



2021 Digital Literacy and Readiness Study

For the State of Hawaii Department of Labor
& Industrial Relations Workforce Development

- ❖ Presented to Workforce Development Council Board of Directors
- ❖ Presented by Hon. Pat Loui, Omnitrak Chair & CEO

With Input from Team Omnitrak: Prof. Qimei Chen, UH, & Dr. Irwin Kirsch, OECD PIAAC ETS Director

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STATE OF HAWAII
DLIR
DEPARTMENT OF LABOR
AND INDUSTRIAL RELATIONS



WORKFORCEDEVELOPMENT



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Research Objectives

The Workforce Development Council for the State of Hawaii Department of Labor and Industrial Relations (DLIR) seeks a greater understanding of Digital Literacy and Readiness among Hawaii residents between 18 to 65 across the state. The objectives of this study, the Digital Literacy and Readiness Study (DLRS) are as follows:

- To establish a baseline measurement of the digital literacy and readiness of Hawaii's working age population;
- To measure the present rate of digital readiness statewide, disaggregated by demographics, education, occupation, industry, and geography;
- To determine the proportion of adults who are not digitally literate
- To identify the largest population segments of adults who are not digitally ready by selected demographics, education, occupation, industry, and geography.



Sample and Methodology

➤ Respondents were screened as:

- ❖ Residents of Hawai'i
- ❖ Ages 18 – 65 years old
- ❖ Income \$21,000 to \$150,000
- ❖ Not employed by advertising agency, market research firm or insurance company

➤ Data was collected via a statewide survey using a multi-modal methodology:

- ❖ CATI: June 12 – August 10, 2021 for overall study
- ❖ ONLINE: For Follow-Up on literacy levels - On-going

➤ Sample Size

	STATE	CITY & COUNTY OF HONOLULU	HAWAII COUNTY	MAUI COUNTY	KAUAI COUNTY
Sample	893	403	200	189	101
Sampling Error at 95% Confidence level	+/- 3%	+/- 5%	+/- 7%	+/- 7%	+/- 10%

- Final data were weighted by age, gender, island and ethnicity.

Executive Summary

- **Hawai'i's less digitally ready are almost twice as large (40%) as a comparable 2015 national study (19%).**
 - ✓ The two most digitally prepared groups are slightly smaller in Hawai'i (41%) than nationally (48%).
 - ✓ A potential influencer is lower levels of digital trust in Hawai'i vs. nationally.

- **Hardware and internet access is an obstacle to readiness for 4% statewide.**

- **Variations in digital confidence by industry sector could impact the digital transformation process.**

- **Acceptance of online learning culture is strong.**

- **Hawai'i has a digital divide in terms of readiness and skills.**
 - ❖ Current definitions of digital divide relate to
 - ✓ Internet infrastructure access (Hardware and internet access)
 - ✓ Skill levels (Basic/ Social / Navigational/ Creative)
 - ✓ Economic related use (Employment/ Finance)
 - ❖ Higher income and higher education levels accelerate digital literacy and seeking opportunities to grow
 - ❖ Residents with a high school education and in blue collar, sales & self-employed jobs less digitally ready/ literate

- **Digital Divide was empirically evidenced in study:**
 - ❖ **Compound Divide**
 - ✓ A cumulative disadvantage within digital skills and uses
 - ✓ Ability to share information social does not necessarily lead to higher proficiency for info search & navigation

 - ❖ **Sequential Divide**
 - ✓ Digital social skills has no sequential effect on digital use
 - ✓ Not all digital skills increase economic digital uses
 - ✓ Info search skills enhance use for finance but not for employment

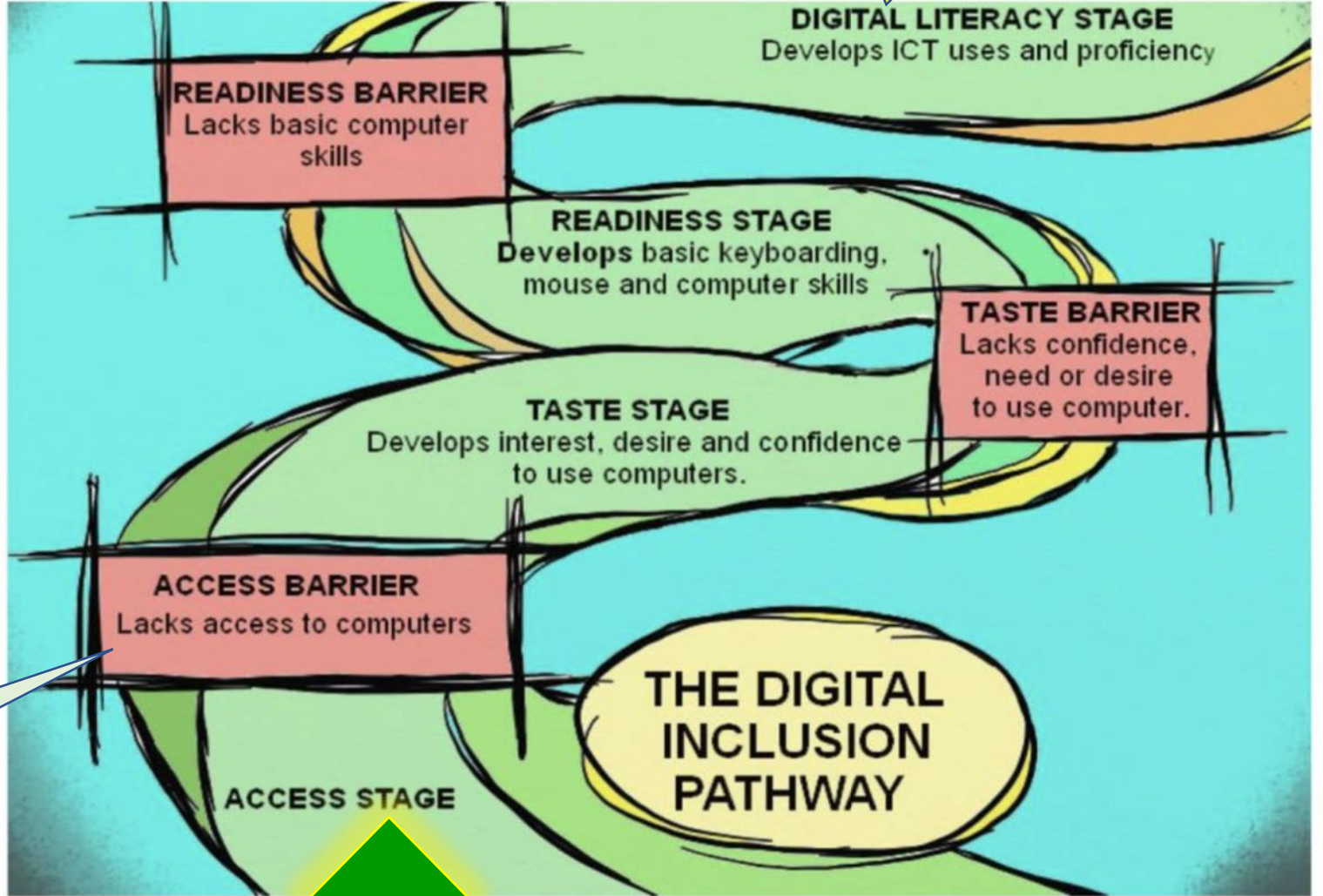
- **Digital trust and self efficacy are critical cornerstones on which to build digital readiness and literacy.**



The Context for Measuring Digital Literacy

PIAAC Digital Inclusion Pathway

**Self Fulfillment
Empowerment**



**Hawai'i State:
4% No Hardware
And No Internet**

The Digital Roadmap: Working Definitions

DIGITAL READINESS
from a workforce development perspective is preparedness in terms of self efficacy, skills and trust in digital applications and tools that enable entry to participating in the 21st Century economy.*

DIGITAL LITERACY is the capacity or fluency to proficiently access and be resilient in the changing environment of digital technology and to understand, engage and effectively use digital content, information and tools for individual living, working, learning, creation, self-fulfillment, and empowerment

NO BARRIERS

TECH CHANGES



Digital Readiness Clusters

- Respondents are clustered into 5 groups based on their self-assessment on 7 main factors.
- Given that the 21st century anticipates changes in technology, the model puts relatively more weight on self-efficacy especially pro-active curiosity to learn new things and thereby grow, and relatively less on functionality.
 - Confidence in using digital devices
 - Ability to get new technology to work
 - Productivity from using electronic info devices
 - Ability to determine the trustworthiness of online info
 - Perception of info overload from electronic devices
 - Use of digital tools for learning
 - Familiarity with contemporary “education tech” terms



Digital Readiness Continuum



The Unprepared

They have the lowest level of tech adoption and tech ownership. They are least likely to learn (both online and others). They do not have confidence in their computer skills, need help setting up new tech devices, and least likely to feel productive using electronic device. They are not familiar with "ed tech" terms.



Old Guard

They are more likely to learn than the Unprepared and they have low ownership of tech devices. They do not take online course but engage in online learning informally. They need help setting up new electronic device and they are not familiar with "ed tech" terms.



Social Users

They are not active learners and therefore do not use Internet for learning. They own technology, especially digital device with Internet connection. They are confident about using electronic devices, but most bothered by too much digital info.



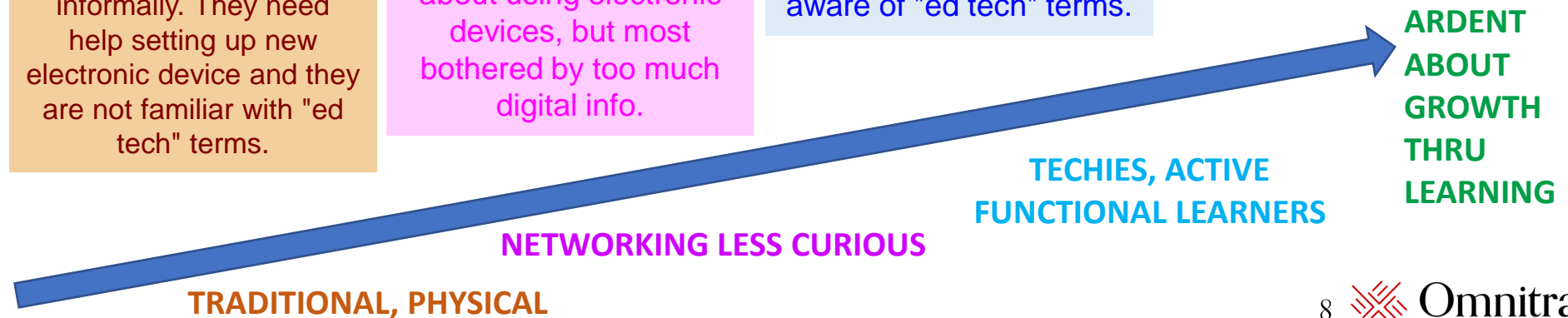
Technical DIYers

They are active learners. They do not take online courses but engage in online learning informally. They are confident about their technology skills, especially when setting up new electronic devices. They are not bothered by too much digital info. They are most aware of "ed tech" terms.



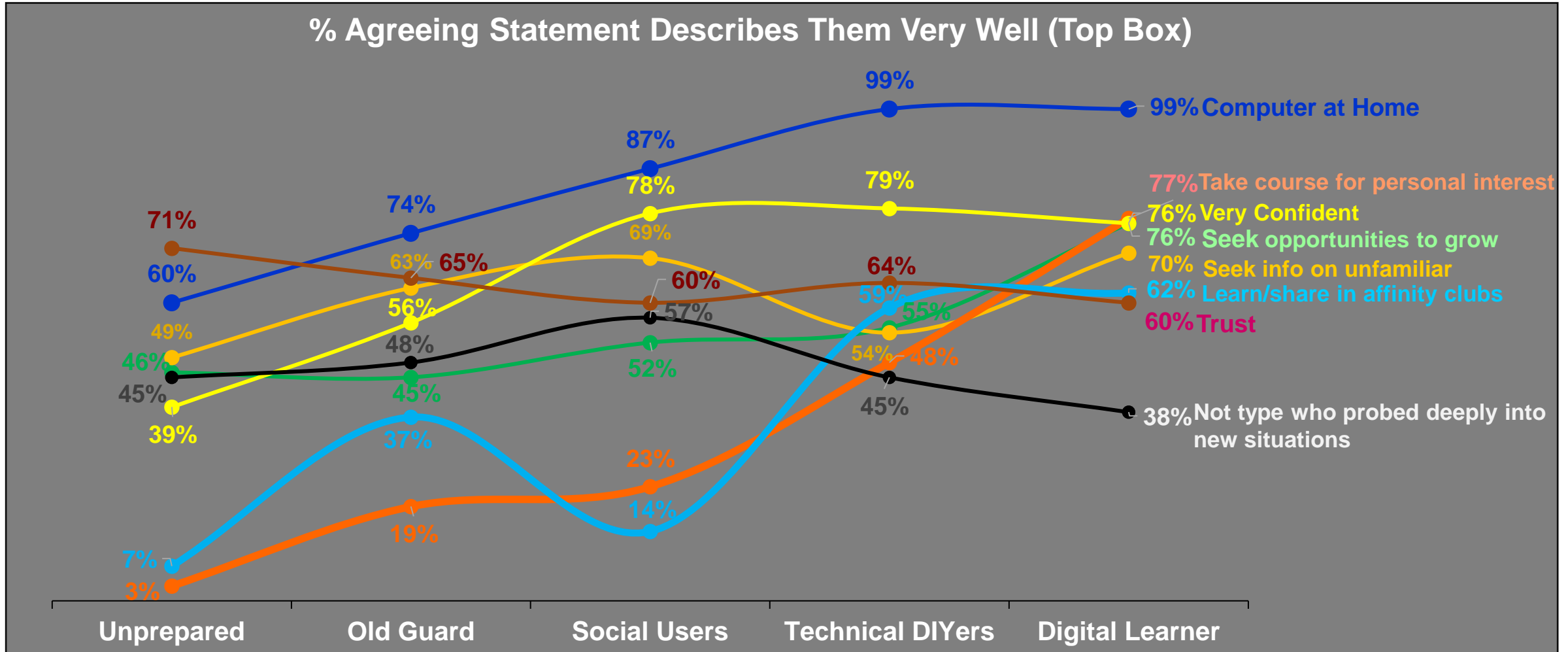
The Digital Learners

They are ardent learners and learn from both online courses and other online sources. They have technology and are confident about their technology skills. They are more productive by using electronic information devices. They are aware of "ed tech" terms.



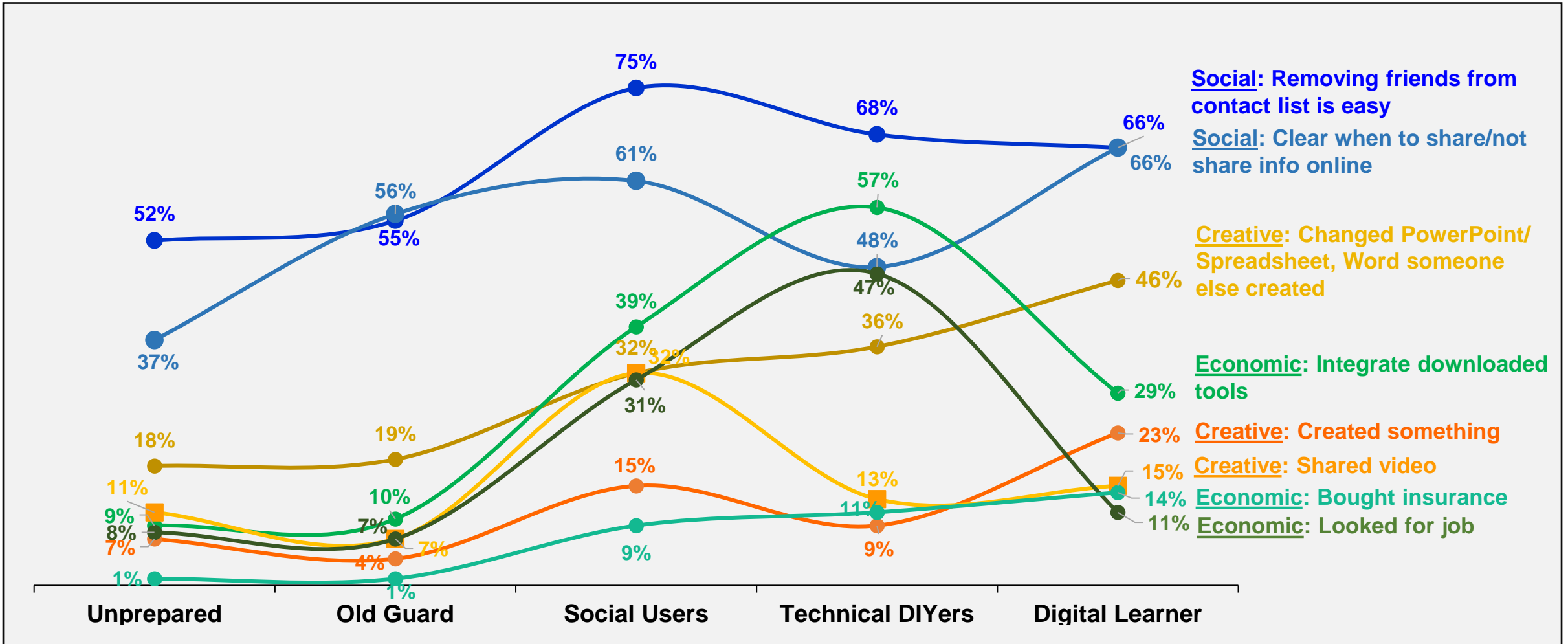
Cluster Analysis for Digital Readiness (Attitudes & Behavior)

- Those more digitally ready have home computers to access learning.
- With a mindset of seeking opportunities to grow and confidence in their digital skills, the more digitally ready take courses of personal interest and gain information/knowledge through affinity clubs.
- Social users most describe themselves as “not the type to probe deeply into new situations.”



Cluster Analysis for Digital Skill Levels

Digital literacy skills by cluster are somewhat counter-intuitive. The most digitally ready are not necessarily the most technologically proficient. Rather, technical skills are highest overall for Technical DIYers who have high functionality. Digital Learners are characterized by their attitude toward learning, may not need to use the internet for economic matters, but can use core management apps e.g., Office and trust their ability to make internet judgments. Social users have fair sharing and networking skills. Digital functionality among the Old Guard and Unprepared are low.



Digital Readiness Continuum Summary

Although Hawai'i data was collected during the 2021 pandemic, Hawai'i's groups less digitally ready are almost twice as large (40%) as the 2015 national study (19%). The two most digitally prepared groups are slightly smaller in Hawai'i (41%) than nationally (48%).

Hawai'i (Omnitrak data from 2021)			U.S. MAINLAND (Pew Charitable Trust Data from 2015)		
Cluster	%	More likely characteristics	Cluster	%	More likely characteristics
LESS 40%	The Unprepared	17% -Neighbor Islands -Women -45 to 65 years / Retired -Lower education, lower income -Primary language non-English	The Unprepared	14%	-Women -50 and older -Lower income -Less formal education
	Old Guard	23% -Male -45 to 65 years; Blue collar/self employed -Lower education/ -Not born in Hawai'i	Traditional Learners	5%	-Women -Minorities -50 and older -Lower income/ less education
MORE 60%	Social Users	19% -18-34 years -Other Asians (non-Japanese/ Filipino) -Middle income (\$50-100K) -Sales / Best at sharing video content	The Reluctant	33%	-Men -50 and older -Lower income -Less formal education
	Technical DIYers	15% -O'ahu -Higher education/ higher income -Single/ Professional -Best digital skills to find jobs	Cautious Clickers	31%	-Higher income -Some college -30s and 40s
	Digital Learners	26% -O'ahu -Higher education/ higher income -Born in Hawai'i -Professional/ Best digital creative skills	The Digitally Ready	17%	-Higher income -Higher education -30s & 40s



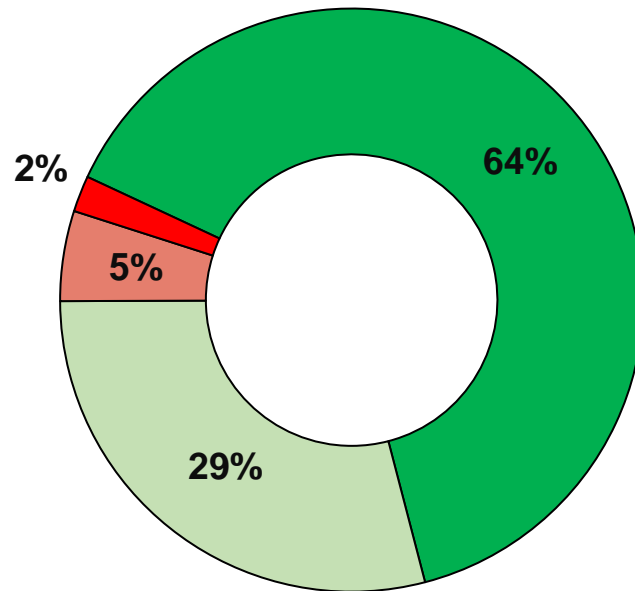
DIGITAL READINESS BY COUNTY

	STATE	HONOLULU	HAWAII	MAUI	KAUAI
DIGITAL READINESS: Knowledge Gaps to Target	<ul style="list-style-type: none"> >Creative >Employment >Financial Skills 	<ul style="list-style-type: none"> >Creative >Employment >Financial Skills 	<ul style="list-style-type: none"> >Basic skills >Social skills >Online learning >Awareness of opportunities 	<ul style="list-style-type: none"> >Creative >Employment >Financial Skills >Basic skills 	<ul style="list-style-type: none"> >Basic skills >Social skills >Online learning >Awareness of opportunities
CLUSTER OPPORTUNITIES: Improvement and Champion	<p><u>For improvement:</u></p> <ul style="list-style-type: none"> Social Users Unprepared Old Guard 	<p><u>For helping others:</u></p> <ul style="list-style-type: none"> Tech DIYers Digital Learners 	<p><u>For improvement:</u></p> <ul style="list-style-type: none"> Unprepared Old Guard 	<p><u>For improvement:</u></p> <ul style="list-style-type: none"> Unprepared Social Users <p><u>For helping others:</u></p> <ul style="list-style-type: none"> Digital Learners 	<p><u>For improvement:</u></p> <ul style="list-style-type: none"> Old Guard Social Users
DEMOGRAPHICS TO TARGET	<ul style="list-style-type: none"> >35 years old >High school ed 	<ul style="list-style-type: none"> >35 years old >High school ed 	<ul style="list-style-type: none"> >Over 35 years old >Native Hawaiian >High school ed >Trade School 	<ul style="list-style-type: none"> >Over 35 years old >High school ed 	<ul style="list-style-type: none"> >Over 35 years old >Native Hawaiian >High school ed >Trade School

Over 9 in 10 Confident in Using Digital Devices

Hawaii residents overall are confident in their use of digital devices, approximately two-thirds say they are very confident, while 29 percent are somewhat confident. Only seven percent of residents are not confident in their use. Areas to target on self-efficacy: Neighbor Island Residents & Those >35 years.

Confidence with Technology and Digital Devices



93% Very or Somewhat confident in using digital devices

- Very Confident
- Somewhat Confident
- Only a Little Confident
- Not At All Confident

Statistically Significant Demographics

	GEOGRAPHY			
	Oahu	Hawaii	Maui	Kauai
Confident (NET)	95%	88%	89%	89%
Not Confident (NET)	5%	12%	11%	11%
Base	389	191	177	98

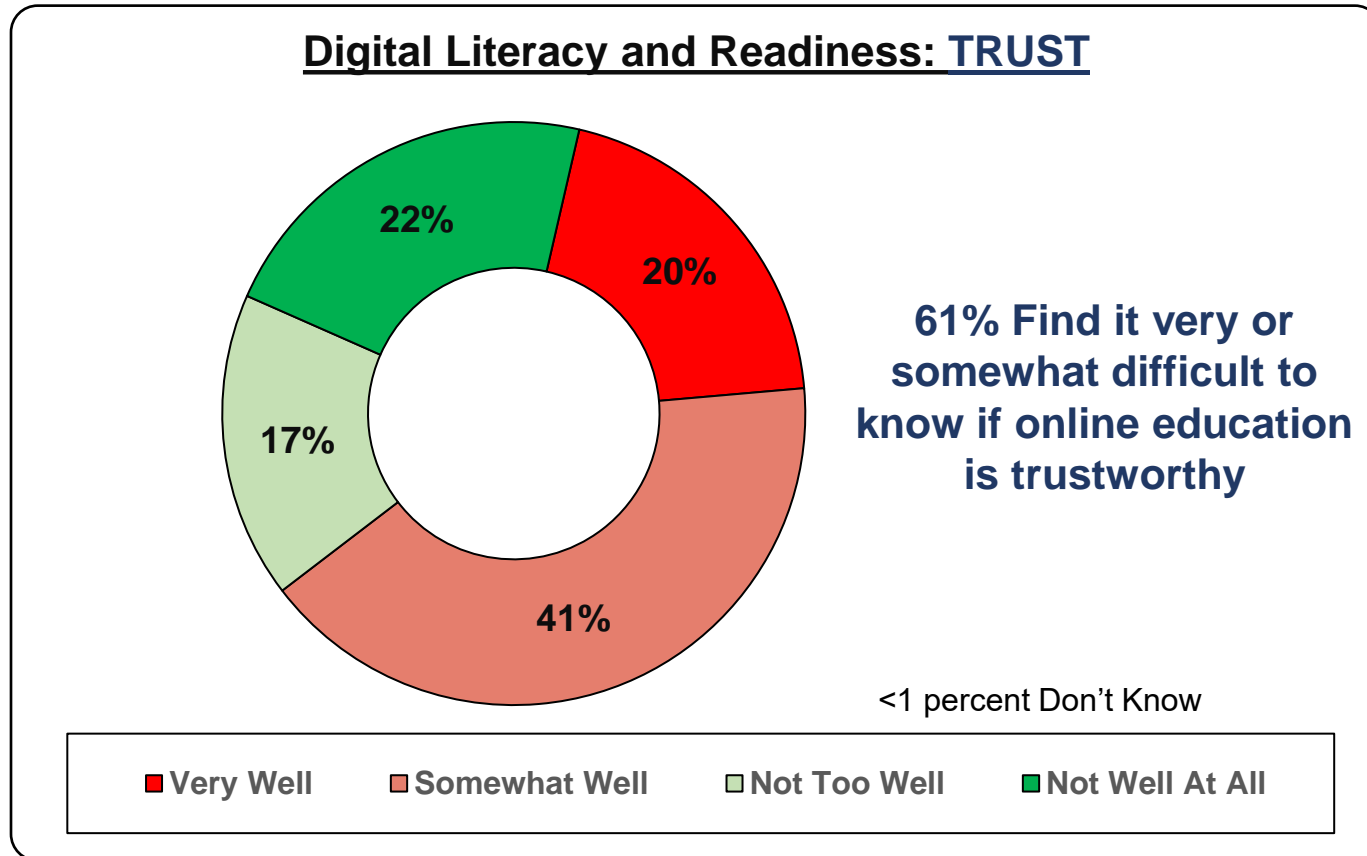
	AGE		
	18-34	35-54	55-65
Confident (NET)	99%	90%	88%
Not Confident (NET)	1%	10%	12%
Base	139	382	334

Base: 834 Smartphone owners only

QP8. Overall, how confident do you feel using computers, smartphones, or other electronic devices to do things you need to do online? Do you feel...[INSERT]?

Three-in-Five Hawaii Residents find it difficult to trust online information

A majority of residents (61%) say it is very or somewhat difficult to know whether information online is trustworthy. Within this majority, 20 percent say this describes them very well, with 41 percent somewhat well. Residents of Hawaiian or Filipino ancestry were more likely to say they found it difficult to trust online information.



These proportions are inline with national findings from the Pew Research Center*, when asked the same question conducted in 2016.

Statistically Significant Demographics (Very/Somewhat Well)

ETHNICITY				
Caucasian	Japanese	Hawaiian	Filipino	Other
50%	71%	66%	56%	63%
156	153	201	91	263

Base: 893

QP7. Now' I'd like to ask you a few questions about how you deal with information and communications technology? How well does the statement [INSERT] describe you? Does it describe you Very Well, Somewhat Well, Not too Well or Not Well at All? Q. "I find it difficult to know whether the information I find is trustworthy"



Strong Relationship Between Digital Confidence, Trust, and Usage

Local residents with high levels of digital confidence or trust, were also likely to have higher levels of digital skills and usage. This makes clear the importance of self-efficacy in digital readiness.

DIGITAL SKILLS	DIGITAL CONFIDENCE	
	High	Low
Devices improve productivity	84%	42%
Devices need to setup /shown how to use	37%	87%
Looking for info online is tiring	16%	35%
Websites are hard to navigate	15%	35%
Unclear how I got to a website	18%	35%
Hard to decide search keywords	13%	28%
Hard to find website visited before	7%	22%
<i>Base</i>	755	76

DIGITAL USAGE	DIGITAL CONFIDENCE	
	High	Low
Lifelong learners	98%	84%
Enjoy gathering unfamiliar information	96%	84%
Seek new opportunities to grow	93%	70%
Open a tab in my browser	57%	18%
Open downloaded files	35%	3%
Downloaded/saved photo	35%	9%
Bookmarked a website	31%	6%
Used key shortcuts	29%	3%
<i>Base</i>	755	76

DIGITAL SKILLS	DIGITAL TRUST	
	Low	High
Devices provide too much info	66%	51%
Devices need to setup/ show how to use	38%	29%
Looking for info online is tiring	49%	36%
Websites are hard to navigate	47%	37%
Hard to decide search keywords	42%	28%
Hard to find a website visited before	28%	18%
<i>Base</i>	538	317

DIGITAL TRUST	DIGITAL CONFIDENCE	
	High	Low
Finding trustworthy info is difficult	59%	74%
<i>Base</i>	755	76

DIGITAL USAGE	DIGITAL TRUST	
	Low	High
Glad no longer in school	71%	54%
No probing into new situations	53%	34%
Easily distracted when concentrating	51%	35%
<i>Base</i>	538	317

QP8. Overall, how confident do you feel using computers, smartphones, or other electronic devices to do things you need to do online? Do you feel...[INSERT]?

QP7. Now I'd like to ask you a few questions about how you deal with information and communications technology? How well does the statement [INSERT] describe you? Does it describe you Very Well, Somewhat Well, Not too Well or Not Well at All?

Q. "I find it difficult to know whether the information I find is trustworthy"





Mahalo!



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