

Digital Divide – Bridging the Gap

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Use this buttons to
advance the
presentation



Have you ever!

- Turned around went home because you forgot your phone!
- Gone a day without checking your e-mail!
- 'Googled'!
- Visited 'MySpace' or 'Facebook'!
- Know what 'Wiki' or 'Blog' mean?
- Forgot that a mouse is a small furry mammal!



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Did you know!

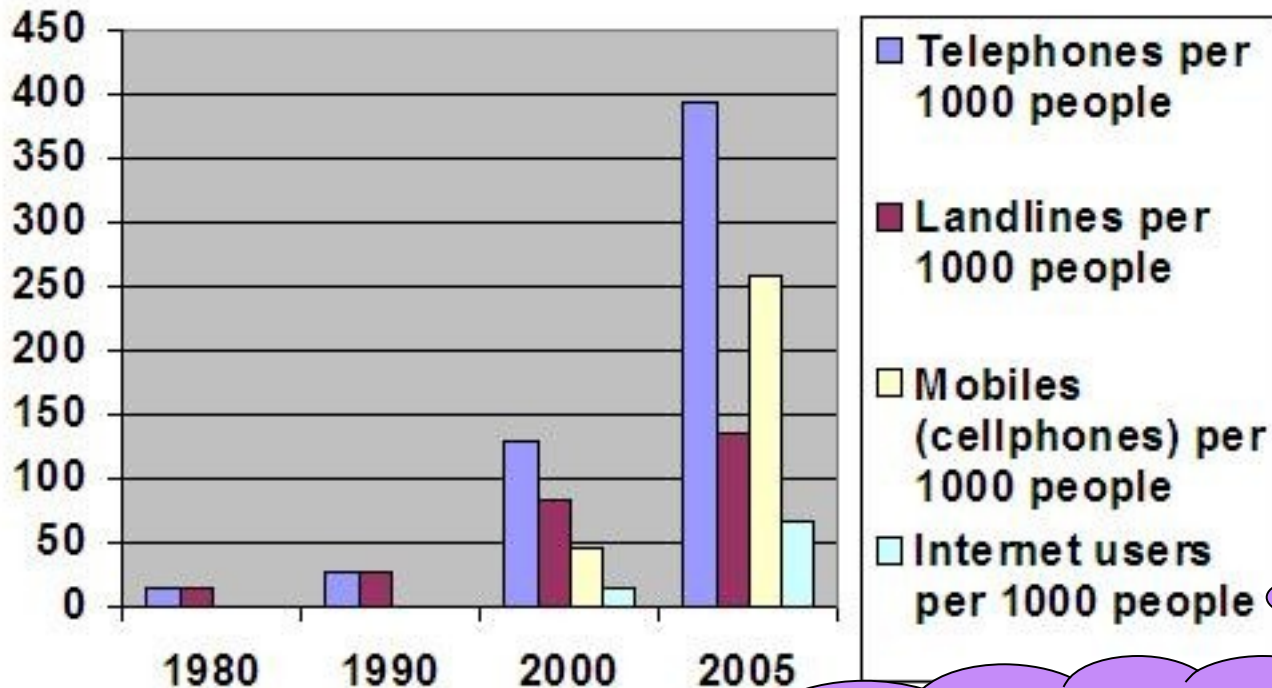
- There are people that do not even know what a cell-phone is!
- Or E-mail, Google, MySpace, or Facebook let alone Wiki or Blogged!
- Have seen thousands of mice but none hooked to a computer!
- They cannot cross the gap known as the digital divide!



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Digital Divide

It is scary to think that only 6% of the worlds population has access to the internet



More people have cell phones than internet

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What is the Digital Divide?

“The Digital Divide is most commonly defined as the gap between those individuals and communities that have, and do not have, access to the information technologies that are transforming our lives.” -

<http://www.edutopia.org/digital-divide-where-we-are-today>



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What is the Digital Divide?

What's going on? — [Click here to start video!](#)

Time - 5:16



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Different levels of the Digital Divide

- *Diversity*
- *School Verses Home*
- *Rich Verses Poor*
- *Education Level*
- *Disabilities*
- *Types of Access*



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Diversity and the Divide

- How much would you use the internet if it was not in English?
- “Hispanics (31.8 percent) and African Americans (39.8 percent) lag behind whites (59.9 percent) in Internet access at home, suggesting serious ethnic and racial divides.” -

<http://www.edutopia.org/digital-divide-where-we-are-today>



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School Verses Home

■ School Access

- “99 percent of public schools now have access to the Internet. And, according to a 2004 survey of district leaders conducted by the Consortium for School Networking (CoSN), broadband connectivity has made its way into schools quite rapidly, with 95 percent of all classrooms nationwide having high-speed Internet access and 62 percent of respondents indicating that every classroom in their district had broadband access.” — [Inside the Divide](#)



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School Verses Home

■ School Access

- “According to the CoSN survey, the four most important benefits of technology cited by school leaders (timely data for decision-making, staff efficiency, administrator productivity, and improved communications) were administrative.” — [Inside the Divide](#)



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School Verses Home

■ School verses Home

- “Computer and Internet Use’ (DeBell & Chapman, 2003) reported that in 2001, more children and adolescents used computers at school (81%) than at home (65%).” - Closing the Digital Divide: Update From the Early Childhood

Longitudinal Study



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School Verses Home

■ Home Access

- “Only around 30 percent of youth in the lowest household income category use computers at home compared to over 90 percent of youth in the highest income category.” - <http://www.edutopia.org/digital-divide-where-we-are-today>



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School Verse Home

■ Home Access

- “They note that almost half of Americans do *not* have Internet access at home and only 25 percent of America's poorest households are online compared with approximately 80 percent of homes earning over \$75,000.” -

<http://www.edutopia.org/digital-divide-where-we-are-today>



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Closing the Digital Divide: Update From the Early Childhood Longitudinal Study

TABLE 1. Demographic Characteristics of Children (N = 8,283)

Characteristic	High-poverty schools		Low-poverty schools	
	n	%	n	%
Child's gender				
Male	1,581	51.8	2,667	51.0
Female	1,472	48.2	2,563	49.0
Child's race				
White	996	32.6	3,433	65.7
African American	814	26.7	414	7.9
Hispanic	810	26.5	728	13.9
Asian/Pacific Islander	271	8.9	432	8.3
Other	160	5.2	216	4.1

Look at the diversity mix in the low poverty schools



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Closing the Digital Divide: Update From the Early Childhood Longitudinal Study

TABLE 1. Demographic Characteristics of Children (N = 8,283)

Characteristic	High-poverty schools		Low-poverty schools	
	n	%	n	%
Family socioeconomic status (SES)				
Low SES (bottom 20%)	881	35.1	565	12.0
Middle SES (middle 60%)	1,442	57.4	2,945	62.6
High SES (top 20%)	188	7.5	1,197	25.4
Mother's education				
Less than high school	567	23.2	400	8.7
High school diploma or equivalent	810	33.1	1,178	25.6
Partial college/trade school	791	32.3	1,718	37.4
Bachelor's degree	186	7.6	827	18.0
Graduate degree	94	3.8	475	10.3
Family poverty level				
Below poverty threshold	1,036	41.3	694	14.7
Above poverty threshold	1,475	58.7	4,013	85.3

Note. SES = Socioeconomic status.

I wonder if education will have an effect on the internet



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Closing the Digital Divide: Update From the Early Childhood Longitudinal Study

TABLE 2. Percentage of Kindergarten, Grade 1, and Grade 3 Children's Technology Access

	Kindergarten		Grade 1		Grade 3	
	High poverty	Low poverty	High poverty	Low poverty	High poverty	Low poverty
* Computer resources	%	%	%	%	%	%
* Computer laboratory in school	79.1	81.8	78.9	81.4	84.6	85.2
* Computers with LAN	78.8	81.4	83.4	89.3	87.3	92.2
* Computers used in class	93.8	90.0	87.6	91.6	96.1	96.5
* Computer area in class	85.3	87.6	90.2	92.0	92.4	94.5
* Access to and use of home computer	34.7	59.8	46.4	70.9	63.3	83.7
* Access to and use of Internet at home	10.7	13.1			67.3	69.4

Note. LAN = local area network.



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Look at the difference to access of a home computer

Education

“The Pew survey also found differences based on education levels; only 29 percent of those who had less than a high school degree reported having Internet access, compared with 61 percent of high school graduates and 89 percent of college graduates.” — [Inside the Divide](#)



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Educations Relation to the Internet Access!

Is internet access important to education?

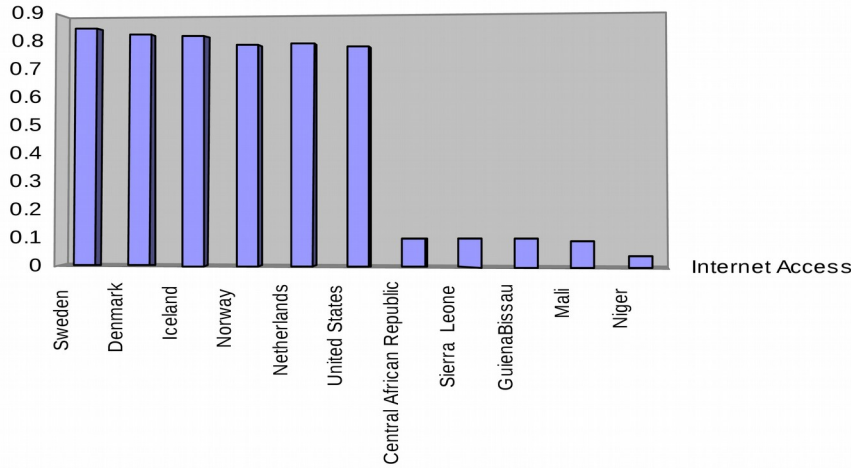
Country	Internet Access	Years in school	Rank
Top 5 for Internet Access			
Sweden	0.85	11.4	5
Denmark	0.83	9.7	11
Iceland	0.82	8.8	22
Norway	0.79	11.8	2
Netherlands	0.79	9.4	14
Number 11 for Internet Access			
United States	0.78	12	1
Bottom 5 for Internet Access			
Central African Republic	0.1	2.5	90
Sierra Leone	0.1	2.4	91
Guinea-Bissau	0.1	0.8	100
Mali	0.09	0.9	99
Niger	0.04	1	98



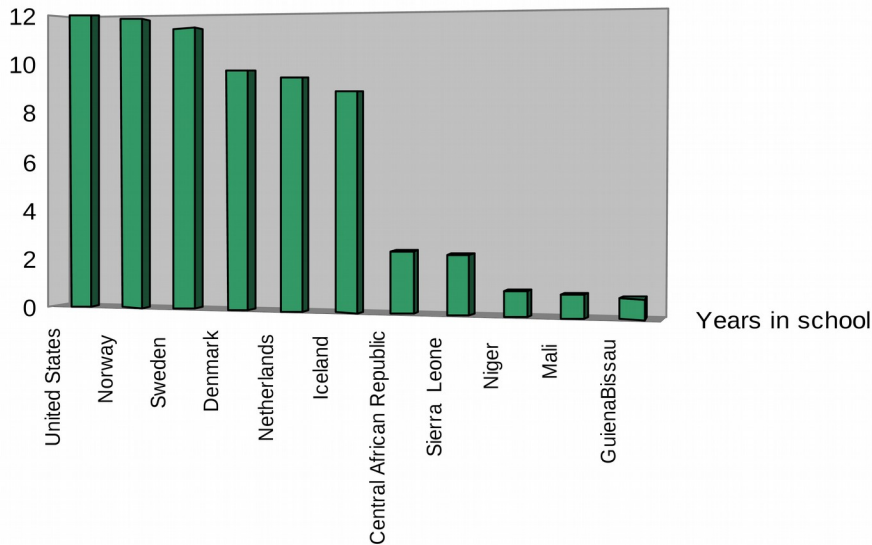
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Education

Internet Access



Years in school



Does the relation between internet access and education look linear?



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Divide relations to Disability!

- “The 2003 census showed significant gains for individuals with disabilities; 63.7 percent of users who were blind or had severe vision impairment and 72.1 percent of deaf and hearing-impaired users had Internet access, as compared to the 54.6 percent overall average in that same year.”
- “A lack of access for an alarming number of disabled Americans who had a vital need for adaptive technologies.” - [INSIDE THE DIVIDE](#)



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How do we access the Internet?

- Dial-up - averaging up to 56k Bytes per second, very slow.
- High-Speed Cable - Fast starting at 1 Mega-Bytes per second ranging all the way up to ? Mega-bytes per second. Roughly 75-? times faster than dial-up. Capable of multiple computers.
- “Internet, a lower level of connectivity in many rural areas” — [Inside the Divide](#)



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The Divides effect on Classroom Activities!

- Could you imagine in a classroom that only 40% of your students have the current textbook!
- Some do not have any, some are using books with old information!
- That is the challenge of the divide, some students cannot access and for others it is just to slow!



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The Divides effect on Classroom Activities!

- How many times do we assume a student does not do a project because they are lazy?
- Or is it because they have slow connectivity to the internet or worse none at all!
- So do we praise or grade base just on the quality of work without knowing the tools students have to work with!



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What can we do?

- Know your students (survey)
- Have plans developed for structure technology educational process
- Help students and parents to locate access to internet
- Write grants
 - Gates Foundation
 - Freedom to Learn



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Use of Computers in the Classroom!

“By carefully analyzing how students use computers for instructional purposes during the school day, individual teachers can exert significant influence on the digital divide.”

Swain & Pearson



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Use of Computers in the Classroom!

“Implementing technology standards can decrease the digital divide and establish a cornerstone for building curricula that places all students on a level playing field.”

- Swain & Pearson



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Examples of ways to share Technology!

- Bridging the Digital Divide –
Click here to start video - 9:03



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Use of Computers in the Classroom!

TABLE 3. Percentage of Grade 3 Children Who Used Computers Weekly in Their Classrooms

	High poverty	Low poverty
Instructional purpose	%	%
Reading	61.7	47.7
Mathematics	43.7	36.4
Social studies	9.3	8.0
Science	12.8	10.4
Internet	50.1	49.0



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Teacher Training is a part of the solution.

“Because only 15%-20% of all teachers believed that they were well prepared to use computers, technology training clearly should become a high priority.”

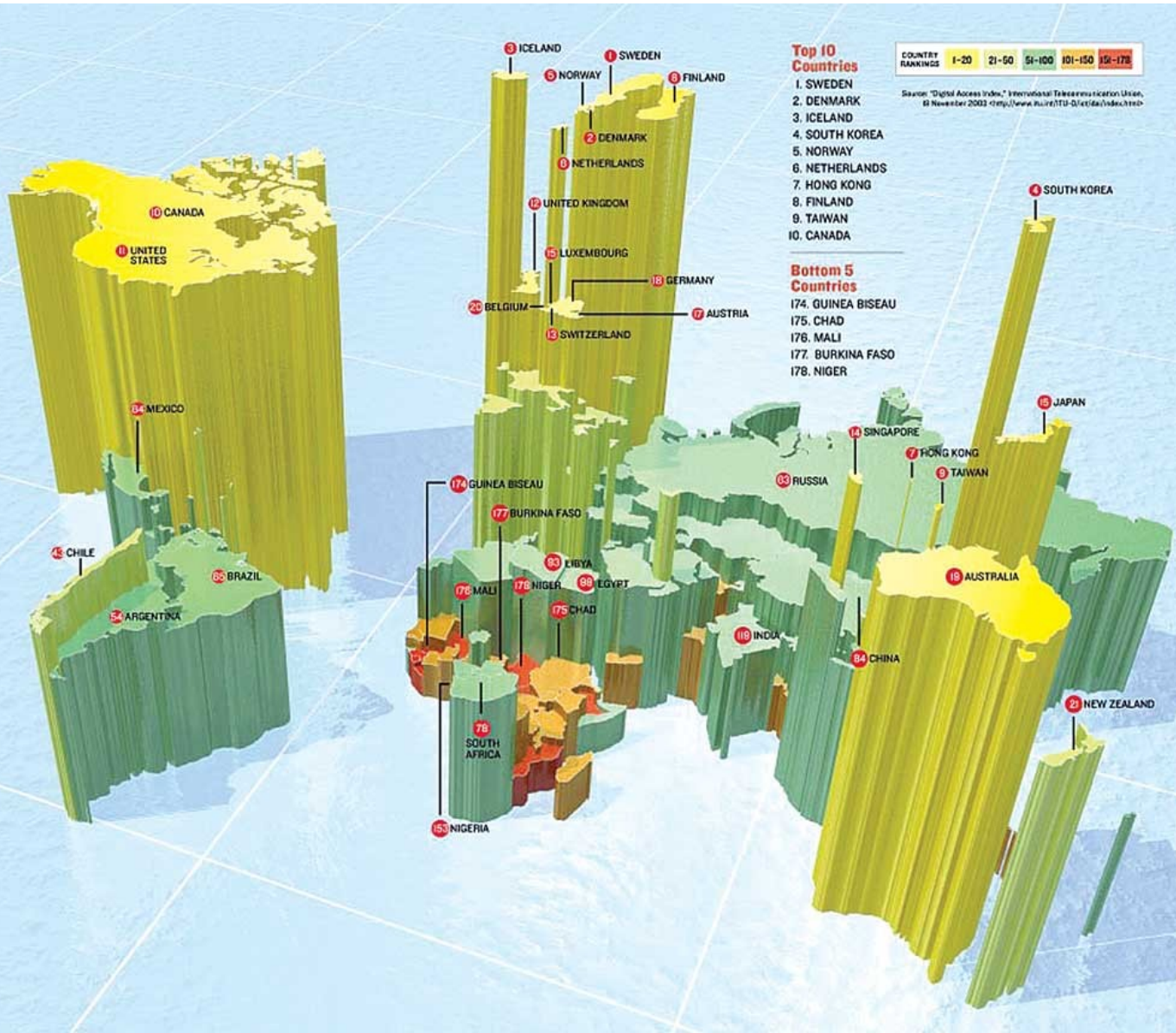
[Closing the Digital Divide: Update From the Early Childhood Longitudinal Study](#)



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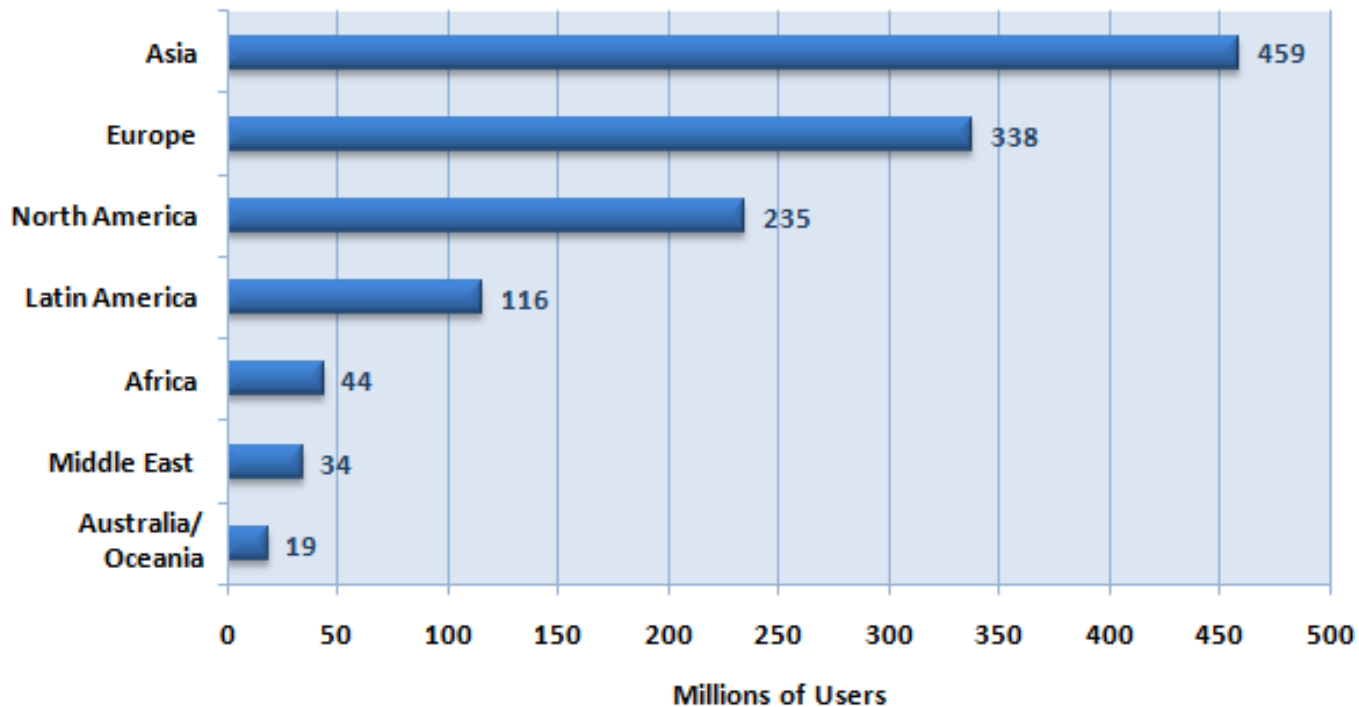
Digital Globalization!

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Internet Usage by Region

Internet Usage by World Region



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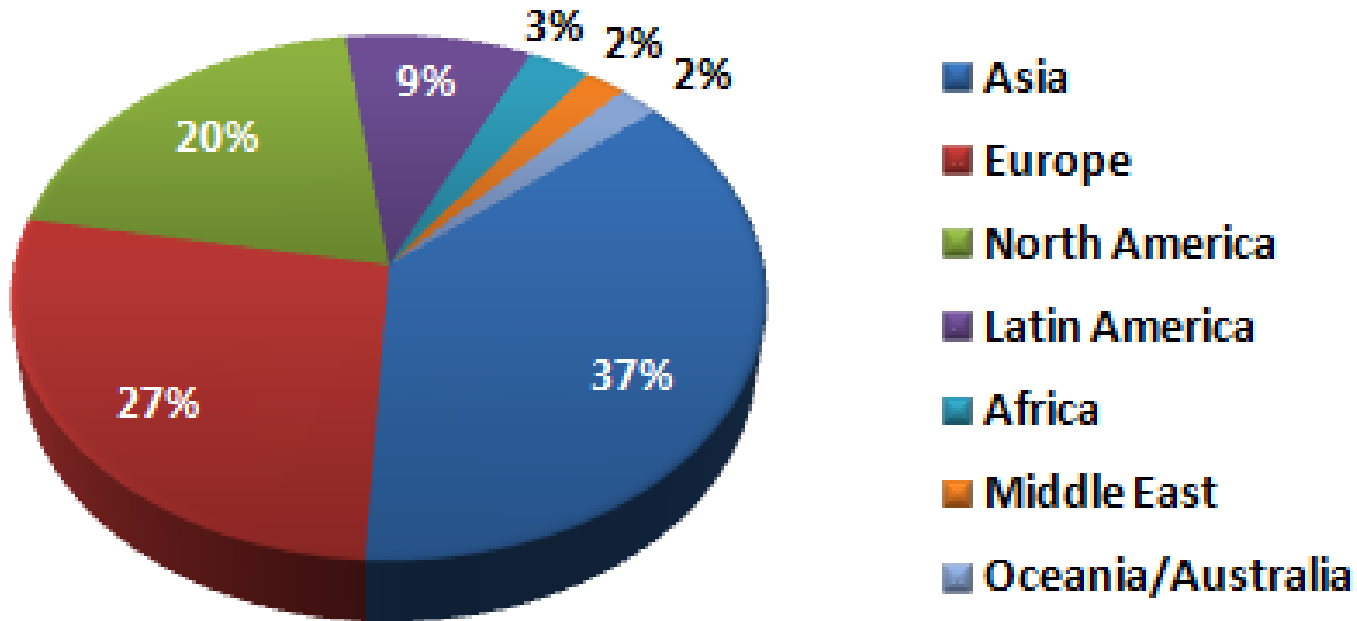


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World Internet Users

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World Internet Users

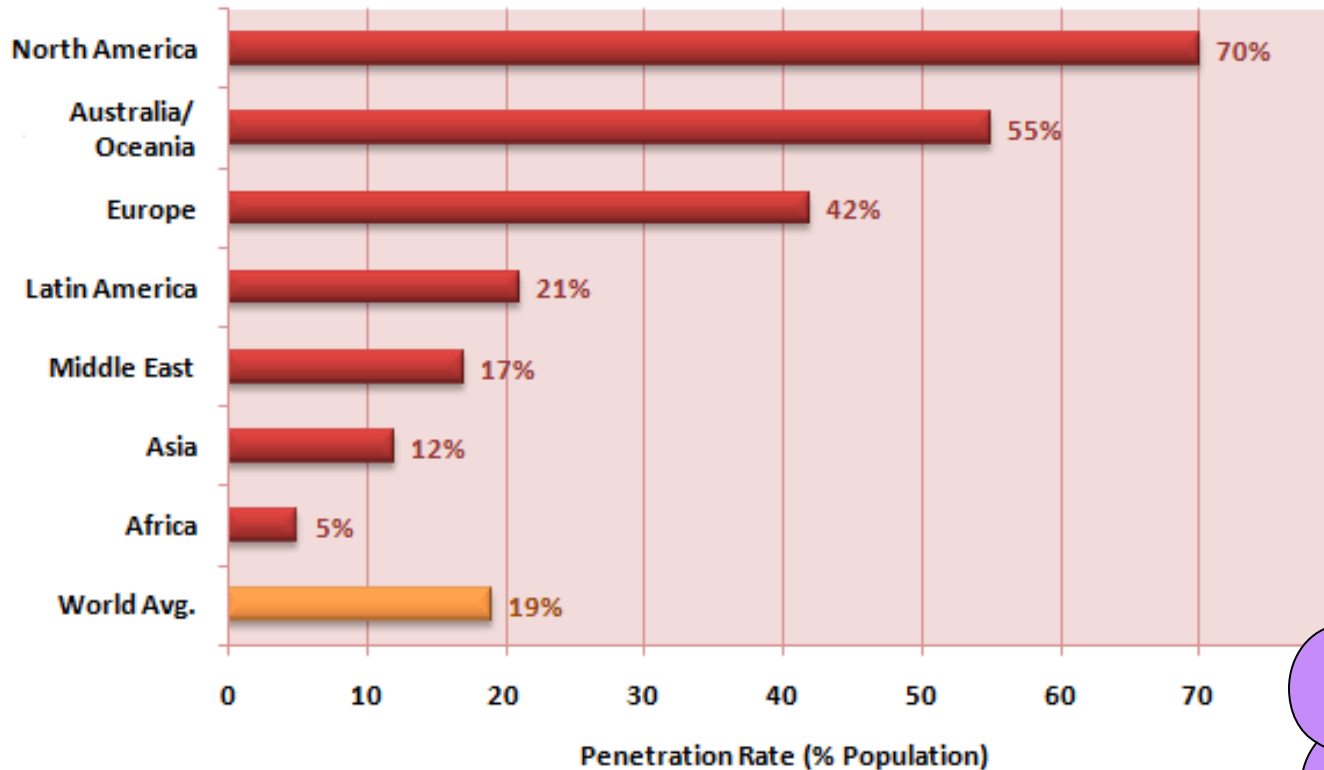


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Internet Penetration by Region

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Internet Penetration by World Region



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Asia might have the most people using the internet but it is still only 12% of their population.

Closing

“If we teach today’s student as we taught yesterday’s, we rob them of tomorrow.” - Dewey



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Shift Happens

Did you know? Shift Happens.
2008 – Click here to start the
video – 3:20



Now how important is the internet.

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References

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