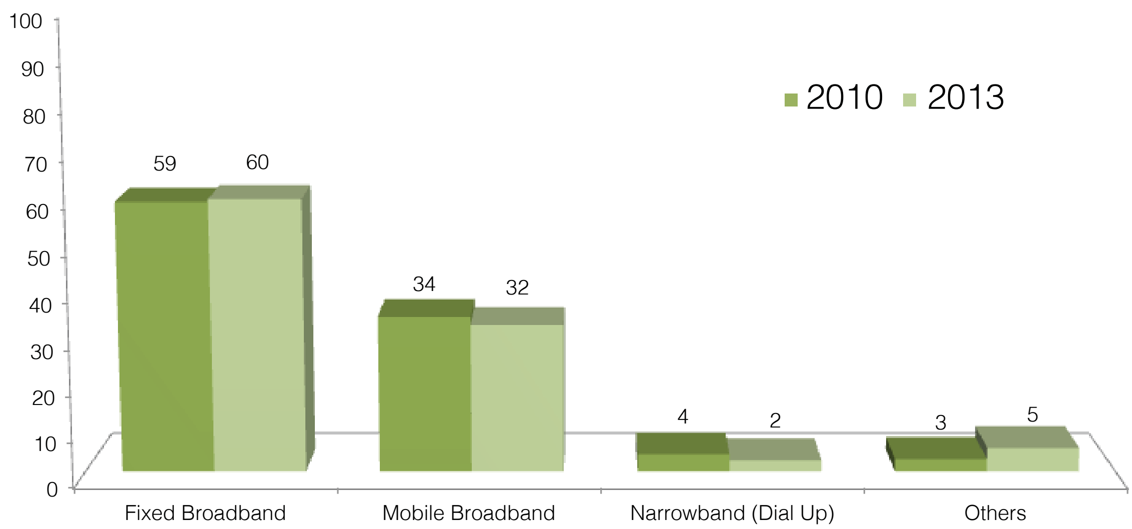


fig 3.1.5a Number of household members using the Internet

3.1.6 Monthly Household Spend On ICT Devices

Figure 3.1.6a below indicates a clear increase in household spending for the internet and decrease in spending for ICT devices, while spending for other services remain fairly stable.

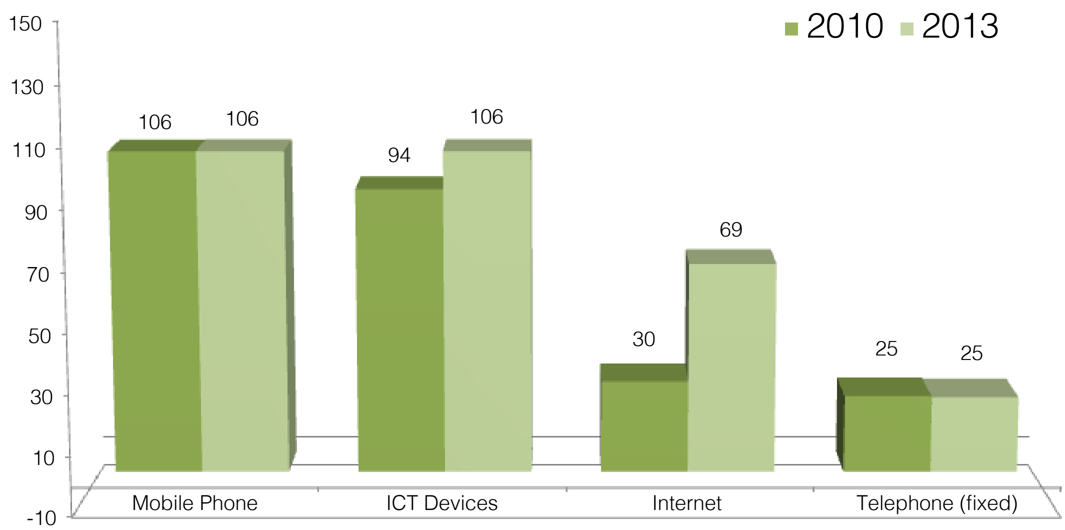


fig 3.1.6a Comparison of monthly expenditures on ICT devices by year (2010 and 2013)

3.1.7 Computer Protection

Only about 3 out of 4 households say all their computers are protected against computer viruses from the internet.

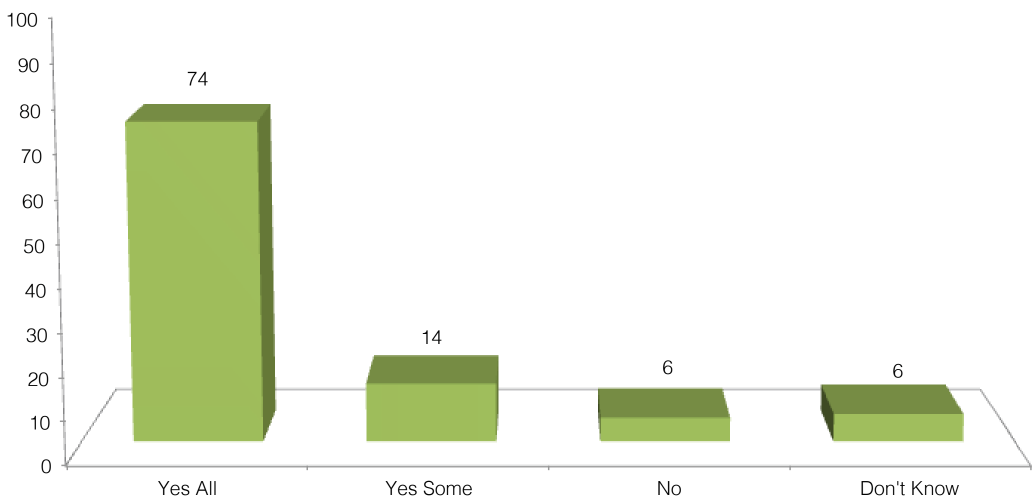


fig 3.1.7a Computer protection (2013)

There is a decrease in computers being protected by firewalls or anti-virus software, from 89% in 2010 to 74% in 2013. The increased usage of laptops obviously correlates with less protection, making computers vulnerable to computer viruses from the internet.

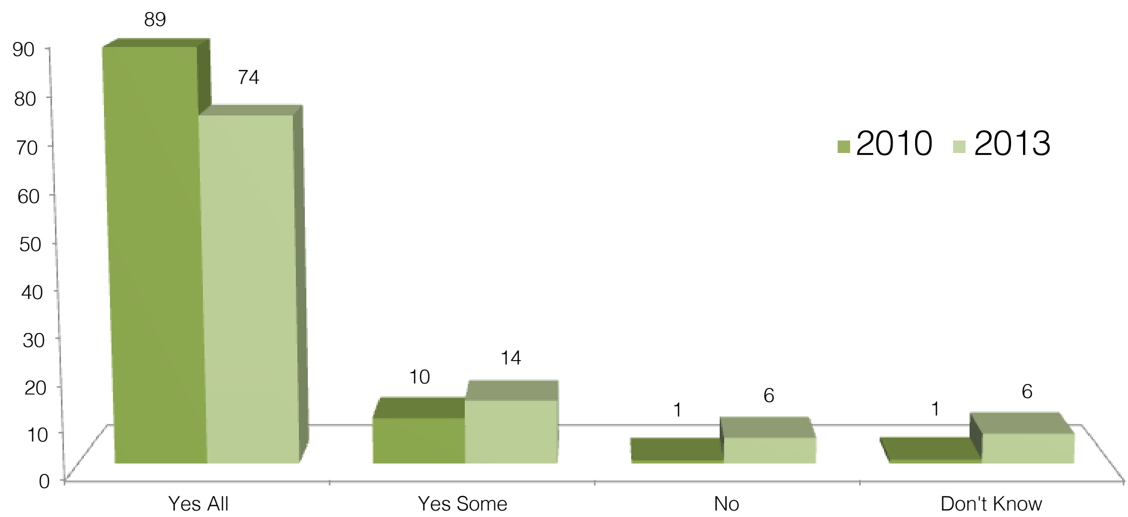


fig 3.1.7b Comparison of computer protection in households by year (2010 and 2013)

3.1.8 Reasons For No Internet Access In Household

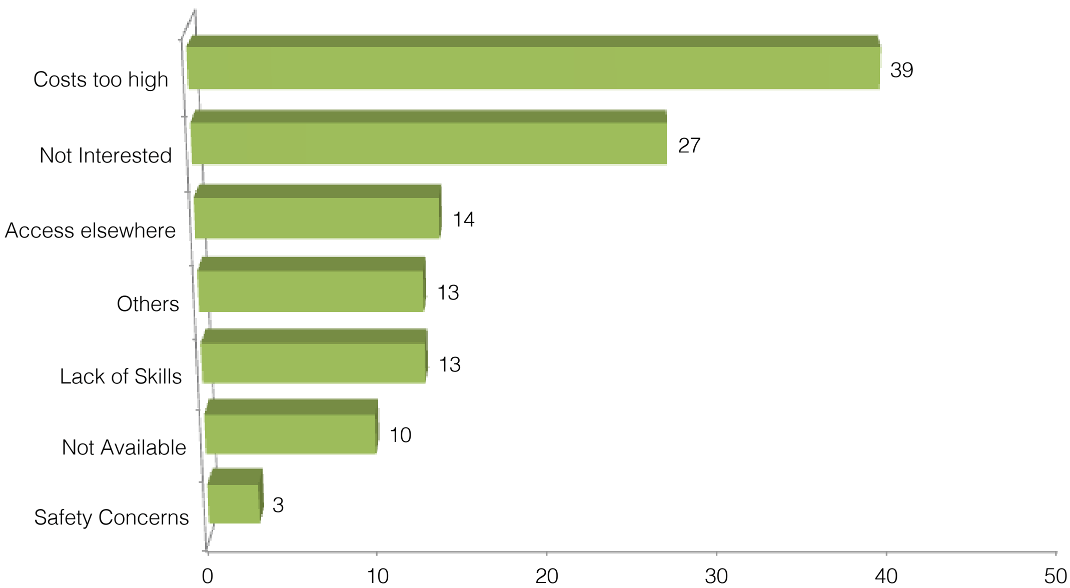


fig 3.1.8a Reasons for no internet access in household (2013)

High costs, though not as often mentioned in 2013 as compared to 2010, are still the main reason for households not accessing the internet. And about a quarter of all households with no internet simply do not have an interest in it.

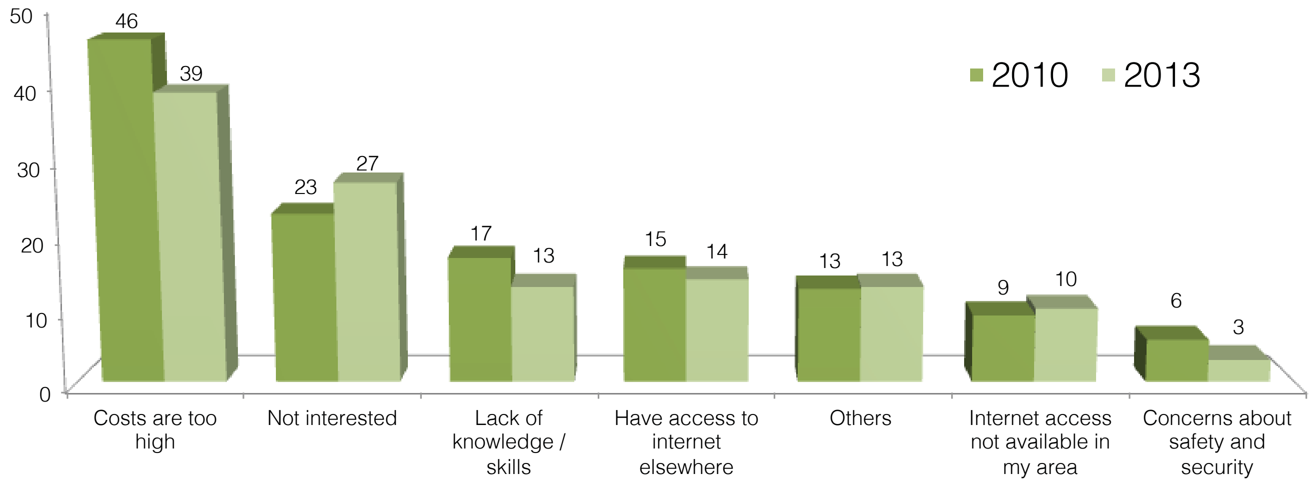


fig 3.1.8b Comparison of not having internet access in household by year (2010 and 2013)

3.1.9 Media Usage

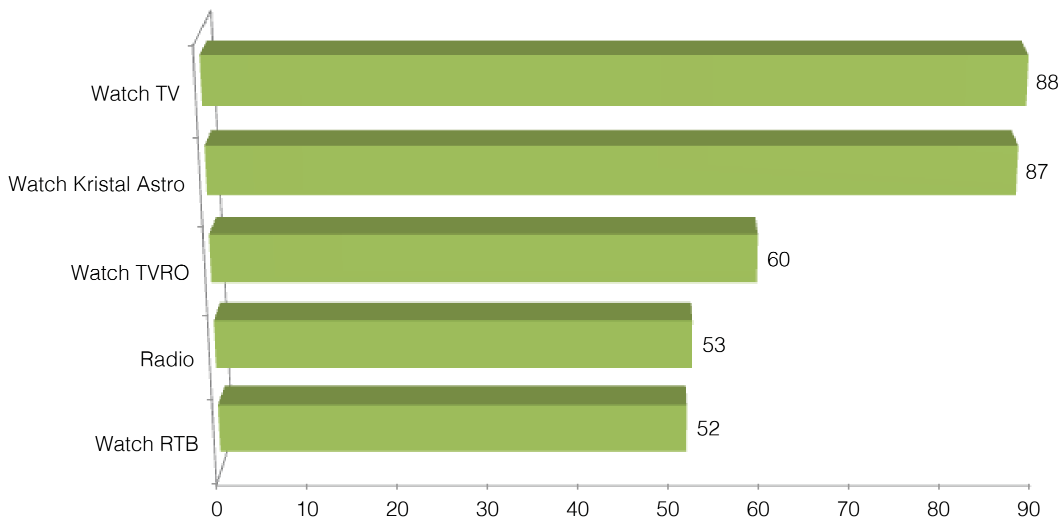


fig 3.1.9a Household's preferred media

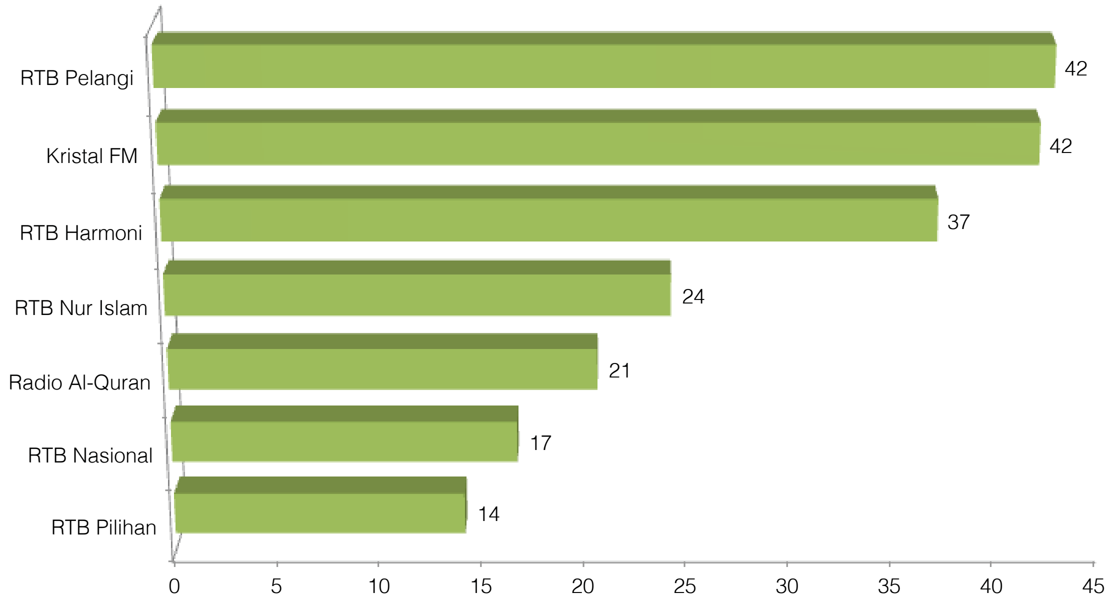


fig 3.1.9b Preferred local radio station

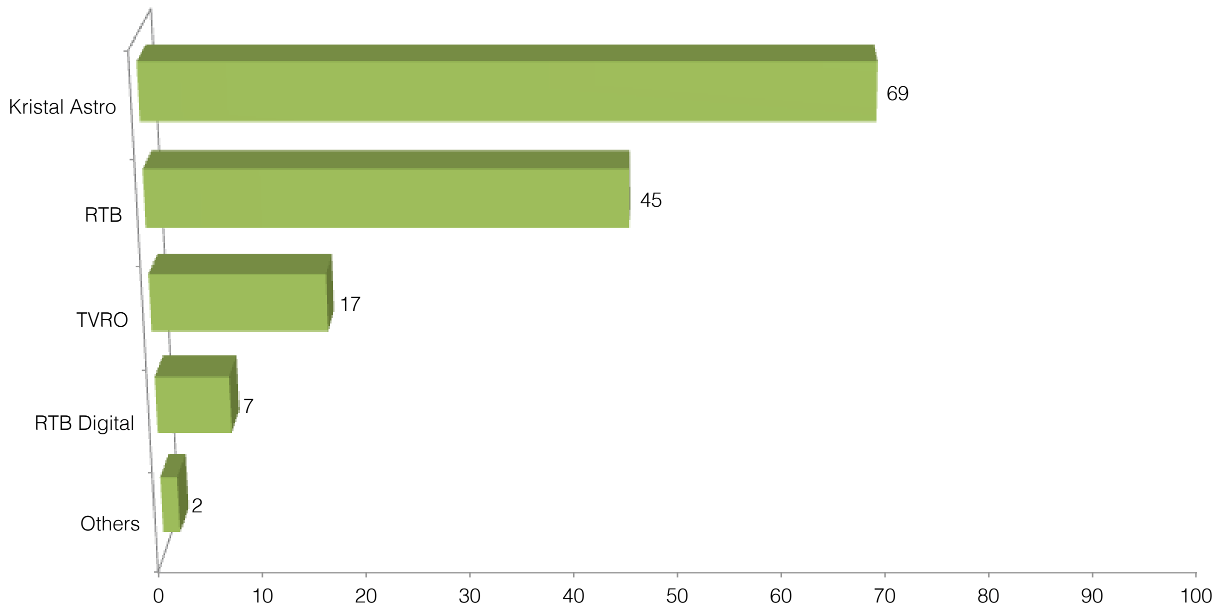


fig 3.1.9c TV provider that is most watched on a daily basis

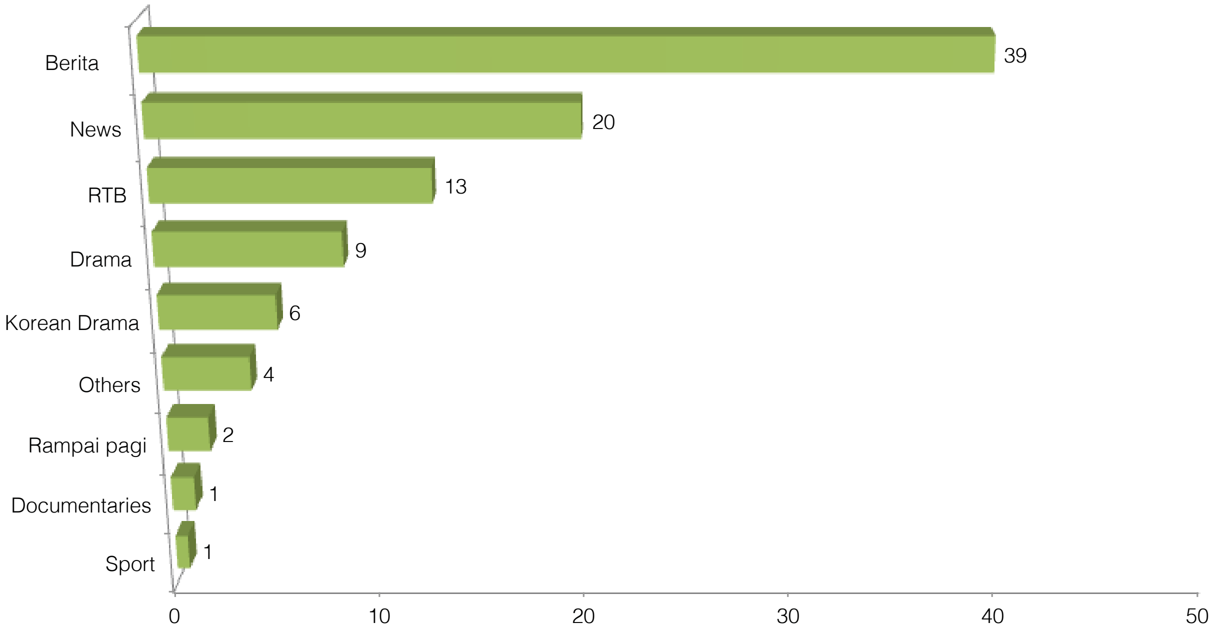


fig 3.1.9d Preferred RTB programs

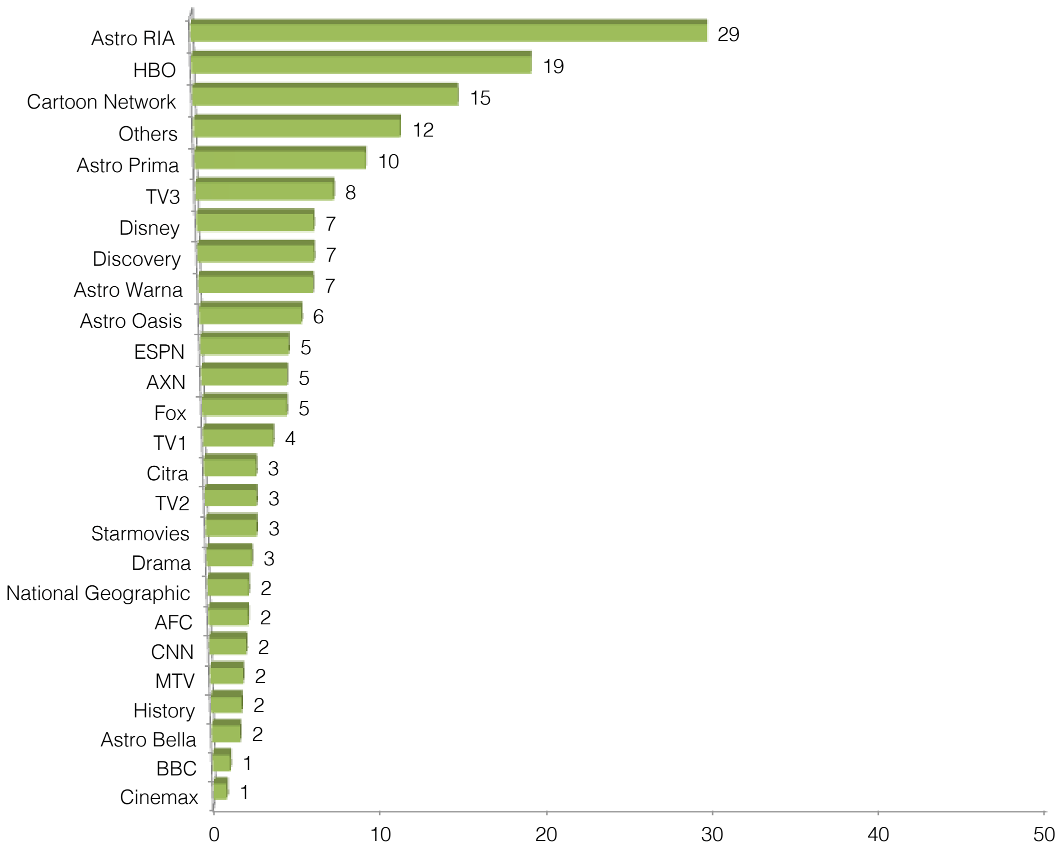


fig 3.1.9e Preferred KRISTAL ASTRO programs / channels

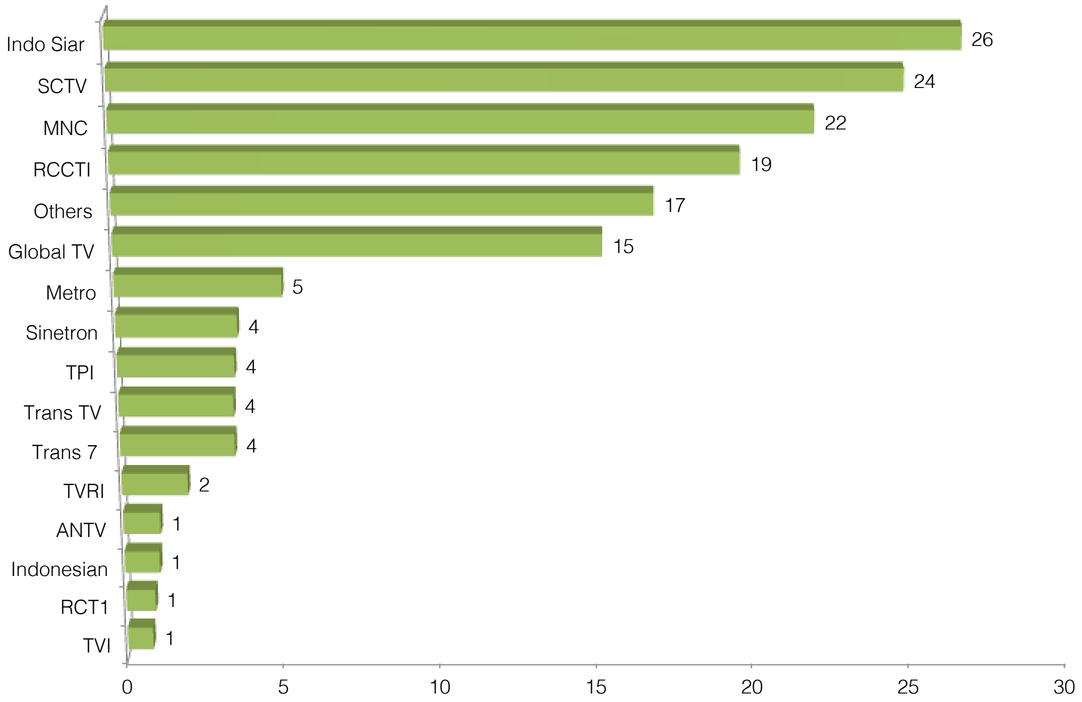


fig 3.1.9f Preferred TVRO programs / channels

TVRO usage on average over 5 years.

3.1.10 Social Media Usage

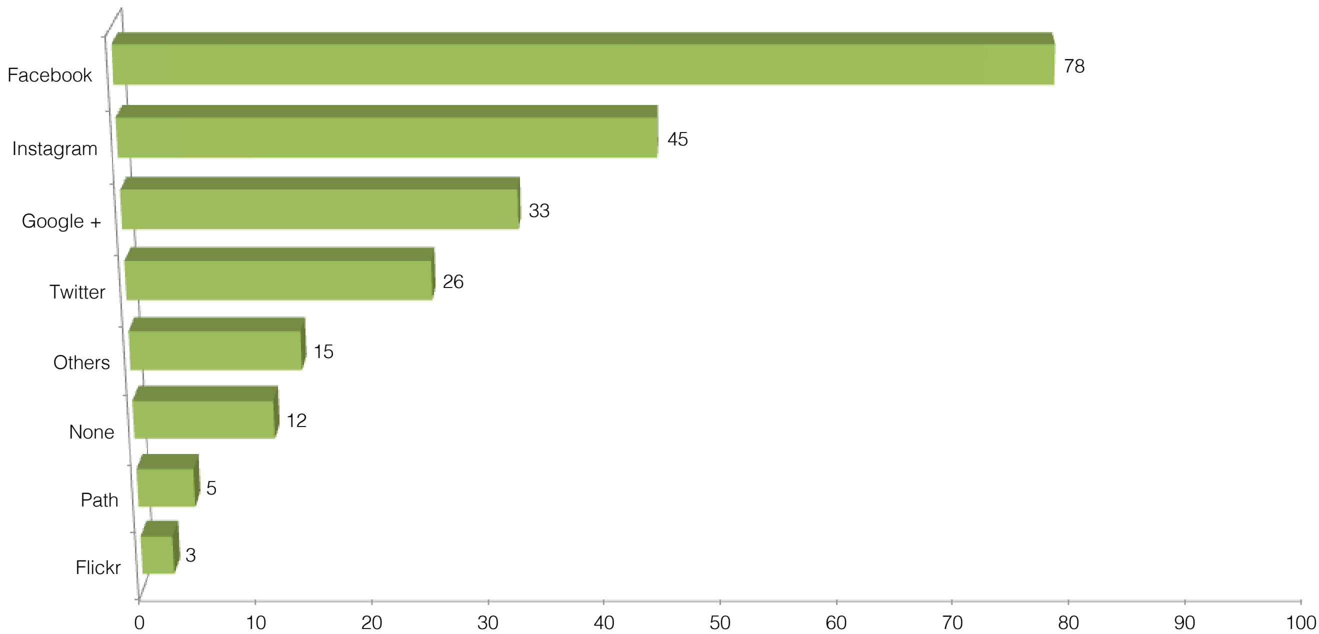


fig 3.1.10a Social media usage

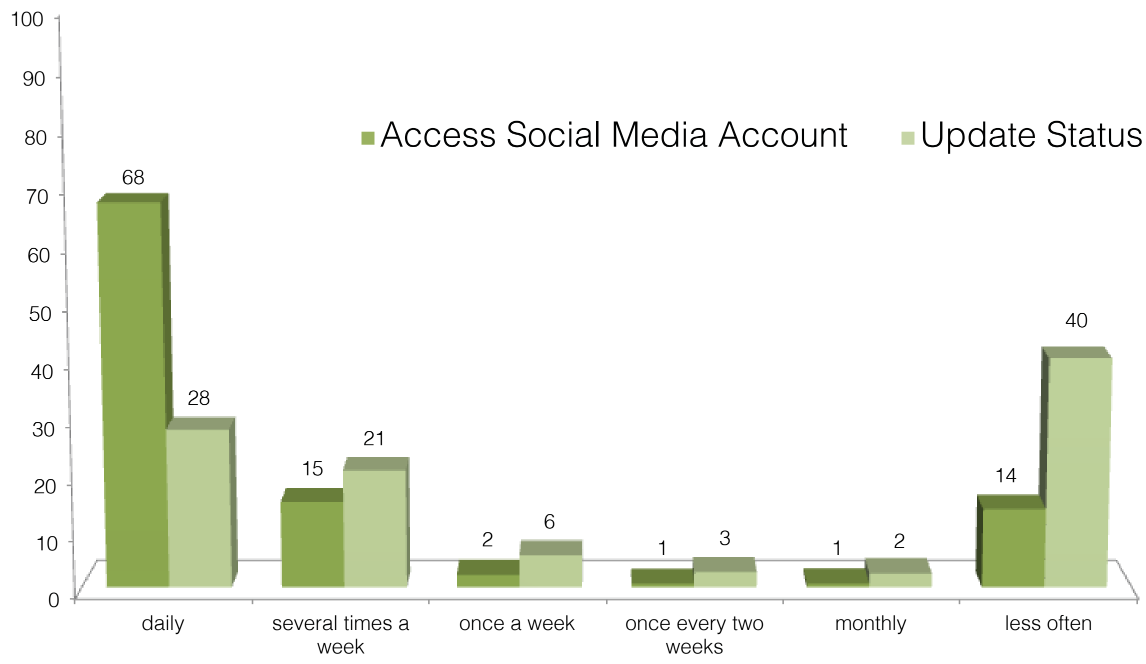


fig 3.1.10b Frequency of social media usage

From figure 3.1.10a, it is interesting to note that only 1 out of 10 households do not use social media. The top 2 mostly used social media applications / programs are Facebook and Instagram.

Figure 3.1.10b shows that social media users are active – 68% access their social media accounts daily.

findings
of the Household ICT Survey

3.1 Individual Section

3.2.1 Usage of Devices

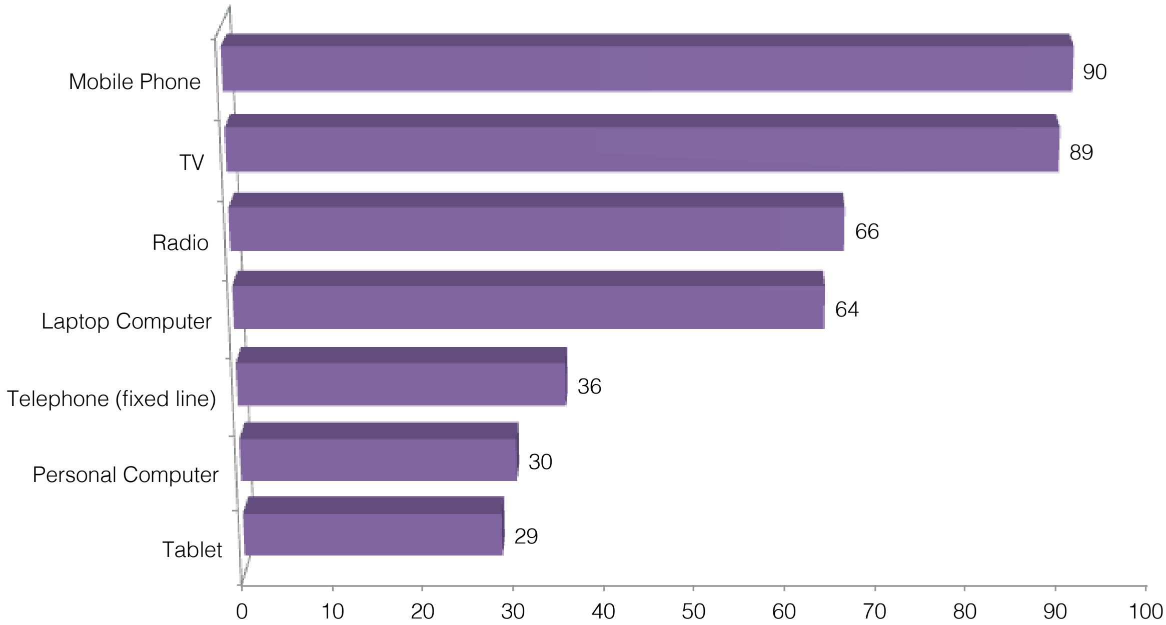


fig 3.2.1a Usage of devices

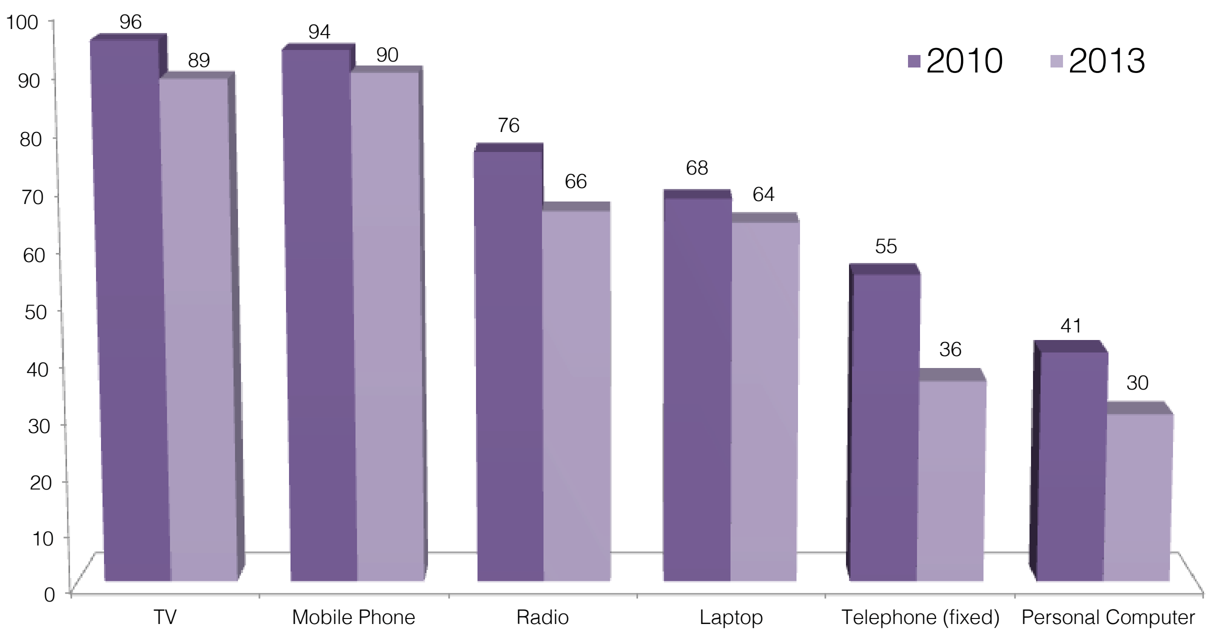


fig 3.2.1b Comparison of usage of devices by year (2010 and 2013)

3.2.2 Frequency of Use

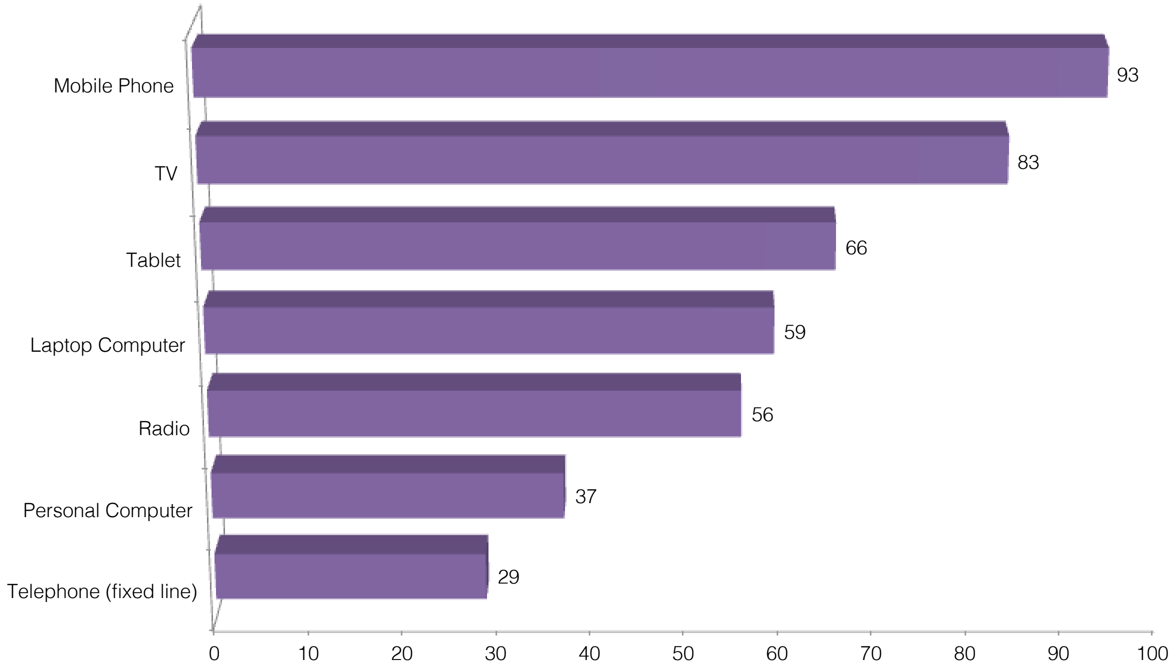


fig 3.2.2a Frequency of use

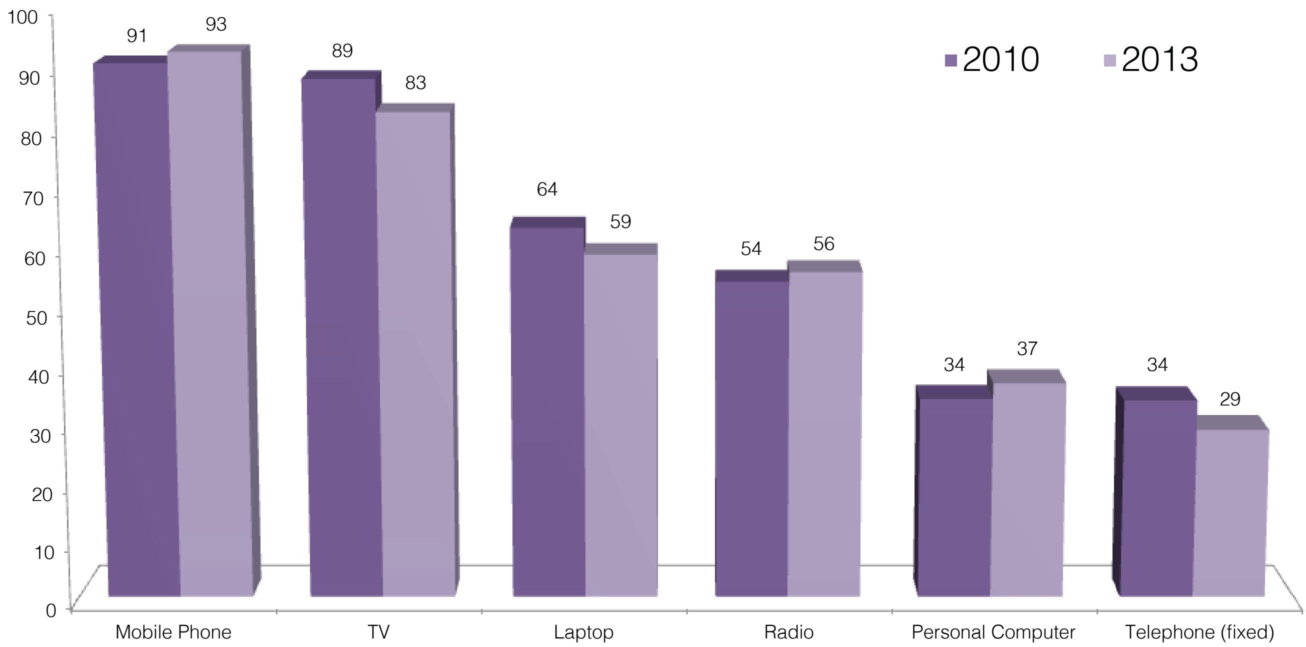


fig 3.2.2b Comparison of frequency of by year (2010 and 2013)

3.2.3 Personal Internet Usage

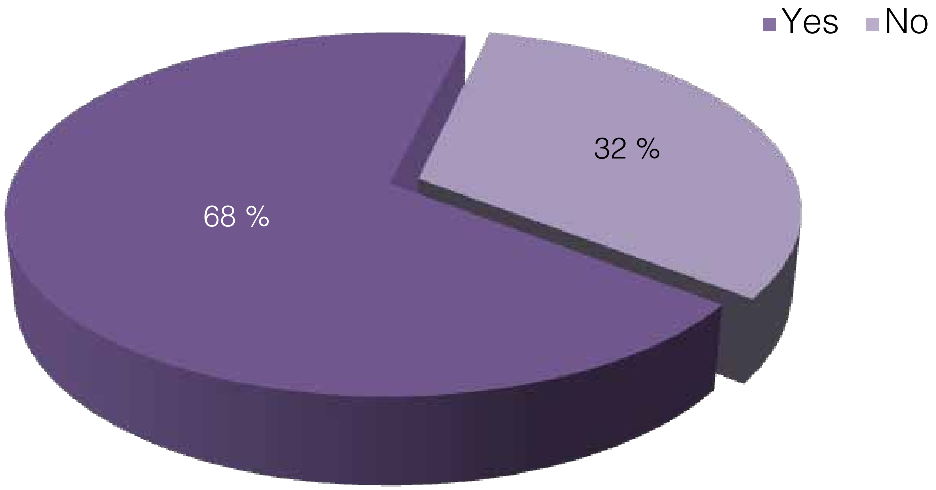


fig 3.2.3a Personal Internet usage

Using the Internet	2010	2013
Yes	**67**	**68**
No	33	32

table 3.2.3a Comparison of personal internet usage by year (2010 and 2013)

68% of respondents are personally using the internet; this marks a slight increase compared to 2010. Internet usage correlated with education, income and age, i.e. users with higher income and education are more likely to use the internet. Usage of internet is also highest among the age group of 16-24 years old.

3.2.4 Quality of Internet Access

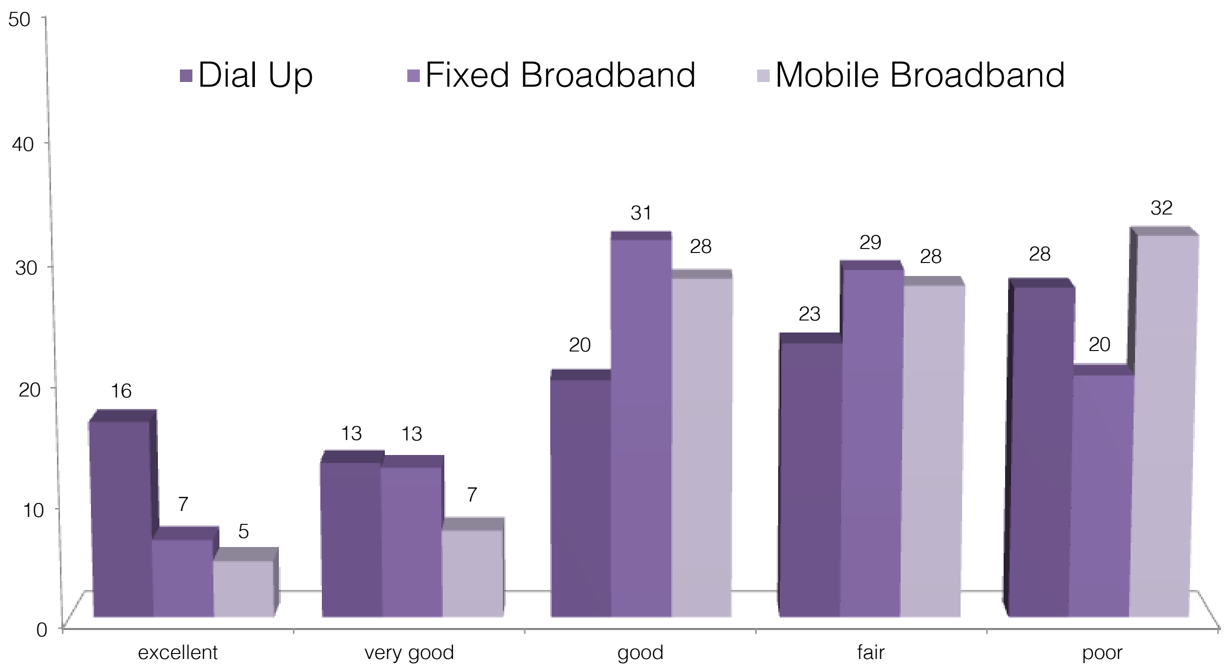


fig 3.2.4a Quality of internet access

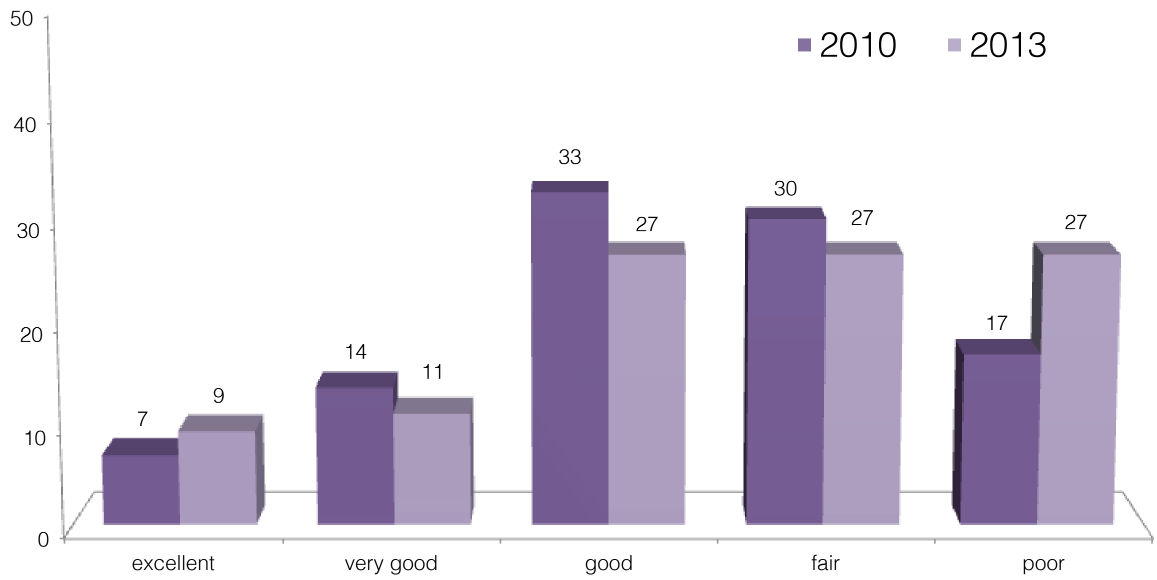


fig 3.2.4b Comparison of internet quality by year (2010 and 2013)

3.2.5 Internet Fee Perception

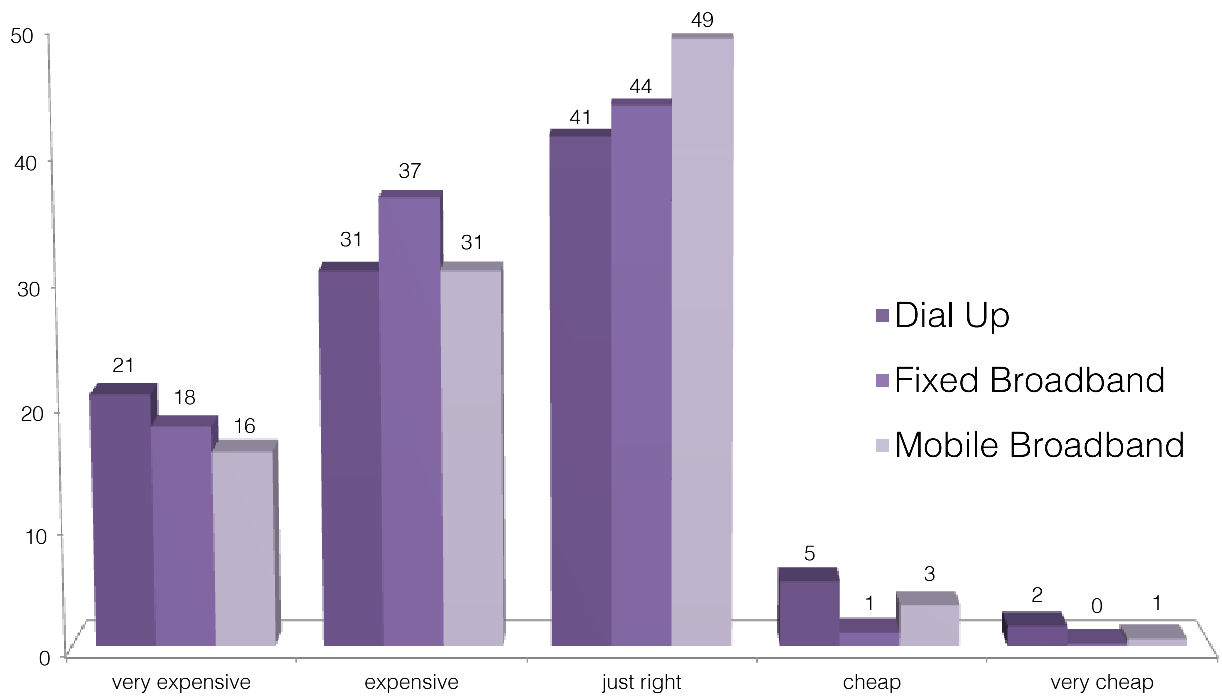


fig 3.2.5a Internet fee perception

About half of the respondents perceive internet access fees as expensive and very expensive. In comparison with the 2010 survey, more responded that the fees are too high.

3.2.6 Ideal Monthly Internet Fee

The table below show the respondents' opinion on the ideal fee for broadband subscription:

Ideal Fee	Total	Personal Income				HH Income			
		No Income	Low Income	Mid Income	High Income	No Income	Low Income	Mid Income	High Income
Mean Value	**33.8**	35.0	32.9	34.5	35.6	38.9	32.3	33.1	36.1

table 3.2.6a Ideal monthly fee

The ideal monthly fee for broadband is at the average of $34 compared to 2010 which was $30.

3.2.7 Frequency of Internet Usage

Respondents with internet access are mainly using it daily (76%) or at least several times a week (15%); this marks a clear increase since 2010, i.e. the internet is used more often compared to 2 years ago. Most of the users are those in the age range of 16-24 years old. One possible reason is the growth of social media usage.

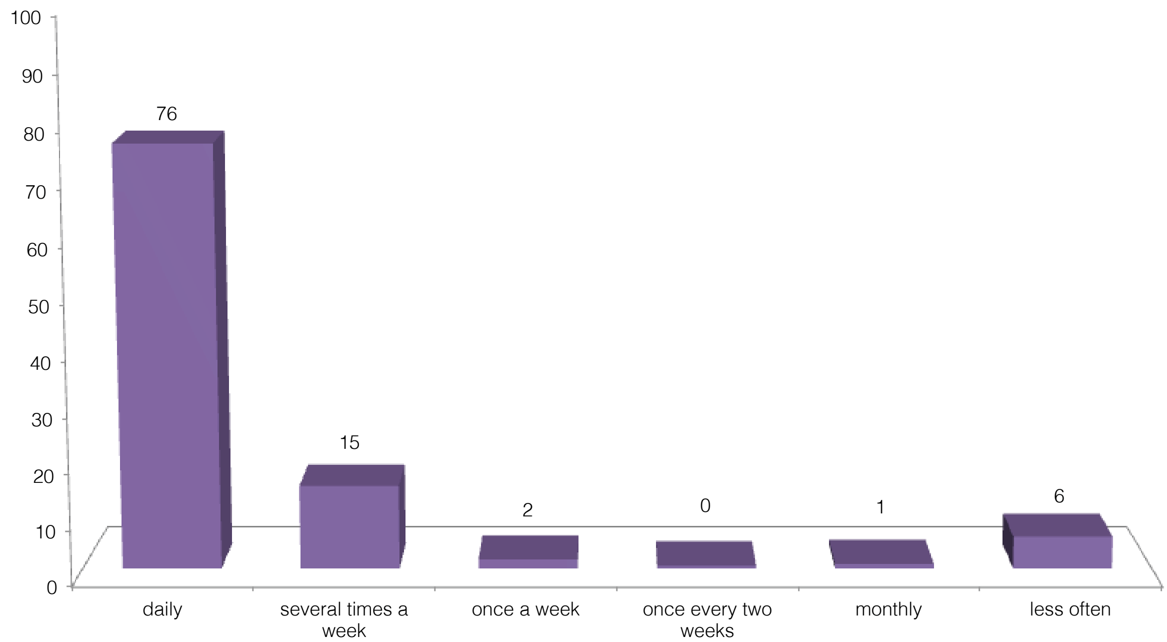


fig 3.2.7a Frequency of internet usage

3.2.8 Location of Internet Usage

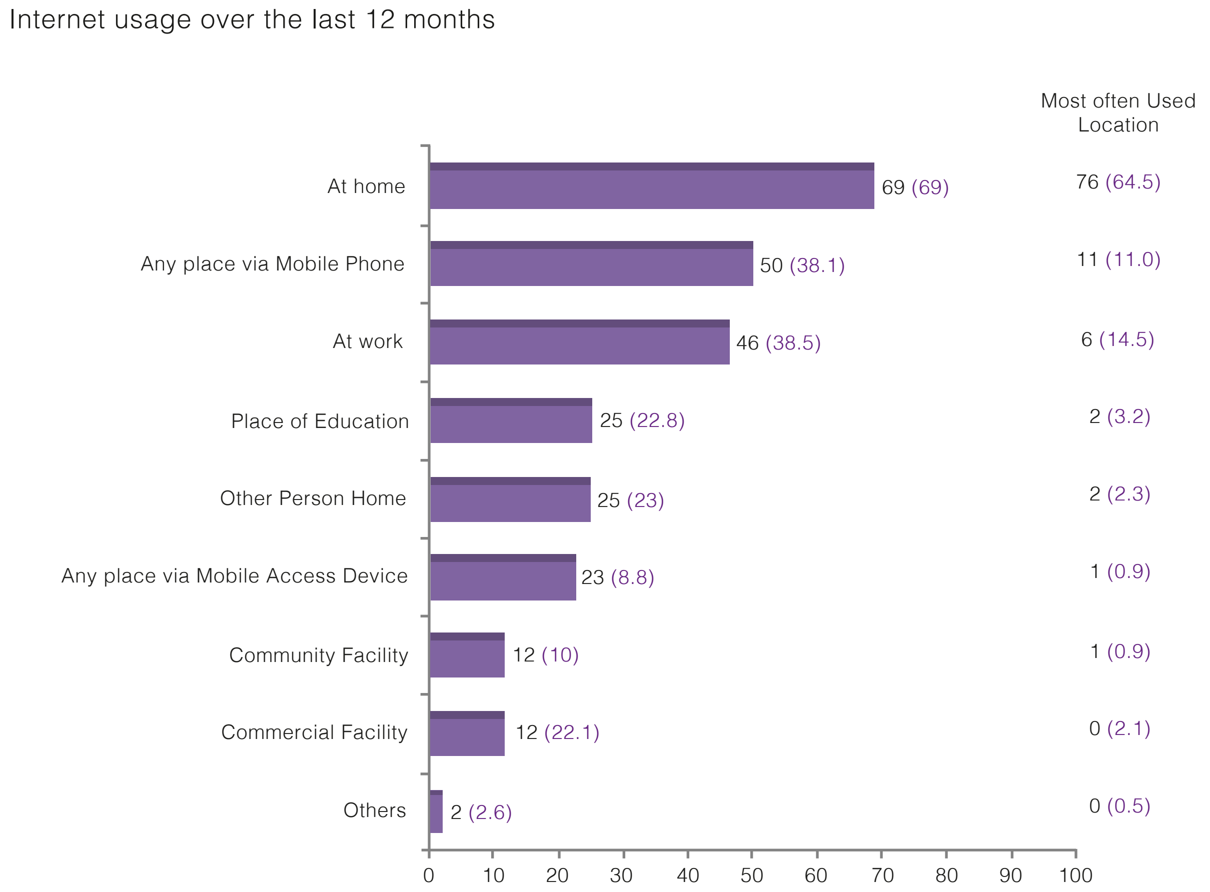


fig 3.2.8a Location of internet usage

The chart shows that the internet is most frequently used at home, with a secondary location of on the go with a mobile phone network connection. Comparing to the 2010 results (shown in bracket), respondents use the internet more in any other places than at their workplace. This means that people these days prefer to get connected not just at home and workplace but also elsewhere by using their mobile devices.

3.2.9 Purpose of Internet Usage

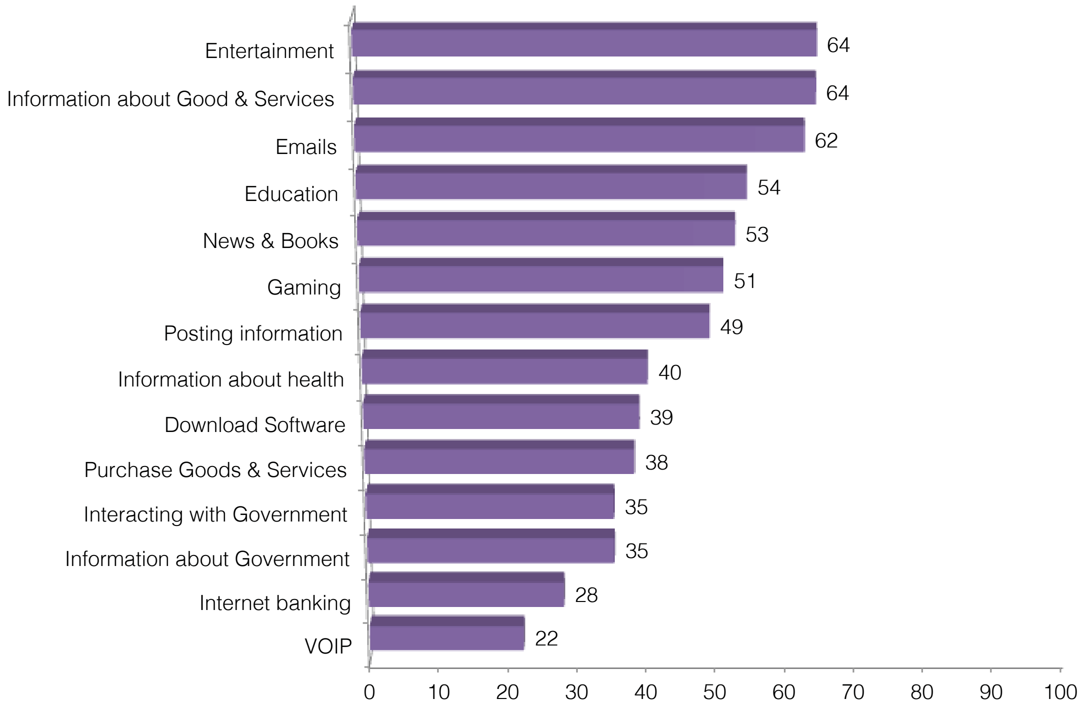


fig 3.2.9a Purpose of internet usage

The chart above shows the reasons of respondent on the usage of the internet over the last 12 months. The main reasons for using the internet are entertainment, favoured mostly by respondents of age 34 and below.

3.2.10 Language of Internet Sites Used

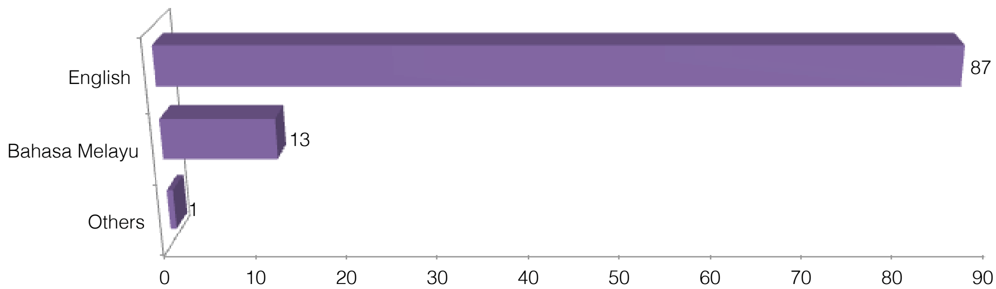


fig 3.2.10a Language of internet sites used

The above chart shows the languages of the website visited most often by the respondents. English is the main language for almost all internet sites visited. Only 1 out of 10 respondents are using mainly sites in Bahasa Melayu. This also indicates a high level of understanding of the English language.

Language	2010	2013
Bahasa Melayu	9	13
English	91	87
Others	0	1

3.2.11 Reasons For No Personal Internet Usage

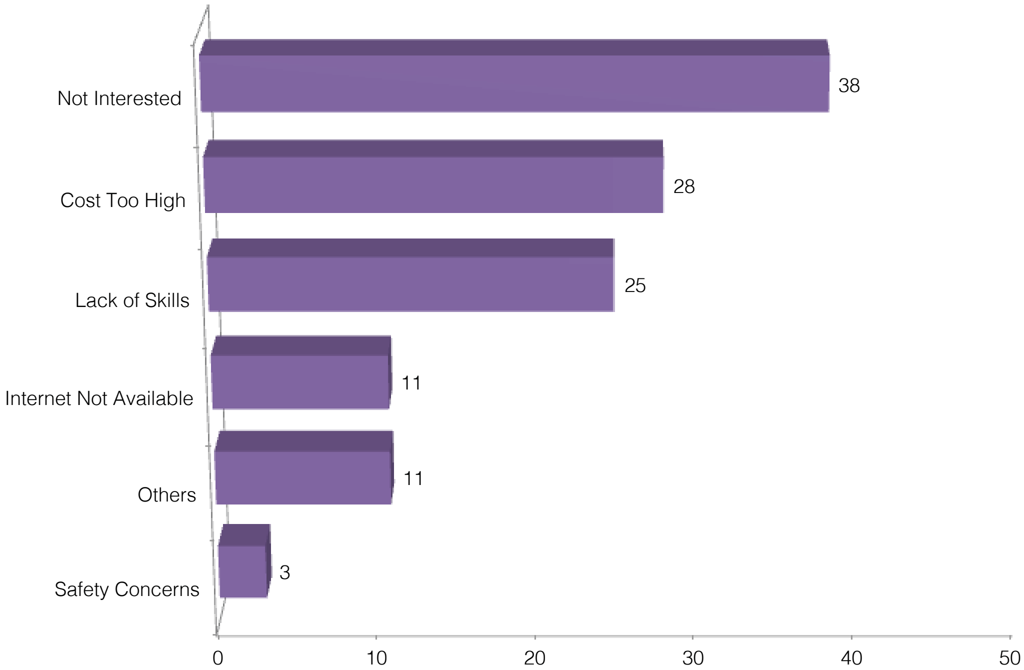


fig 3.2.11a Reasons for not using the internet

The table above shows the reasons why the respondent did not access internet over last 12 months. Respondents not using the internet claim manly three reasons: no interest, high cost or lack of knowledge. This point to a certain need for more internet-education as well as some form of financial support (mainly for low income households).

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Appendix B – List of Acronyms

ACRONYMS	DESCRIPTION
AITI	Authority for Info-communications Technology Industry of Brunei Darussalam
ICT	Info-communications Technology
PC	Desktop personal computer
TVRO	Television Receive Only
RTB	Radio Televisyen Brunei
Kristal Astro	Multi-channel pay-TV Service

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