Developing digital products

Case Otava

19.06.2014 Kuisma Eskola
In this presentation:

- Otava’s e-learning products
- Objectives and needs in production
- 5 steps in product development process
What we do

• General publisher

• Otava’s products: fiction, nonfiction, textbooks and teaching materials, books for children and young readers, calendars, magazines, new business functions

• Otava Education’s customers:
  • Teachers
  • Schools
  • Students
Our new product family

• Flexible, depending on customer needs
• Structure for the most extensive products:
Printed book

Digital book

Teacher’s material
Serves both printed and digital

Printed exercise book

Digital exercises

Printed teacher’s guide
(didactic instructions)
Production objectives

- One frame for all teacher’s materials
- 80% automated digital book layouts
- The authors should be able to produce the digital exercises by themselves, using a browser based tool (provided by an external supplier)
- Printed and digital material should be produced at the same time
- Specified graphic workflow (e.g. how to manage InDesign and PhotoShop files, what kind of changes can be made to individual products’ CSS file etc.)
How we are developing our new products at the moment?
The people (stage 1)

- No dedicated development unit → the use of editors, graphic designers and partners (code, layout)
- 4 groups defining the pedagogical objectives
- 4-5 persons /group: (2-3 editors, 1 graphic designer, 1 programmer or developer)
  - Teacher’s material (frame/user interface)
  - Student’s material (digital book)
  - Student’s material (digital exercises)
  - General embedded demonstrative materials (videos, interactive images, etc.)
- A leader for each group + a project manager for the whole project → guiding board to share information
Step 1/5: Defining objectives

• The groups met 6-8 times (during 2 months)
  • What kind of products are we going to make?
  • Studying the feedback from previous products
  • Checking the other publishers’ materials.
  • What are the features we need?

• Groups’ results were presented → decisions about the products

• Next stage: 3 smaller, more flexible groups to execute the project (2 persons per group):
  • User interfaces for both teacher and student
  • Digital exercises: functionality and exercise types
  • Embedded demonstrative materials
Step 2/5: UI development

BEFORE CODING

• Listing all typical using situations
• A lot of paper prototypes of the using situations
• PPT images of the UI

• This took some time (about 2 months) because nobody could focus only in this project. Consider cleaning your calendar before a development project if possible.
A typical sketch #1 😊
A typical sketch #2 😊
Step 3/5: Consulting

- Collecting feedback in-house and from the customers
- Decision: what are the features we are going to implement?
- An external consult: functionality architect Karri-Pekka Laakso (Reaktor)
  - 2 hours 2 times/week for about a month
  - All the user situations were studied →
  - Intensive drawing sessions →
  - A ready user interface for both the teacher and the student
A sample: Reaktor’s drawings
Step 4/5: Functionality descriptions

- PPT presentations based on paper drawings
- Presenting the functions step by step
- The presentations are the base for:
  - Coding
  - Visual design
  - Product development / production
Functionality view #1

1 KIPINÄSTÄ LIEKIKSI
   + Tervetuloa Sanaskylään →
   + Suuri kurpiäsklipalli →
   + Tutustun suomen kieleen →
   + Opin suomen kielen äänetyt →

   + Ennakoin ja luen →
   + Luen tietotekstin →
   + Teen ajatuskartan →
   + Kipinä-bussin kirjavinkit →

2 LORUJA LUURISTA
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum

   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum

3 SATU ETSII KERTOJAA
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum

   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum
   + Lorem ipsum

4 KUHINAA KIRJAHYLLYSSÄ
Functionality view #2

Aineiston etusivu > loco tms. sarjailme

Sisällys

Oppikirja  Tehtäväkirja  Opetstuokiot  Tehtävät  Opettajan materiaalit

1 KIPINÄSTÄ LIEKIksi

Opin suomen kielen äänteet →
Step 5/5: Coding and visual design

• Detailed functionality presentations help the coders

• Visual layout is planned by a graphic designer (who preferably has experience in web design)

• Layout can be made at the same time as coding (Detailed functionality presentations!)
Ongoing process

• The first real demo in the new frame is published in September 2014 → the process took about 6 months
• The idea is to use the new frame some time, but:
  • users may demand new features quite soon
  • competitors may introduce new features
  • technology and devices evolve quickly
  • there’s a demand for new kind of products (e.g. digital tests that can be edited)
• Next steps:
  • We still need to decide how to produce the digital exercises more efficiently
  • Data mining from the digital exercises to help the teacher in evaluation
Conclusions

• When starting, think pedagogy – not code!

• Only later (when planning the detailed functionality) make sure that it is possible to execute the planned functionalities in the code

• Reserve time for development!

• Paper is cheap!
Thank you!

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