Digital literacy - knowledge and wisdom in pre-school teacher education

Margrethe Jernes (phd)
Department for Early Childhood Education
University of Stavanger, Norway
margrethe.jernes@uis.no

DigiLitEY

DigiLitEY Project Meeting 4
7th and 8th November 2016
Autoklub ČR, Opletalova 29, Prague

Content - work in progress

I ntroduction (background, context, relevance, research)
M ethod (methodology, data collection, analyse)
R esults (analysed, distilled, transparent process)
a nd
D iscussion (with theoretical perspective and implications for policy and practice)

Questions

My background

- Preschool teacher and head of kindergartens
- Teaching in preschool teacher education since 1997
- Master (majoring) on issues on technology in teacher education, theoretical aspects on supervision in practice (2003)
- PhD on issues on technology in ECE, theoretical aspects on interaction and experience (2013)
- This paper: using Eisners theory as glasses

Research aim and question

The overall aim: to understand what kind of demands preschool teachers and preschool teacher students expresses on digital literacy for using technology in Norwegian kindergartens.

Research question: what demands do both preschool teachers and preschool teacher students express when it comes to digital literacy in early years?

The Norwegian Context

- Integrated system services for children from birth to five
- Increasingly extension of kindergarten during the 1990ies
- 2005: transferred to from *Ministry of Child and Family affairs* to *Ministry of Education and Research*
- 2013: all children (app. 90%) attend kindergarten
- The cost: parents 20 % (2330 NOK per month), the state and the municipalities the rest
- Preschool teachers hold a Bachelor degree (3 years at university)
- Proportion of qualified preschool teachers: 35%

5

The National Framework Plan for content and methods in ECEC

- Part 1: The social mandate of kindergartens
  - The content and objects and values etc.
- Part 2: The content of kindergartens
  - Pedagogical approaches and aims, including seven subject areas etc.
- Part 3: Planning and collaboration
  - Planning, evaluation and cooperation etc.

6

The National Framework Plan (2011)

"Children *should have the opportunity to experience how digital tools can be used for play, communication and the gathering of information"* (p.27)

University of Stavanger

7

The National Framework Plan (to come 2017)

On the kindergarten's digital practice
- Contribute to the children's play, creativity and learning
- Digital tools to explore, play, learn and marvel
- Talk with children about principles of digital judgment

Staff at the kindergarten shall:
- perform digital judgment when it comes to information searching, have an awareness of copyright and source criticism and protect children's privacy
- facilitate children explore, play, learn and even create something through digital forms of expression
- assess the relevance and participate in their children's media use
- explore the use of digital tools together with kids

University of Stavanger

National Guidelines for teacher education for early years

In the National Guidelines for teacher education for early years (Ministry of Education, 2012) it is emphasized that:

"One of the conditions for professional practice is to use the Norwegian language orally and in writing, and digital tools in a qualified manner in different contexts. This competence is developed as part of skills in all knowledge areas "(Ministry of Education, 2012, p. 11).

Also in skills, strategy on working with digital tools, is mentioned (Ministry of education, 2013, p. 12)

"Expertise for the kindergartens of the future. Strategy for competence and recruitment 2014-2020" (Ministry of Education, 2013)

University of Stavanger

Otherwise…

- The kindergarten commitment is increasing, and also quality requirements in kindergarten (Ministry of Education, 2009)
- Policy documents for Norwegian kindergarten is mentioning digital tools and media (Ministry of Education, 2010, 2011)
- Technonology has become part of the community and of daycare (Bølgan, 2009; Kvinge et al., 2010; SSB, 2011; Gudmundsdottir & Hardersen, 2012)
- Still, there is little Norwegian research on technology and kindergarten (Borg et al., 2008)
- In Norway: five doctoral theses until today (Jernes, 2013; Vangsnes, 2014; Sando, 2014; Letnes, 2014; Lafton, 2016) and nine MA thesis

University of Stavanger

10

Some international research on technology and kindergarten
… in kindergarten…

- Drill and practice - not good enough (Haugland, 2000)
- Preschool teachers abdicate arena (Plowman & Stephen, 2006, 2010)
- Distal and proximal preschool teacher role (Plowman & Stephen, 2007)
- Positions as owners, participant or spectator, companionship, not necessarily interacting, restrictions on timing, application and frequency (Ljung-Djärf, 2004; 2008)
- The exclusion issue in digital context (Jernes & Engelsen, 2012)

11

Some international research on technology and kindergarten
… on digital competence…

- Need and desires for strengthening digital expertise, but cannot find suitable courses (Saúdea et al., 2004; Lafton, 2012)
- Explorative and multi-dimensional attitude (Yelland, 2005)
- Creative use of digital tools, relies on a knowledge-rich interaction and digital literacy (Jessen 2001; (Fischer & Gillespie, 2003; Sheridan & Pramling Samuelsson, 2003; Tsitouridou & Vryzas, 2004; Klerfelt, 2007)
- Tensions in pedagogical knowledgebase, pedagogical practices and didactical (educational) reflection (Jernes, Alvestad & Sinnerud, 2010)

12

Methodology – qualitative data

- A qualitative small-scale study (Denzin, 2001; Alvesson & Sköldberg, 2008)
- Secondary analysis (Heaton,2004)
- Mixed method (Denzin & Lincoln, 2000; Biesta, 2010)
- Hermeneutic approach (Gadamer, 2006; Cresswell,2007)
- Inspired by Grounded Theory (Charmaz, 2000; Corbin & Strauss, 1998)

University of Stavanger

14

Empirical data

Foto: Jernes 2007

- Re-analyses of results from phd-research (Jernes, 2013)
- Preschool teacher students anonymous handwritten reflections after lessons on the thematic (2011, 2012 and 2013)
- Impressions from kindergartens practices the last five years

"Either direct nor indirect personal data shall be recorded in the project. If no personal information will be recorded, the project will be excluded from the notification requirement. It is not necessary to submit the form to the Data Protection Officer " (Data Protection Official for research (NSD).

University of Stavanger

Preliminary results – the knowledge and wisdom

- **Mastering the practical**
- **Make oneself informed**
- **Ethical reflections**

https://www.etsy.com/de/market/aristoteles

University of Stavanger

Elliot Eisner: Educational connoisseurship

The wine-metaphor:
- access, taste & smell, the particular as part of a larger group

DIVERSITY

Five dimensions to consider
1. the intentional (hidden curriculum)
2. the structural (message)
3. the curricular (diversity)
4. the pedagogical
   - aims & context
   - example, not ideal
5. the evaluative
   - objects
   - situations
   - process

University of Stavanger

17

Elliot Eisner: Educational criticism

- Description (selectivity, disclosure)
- Interpretation (reveal the qualities)
- Evaluation (be aware of own groundings)
- Thematics (going beyond the situation itself)

«The task of the critic is to help us to see»
(Eisner, 1985, p. 93)

University of Stavanger

18

Preliminary discussion

- Preschool teachers who have experience, are able to address their need for extending knowledge (Jernes et.al. 2010)
- Preschool teacher students are showing surprisingly mature attitude on the subject, expressing their need to have knowledge for doing critical reflection on the topic

- «One can be a great connoisseur without being a critic, but one cannot be a critic of any kind without some level of connoisseurship» (Eisner, 1998, p. 86).

Implications for preschool teacher education

- Addressing digital technology through work in the different subjects of education
- Addressing technology in use in day care
- Addressing technology in children's lives, home and leisure
- Continuous work on teaching the educational critical thinking
- Working on "learn to learn" (it seems that to learn constructing knowledge, gives more sustainability, then just achieve knowledge on a specific topic)

- A challenge might be balancing the need for the concrete examples e.g. analyzing computer games or e-books for children or working with photography and the critical and ethical reflections

Implications for research in pre-school

New national funded research & innovation project:
- Studying storybook apps focusing dialogue based reading activities in kindergartens
- University of Stavanger:
  - The Norwegian Reading Centre (Mangen, Hoel)
  - Department for Early Childhood Education (Jernes)
- The innovation, based on research: an evaluation app
- http://lesesenteret.uis.no/category.php?categoryID=19984

Research Group

Project Management

Anne Mangen   Trude Hoel   Margrethe Jernes

http://lesesenteret.uis.no/vebb/
http://lesesenteret.uis.no/category.php?categoryID=19984

Preschool teachers are encouraged to use digital technology in play & learning activities in kindergarten, but there is little knowledge on the use of tablets and e-books in language activities.

A Norwegian research project – but also European

- The researchers and preschool teachers involved in the project will gain more knowledge on the different kinds of e-books available for children, and what technical and material features that seem to be most important.
- COST action (WG3) is important for exchange knowledge on the issue

Developing an evaluation tool

- The aim of is to develop a research-based, simple application, which preschool teachers and staff can use in evaluating whether specific e-books may support or hinder language learning associated with kindergarten reading activities.
- The application will be available for free (other interested, as parents)

Dialogue-based reading

- Being in dialogue
- Having a common focus in the book
- Open reflection
- Strengthen and stimulate language learning → understand the world
- E-book – paper book?

http://www.udir.no/laring-og-trivsel/rammeplan/barnehagens-innhold/de-yngste-barna-i-barnehagen/

E-book challenges

- Stop and reflect…
- Group reading…
- Affordance…
- Sounds…
- Touchscreen…
- Eager to move forward…

http://www.udir.no/laring-og-trivsel/rammeplan/barnehagens-innhold/omsorg-lek-og-laring/film-pa-skattejakt-med-ikt-i-barnehagen/

Questions for discussion on the focus

- How is it possible to compare books in two different formats?
- What will the consequences be for the evaluation of e-books that is constantly evolving, in progress?
- Do others have experiences to obtain an overview of an extensive field?

- … and by the way, where did the *knowledge* and *wisdom* disappear…?

Some literature…

- Dale, E. L. (Ed.). (2001). *Om utdanning: klassiske tekster*. Oslo: Gyldendal akademisk.
- Dewey, J. (1980). *Art as experience. Første utgave 1934.* New York: Berkley Publ. Group.
- Eisner, E. W. (1985). *The Art of educational evaluation: a personal view.* London: Falmer Press.
- Eisner, E. W. (1998). *The enlightened eye: qualitative inquiry and the enhancement of educational practice.* Upper Saddle River, N.J.: Merrill.
- Eisner, E. W. (2001). Pedagogikk-kritikk. In E. L. Dale (Ed.), *Om utdanning: klassiske tekster* (pp. 205-230). Oslo: Gyldendal akademisk.
- Geertz, C. (1973). *The interpretation of cultures: selected essays.* USA: Basic Books.
- Gudmundsdottir, S. (1997). Forskningsintervjuets narrative karakter. In B. Karseth, S. Gudmundsdottir & S. Hopmann (Eds.), *Didaktikk: Tradisjon og fornyelse. Festskrift til Bjørg Brandtzæg Gundems 70-års dag.* (pp. 202-216). Oslo: UiO, Pedagogisk forskningsinstitutt og Ad Notam.
- Jernes, M. (2001). Budskap i fysisk miljø og dagsrytme. *Barnehagefolk, 3,* 26-33.
- Jernes, M., & Engelsen, K. S. (2012). Stille kamp om makten. En studie av barns interaksjon i digital kontekst i barnehagen. *Nordic Studies in Education, 32*(3-4), 281-296.
- Jernes, M. (2013). *Interaksjoner i digitale kontekster i barnehagen. Doktorgradsavhandling* (Vol. 186). Stavanger: Universitetet i Stavanger.
- Lave, J., & Wenger, E. (1991). *Situated learning: legitimate peripheral participation.* Cambridge: Cambridge University Press.
- Steinsholt, K., & Sommerro, H. (2006). *Improvisasjon: kunsten å sette seg selv på spill.* Oslo: Damm.