Midwives and competency development

A lifelong workplace learning journey!

Umeå

Mieke Embo

8th May 2015
Overview

1. **Context**: Belgium – Midwifery - Education
2. **Concept** Workplace Learning
3. **Continuous learning** in midwifery education
   - Concept continuous learning
   - Problems
   - Aim
   - Research questions
   - Methods
   - Results (Embo’s Workplace Learning Model)
   - Conclusion
4. **Questions**
1. Context: Belgium – Midwifery - Education
## Europe: Belgium - Sweden

<table>
<thead>
<tr>
<th></th>
<th>HABITANTS (x 1000)</th>
<th>%</th>
<th>SURFACE (km² x 1000)</th>
<th>%</th>
<th>BNP Miljard dollar</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>511 763</td>
<td></td>
<td>4 482,1</td>
<td></td>
<td>18 131,7</td>
<td></td>
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<tr>
<td>BELGIUM</td>
<td>10 449</td>
<td>2 %</td>
<td>30,5</td>
<td>0,7</td>
<td>467,1</td>
<td>2,6</td>
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<tr>
<td>SWEDEN</td>
<td>9 724</td>
<td>1,9</td>
<td>450,3</td>
<td>10,0</td>
<td>434,2</td>
<td>2,4</td>
</tr>
</tbody>
</table>
Belgium: Federal state

3 official languages: Dutch, French, German

Federal state: Everything connected with public interest
1 Minister of health

Community: Everything related to culture in the broad sense
2 Ministers of Education
Midwifery
Midwifery care

Belgium
• +/- 10 000 midwives (no official registration)
• +/- 100 000 births in Belgium
• +/- 1% home births in Belgium
• Minority of midwives works independent
• Gynaecologist – Midwife
• 4,5 days in maternity ward after birth

Flanders 2013
• 66,197 births
• 23,9 % induction
• 70,3 % epidural anesthesia
• 20,3 % caesarean section
Midwifery Education

Flanders
- Three-year undergraduate programme (180 ECTS)
- Competency Framework with 11 Learning Outcomes
- Direct entry
- Entry requirement: secondary school
- 11 schools – free choice

Ghent
- Modular and Competency based curriculum
- Experiential workplace learning
- EU-directives
Midwifery Workplace Learning Ghent
## Midwifery Workplace Learning Ghent

<table>
<thead>
<tr>
<th>MIDWIFERY SETTINGS</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
</tr>
<tr>
<td><strong>MATERNITY WARD</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>DELIVERY WARD</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>GYNAECOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NEONATAL CARE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MIDWIFERY IN THE FIRST ECHELON</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MINOR: CHOICE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL ECTS/YEAR</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL ECTS</strong></td>
<td>66/180</td>
</tr>
</tbody>
</table>

6 ECTS = 4 weeks or 132 workplace learning hours
2. Concept: Workplace Learning
Concept Workplace Learning

Study type which involves the acquisition of knowledge, skills and attitudes through carrying out tasks – and reflecting on tasks and competency growth – in a vocational context.

(Embo, 2015)
Concept

WORK
PLACE
LEARNING
WORK

Work is an activity where individuals alone and together participate in productive endeavours to complete tasks and to achieve midwifery outcomes which are either self set and set by others and which must be remunerated.

(Cairns and Malloch, 2006) – (Embo, 2015)
LEARNING

Learning is a process of change in an individual or group through activity. It is temporal and mindful.
(Cairns and Malloch, 2013)

LEARNING THEORIES

- Behaviorisme
- Cognitivisme
- Constructivisme
- Socio-culturele leertheorieën (COP)
- .....
3. Continuous Workplace Learning
Workplace learning is a continuous and self-regulated process of personal and professional development (Malloch et al., 2013)
Problem: COMPLEXITY and DISCONTINUITY
Discontinuous educational programmes (Ellaway et al., 2013)
Problem: Discontinuous supervision (Sundler et al., 2014)
PROBLEM: Discontinuity between learning and assessment (Dannefer, 2013)
Aim

Investigating how the development of a continuous and self-directed learning process in a discontinuous and complex workplace learning environment can be organised
Research questions

How can learning, assessment and supervision be **integrated**?

What are the implications for the **learning design**?

What is the effect on **summative assessment**?
Research design

Four studies with students, graduates and supervisors from the 3-year Midwifery bachelor programme in Ghent

Theoretical paper with the design of a new workplace learning model
Embo et al. Integrating Learning, Assessment and supervision in a competency framework education. Nurse Education Today 2014; http://dx.doi.org/10.1016/j.nedt.2014.11.022
STEP 1: Competency selection
STEP 2: defining learning goals
STEP 3: self-monitoring performance
STUDY 1 & 2

Selfmonitoring: reflection on actions (Eva & Regehr, 2005)


STUDY 1 & 2

Effect of an integrated learning- and assessment instrument on daily practice


<table>
<thead>
<tr>
<th>STUDY 1</th>
<th>STUDY 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ perceptions</td>
<td>Supervisors’ perceptions</td>
</tr>
<tr>
<td>Effect integration</td>
<td>Effect integration</td>
</tr>
</tbody>
</table>


RESULTS STUDY 1
Students’ perceptions

Effect integration

Supports active learning

Reflection & feedback information

Checklist is a ‘quick scan’ to facilitate learning and assessment

RESULTS STUDY 2
Supervisors’ perceptions

Effect integration


RESULTS STUDY 1
Students’ perceptions

Effect integration
- Supports **active** learning
- Reflection & feedback is information
- Checklist is a ‘**quick scan**’ to facilitate learning and assessment


RESULTS STUDY 2
Supervisors’ perceptions

Effect integration
- **Student**-centred supervision
- Information is **memory support**
- Checklist visualises **growth** and makes **outcomes** explicit

RESULTS STUDY 1
Students’ perceptions

Effect integration

Supports active learning
Reflection & feedback information
Checklist is a ‘quick scan’ to facilitate learning and assessment

Summative assessment: score?


RESULTS STUDY 2
Supervisors’ perceptions

Effect integration

Student-centred supervision
Information is memory support
Checklist visualises growth and makes outcomes explicit

Summative assessment: role?

RESULTS STUDY 1
Students’ perceptions

Effect integration
- Supports **active** learning
- Reflection & feedback information
- Checklist is a ‘**quick scan**’ to facilitate learning and assessment

Summative assessment: **score**?

Barriers


RESULTS STUDY 2
Supervisors’ perceptions

Effect integration
- **Student**-centred supervision
- Information is **memory support**
- Checklist visualises **growth**, makes outcomes **explicit**

Summative assessment: **role**?

Barriers

Essential underlying educational conditions
FEEDBACK - CULTURE
STEP 4: self-assessment
Reflection on competency development (Eva & Regehr, 2005)
STUDY 3
A comparison between reflection on actions & reflection on competency development
(Eva & Regehr, 2005)

Self-monitoring & Self-assessment


### RESULTS STUDY 3

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df1</th>
<th>sig</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>32</td>
<td>7.28</td>
<td>1.08</td>
<td>5.70</td>
<td>1.99</td>
<td>4.31</td>
<td>31</td>
<td>0.000</td>
<td>0.98</td>
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<tr>
<td>Year 2</td>
<td>57</td>
<td>6.85</td>
<td>1.20</td>
<td>4.57</td>
<td>1.81</td>
<td>8.06</td>
<td>56</td>
<td>0.000</td>
<td>1.48</td>
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<td>6.88</td>
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<td>5.20</td>
<td>1.76</td>
<td>5.57</td>
<td>35</td>
<td>0.000</td>
<td>1.10</td>
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<tr>
<td>Grad.</td>
<td>21</td>
<td>6.88</td>
<td>1.77</td>
<td>6.42</td>
<td>1.66</td>
<td>0.74</td>
<td>20</td>
<td>0.466</td>
<td>0.26</td>
</tr>
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</table>

N= number of respondents; Mean: on a score from 1 to 10; SD= standard deviation; t=paired samples t-test; df=degrees of freedom; sig=significant at p< 0.0001; Effect size= Effect size estimate for the differences between two means.
RESULTS: STUDY 3

<table>
<thead>
<tr>
<th></th>
<th>Reflection-on-actions</th>
<th>Reflection-on-competency development</th>
<th>Paired sample t-test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
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N= number of respondents; Mean: on a score from 1 to 10; SD= standard deviation; t=paired samples t-test; df=degrees of freedom; sig=significant at p< 0.0001; Effect size= Effect size estimate for the differences between two means.
STEP 5: assessment of individual competencies
STEP 6: assessment of professional competence

(Hodges, 2013)
STUDY 4
Relationship between

Reflection on competency development & Reflection on professional competence

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-sectional</td>
<td>0.56**</td>
<td>0.55**</td>
<td>0.30*</td>
</tr>
<tr>
<td>Retrospective</td>
<td>0.42**</td>
<td>0.40**</td>
<td>0.45**</td>
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* correlation is significant at the 0.05 level (one-tailed)
** correlation is significant at the 0.01 level (one-tailed)

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<td></td>
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STEP 5 – STEP 6: Programmatic continuüm
STUDY 5
Programmatic continuüm
Conclusion

How to integrate learning, assessment and supervision?

An integrated model is potentially valuable to support continuous workplace learning, but the success depends of conditions.

What’s the effect on the learning design?

A twofold reflection- and feedback strategy supports a self-regulated learning continuüm.

What’s the effect on the design of summative assessment?

A twofold assessment strategy supports a programmatic assessment continuüm.
Integrating workplace learning, assessment and supervision in health care education

http://pub.maastrichtuniversity.nl/700fdd2c-b660-48cf-ad32-2a9f4effff95

University Maastricht
Mieke Embo

Promotoren
Prof. dr. C.P.M van der Vleuten
Prof. dr. M. Valcke

Copromotor
Dr. E.W. Driessen
rector et collegiam decanorum
universitatis praebuit in moxam
lectoribus solutum

Omnibus, quorumque eam hodie in presentia sine et merito
et honore vel obitu publico consequentibus, occipus eae
omnium hodie conscripsit enigmaticalium causam omnem
imprimis, apud mea, cum omnibus.

Mmax. J.C. Embo

omnium invictus studiis acuiterque satisfactis
sororibusque honorem de suae dignitatis non simulatis
apud mea, cum omnibus.

doctorem

ac maxime eam honorem et eam maxime
honore et omnibus conscriptis

Doctorum

maxime eam
maxime

Rector Magnificus
Promotus

[Signature]
Thanks
Time for questions!

Interest and ideas for further research?
mieke.embo@arteveldehs.be