Southeastern Indiana Regional Planning Commission (SIRPC)

Digital Capital Survey

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Center for Regional Development

Prepared by:

Purdue Center for Regional Development

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Digital Capital Survey

Since digital inclusion is a new concept and requires additional metrics to not only better inform planning efforts, but also set a baseline to gauge performance over time SIRPC decided to conduct a modified digital capital survey. This modified version measured the level of digital skills/literacy among adults in the region as well as home internet access, device ownership, and internet benefits. Measuring and understanding levels of digital capital among individuals is critical since this capital allows to not only maximize the benefits of internet use, but also translate online use into offline benefits and vice versa.

Survey gathered data on home internet access and type, device ownership, employment status, occupation, and length of time using the internet. Likewise, the survey also gathered data that can serve as proxies for gauging levels of digital skills. These data include frequency and diversity of online interactions with community institutions, frequency and diversity of internet use, and device and internet use resourcefulness. Lastly, survey gathered data on internet benefits, socioeconomic characteristics, and interest in digital literacy trainings.

Collectively, the survey provides a broad understanding of the level of digital literacy or skills among individuals in the region with economic and workforce development implications. This information should complement other data and inform digital inclusion planning as well as setting a benchmark to measure progress of digital inclusion interventions and strategies in the future.

The survey was conducted online and distributed by SIRPC and its stakeholders to multiple groups in the region including, but not limited to, local chambers of commerce, economic development organizations, nonprofits, and other community groups for about 4-weeks between late-March and mid-April 2021. Internet access at home was not an issue since survey could be completed using smartphones. The total number of valid survey responses was 1,636 and included responses from all nine counties in the region. While this convenient sample did not meet the random criteria entirely, it was weighted by age, educational attainment, and race to align with the region's demographic characteristics.

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Survey Demographic Characteristics

Survey versus weighted demographic characteristics

Percentages	Survey	Weighted	Census
White	99.1	96.6	96.6
Minority	0.9	3.4	3.4
High school or less	17.3	54.1	54.5
Some college	31.1	28.3	28.1
Bachelor's or more	51.6	17.6	17.4
18-34 years	15.0	23.7	25.6
35-64 years	71.5	50.7	52.3
65 years or older	13.5	25.6	22.1

Given that survey responses did not meet entirely the random criteria for a scientific sample, the convenient sample was weighted by education, age, and race/ethnicity to align as much as possible to the region's characteristics according to the census. This gives an appropriate weight to each group making survey findings more accurate.
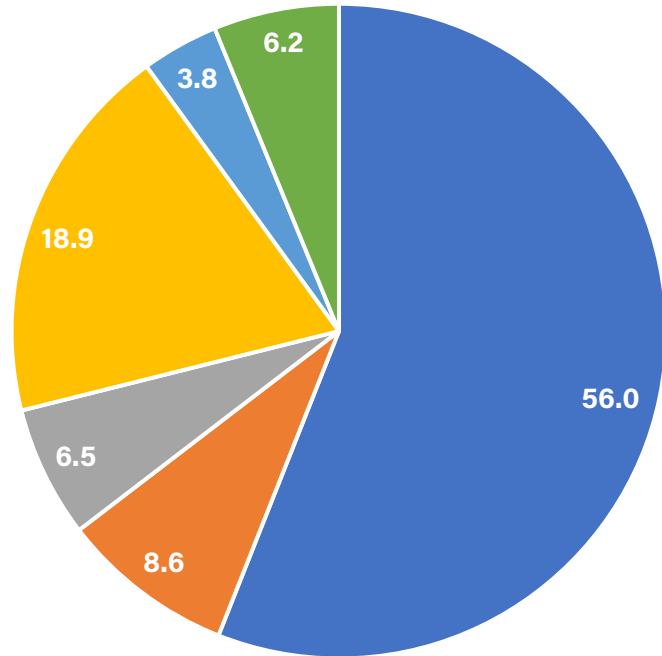
The table shows the share of responses by education, age, and race/ethnicity under the **survey** column. On the other hand, the share of the region's population by group is shown under the **census** column. Notice for example how those individuals with a bachelor's or higher were oversampled since the share of the survey was 51.6% versus 17.4% according to the census.

However, once the weights were applied, the new share of residents by group is shown under the **weighted** column. While the share will not be identical to the census' share, it is an improvement compared to the original sample. In this case, the share of those with a bachelor's degree or higher declined to 17.6% after applying the weight. A similar adjustment took place in the other categories. Survey data analysis was conducted using this "weighted" sample.
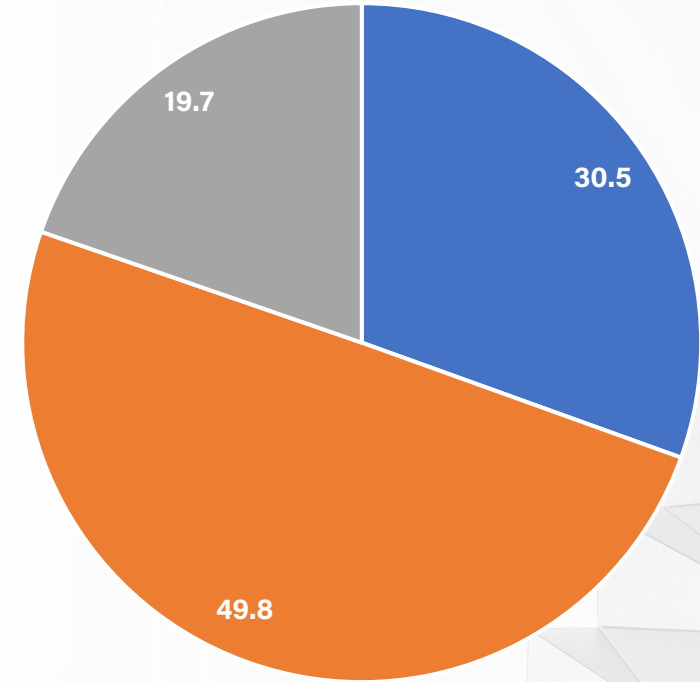
Employment Status and Occupations (% responses)

Employment Status (n=1,634)

- Employed, full-time — 56.0
- Employed, part-time — 8.6
- Own business — 6.5
- Unemployed — 18.9
- Retired — 3.8
- Other — 6.2

Occupations (n=1, 146)

- Low — 30.5
- Medium — 49.8
- High — 19.7

i More than half of respondents were employed full-time while close to 19% were unemployed. More than 6% said they owned their own business. The other category includes homemakers, stay at home moms, and disabled respondents. All 24 occupations listed were grouped into low, medium, and high based on median hourly earnings. Median hourly earnings in the low group ranged from $9,81 to $15.91; $15.95-$19.64 in the medium group; and $24.93 to $33.13 in the high group. Close to half of respondents worked in occupations in the medium group versus close to one-fifth in the high group and 30.5% in the medium group.
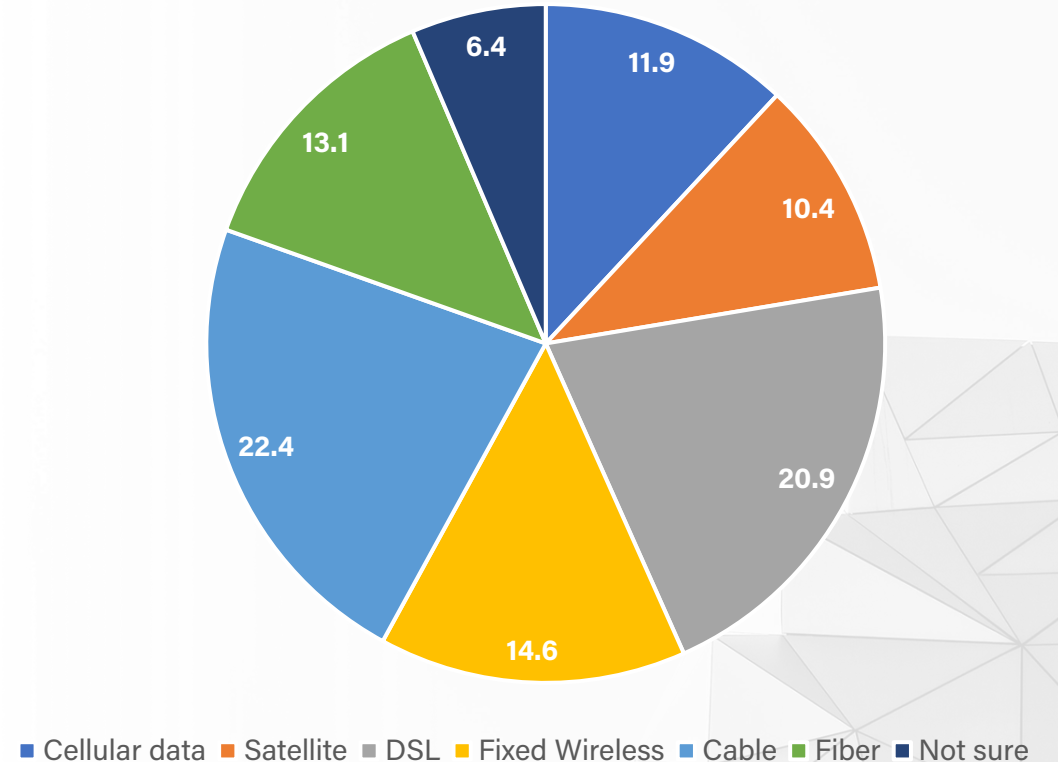
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Home Internet Access and Type (% responses)

Home Internet Access (n=1,633)

- Yes
- No
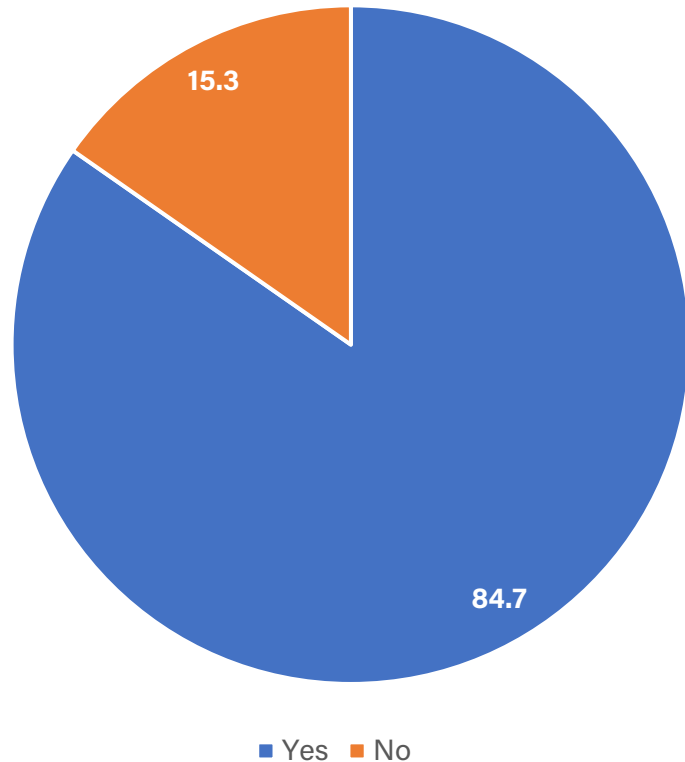
Home Internet Technology (n=1,250)

- Cellular data
- Satellite
- DSL
- Fixed Wireless
- Cable
- Fiber
- Not sure
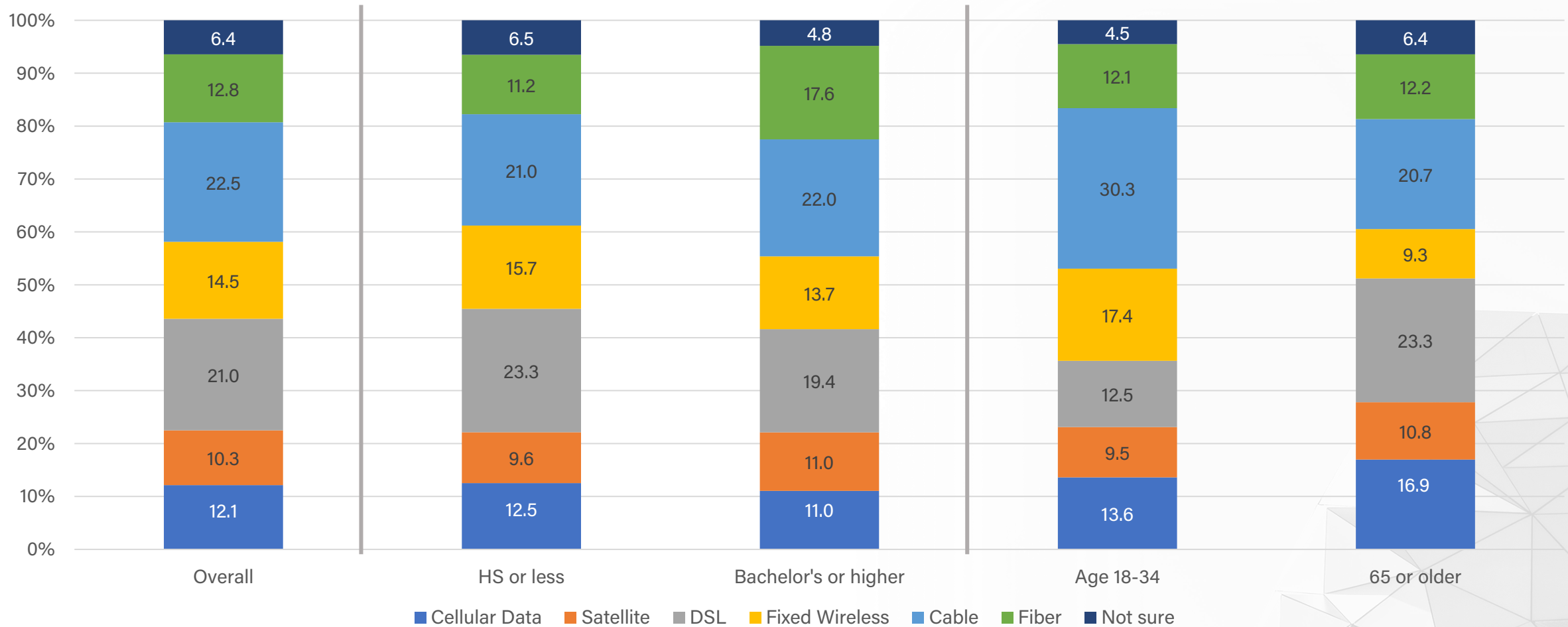
Close to 85% of respondents said they had internet service at home versus 15% that did not. Of those that did have internet service at home, a little more than one-fifth (22.4%) had cable followed by 20.9% with DSL, 14.6% with fixed wireless, 13% with fiber and 10% with satellite. Roughly 43% of respondents had either DSL, satellite, or cellular data internet at their home. While multiple technologies are needed to bridge the digital divide, these three technologies tend to offer slower more unreliable connections or have limited data usage. Also note that close to 6.5% of respondents were not sure what internet service they had at home. Efforts need to be made to educate residents on the multiple technologies available.

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Home Internet Tech: Selected Characteristics (% responses) ...

	Overall	HS or less	Bachelor's or higher	Age 18-34	65 or older
Not sure	6.4	6.5	4.8	4.5	6.4
Fiber	12.8	11.2	17.6	12.1	12.2
Cable	22.5	21.0	22.0	30.3	20.7
Fixed Wireless	14.5	15.7	13.7	17.4	9.3
DSL	21.0	23.3	19.4	12.5	23.3
Satellite	10.3	9.6	11.0	9.5	10.8
Cellular Data	12.1	12.5	11.0	13.6	16.9

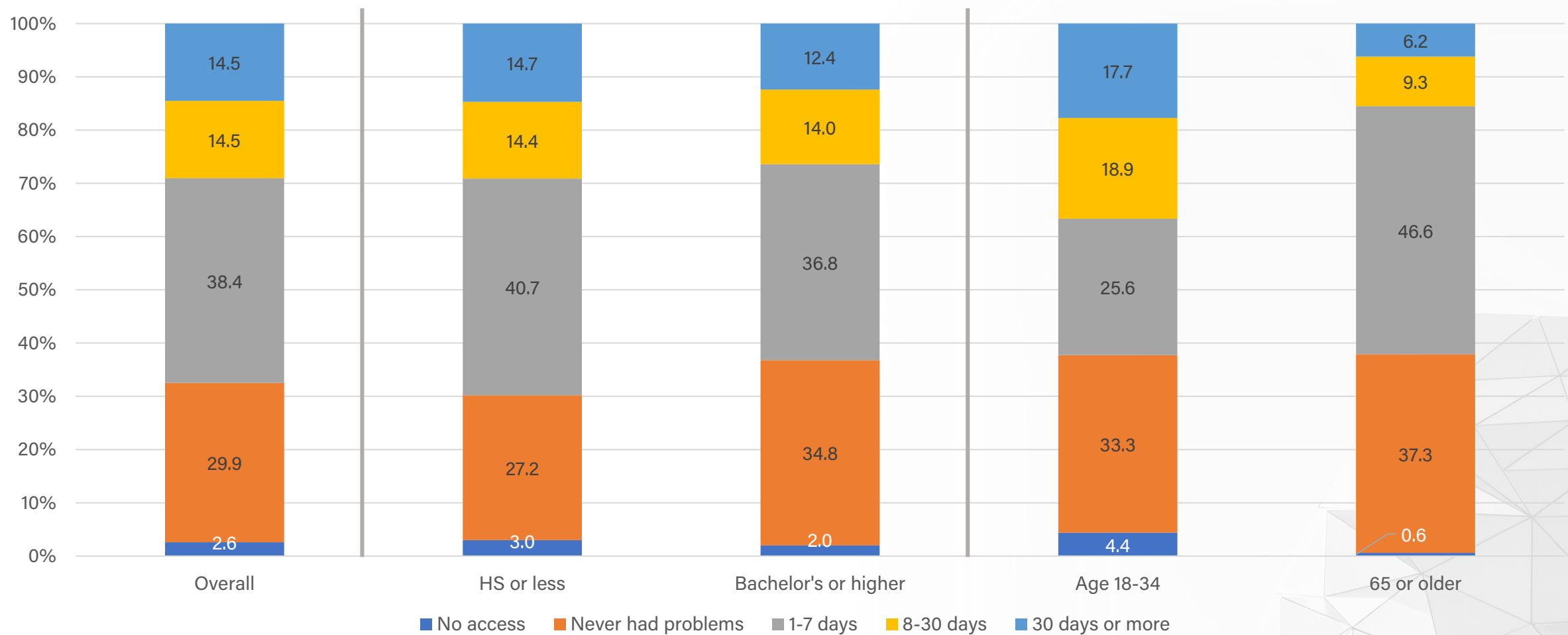Legend: ■ Cellular Data ■ Satellite ■ DSL ■ Fixed Wireless ■ Cable ■ Fiber ■ Not sure

ⓘ Overall, 22.5% of respondents in the region reported using cable at home followed by DSL with 21%. When looking at different groups, however, some different patterns emerge. For example, while 11.2% of those with a high school degree or less had fiber, the share of those with a bachelor's or higher with fiber was higher (17.6%). Regarding age, the highest share of those ages 65 or older subscribed to DSL (23.3%) while the highest share of those younger subscribed to cable (30.3%). Lastly, around 6.5% of those with high school or less and age 65 or older were not sure of the technology they had.

# Days without Internet: Selected Characteristics (% responses)

	Overall	HS or less	Bachelor's or higher	Age 18-34	65 or older
No access	2.6	3.0	2.0	4.4	0.6
Never had problems	29.9	27.2	34.8	33.3	37.3
1-7 days	38.4	40.7	36.8	25.6	46.6
8-30 days	14.5	14.4	14.0	18.9	9.3
30 days or more	14.5	14.7	12.4	17.7	6.2

Legend: ■ No access ■ Never had problems ■ 1-7 days ■ 8-30 days ■ 30 days or more

A key measure of digital inclusion is reliability and consistency when accessing the internet. Overall, 29.9% of respondents never had problems with their internet over the past year compared to 27.2% of those with a high school degree or less and 34.8% of those with a bachelor's or higher. Interesting to note is that the share of those ages 18 to 34 without internet for 8 or more days was the highest among all groups with 36.6%.

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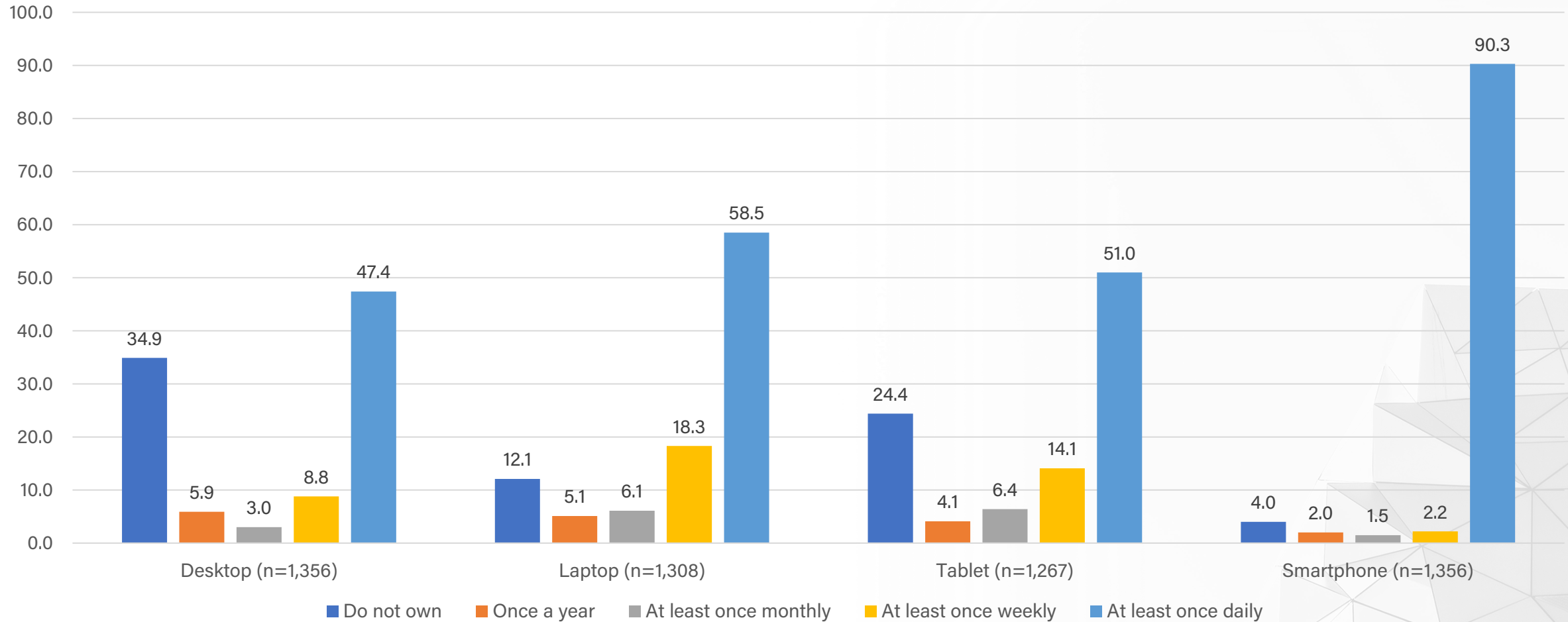
Home Internet Service Reliability by Technology (% responses)
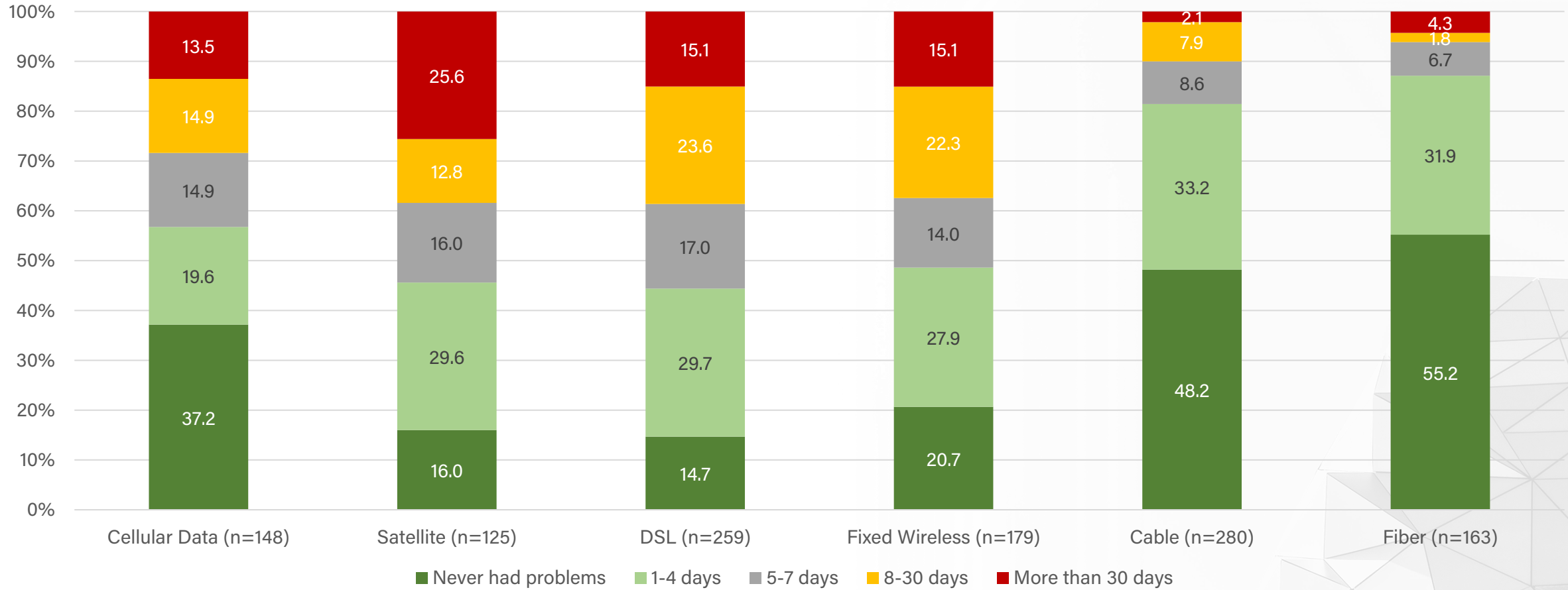
This graph breaks down the number of days without internet over the past year by technology. The most reliable technology, where a higher share of respondents reported never having problems, was fiber followed by cable and cellular data. On the other hand, one-quarter of respondents with satellite reported being without internet for more than 30 days. In the end, DSL was the most unreliable where 38.6% of respondents did not have the service for 8 or more days followed by satellite with 38.4% and fixed wireless with 37.4%.

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Devices & Internet Access Frequency (% responses)

Legend: ■ Do not own ■ Once a year ■ At least once monthly ■ At least once weekly ■ At least once daily

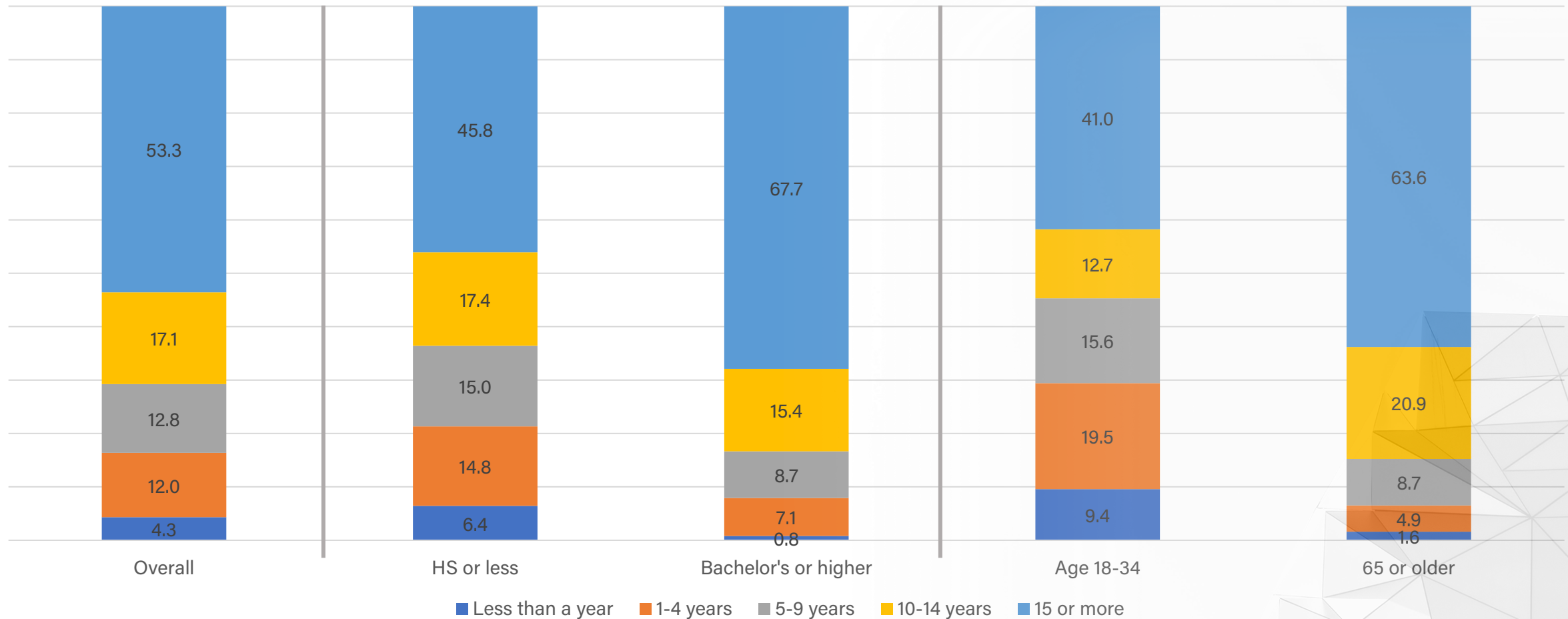|	Do not own	Once a year	At least once monthly	At least once weekly	At least once daily
Desktop (n=1,356)	34.9	5.9	3.0	8.8	47.4
Laptop (n=1,308)	12.1	5.1	6.1	18.3	58.5
Tablet (n=1,267)	24.4	4.1	6.4	14.1	51.0
Smartphone (n=1,356)	4.0	2.0	1.5	2.2	90.3

ⓘ Most respondents (90.3%) reported connecting to the internet at least once daily through their smartphones followed by 58.5% through their laptop. On the other hand, more than two-thirds of respondents reported not owning a desktop compared to close to one-quarter not owning a tablet, 12.1% not owning a laptop, and only 4% not owning a smartphone.

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Length of Internet Use (% responses)

	Overall	HS or less	Bachelor's or higher	Age 18-34	65 or older
15 or more	53.3	45.8	67.7	41.0	63.6
10-14 years	17.1	17.4	15.4	12.7	20.9
5-9 years	12.8	15.0	8.7	15.6	8.7
1-4 years	12.0	14.8	7.1	19.5	4.9
Less than a year	4.3	6.4	0.8	9.4	1.6

Legend: ■ Less than a year ■ 1-4 years ■ 5-9 years ■ 10-14 years ■ 15 or more

ⓘ More than half of survey respondents said they have been using the internet for 15 years or more. Around 4% said they have been using it for less than a year. On the other hand, more than two-thirds of those with a bachelor's degree or higher have been using the internet for 15 years or more compared to 45.8% of those with a high school degree or less. A similar pattern is seen between age groups where 63.6% of those 65 or older have been using the internet for 15 years or more compared to 41% of those ages 18-34. Of course, age plays role since the younger age group were perhaps too young to be using the internet. Regardless, interesting differences emerge.

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Internet Productivity & Resourcefulness (% well/extremely well responses)

Source: PCRD

Legend: ■ Needed Help ■ Found Help ■ More productive ■ Difficulty trust info

Category	Needed Help	Found Help	More productive	Difficulty trust info
Overall	19.3	50.3	59.5	25.3
HS or less	22.6	48.3	52.4	27.6
Bachelor's or higher	14.4	58.6	74.4	20.3
Ages 18-34	11.2	51.7	61.5	18.9
Age 65 or older	31.3	49.8	52.7	28.3
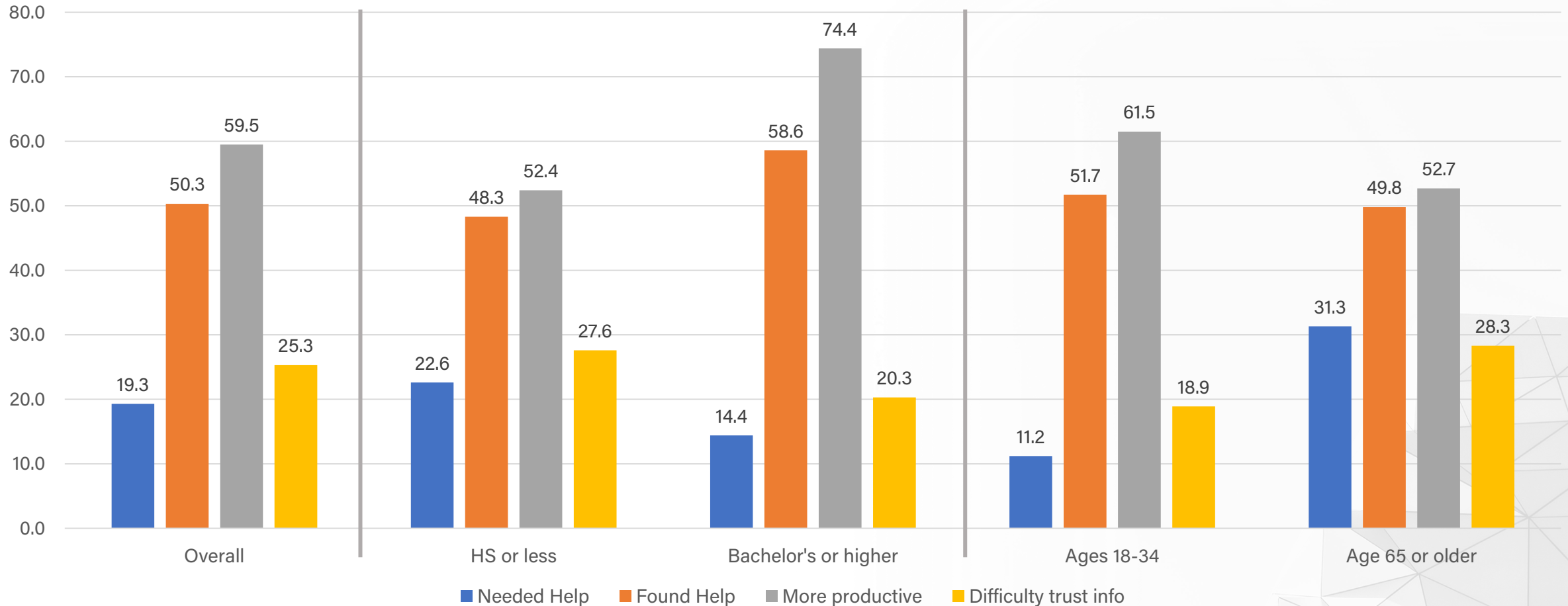
ℹ Regarding productivity and resourcefulness, overall close to 60% of respondents said they were more productive due to device or internet use and more than half were able to find people or resources when needing help with a new device or the internet. On the other hand, overall close to one-fifth reported needing help with a new device or using the internet and one-quarter found it difficult to know whether online information was trustworthy. Close to one-third of those ages 65 or older needed help while a little less than half were able to find help. Those with a high school or less and those age 65 or older had the higher share when it came to finding it difficult to know whether online information is trustworthy.

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Online Interactions Daily, Weekly, and Monthly (% responses)
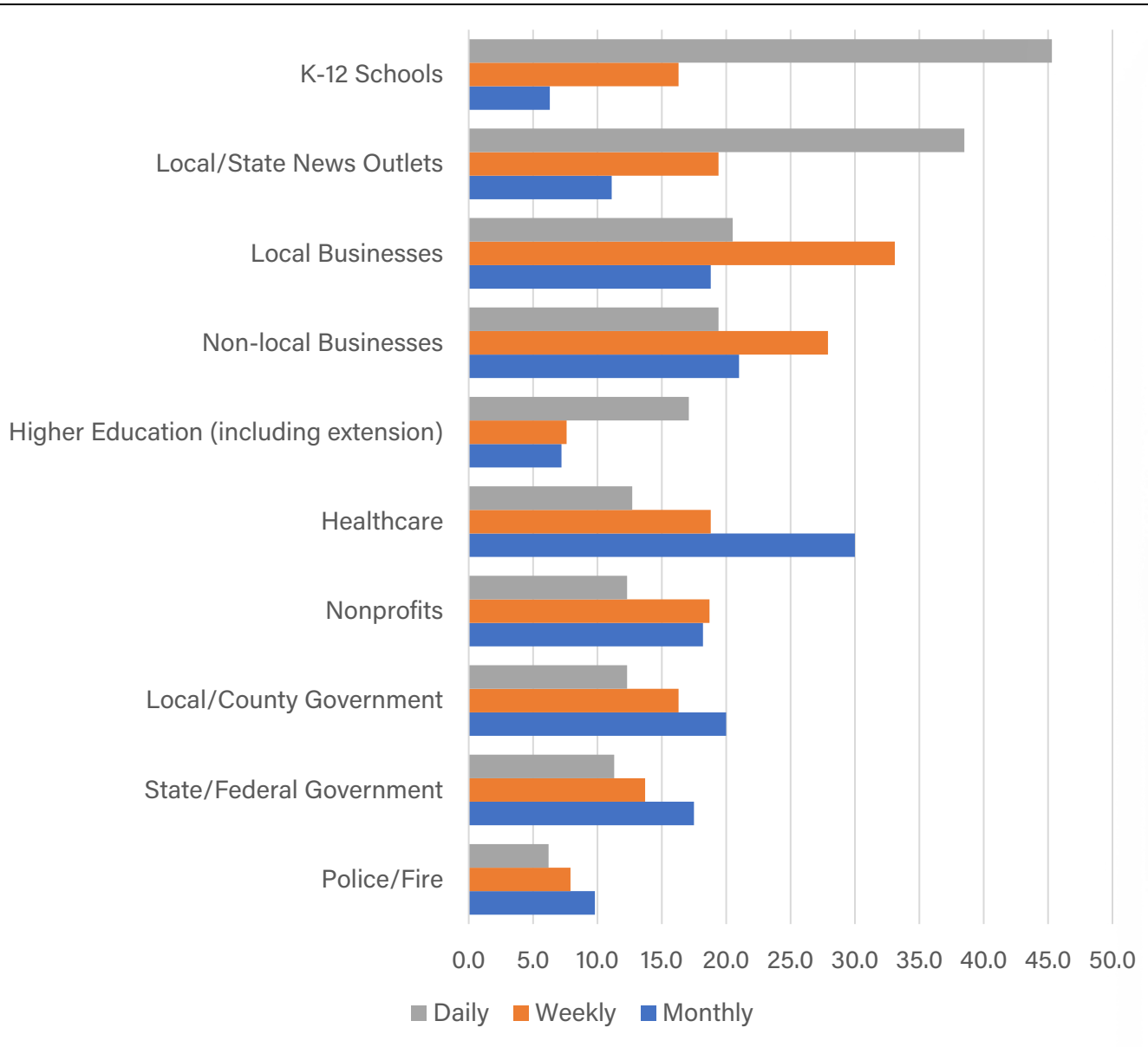
An indirect way to gauge the level of digital skills is by looking at the diversity and frequency of interacting online with community organizations. Graph shows the percent responses interacting with community organizations on a daily, weekly, or monthly basis.

Responses were sorted in descending order based on daily interactions. Notice a little more than 45% of respondents interacted online daily with K-12 schools. More than likely, this is due to e-learning. On the other hand, close to 40% interacted online daily with local or state news outlets.

A higher share of respondents interacted online with local and non-local businesses (more than 50 miles from respondent) weekly versus daily or monthly. Also, the share interacting with local businesses weekly was higher than the share interacting with non-local businesses. This implies that the online presence of local businesses is adequate. However, when looking at monthly interactions, a larger share interacted with non-local businesses. This means that perhaps these goods/services are not available locally.

Regarding monthly use, interacting online with healthcare organizations had the highest share with 30%. This is more likely related to the COVID pandemic.

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Online Interactions: Educational Attainment & Age Groups
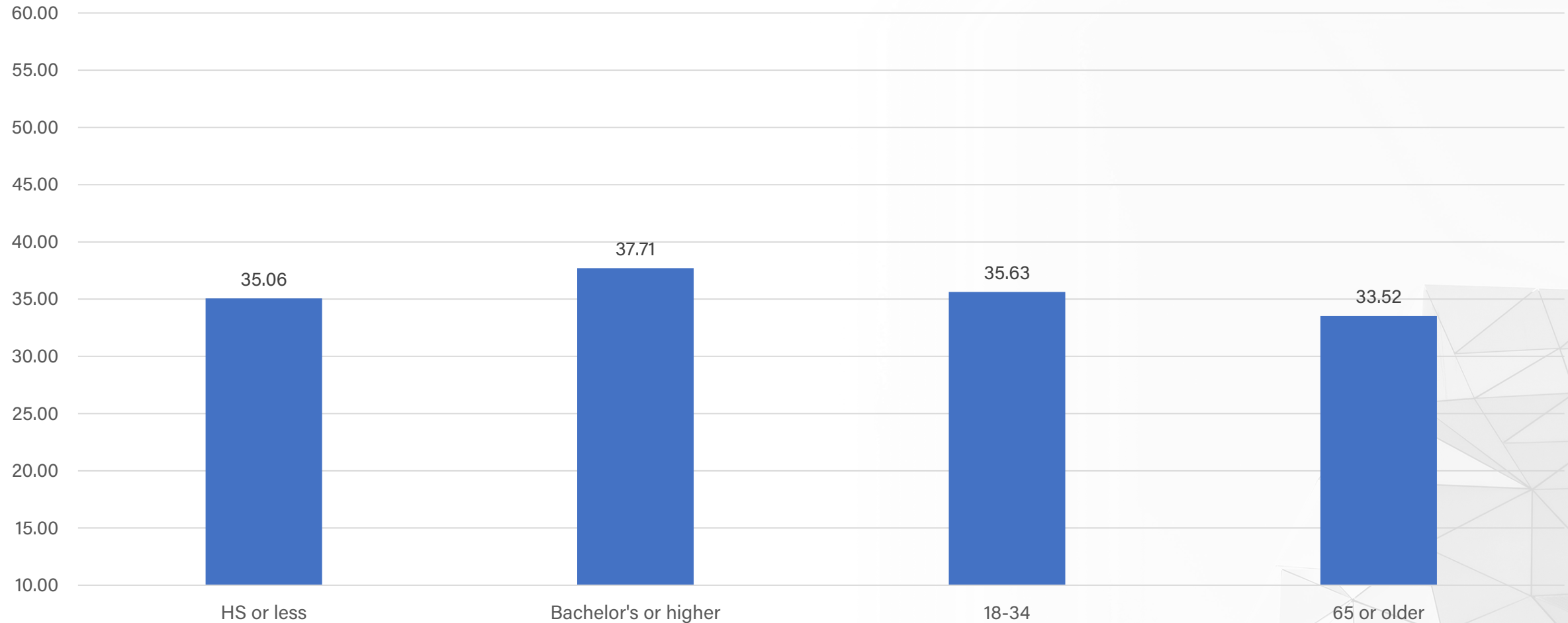
The diversity (ten organizations) and frequency (daily, weekly, monthly, annually, not available, never/not interested) of online interactions was converted into a score with a range of 10-60, where a higher number denotes a more diverse and frequent online interaction with community organizations. Notice how better educated or younger respondents interacted more frequently and

Basic Internet Use Daily, Weekly, and Monthly (% responses)

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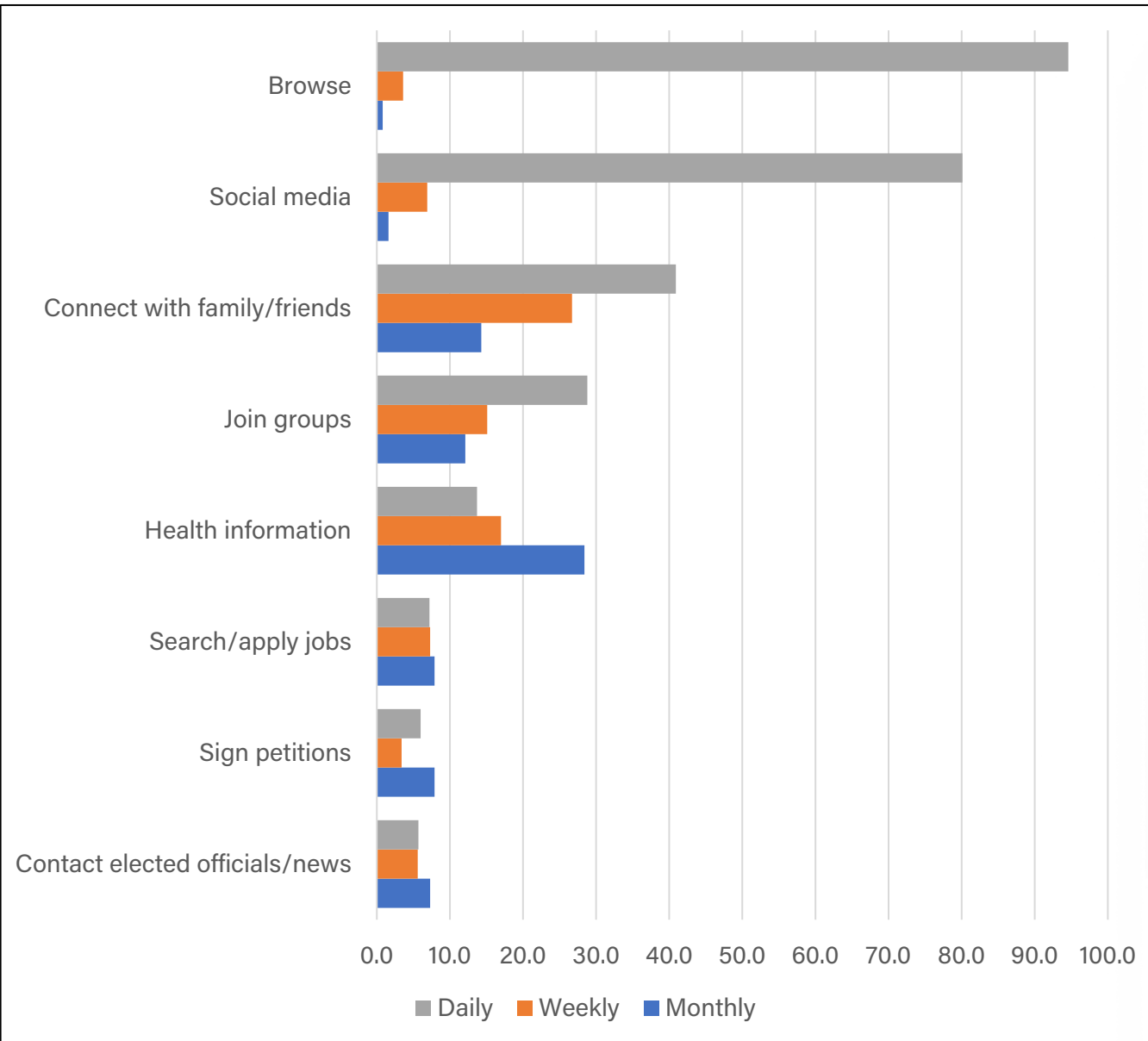
These internet uses are generally considered to require basic digital skills. Results are sorted in descending order based on daily use. Notice how more than 90% of respondents browse the web daily while 80% use social media.

A little more than 40% of respondents used the internet to connect with family/friends daily followed by a little less than 30% to join groups online.

Those related with civic engagement had the least share of participants. Notice how signing online petitions as well as contacting elected officials or news outlets online were used by less than 10% of respondents regardless of daily, weekly, or monthly use.

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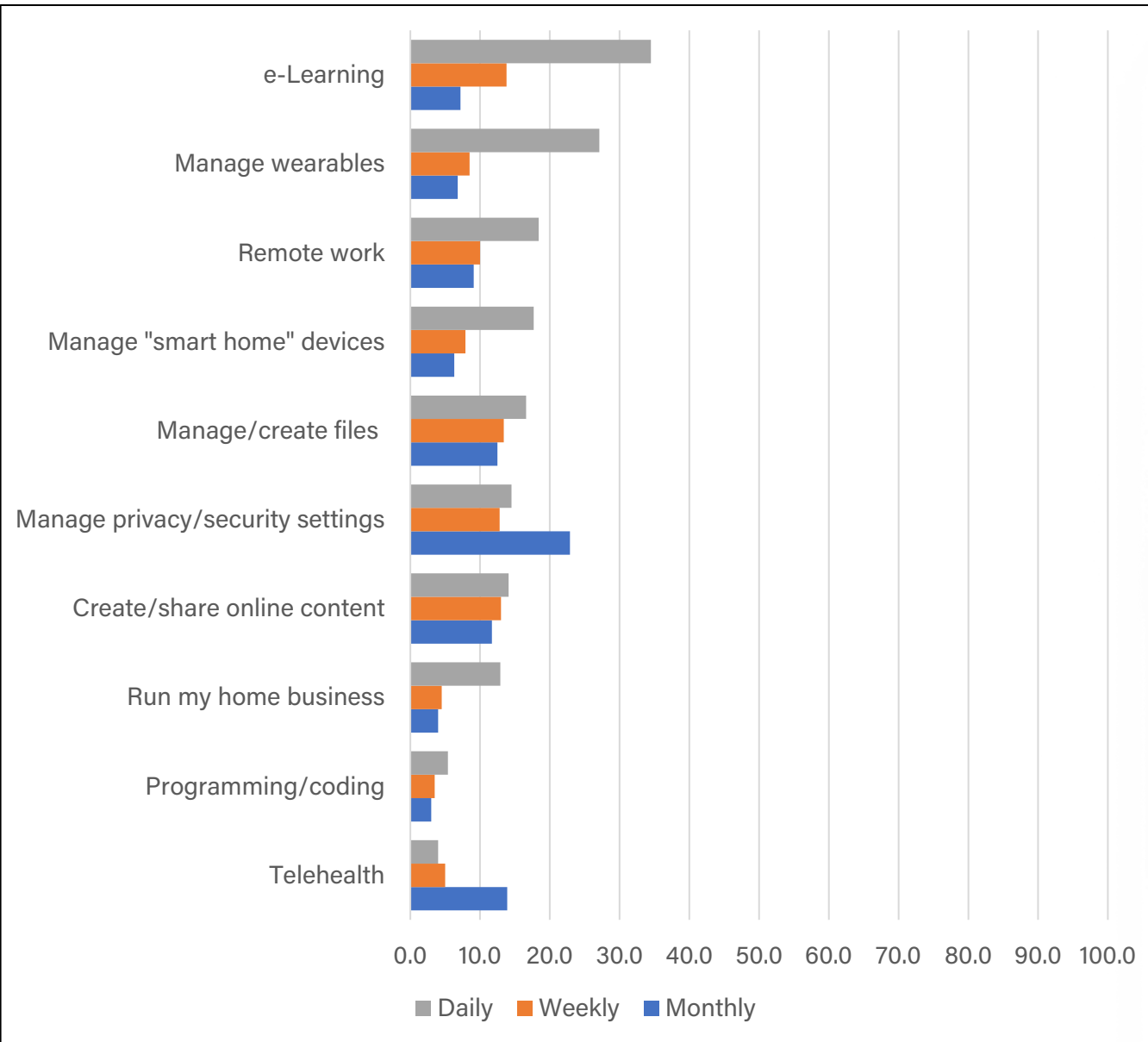# Intermediate Internet Use Daily, Weekly, and Monthly (% responses)

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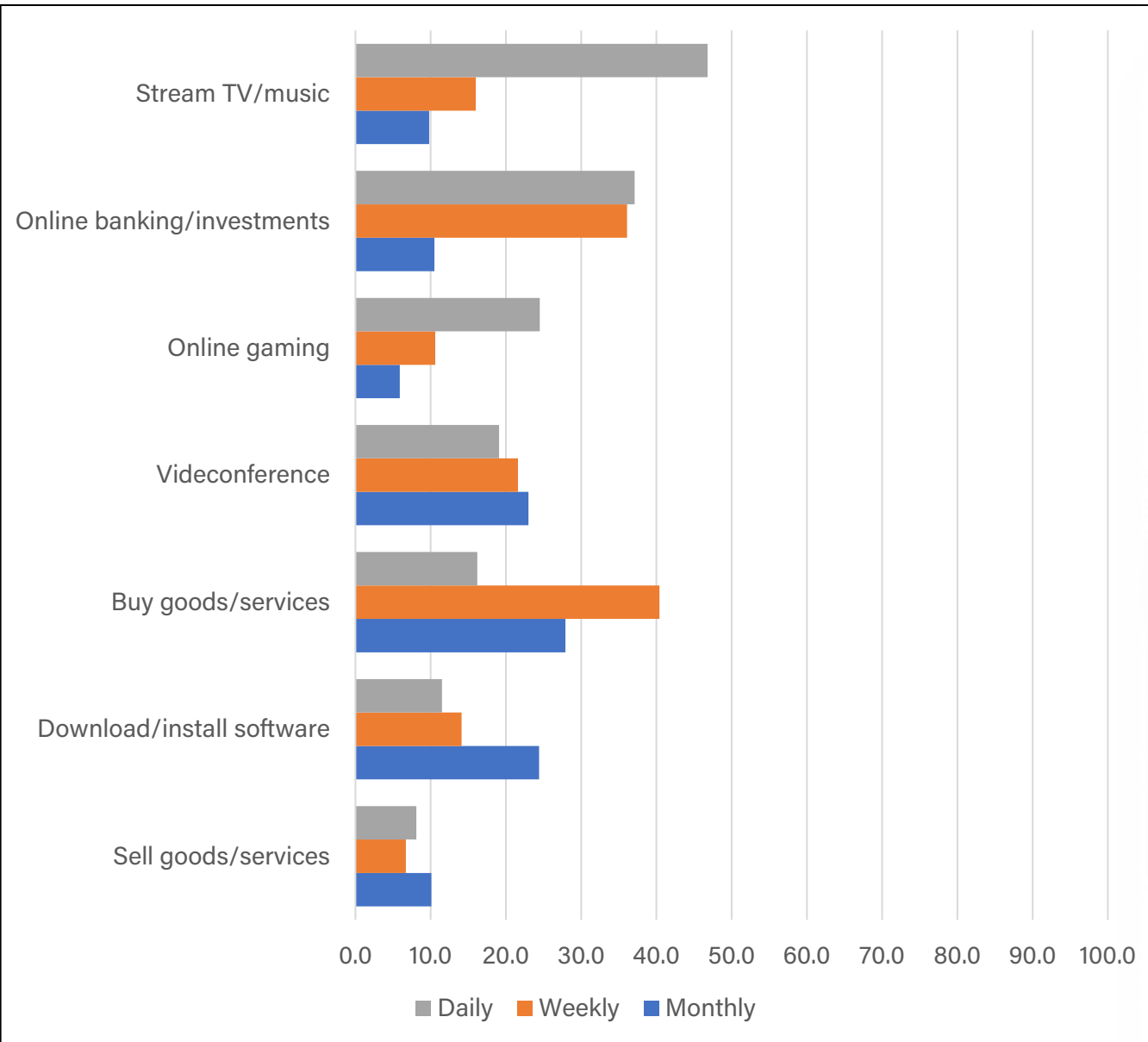
These internet uses are generally considered to require intermediate digital skills. Results are sorted in descending order based on daily use. Notice how close to 50% of respondents streamed TV or music. Also, close to 40% of respondents conducted online banking daily.

On average one-fifth of respondents engaged in videoconferencing. Regarding buying online, respondents were more active weekly when 40% of respondents bought something online. On the other hand, roughly 10% of respondents sold something online monthly.

This highlights the need for local businesses to maintain an effective and efficient online presence.

Chart categories (top to bottom): Stream TV/music, Online banking/investments, Online gaming, Videoconference, Buy goods/services, Download/install software, Sell goods/services

Legend: ▆ Daily ▆ Weekly ▆ Monthly

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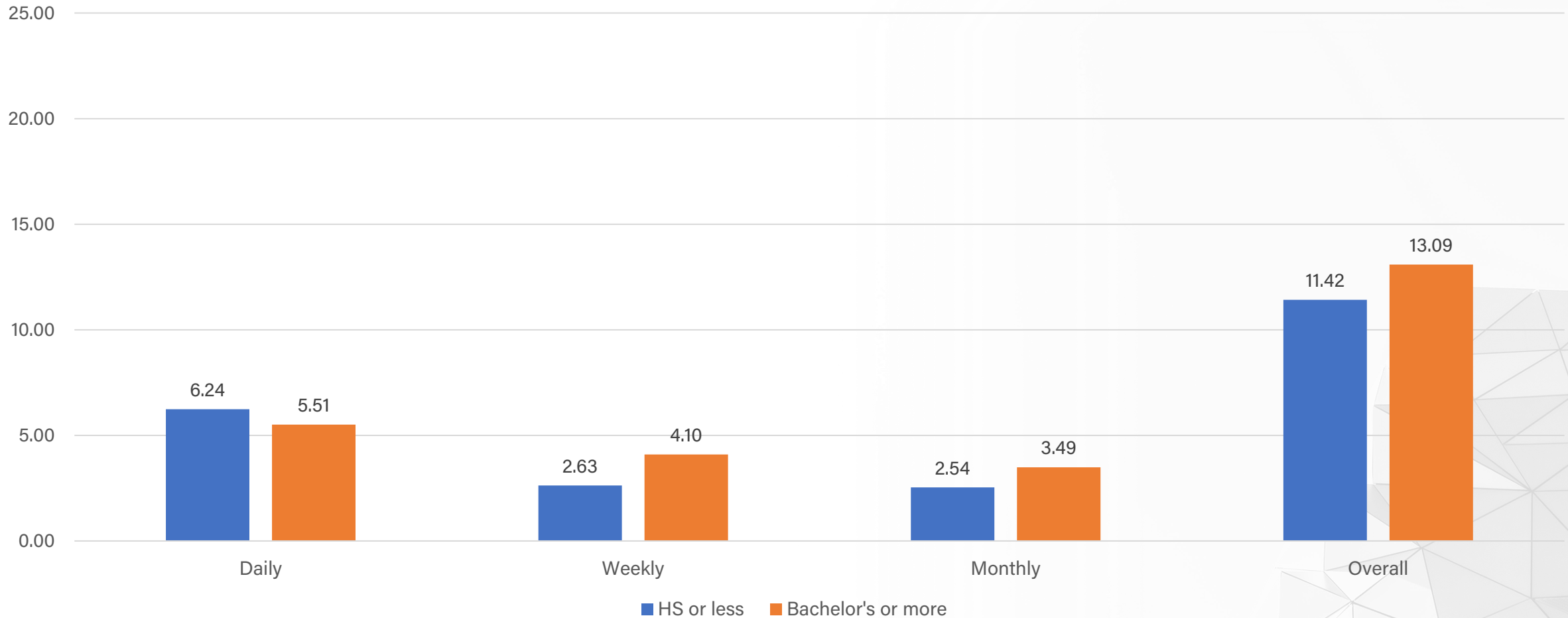# Advanced Internet Use Daily, Weekly, and Monthly (% responses)

ⓘ These internet uses are generally considered to require advanced digital skills. Results are sorted in descending order based on daily use. Notice how overall the share of respondents engaged in these activities is smaller compared to basic and intermediate uses.

Close to one-third of respondents engaged daily in e-learning followed by less than 30% managing their wearables. Regarding monthly use, close to one-quarter of respondents managed their privacy/security settings.

Note how more than 10% of respondents used the internet daily to run their home business.

# Average Internet Uses: Educational Attainment

HS or less   **Bachelor's or more**

ⓘ This graph shows the average number of internet uses daily, weekly, monthly, and overall by educational attainment. As expected, daily uses are higher compared to weekly or monthly uses. Note how less educated used the internet in more different ways daily but lagged their more educated counterparts when using the internet in different ways weekly and monthly. Overall, more educated folks used the internet in more different ways compared to less educated.

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Average Internet Uses: Age Groups
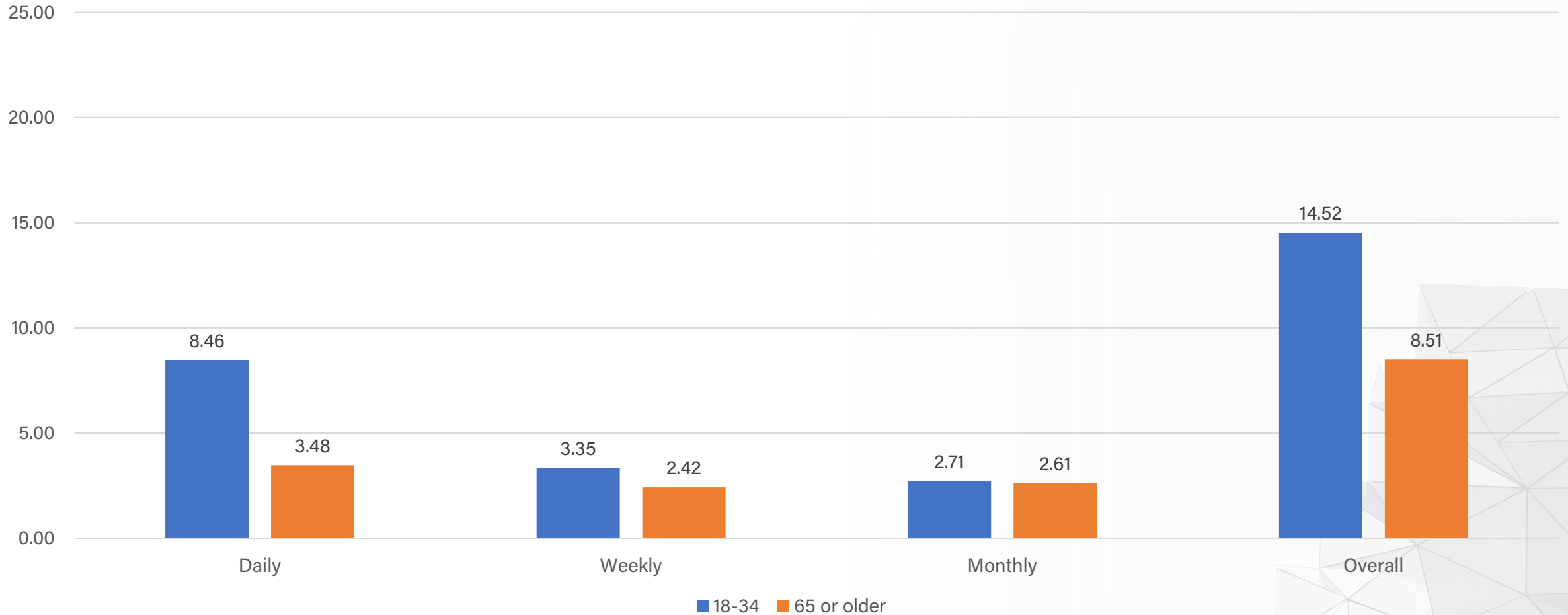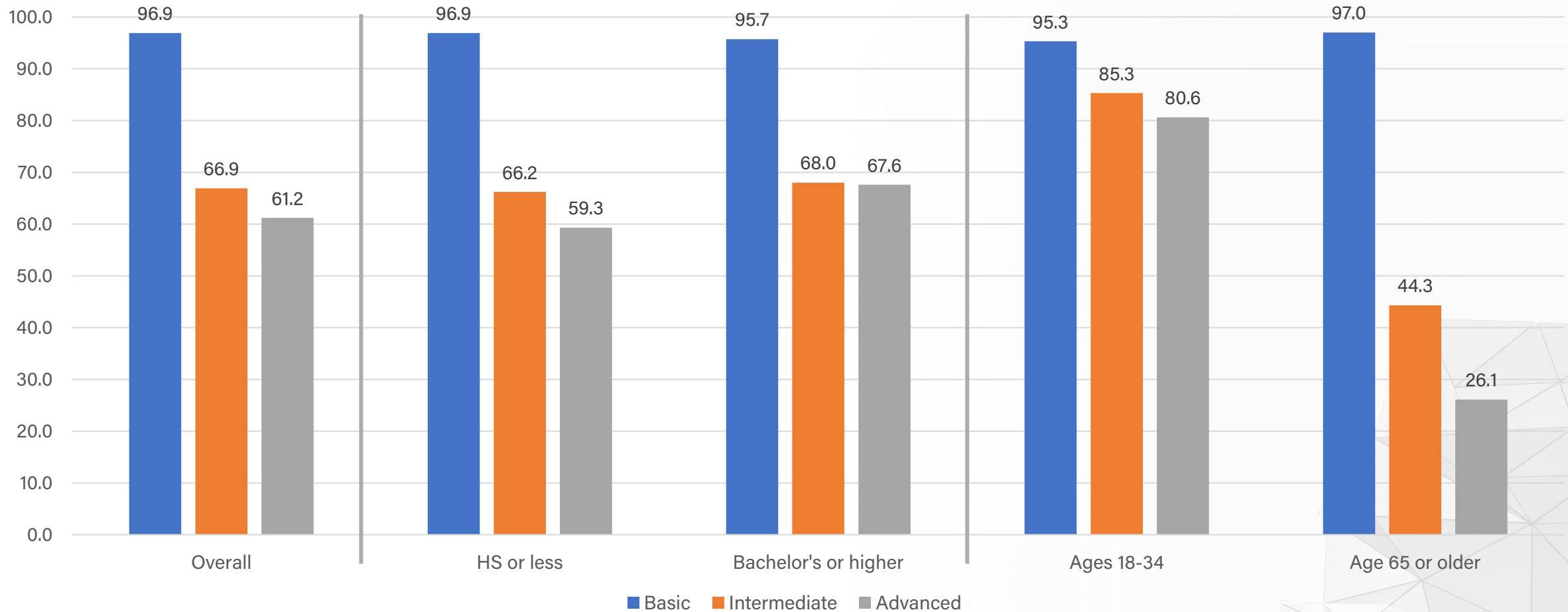
This graph shows the average number of internet uses daily, weekly, monthly, and in total by age groups. As expected, daily uses are higher compared to weekly or monthly uses. Differences between younger and older respondents was higher daily versus weekly and monthly. Overall, younger folks did use the internet in more different ways compared to older respondents.

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Daily Internet Use by Digital Skills: Selected Characteristics (% responses)

Legend: Basic · Intermediate · Advanced

	Overall	HS or less	Bachelor's or higher	Ages 18-34	Age 65 or older
Basic	96.9	96.9	95.7	95.3	97.0
Intermediate	66.9	66.2	68.0	85.3	44.3
Advanced	61.2	59.3	67.6	80.6	26.1

Graph shows the percent of respondents using the internet in at least one way daily that required basic, intermediate, or advanced digital skills. As expected, close to 97% of respondents used the internet in at least one way daily that required basic skills. The share of respondents decreases as the internet uses require intermediate or advanced digital skills. Granted, not all intermediate or advanced internet uses are conducive for daily use (e.g., telehealth) but differences between groups are visible. Note how 80.6% of respondents ages 18-34 used the internet in at least one way daily requiring advanced digital skills compared to a little more than one-quarter of those ages 65 or older.

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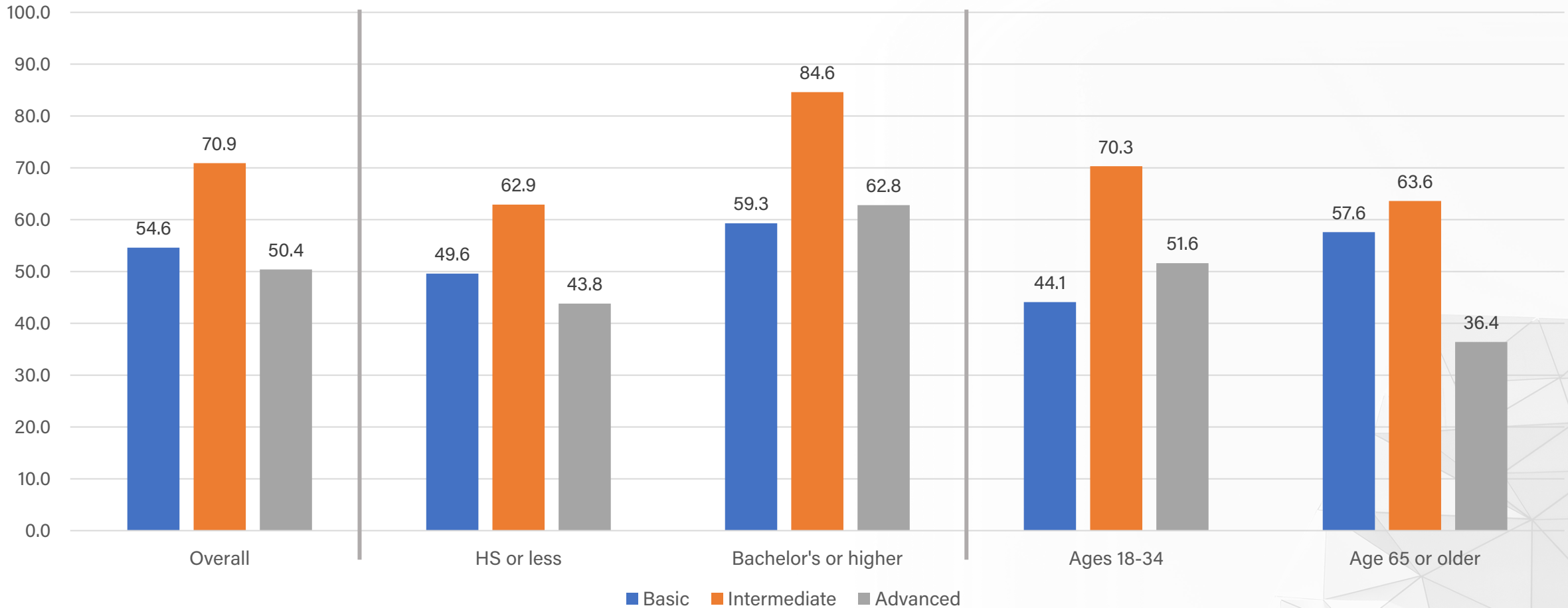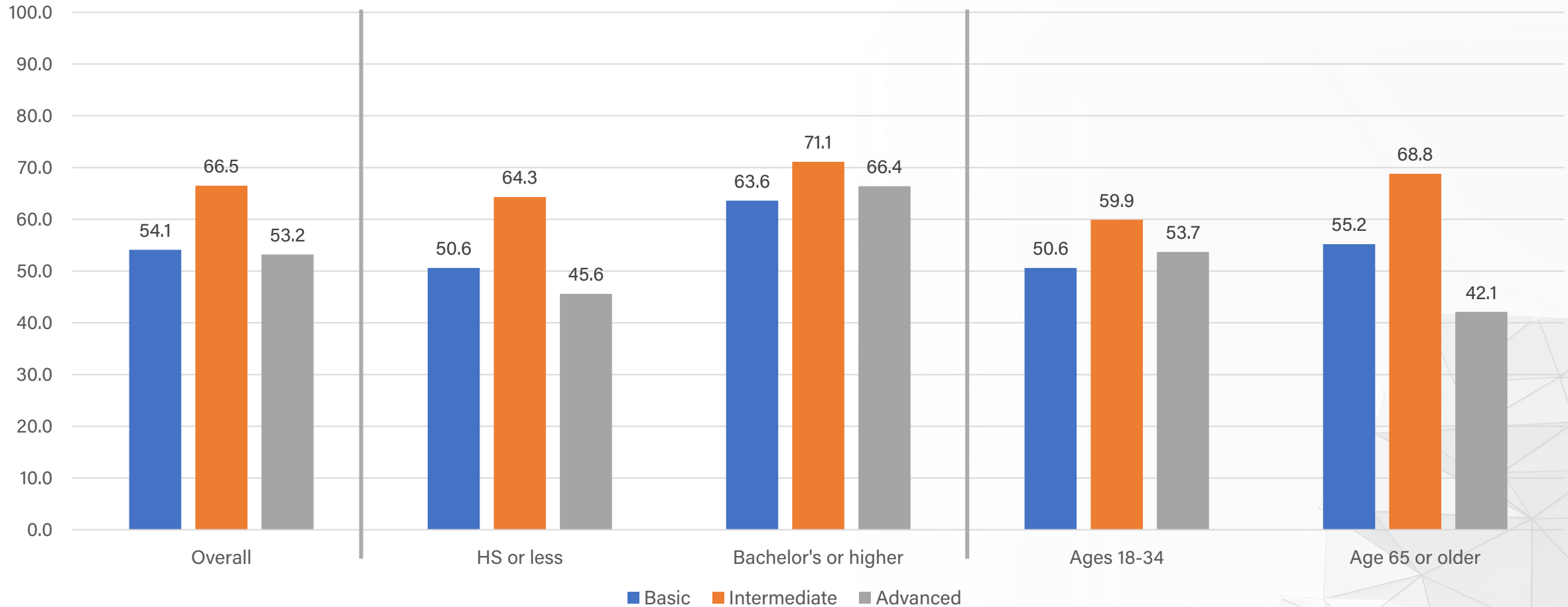# Weekly Internet Use by Digital Skills: Selected Characteristics (% responses)

Source: PCRD

Graph shows the percent of respondents using the internet in at least one way weekly that required basic, intermediate, or advanced digital skills. Seems that internet uses requiring intermediate digital skills happens most weekly versus daily or monthly. Still, differences between groups are visible. For example, the share of respondents using the internet in at least one way weekly that requires intermediate digital skills with a bachelor's degree or higher was more than twenty percentage points higher than the share of those with a high school degree or less.

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Monthly Internet Use by Digital Skills: Selected Characteristics (% responses)
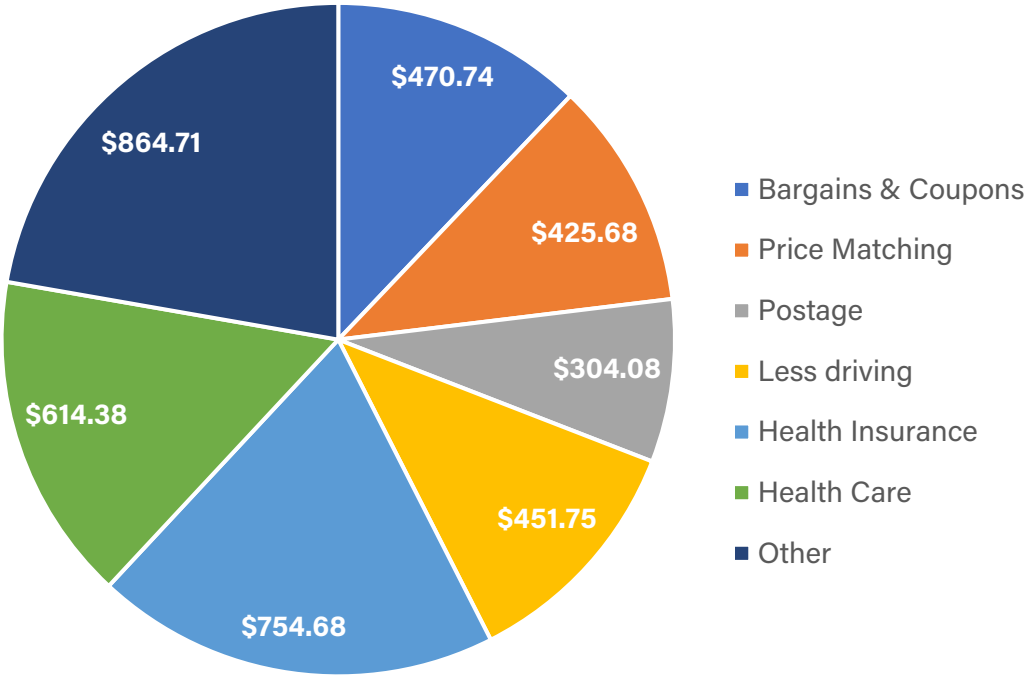
Graph shows the percent of respondents using the internet in at least one way monthly that required basic, intermediate, or advanced digital skills. Differences between groups are visible as well. For example, the share of respondents using the internet in at least one way monthly that requires advanced digital skills with a bachelor's degree or higher was more than twenty percentage points higher than the share of those with a high school degree or less. Granted, jobs and occupations of more educated respondents may be more conducive to advanced internet uses.
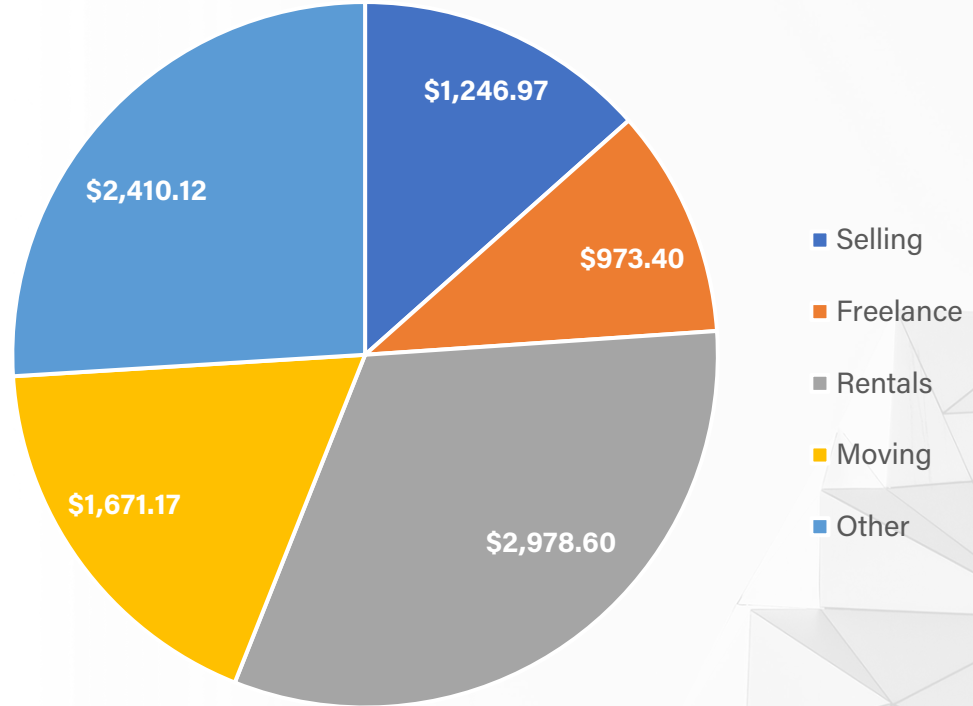
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Earnings & Savings by Category

Average Savings (n range = 47-667)

- Bargains & Coupons — $470.74
- Price Matching — $425.68
- Postage — $304.08
- Less driving — $451.75
- Health Insurance — $754.68
- Health Care — $614.38
- Other — $864.71

Average Earnings (n range = 5-127)

- Selling — $1,246.97
- Freelance — $973.40
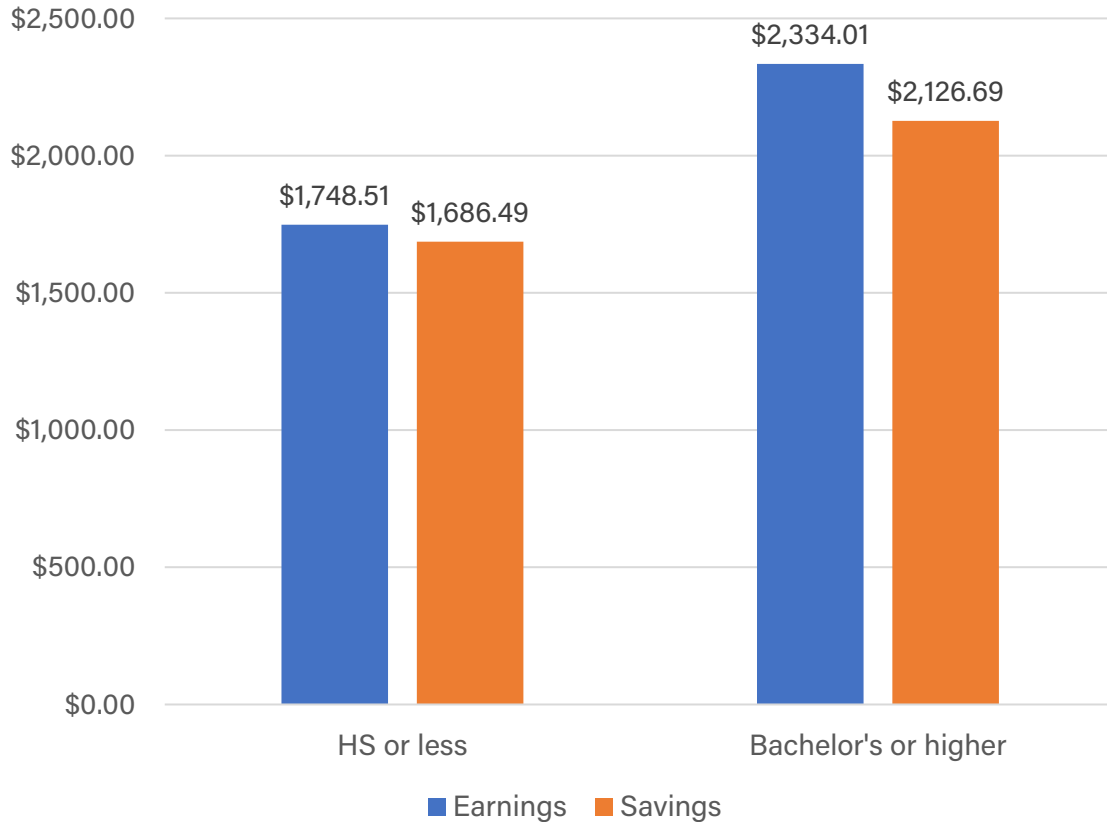- Rentals — $2,978.60
- Moving — $1,671.17
- Other — $2,410.12

Total Savings: $1,242,683
Total Earnings: $277,992

Survey respondents saved a total of $1.2 million dollars and earned $277,992 over the past year. On average, survey respondents saved $1,785 dollars and earned $1,818 dollars. The other savings category includes trading and groceries while the other earning category includes primarily consulting and teaching online.
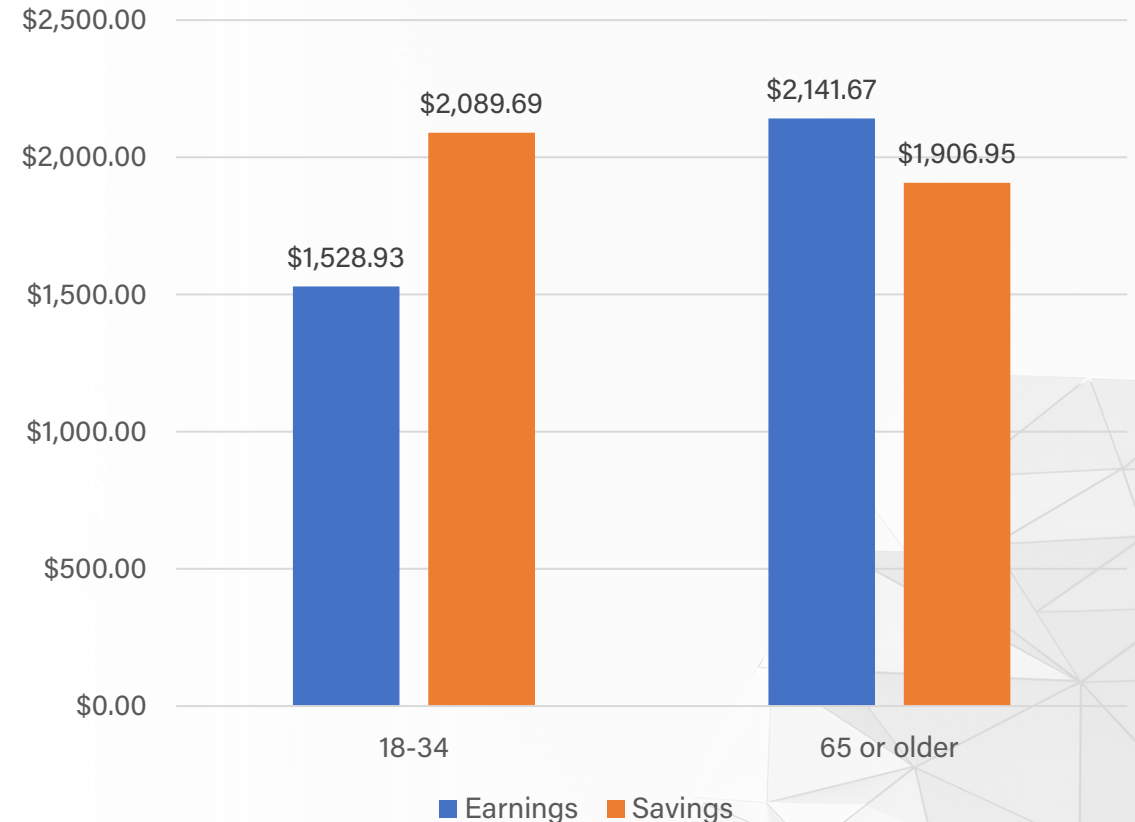
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Average Earnings & Savings: Selected Characteristics

Average Savings (n range = 47-667)

- HS or less: Earnings $1,748.51, Savings $1,686.49
- Bachelor's or higher: Earnings $2,334.01, Savings $2,126.69

Legend: ■ Earnings ■ Savings

Average Earnings (n range = 5-127)

- 18-34: Earnings $1,528.93, Savings $2,089.69
- 65 or older: Earnings $2,141.67, Savings $1,906.95

Legend: ■ Earnings ■ Savings

On average more educated respondents saved and earned more online compared to their less educated counterparts. On average, respondents with a high school degree or less earned $600 less compared to their more educated counterparts. Likewise, less educated respondents saves $500 on average less than more educated respondents. Regarding age groups, those 65 or older earned on average $500 more than younger respondents. However, younger respondents saved on average $100 more than older respondents.

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Key takeaways

1. Close to 85% of respondents had home internet, of which, 22.4% subscribed to cable followed by 20.9% to DSL. However, DSL was one of the most unreliable technologies (measured by downtime in days) and a higher share of those with a high school degree or less and ages 65 or older subscribed to this technology at home.

2. Smartphone ownership surpassed 90% among respondents; however, about 4.6% of respondents (n = 74) were mobile only (no desktop or laptop). Of these, 73.8% had a high school degree or less compared to only 6.9% with a bachelor's degree or higher.

3. Close to 60% felt they were more productive due to internet and device use. However, close to one-fifth needed help with new devices and one-quarter found it difficult to know whether online information was trustworthy.

4. On average, only one-quarter of respondents interacted online daily, weekly, or monthly with five of the ten communities listed. Those less educated or older interacted less frequently and with a smaller number of organizations.

5. More than 80% of respondents used the internet daily to browse and use social media. A little less than half used it daily for e-learning, online banking, and streaming TV or music. More educated and younger respondents used the internet in more different ways compared to their less educated or older counterparts. Similar differences are seen when using the internet in ways that require basic, intermediate, or advanced digital skills.

6. Majority of economic impact due to internet use in the region was from savings. However, the average earnings were slightly higher compared to average savings. Groups in the region benefitted differently from saving and earning online.