Student-generated digital stories for 21st century knowledge creation

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Crossing borders across schools and countries

• FINNABLE 2020 (Boundless Classroom) & SAVI international projects
  → to explore the added value of digital technology integration into classroom practices; to promote active learning and knowledge creation; to motivate and engage students
• In both projects, students created short video stories collaboratively. Having designed, captured and edited stories, students shared their work with peers online.
digital storytelling as pedagogical method

- language, image, sound +
- work in groups +
- connective technology +
- digital mobile devices =
- digital story
- a digital story is ...
  - <1-4+ minutes long
  - image, moving-image production
  - produced during and/or at the end of a series of lessons
  - content
    - landscape + text, voice over
    - other modalities (e.g., subtitles, sound, music, effects)

the analysis of 106 stories shows...
• Self-presentations
  • e.g., introducing, welcoming etc.
• Life & culture
  • e.g., daily life & activities, traditions
• History & mythology
  • e.g., ancient myths
• Physics & chemistry
  • e.g., movement, water, air
<table>
<thead>
<tr>
<th></th>
<th>Single event stories</th>
<th>Multiple event stories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject-based digital stories</strong></td>
<td>Instances of a phenomenon • Chemical reactions</td>
<td>Multiple-phenomena based stories • Science subjects: water, motion, air • Humanistic subjects: historical events, biographies, languages</td>
</tr>
<tr>
<td><strong>Interdisciplinary digital stories</strong></td>
<td>Instances of an interdisciplinary phenomenon • One event in a forestry in a field trip</td>
<td>Theme-based stories • Recycling • Well-being • Myths • Animal testing</td>
</tr>
<tr>
<td><strong>Student-initiated stories</strong></td>
<td>Introducing myself and my class to peers</td>
<td>Instances from everyday life • Hobbies • My friends • Ethical issues • Citizenship</td>
</tr>
</tbody>
</table>
The image cannot be displayed. Your computer may not have enough memory to open the image, or the image may have been corrupted. Restart your computer, and then open the file again. If the red x still appears, you may have to delete the image and then insert it again.

ancient myths

teaching aims:
to enable student understanding of the phenomenon of season alternation through comparison
to connect with related issues e.g., disruptions arising from environmental problems

film outdoors revise, edit to improve narrate to support storytelling

a digital story can draw directly or indirectly from the curriculum
subject domain: history & mythology

teaching aim:
to enable student online collaboration with international peers

share stories online  expand audience  create interaction
A story of interdisciplinarity

History & mythology
how the ancient Greeks used myths to explain natural phenomena

Language: L1, Elf
narrating events in chronological sequence:
temporariness in progressive tenses
Pluto is walking around on the Earth
Persephone and her friends are playing
Pluto wants to get married and is asking Zeus
Goddess Demetra is crying and putting Nature to sleep
Hermes is asking Zeus to help
Hermes brings Persephone to Demetra but Pluto claims her back

text alternates with moving image (x 9)
dramatization supports dialogue (4-9)
duration: 5:31
Developments in narrative production

A group for sharing between CDS, San Francisco and Thessaloniki, Greece

Europe, the birth of Euro (3:07)
dimtris.konstantinou 2012/11/19 00:00

Text unfolds with moving image:
as narration (L1) &
as subtitle (Elf)
dramatization, narration and written text
duration: 3:07

Zeus appeared to Europe as an angel. She took her and traveled in unknown places.

Titles & Signature
- Europe and angel
- The end
- Blue team
Zeus appeared to Europe as an angel. She took her and traveled in unknown places.

Europe was crying because she saw the poor people.

Language: L1, Elf narrating events in chronological sequence past tenses.
Once upon a time
The gods were kings
people were weak

Europe was a very rich princess
Europe was very selfish so she dismissed all her (helpers)

Zeus appeared to Europe as an angel. He took her and traveled in unknown places

Europe was crying because she saw the people who were hungry
As tears were falling down, the angel was blowing and his breath was becoming ‘money’

(The) money (was) named ‘Euro’, after Europe’s name

(The) poor people came back and Europe changed her attitude for ever!!!
Red balloon (Investigating air)

1. Need for air and sensing air
2. Properties of air
3. Air investigation in Heureka
4. Air pollution and cleaning

cover picture of the DS

four sequential parts of the DS, headlines named by pupils
Red balloon (Investigating air)

1. Need for air and sensing air

2. Properties of air

3. Air investigation in Heureka

4. Air pollution and cleaning
subject domain: sciences

teaching aim:
- to identify, classify and compare natural phenomena (properties of air and water, mechanics, chemical reactions) by doing own investigations about the topic in pairs → learn to use the language of sciences
- to film own investigations → learn sciences through the camera lens
- learn together in collaboration with others

digital story is a documentary learning diary that is created during the lessons
Frame of learning sciences by creating digital stories

1. Pre task: recording video clips in the schoolyard or at home
2. Lessons 1-2: investigating the topic, recording video clips about experiments (classroom)
3. Editing video clips in ICT class
4. Lessons 3-4: investigating the topic more, recording video clips about experiments (classroom, trip to science center, trip to science laboratory)
5. Editing video clips in ICT class
6. Extra task: recording video clips during holiday
Watching part 2 of the digital story, Red balloon

2. Properties of air

3. A table napkin in a glass remains dry although the glass is put under water.

4. A balloon is fastened on the mouth of a bottle. The balloon swells when the bottle is in hot water and contracts when the bottle is placed in cold water.

Annotations and pupils’ talk during the video

- Air bubbles remain in the glass.
- Notice that hot water has been placed in the first container, and warm air rises.
- Now you can [start].
- It is there.
- It is dry.
- Then, put it to cool.
Evaluating learning outcomes

1. analysing mind maps

- Pre mind map: Learning starts
- Digital stories (DS): What happens between the ends?
- Post mind map: Learning ends
Results

- Direct connection between the mind maps and the digital story 59 % (24/41)
- From everyday observations and conceptions to more scientific ones

<table>
<thead>
<tr>
<th>Relationship between students’ mind maps and digital stories (DS)</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Topics on post mind maps and DS are similar</td>
<td>46</td>
</tr>
<tr>
<td>Topics on pre mind maps and DS are similar</td>
<td>13</td>
</tr>
<tr>
<td>Evidence of learning in annotated (= speech bubbles) DS</td>
<td>11</td>
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<tr>
<td>A drawing in the post mind map about some topic of the DS</td>
<td>9</td>
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<tr>
<td>Pupil learns by watching a DS created by the pair (appears from the post map)</td>
<td>9</td>
</tr>
<tr>
<td>Pupils mix contents from their personal pre mind maps to the common DS of a pair</td>
<td>4</td>
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</tbody>
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digital storytelling in the future

- As pedagogical method promotes
  - Student learning of subject matter
  - The communicative use of English for international communication
  - Peer networking & collaboration online & locally

- As tool in teacher education
  - diary for reflection
  - learning database for student-teachers & teachers

thank you for your attention!