

# **KidTalk: Understanding developing technology users**

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## **SESSION OBJECTIVES:**

The goal of the session is to provide practitioners with a deep understanding of children so they can apply that understanding to designing technology experiences that are relevant and exciting for that audience.

Participants in this tutorial will:

- Gain a firm understanding of why it's important to understand development and take it into account in building products.
- Be able to compare and contrast capabilities of and design implications for children at different developmental stages.
- Be able to apply developmental principles to brainstorming and design to arrive at an engaging and usable product.

Many practitioners in the area of children's technology do not have a formal or extensive background in child development. This tutorial provides an opportunity to learn about child development and how to apply that knowledge to product development. This tutorial was presented at IDC2004 and was rated highly on usefulness of the content and overall learning.

## **DESCRIPTION OF MATERIAL TO BE COVERED:**

This tutorial will be similar to what was covered at IDC2004. However, we've decided to make some changes based on the feedback we received from last year's participants. In 2004 we presented information about child development and then asked participants to apply that information by reviewing software titles and evaluating developmental appropriateness. The feedback that we got was that the tutorial participants wanted more in-depth knowledge regarding the particular ages that were of interest to them and that were most applicable to their product development efforts. For example, people developing products for pre-school children wanted to spend more time on that age group.

For 2005, we will provide the same overview as before in the first part of the tutorial. In the second half of the tutorial we will have participants break up into sub-groups in order to provide more depth and more focused application of course content relevant to either preschoolers, school-age children, or teens. Participants will then utilize their knowledge of the interests and abilities of their target age group by working collaboratively on developing a product idea and corresponding interaction design (through storyboards and sketches).

The following provides a more detailed outline of the course content:

Introduction: 45 minutes

- Welcome the attendees to Kid Talk: Understanding developing technology users.
- Introductions.

- Present the goal we all share, highlighting relevant and exciting user experiences for kids.
- Show a clip from the movie “Big” that highlights these difficulties and differentiates market data from developmental trends and their impact on success of a product.
- Explain external changes and internal changes and clarify that we will be focusing on internal changes (development).
- Go over course goals and structure.
- Brainstorm and discussion of the following questions: Why is it important to consider child development in software design for kids? What are your insights, experiences or guesses?
- Talk about attributes of an engaging experience based on research we’ve done on this topic.
- Explain the structure we will use to talk about the 3 developmental stages.

#### Preschool: 30 minutes

- Watch video clips of preschoolers using technology. Ask the class to share behaviors that they noticed in the clips.
- Talk about what preschool children can do with real life examples.
- Conservation of water demonstration to illustrate limitations in preschooler’s ability to reason.
- Call out key characteristics of preschool children.
- Talk about designing for preschoolers within the engagement framework presented earlier.
- Present examples of “best practice” software that follows the guidelines above well.

#### Break: 15 minutes

#### School Age: 30 minutes

- Watch video clips of school age children using technology. Ask the class to share behaviors that they noticed in the clips.
- Talk about what school age children can do with real life examples.
- Memory demonstration to illustrate limitations in school age children’s ability to reason use strategies effectively.
- Talk about the vast differences from early grades to later grades in school age children.
- Call out key characteristics of school age children.
- Talk about designing for school age children within the engagement framework presented earlier.
- Present examples of “best practice” software that follows the guidelines above well.

#### Teenagers: 30 minutes

- Watch video clips of teenagers using technology. Ask the class to share behaviors that they noticed in the clips.
- Talk about what teenagers can do with real life examples.
- Analogies demonstration to illustrate ability to reason abstractly.
- Call out key characteristics of teenagers.

- Talk about designing for teens within the engagement framework presented earlier.
- Present examples of “best practice” software that follows the guidelines above well.

#### Summary: 15 minutes

- Condensed review of major developmental themes.
- Review of design concepts to use in products for children.

#### Orientation to next phase: 15 minutes

- Describe logistics of break out groups including which presenter will work with each age segment break out group.
- Review break out group activities. Participants will be told that they will participate in an expanded discussion of their age group of interest, that they will then receive a general product idea and begin a preliminary design of their product (with support as needed) and finally prepare to defend it from a developmental perspective.

#### Lunch: 60 minutes

#### Expanded discussion of development within specific age range: 60 minutes

- The content of each section will be specific to the preschool, school age and teenage ranges, respectively. It will cover more detail about the physical, cognitive, social and emotional changes within the age range. The content will also deal with extended design implications and guidelines for the focal age group.

#### Break: 15 minutes

#### Product design: 60 minutes

- Each sub group will be asked to come up with and begin to design a product (rough sketches and storyboards) intended for their target audience. Depending on the number of participants, there may be multiple groups per age range (to work in groups of 4 to 6). The groups will brainstorm product design with an emphasis on development appropriateness.

#### Product presentation: 30 minutes

- Each sub group will be asked to briefly present their design ideas and explain how it fits the target age.

#### Wrap up and evaluations: 15 minutes

- Summary of key take-aways from tutorial and introduction to further reading materials in handouts.
- Tutorial evaluation forms