

# CHILDREN'S FUTURE REQUESTS FOR COMPUTERS & THE INTERNET°

A Study by **Latitude°** (Phases 1 & 2)

CHILDREN'S FUTURE REQUESTS FOR COMPUTERS & THE INTERNET is one installment of Latitude 42s, an ongoing series of open innovation studies which Latitude, an international research consultancy, publishes in the spirit of knowledge-sharing and opportunity discovery for both established companies and emerging entrepreneurs.

WE ASKED KIDS ACROSS THE WORLD TO DRAW THEIR ANSWERS TO THIS QUESTION:

"WHAT WOULD YOU LIKE YOUR COMPUTER OR THE INTERNET TO DO THAT IT CAN'T DO RIGHT NOW?"



PRIMARY PLACES OF STUDY:

38° / 25' : ARGENTINA  
25° / 16' : AUSTRALIA  
35° / 40' : CHILE  
04° / 34' : COLOMBIA  
20° / 35' : INDIA  
23° / 38' : MEXICO  
-30° / 33' : SOUTH AFRICA  
37° / 05' : UNITED STATES

Over the course of 2010, Latitude° asked 201 children around the world, ages 12 and under, to draw a picture of something they'd like their computers or the Internet to do differently. Parents answered questions about their children's technology use and their participation in various online activities, as well as basic demographic information. \*Some kids' technology descriptions have been translated to English.

Latitude developed a reliable coding scheme to score the presence of specific themes in children's inventions (such as type of interface, degree of interactivity, physical-digital convergence, user's desired end-goal, and so on). See infographic on page 7 for more information. \*Reported frequencies may be based on total number of submissions that were possible to code on a given variable, rather than total number of study participants.

TYPE OF STUDY:

GENERATIVE



# KEY STUDY QUESTIONS

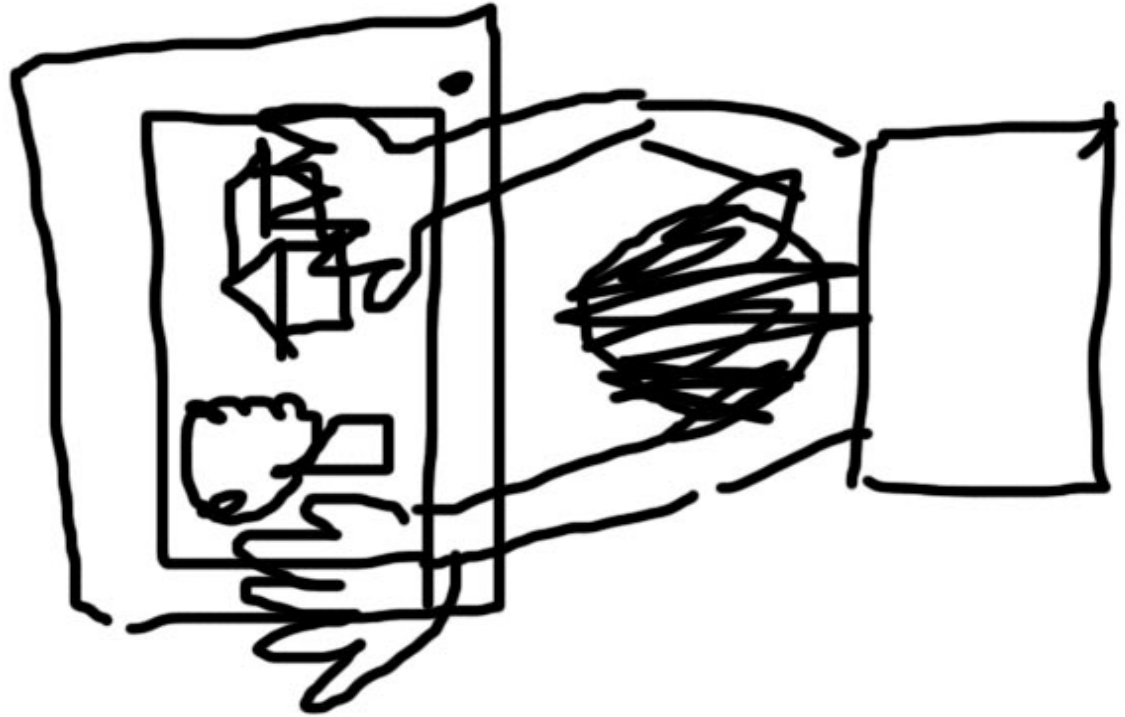
A young girl with dark hair and a red bow is looking upwards with a thoughtful expression, holding a yellow pencil in her mouth. She is wearing a white shirt and a dark vest. In the background, other children are visible, slightly out of focus, in a classroom setting with a brick wall.

1. What does the next generation of digital natives expect and desire from technology, and how does this differ across world regions?
2. How can we engage children as authors and inventors of future technology, not just passive recipients?
3. How can young minds help companies develop unexpected content and technology experiences that resonate with people of all ages?

Photo by CIAT on Flickr

# INSIGHT°

## THE DIGITAL VS. PHYSICAL DIVIDE IS DISAPPEARING



"I'd like to touch the things that are in the screen—feel and move them."

—Female, 7, Barcelona, Spain

### The Meeting of Online and Offline

Children across the world created technologies that seamlessly meld online and offline experiences, such as computers that “print” real food or that allow the user to touch objects displayed on the screen. Kids today don’t neatly divide “online” from “offline.” For them, technology is no longer something that mediates experience, but something that pervades it.

### From Immersion to Action

This convergence of the actual and virtual took many forms. Nearly 4 in 10 kids imagined immersive experiences of physical spaces (e.g., real or simulated travel) or devices that assisted physical activities (e.g., playing sports); a full 9% explicitly cited 3D effects. As the Internet of Things replaces the internet of information delivery, kids will increasingly rely on tech that enables real-world actions and choices.





"The computer becomes 3-dimensional and, instead of a keyboard, it's controlled by voice." —Female, 11, Copenhagen, Denmark

# INSIGHT<sup>o</sup>

## WHY AREN'T COMPUTERS MORE HUMAN?

### Talk to the Screen, the Mouse Isn't Listening

Mirroring current interface trends, kids expressed a desire to interact with technology more intuitively. Of those kids who specified an interface, only half suggested the traditional keyboard/mouse configuration, while 20% explicitly requested verbal/auditory controls, and another 15% wanted touch-screen interfaces.

### More Human Than Computer

The majority of kids (77%) illustrated a tech idea that called for more dynamic, human-level responsiveness (often anthropomorphized as robots or virtual companions), and 43% drew themselves or another person interacting with their creations. Kids accurately identify a shrinking gap between gadget and user, depicting the "iGeneration" understanding of device as merely an extension of oneself.

# INSIGHT<sup>o</sup>

## TECHNOLOGY CAN IMPROVE & EMPOWER US



### A Web of Self-Improvement

Instant access to people, information, and possibilities reinforces young users' confidence and interest in self-development. One-third of kids invented technologies that would empower users by fostering knowledge or otherwise "adult" skills, such as speaking a different language or learning how to cook.

### The Urge to Create

One-quarter of kids' inventions—the same number which favored gaming—centered on art or design. Nearly 1/3 of all children went beyond simple creations, envisioning entire platforms for creating games, Web sites, action figures, and so on. Kids' interest in a host of design fields—industrial, landscape, fashion, Web, and more—reflects the visual richness of the online world, as well as the can-do creative drive that tech encourages.



# FUTURE REQUESTS°

## WHAT DO KIDS ENVISION FOR TECHNOLOGY?

77%



INTERACTIVE  
( ADAPTIVE TO INPUT )

48%



GAMES /  
ENTERTAINMENT

36%



COMBINES PHYSICAL  
& DIGITAL SPACES

36%



INTUITIVE INTERFACES  
(TOUCHSCREEN, GESTURAL...)

33%



CONFERS ABILITY /  
KNOWLEDGE

31%



PLATFORM FOR  
CREATING SOMETHING

26%



SOCIAL

25%



ART / DESIGN

12%



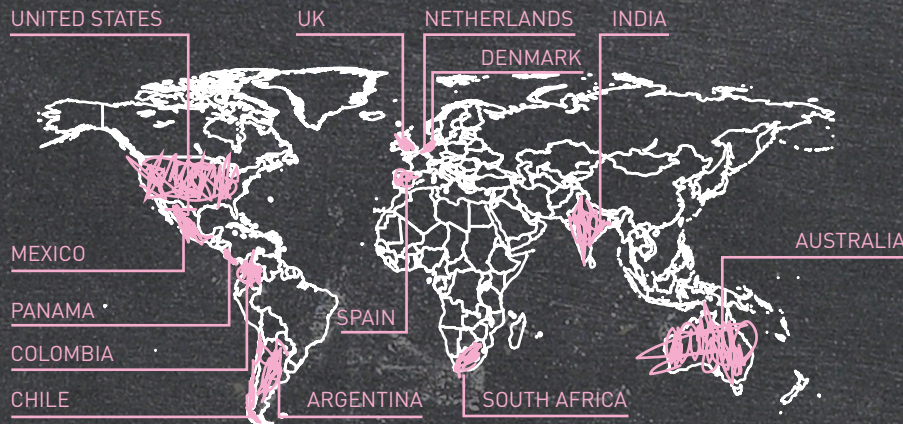
VIDEO

9%



3 DIMENSIONAL

### These Future Requests Came from Kids Across the World



### Related Segments



**Players** – Kids who imagined technologies with these themes were more concerned about the experience of engaging with their inventions rather than any real-world outcomes, desiring games, entertainment, and more interactive environments.



**Makers** – Kids who imagined technologies with these themes were more likely to focus on creation, art and design. They also tended to bring digital activities into the physical world.



**All Kids** — These themes were equally desired by all children.



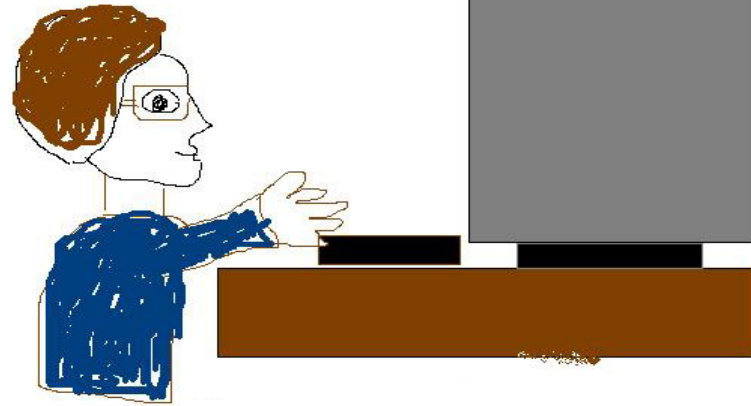
# CROSS-CULTURAL DIFFERENCES°

## Play for Play's Sake

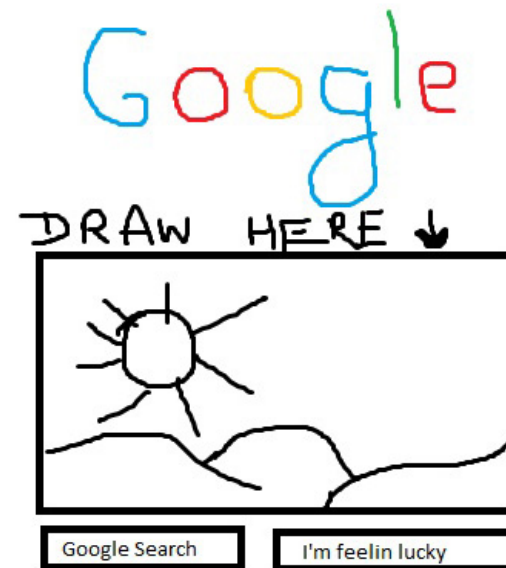
Kids in different regions of the world conveyed different perspectives on the ultimate purpose of their inventions. By more than a factor of five, children in the U.S., Europe, and Australia (92%) indicated greater interest in the process of interactivity itself rather than any real-world outcomes, presenting concepts that revolved around game-playing or conversing with the computer.

## All About Results

In contrast, children in Africa and South Asia tended to focus on technologies with a clear outcome or those that would deliver a tangible benefit to the user, such as a device that provides homework help, a software that assists the user in creating more true-to-life drawings, or a vehicle that helps one get from point A to point B quickly. These children were also more likely to imagine platforms that are tools for creating something else, such as software that can make movies or video games.



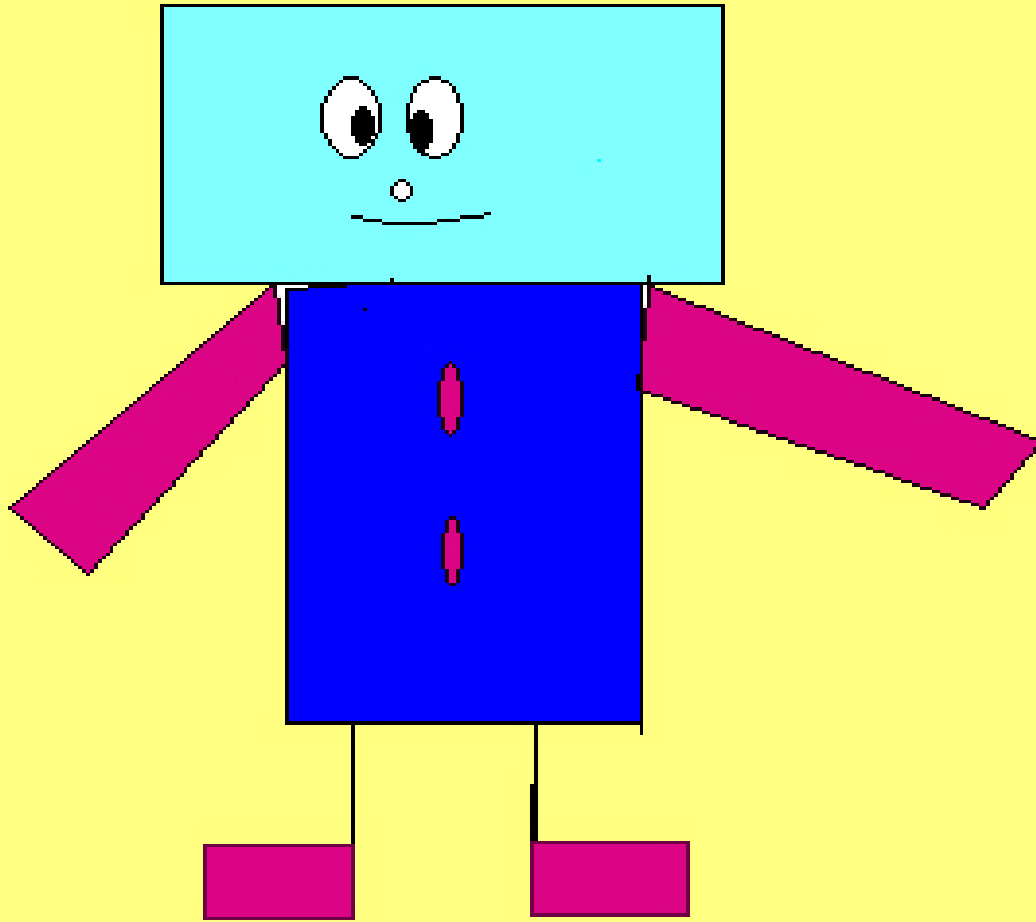
"I'm playing video games on my computer in 3D, wearing 3D glasses." —Male, 10, Boston area MA, United States



"I want an interface where we can search, not by text, but by drawing—and get image results with that particular shape or pattern." —Female, 12, Mumbai, India



# CROSS-CULTURAL DIFFERENCES<sup>o</sup>



"My son wishes the computer was a robot he could take everywhere with him—to play chess with him or soccer outside... in other words, he wants it to be a friend he can share with his other friends." —Male, 7, Barranquilla, Colombia

## Tech as Friend and Helper

Children in Africa, South Asia, and Latin America were much more likely than those in Europe, Australia, and North America to anthropomorphize computers—to imagine them as friends or teachers that could share their experiences or help in the accomplishment of a goal. One-quarter of participants in Africa and South Asia imagined computers that would assist with or output knowledge (such as help solving a math problem), and 74% of kids in those regions envisioned technologies that aided with real-world tasks or abilities, such as cleaning one's room or learning ballet.

# OPPORTUNITIES °

Photo by Alex Healing

“There’s a real opportunity to create new experiences where the technology seems to disappear, where we experience the web directly—and almost magically—in the world.”

— Steve Mushkin, Founder & President of Latitude

## DON'T THINK ROBOTS ARE JUST FOR SCHOOLS

More advanced, human-like interactions with technology create an opportunity for at-home learning and productivity to feel even more like play.

For kids, learning systems equipped with networking functionality and real-time, natural language processing—such as a robot that can look up and recite Wikipedia entries—can create a greater sense of independence and control.

For adults, robot interactions can offer encouragement, increased motivation, and progress-tracking to help people achieve their personal goals.

## BRING “GROWN UP” SKILLS WITHIN REACH

Kids crave tools to flex their mastery of advanced skills (like playing an instrument, creating fine art, or designing a personal fashion line).

Technology can bring these skills within close reach sans the pain of study or the financial burden often involved with acquiring them. For example, MIT’s Scratch is a programming language that allows kids to produce their own interactive content and games, and share their creations with others. When building apps and other tools that enable “advanced creations,” ensure that kids also have the ability to instantly show off what they’ve made.

## OFFER GAMES AND ENTERTAINMENT WITH REAL-WORLD OUTCOMES

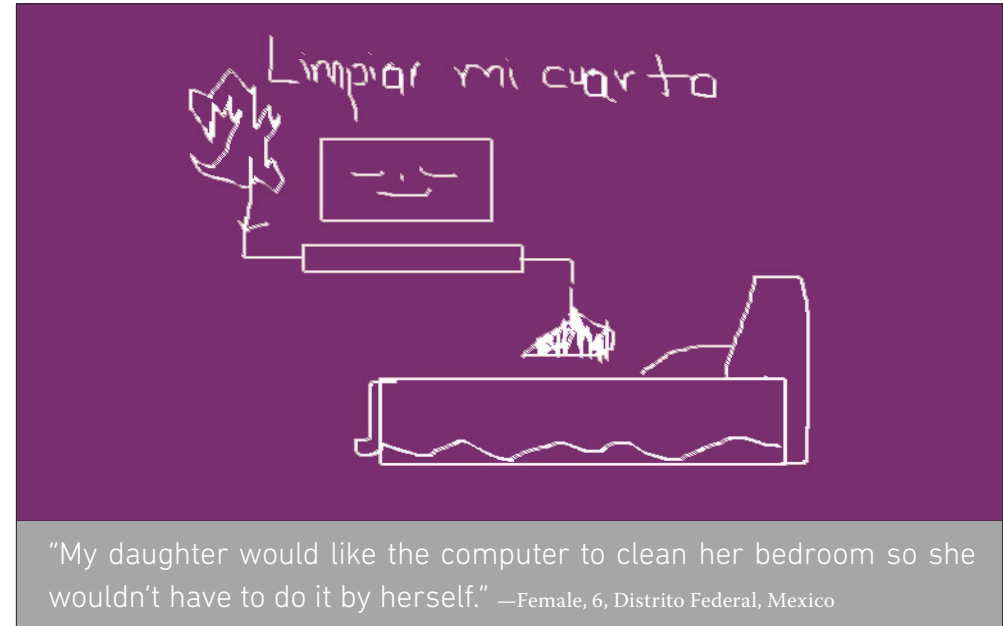
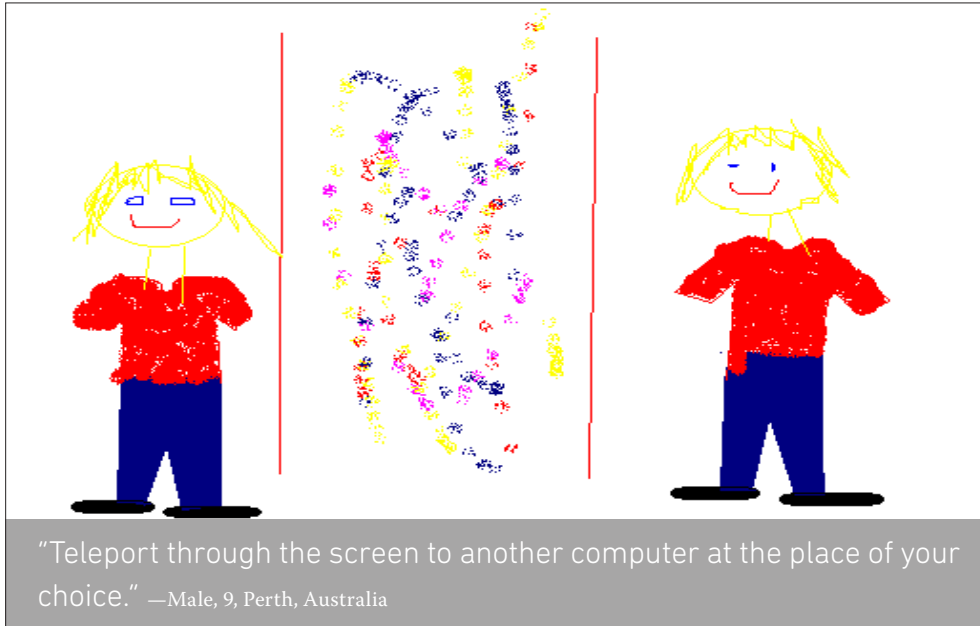
Kids expect their online activities to have real-world impact, and vice versa. Web, mobile and game developers are bridging online and offline experiences for both kids and adults; currently, sites like Nickelodeon’s “The Big Help” and Recyclebank assign real-world rewards for eco-friendly actions.

There are significant opportunities for networked objects (e.g., The Internet of Things) to reinvent gaming in traditionally offline spaces. For example, users could accrue lifestyle points (automatically tracked) when they use their running shoes or take out the recycling bin.



# CHILDREN'S FUTURE REQUESTS°

## SELECT SUBMISSIONS



# CHILDREN'S FUTURE REQUESTS FOR COMPUTERS AND THE INTERNET<sup>o</sup>

This study was prepared by:

## Latitude<sup>o</sup>

Latitude is an international research consultancy helping clients create engaging content, software and technology that harness the possibilities of the Web.

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KIDS is an ongoing research series by Latitude which invites kids from across the globe to tackle big ideas in structured problem-solving scenarios, providing valuable insights for educators, technologists, and society.

<http://www.latd.com/#kids>