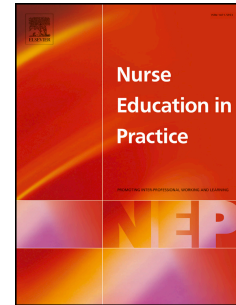


# Accepted Manuscript

Continuing midwifery education beyond graduation: Student midwives' awareness of continuous professional development

M. Embo, M. Valcke



PII: S1471-5953(15)00141-9

DOI: [10.1016/j.nepr.2015.08.013](https://doi.org/10.1016/j.nepr.2015.08.013)

Reference: YNEPR 2032

To appear in: *Nurse Education in Practice*

Received Date: 16 January 2015

Revised Date: 19 August 2015

Accepted Date: 29 August 2015

Please cite this article as: Embo, M., Valcke, M., Continuing midwifery education beyond graduation: Student midwives' awareness of continuous professional development, *Nurse Education in Practice* (2015), doi: 10.1016/j.nepr.2015.08.013.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**TITLE PAGE**

CONTINUING MIDWIFERY EDUCATION BEYOND GRADUATION: STUDENT  
MIDWIVES' AWARENESS OF CONTINUOUS PROFESSIONAL DEVELOPMENT.

**Authors**

M. Embo<sup>1\*</sup> ([mieke.embo@arteveldehs.be](mailto:mieke.embo@arteveldehs.be))

M. Valcke<sup>2</sup> ([martin.valcke@UGent.be](mailto:martin.valcke@UGent.be))

\*corresponding author

**Author affiliation**

<sup>1</sup> Midwifery Department, University College Arteveldehogeschool Ghent, Voetweg  
66, 9000 Ghent, Belgium.

<sup>2</sup> M. Valcke, Department of Educational Studies, Faculty of Psychology and  
Educational Sciences, Ghent University, H. Dunantlaan 2, 9000 Ghent, Belgium.

**Corresponding author's contact information**

Mieke Embo

University College Arteveldehogeschool Ghent, Midwifery Department

Voetweg 66

9000 Ghent (Belgium)

Phone: 0032/9 238 20 34

Mobile: 0032/485 63 05 62

Fax: 0032/9 234 70 00

Email: [mieke.embo@arteveldehs.be](mailto:mieke.embo@arteveldehs.be)

**Journal:** Nurse Education in Practice

**Title**

Continuing midwifery education beyond graduation: student midwives' awareness of continuous professional development.

**KEYWORDS**

Continuous Professional Development, activities, undergraduate, midwives, reflection, midwifery practice

**ABSTRACT**

Midwifery education plays an important role in educating graduates about engaging in continuous professional development (CPD) but there is a lack of empirical research analysing student midwives' awareness of CPD beyond graduation. We aimed to explore student midwives' awareness of the need to become lifelong learners and to map their knowledge of CPD activities available after graduation. Therefore, forty-seven reflective documents, written in the last week of student midwives' training programme, were analysed in a thematic way. Content analysis confirmed student midwives' awareness of the importance of CPD before graduation. They mentioned different reasons for future involvement in CPD and described both, formal and informal CPD-activities. Respondents were especially aware of the importance of knowledge, to a lesser degree of skills-training and still less of the potential value of the Internet for individual and collective learning. Respondents perceived a need for a mandatory preceptorship. Supporting learning guides were highly valued and the importance of reflection on CPD was well-established. This could have resulted from an integrated reflective learning strategy during education.

Conclusion: Undergraduate midwives are aware of the importance of CPD and the interplay of formal and informal learning activities. Virtual learning requires special attention to overcome CPD challenges.

## INTRODUCTION

Continuing education and continuous professional development are formal requirements to maintain registration to practice. Continuing education (CE) can be defined as a structured educational process supporting continuous professional development (CPD) (Graham et al., 2006). CPD keeps midwives up-to-date to meet the needs of patients (women and babies), and the health service in general. It incorporates the continued acquisition of new knowledge, skills, and attitudes to maintain and enhance professional competent practice (Peck et al., 2000). Continuing education and continuous professional development belong to the EU-Framework of Lifelong Learning. Lifelong learning refers to all learning activities undertaken throughout life (European Commission, 2000). The present study explores student midwives' awareness of the need to become lifelong learners and to map their knowledge of CPD-activities available after graduation.

The need to become lifelong learners can be linked to current economic and social changes and the rapid transition to a knowledge-based society. This reality calls for new educational approaches in terms of education and training (European Commission, 2000). The International Confederation of Midwives (ICM) described a lifelong learning approach in their Position Statement: Basic and Ongoing Education for Midwives (2014). ICM states that midwifery competence can be achieved through multiple formal educational pathways based on the ICM Global Standards for Midwifery Education (ICM, 2011), that all midwifery educators should be competent in theory and practice and that learning is an ongoing process

to ensure continuous professional development (CPD). ICM further stresses that it is the ethical duty of each midwife to remain safe and current in practice at all times. Therefore, continuing education should be compulsory for all practising midwives (ICM, 2014). As stated before, CPD is the embodiment of both professional learning and personal growth (Davis et al., 2003). It incorporates educational methods beyond the didactic, embodies concepts of self-directed learning and personal development and considers organizational and system factors (Barnes, Davis, & Fox, 2003).

CPD is complex and builds on different theories of learning, comprising adult learning, constructivist learning, and both situated and social learning theories (Johnson and Davies, 2009; Carter and Jackson, 2009). These learning theories underpin the adoption of varying didactic strategies (e.g., case studies, peer evaluation, portfolio development) in both formal and informal settings. The latter integration of formal and informal learning appears to be essential to develop new competencies, both from an individual and organizational perspective (Ellström, 2013 p106).

(1) In the past, CPD emphasised technical upgrading, following conventional didactical routines (defined as a lecture-based, teacher driven approach). CPD-activities mainly built on thematic content-focused courses, conferences by experts, hands-on workshops, and the like (Bolderston, 2007). More recently, the Internet facilitates participation in online CPD-activities; e.g., with e-learning packages (Bolderston, 2007). These formal learning activities can also lead to academic or professional awards (Johnson, 2012).

(2) A contemporary view on CPD adopts adult education approaches and emphasizes starting from learner-defined goals as well as 'small-group, learner-centered, experiential, reflective, deep and self-directed learning' (Stevenson et al., 2001; Ellström, 2013 p 105; Evans et al., 2013 p356, p362). Taylor and Evans show that self-directed learning has become a fundamental component of informal learning: 'searching independently for information' and

'practicing without supervision'. Yet, informal learning is not limited to independent mastery of work procedures but also encompasses the relationship between learners, context and opportunities. For example, the authors found that informal learning also results from 'mentoring or coaching' as well as participating in 'focused discussions' or committees (Evans et al., 2013 p 363). In this context we mix adult, constructivist and social learning theories, resulting in what is labelled as 'communities of practice' (CoP). Communities of practice are 'informal networks' among members of a particular specialty or work group who have developed a common sense of purpose and a desire to share work-related knowledge and experience (Lave and Wenger, 1990; Mann, 2011). In this way CoPs offer a relevant platform for CPD. In addition, we build on the potential of the Internet to support informal CPD-activities; e.g., through e-learning portfolios, exchange and discussion of cases, interactive Internet discussion groups, ... (Johnson and Davies, 2009; Stewart et al. 2012; Brookshire et al., 2013 p 331). Available evidence shows that informal learning, strongly emphasizing participant involvement can change professional practice and, in some situations, health outcomes (Bolderston, 2007).

The former implies undergraduate health care programmes should support students to become independent and lifelong learners. Initial training should already push a learner focus on formal and informal CPD-activities, in order to increase their motivation for further learning (Evans et al., 2013 p 362). This presents the context and the aim of the present qualitative study: to explore student midwives' awareness of the need to become lifelong learners and to map their knowledge of CPD-activities available after graduation. So far, no research has been published building on the point of view of student midwives at the end of their midwifery training. The following research questions guided our research: 1) What are student' midwives perceptions about professional development at the end of their midwifery

training programme?; 2) How will undergraduates keep themselves updated once they graduated?

## **METHOD**

### **Context**

The Midwifery department of the University College Arteveldehogeschool, Ghent (Belgium) offers a three-year undergraduate programme with a competency-based curriculum, resulting in a midwifery certification that gives access to the independent midwifery profession. The transition from novice to expert is not – unlike in the UK - legally organised with a mandatory preceptorship. Nevertheless, CPD is legally regulated since 2010 (Ministerial Circular, 2010). To develop lifelong learning competencies, an integrated learning, assessment and supervision workplace learning model was implemented in the workplace learning programme (Embo et al., 2014). An important feature of the latter curriculum is a reflective learning and assessment strategy with a written reflection on CPD at the end of the last midwifery placement, shortly before graduation. Students are not enrolled in a special CPD-course but - as an integrated part of their final placement - they are instructed to reflect on midwifery competencies, their current professional development and education needs and the importance of CPD for future learning. This reflection task is invoked by the following questions: Do you feel ‘fit for practice’? What competencies need further improvement? What do you think about your future learning as a midwife? The students’ answers to these reflection questions were analysed to look for an answer for the research questions in this paper.

### **Research design**

This qualitative study builds on the analysis of structured written reflections on CPD, gathered at the end of the final midwifery placement. Forty-seven written reflection assignments from third year midwifery students, who graduated between June and September 2013 were used in this study. The population consisted of 51 students, reflections from four students were not included because their materials were accidentally not archived. All written reflections considered for analysis were collected between April and September 2013. The reflection texts were anonymized before analysis by the principal investigator (ME) who was not involved in supervision nor in the assessment of students' reflections. The study was conducted in full accordance with the 1975 Declaration of Helsinki, its revised version of 1983 and in full accordance with national ethical guidelines.

### **Data analysis**

Following the guidelines of Miles and Hubermann (1999 p58), we created a provisional 'start list' of codes prior to the analysis activity. This start list included all CPD-activities and CPD-goals as found in the literature review described in the introduction. The list was applied to a first set of field notes (n=5), and then examined closely for fit and power. The list of codes was discussed between the researchers. The description of indicators for some codes was revised, but in general the conceptual orientation served the analysis purpose sufficiently. The ATLAS.ti software (version 6.1.6) was used to manage and store data. Content analysis was performed by the first author, next to a research assistant who - independently – also coded all documents. Both researchers compared their findings and discussed differences until consensus was attained.

## **RESULTS**



We present the results for the central themes that were identified in relation to the research questions.

**Research question 1:** What are student' midwives perceptions about professional development at the end of their midwifery training programme?

Most students identified different reasons to engage in continuous professional development after graduation and the importance of that for their future careers: building-up autonomy and confidence (4/47); keeping up-to-date (13/47); and supporting evidence-based practice (10/47). Different respondents described that a preceptorship with supervision and feedback, at the start of their careers, would be helpful to gain professional autonomy and to build-up confidence as a practicing midwife. Respondents who described the importance of staying up-to-date referred to attaining new knowledge (12/47), developing new techniques (9/47), and being acquainted with state-of-the-art developments in practice (4/47). The importance of updating one's knowledge was well-established; less input was found about the importance of practice-based training. Only two students mentioned the relevance of practical training courses in order to maintain life-saving skills such as cardiopulmonary resuscitation. Finally, the importance of CPD on evidence-based midwifery practice was mentioned in relation to improving patient care (7/47), as well as personal and professional competency development (8/47).

Workplace learning experiences during undergraduate education influenced respondents' perceptions about on-going professional development and personal education needs. These perceptions reflect positive learning experiences, awareness of shortcomings in professional competences, as well as experiences with role models. One student documented how she didn't attain 100% of the competencies because she didn't cover all pathology during her

midwifery clerkships (P18). Another student described how her learning experiences triggered continuous professional development: 'Thanks to my last internship in the first echelon, I see clearly that my knowledge on breastfeeding is limited. I really want to work on it, because guiding the lactation of young mothers is a unique job for a midwife. That's why, after a bit of experience in the field, I want to follow the postgraduate lactation studies (P34)'. One student referred to her role models during placements: 'During my placements, I heard midwives talking about attending a seminar and information sessions. I think they have a huge wealth of choices as midwives (P38)'.

**Research question 2: How will undergraduates keep themselves updated once they graduated?**

The answer to this research question brings us to respondents' preferences for, and awareness of available CPD-activities. Respondents described both, formal and informal CPD-activities. Although the majority of students referred to one or more concrete CPD-activities, six students did not mention CPD-activities at all. They reacted in general terms about 'further learning'. In the reflective writings of other students (n=41), clear CPD-activities could be identified. The researchers coded them as formal or informal CPD-activities, as described in the next paragraphs.

The first important CPD-activities comprised formal education programmes (23/41). Most formal education programmes were those resulting in academic or professional credits. Within this study, students generally referred to short courses (such as a lecture, a single course, a workshop, skills training session) or longer programmes, resulting in a formal degree or credit certificate (e.g., a master's degree in nursing and midwifery, a paediatric nursing degree, a lactation consultant certificate, or an educational degree).

A second important cluster of CPD-activities was related to the informal activity of ‘searching independently for information’. Students wrote about the importance of reading scientific articles and journals (25/41). A quarter of the students mentioned continuing their professional association membership (11/41) because they perceived benefits from reading their magazines: ‘I have, since I started Midwifery, subscribed to the magazine of the professional association. These articles are very interesting and I will continue to read them in the future (P37)’. Remarkably, only a few students planned to consult the Internet (5/41), and no student referred to distance-learning programmes.

Different experience-based activities were coded as ‘experiential learning on-the-job’ (20/41), ‘reflection’ (11/41) and ‘supervision’ (14/41). Students recognized that experienced midwives and gynaecologists could facilitate personal and professional development by encouraging reflection, by identifying gaps in knowledge and skills, and by providing structured feedback to develop their safety practice and to develop confidence. This was stated as follows: ‘I think it is important to be self-critical in order to improve performance (P41)’; ‘Also it’s important to be honest when you are not sure and to ask for supervision from an experienced midwife (P44)’; ‘I will ask many questions to fellow midwives and gynaecologists. The experience they have is practical and beyond comparison to books (P40)’. The latter reflects respondent’s awareness of the social learning impact. In addition to this supervision, two other types of social learning could be identified: building on a social network (2/41), and being a member of a Community of Practice (10/41). The latter was documented as follows: ‘Everyone can learn from each other! So, I think it is important to be aware of views and opinions of other midwives. This is only possible by regularly sitting around the table and sharing knowledge with each other. This will help developing new insights (P3)’.

## DISCUSSION

In this study, we investigated student midwives' awareness of the need become lifelong learners and to map their knowledge of CPD-activities after graduation. The study was conducted at the end of their initial midwifery education. Specifically, we sought to answer the research questions about graduate's perceptions about professional development and how they would keep themselves updated after graduation? Answers to these questions were based on a content analysis of student midwives' written reflections on the brink of graduation.

The results showed that the majority of midwifery students were aware of the importance of CPD following their graduation. They described different reasons: gaining autonomy and building confidence, supporting evidence-based midwifery practice and keeping up-to-date. A critical finding was that respondents mainly focused on updating their 'knowledge'. These results suggest respondents undervalued the importance of skills training. These findings justify why skills-updates are increasingly becoming mandatory as stated by professional associations and through health care policies; see e.g., the NMC requirements (Johnson 2012).

The importance of CPD on gaining autonomy and building professional confidence at the start of their career was considered as an important issue. The written reflections made clear that most new 'midwives' needed support and guidance when making the transition from student to an accountable practitioner. This need for additional support was already stressed by Livingstone et al. (2008) who found that adults often require more learning support at the beginning of a structured learning opportunity, though self-direction gradually increases with confidence and engagement. (Evans et al., 2013 p363). These findings align with the move to introduce a mandatory period of 'preceptorship' that supports continuous learning after graduation. This preceptorship is defined by the UK Department of Health as a period of structured transition for the newly registered practitioner during which he or she will be

supported by a preceptor, to develop their confidence as an autonomous professional, refine skills, values and behaviors and to continue on their journey of life-long learning (Department of Health - CNO Directorate, 2010). In other words, a preceptorship is a foundation period for practitioners at the start of their careers which help them begin the journey from novice to expert (Johnson 2012). The latter entails the creation of a supportive learning and working climate where students or newcomers are given opportunities to develop professional competence (Carlson, 2014; Ellström, 2013 p106). Learning from experiences in the context of the Community of Practice fits socio-cultural workplace learning theories (Mukhopadhyay, 2011; Mann, 2011). This situated learning can complement experiential learning by framing the exploration of experience within a community's norms, values and activities. Especially socio-cultural theories of workplace learning seem to offer useful frameworks for understanding how to facilitate a learner's continuous development in complex social midwifery learning environments, a topic that deserves further research (Mann, 2011).

One key step in the CPD-process is to ensure newly registered professionals have access to suitable CPD opportunities that meet their needs and help to build up confidence as a practicing professional (Johnson 2012). This brings us to the second research question, the awareness of CPD-activities. Considering the number and the nature of CPD-activities discussed by students, we observe that few respondents did not reflect on CPD-activities at all. The majority described explicitly formal and informal CPD-activities in their written reflections. In the next paragraphs, we will discuss related issues about students' awareness of the value of Internet, their awareness of supervision and reflection activities, and the potential of learning through a Community of Practice.

A critical finding was a rather weak awareness of the potential of the Internet as a CPD platform. Only two students mentioned Internet use in view of social professional networking and only five students planned website consultation. No students referred to the potential of

online courses. These findings are consistent with research involving nurses and midwives (Gould et al., 2007; Wray, 2011; Stewart et al., 2012). The reason for underestimating the Internet as a source for CPD requires further investigation since it is clear that 'virtual' workplace learning could be a successful catalyst for CPD in the twenty-first century. In addition, we can build on available evidence that identified critical factors to design, develop and promote successful virtual workplace learning (Brookshire et al., 2013 p338).

Students' awareness of the importance of supervision and reflection on CPD was well established. This could have been the result of the actual involvement in the integrated workplace learning-, assessment- and supervision strategy for midwifery education as established at the University College Arteveldehogeschool Ghent (Embo et al., 2014). These findings help to validate the innovative curriculum implementation. They also reconfirm the potential of reflection for developing self-directed and lifelong learning (Mann et al., 2009; Sandars, 2009). As described by Cooke (1999), CPD programmes without such reflective and self-evaluative function risk becoming merely 'stamp collecting', with the practitioner hardly achieving 'professional development' (Bolderston, 2007).

Another positive finding was respondents' awareness of the importance of learning through a Community of Practice. Once again, the crucial role of supervisors (or learning guides) was emphasized. This is not surprising. As we know from research, the efficacy of learning relies heavily on interactions with learning guides (Henderson and Eaton, 2013; Carlson, 2014). Nevertheless, the results show a strong focus on individual learning instead of collective learning. This is a topic of concern because research shows that graduates do not immediately practice as individuals. Only in the long term, few of them will work in individual professional settings, with a majority working in larger group-based settings in hospitals, governmental settings, and academic centres, and nearly all will work in service-delivery 'networks' of some sort. Therefore, more attention is needed to establish collegial and

collaborative learning opportunities in practice settings (Frankford et al., 2000; Irby et al., 2013).

A limitation of the present study is the limited sample size and the setting of the study in one midwifery department in Belgium. This limits the generalizability of the results. Further research is needed to expand our understanding of undergraduate learners' interpretation of CPD-needs and CPD-activities. This research should also help in determining how students can be encouraged to get involved in continuous professional development, and to push the adoption of Internet-based provisions in view of formal and informal learning, as well as for individual and organizational learning. Furthermore, the research could centre on the relationship between newly graduates' awareness of CPD-activities and the didactical approaches adopted during undergraduate education.

## CONCLUSIONS

Analysis of written reflection documents confirmed student midwives' awareness of CPD on the brink of their graduation. Their awareness reflects that engagement in CPD is necessary for gaining autonomy and building confidence, for keeping up-to-date, and to support evidence-based practice. A period of preceptorship was perceived as crucial. The majority of respondents mentioned a variety of formal and informal CPD-activities but their awareness of Internet-based activities for CPD was limited. Respondents' view upon informal CPD-activities is well-established for activities such as supervision and reflection. This could have been the result of an integrated workplace learning strategy that was established to stimulate continuous learning in undergraduate midwifery education. More research on this professional developmental continuum beyond graduation is needed.

**COMPETING INTERESTS**

The authors declare that they have no competing interests.

**NAMES OF THE INSTITUTIONS AT WHICH THE RESEARCH WAS CONDUCTED**

Midwifery Department, University College Arteveldehogeschool Ghent, Belgium.

**REFERENCES**

Barnes, B., Davis, D., Fox, R., 2003. The continuing professional development for physicians: From research to practice. Chicago: American Medical Association.

Bolderston, A., 2007. Maintaining competence: a holistic view of continuous professional development. *Journal of Radiotherapy in Practice* 6, 133-141.

Brookshire, R. G., Lybarger, K. M., Keane, L. B., 2013. Virtual Workplace learning: Promises met? In: *The SAGE Handbook of Workplace Learning* by Malloch, M., Cairns, L., Evans, K., O'Connor, B. Sage Publications, Los Angeles, London, New Delhi, Singapore, Washington DC.

Carlson, E., 2014. Critical friends: A way to develop preceptor competence? *Nurse Educ Pract.* From: <http://dx.doi.org/10.1016/j.nepr.2014.11.016>.

Carter, Y., Jackson Y., 2009. *Medical Education and Training. From theory to delivery.* Oxford University Press, UK.

Cooke, K., 1999. CPD and portfolio: the process and the product. *Journal of Radiotherapy in Practice* 1(2), 57-64.



Davis, D., Evans, M., Jadad, A., Perrier, L., Rath, D., Ryan, D., Sibbald, G., Straus, S., Rappolt, S., Wowk, M., Zwarenstein, M., 2003. The case for knowledge translation: shortening the journey from evidence to effect. *BMJ* 327(7405), 33-35.

Department of Health, CNO Directorate, 2010. Preceptorship Framework for Newly Registered Nurses, Midwives and Allied Health Professionals. Retrieved from: [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/@abous/documents/digitalasset/dh\\_109794.pdf](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@abous/documents/digitalasset/dh_109794.pdf)

Ellström, P., 2013. Informal Learning at Work: Conditions, Processes and Logistics. In: The SAGE Handbook of Workplace Learning by Malloch, M., Cairns, L., Evans, K., O'Connor, B. Sage Publications, Los Angeles, London, New Delhi, Singapore, Washington DC.

Embo, M., Driessen, E., Valcke, M., van der Vleuten, C., 2014. Integrating Learning, Assessment and Supervision in a Competency Framework for Clinical Workplace Education. *Nurse Educ Today*. Retrieved from: <http://doi:10.1016/j.nedt.2014.11.022>.

European Commission, 2000. A Memorandum on Lifelong Learning. Retrieved from: [http://ec.europa.eu/education/policies/III/III\\_en.html](http://ec.europa.eu/education/policies/III/III_en.html) (accessed 04.06.2015).

Evans, K., Waite, E., Kersh, N., 2013. Towards a Social Ecology of Adult Learning in and through the Workplace. In: The SAGE Handbook of Workplace Learning by Malloch, M., Cairns, L., Evans, K., O'Connor, B. Sage Publications, Los Angeles, London, New Delhi, Singapore, Washington DC.

Frankford, D., Patterson, M., Thomas, K., 2000. Transforming Practice Organisations to Foster Lifelong learning and Commitment to Medical Professionalism. *Acad Med* 75(7), 708-717.

Gould, D., Drey, N., Berridge, E. J., 2007. Nurses' experiences of continuing professional development. *Nurse Educ Today* 27(6), 206-209.

Graham, I., Logan, J., Harrison, M., Straus, S., Tetroe, J., Caswell, W., Robinson, N., 2006. Lost in Knowledge Translation: Time for a Map? *The Journal of Continuing Education in the Health Professions* 26,13-24.

Henderson, A., Eaton, E., 2013. Assisting nurses to facilitate student and new graduate learning in practice settings: What 'support' do nurses at the bedside need? *Nurse Educ Pract* 13(3), 197-201.

International Confederation of Midwives (ICM), 2011. Global Standards for Midwifery Education. From: <http://www.internationalmidwives.org>. (accessed 14.06.2015).

International Confederation of Midwives (ICM), 2014. Position Statement: Basic and Ongoing Education for Midwives. From: <http://www.internationalmidwives.org>. (accessed 14.06.2015).

Irby, B., Brown, G., Lara-Alecio, R., Jackson S, 2013. *The Handbook of Educational Theories*. Charlotte, North Carolina: Information Age Publishing.

Johnson, N., Davies, D., 2009. Continuing professional development. In Carter, Y. and Jackson, N. *Medical Education and Training. From theory to delivery*. Oxford University Press, U.K.

Johnson, G., 2012. Learn to stay up to date. *Occupational Health* 64(9).

Lave, J., Wenger, E. 1990. *Situated learning: legitimate peripheral participation*. Cambridge University Press, Cambridge.

Livingstone, D., Mirchandani, K., Sawchuk, P., 2008. In: *The Future of Lifelong Learning and Work: Critical Perspectives*. Rotterdam: Sense Publishers.

Mann, K., Gordon, J., MacLeod, A., 2009. Reflection and reflective practice in health professions education: A systematic review. *Adv Health Sci Educ*, 14(4), 595-621.

Mann, K., 2011. Theoretical perspective in medical education: past experience and future possibilities. *Med Educ*, 45(1), 60-68.

Miles, M.B., Huberman, A.M., 1994. *An Expanded Sourcebook. Qualitative Data Analysis*, second edition. Sage Publications. Thousand Oaks, London, New Delhi.

Ministerial circular March 15 [C – 2010/24123], 2010. *Belgian Official Gazette*, 05.05.2010.

Retrieved from:

[http://www.anpi.be/media/misc\\_media/norme%20enregistrement%202010%2005%2005.pdf](http://www.anpi.be/media/misc_media/norme%20enregistrement%202010%2005%2005.pdf).

Mukhopadhyay, S., Smith, S., Cresswell, J., 2011. Lifelong learning in obstetrics and gynaecology: how theory can influence clinical practice. *Journal of Obstetrics and Gynaecology* 31, 476-479.

Peck, C., McCall, M., McLaren, B., Rotem, T., 2000. Continuing medical education and continuing professional development: International comparisons. *BMJ* 320, 432-435.

Sandars, J., 2009. The use of reflection in medical education: AMEE Guide no 44. *Med Teach* 31(8), 685-695.

Stevenson, A., Higgs, R., Sugarman, J., 2001. Teaching professional development in medical schools. *Lancet* 357(9259), 867-870.

Stewart, S., Sidebotham, M., Davis, D., 2012. The virtual international day of the midwife: Social networking for continuing professional development. *Nurse Educ Pract* 12, 248-252.

Wray, J., 2010. Think before you type! *The Practising Midwife* 13(7), 28.

ACCEPTED MANUSCRIPT

To Nurse Education in Practice

Date 19 08 2015

Concerning Revision of Manuscript NEP-D-15-00037, titled: *Continuing midwifery education beyond graduation: student midwives' awareness of continuous professional development.*

### **ACKNOWLEDGMENTS**

We thank Tracy Embo for her assistance for editing the final version of this manuscript and Marianne Mead for her comments on an earlier draft.

To Nurse Education in Practice

Date 10 03 2015

Concerning Revision of Manuscript NEP-D-15-00037, titled: *Continuing clinical education beyond graduation: student midwives' awareness of continuous professional development.*

### **Ethical Approval Statement**

The study was conducted in full accordance with the 1975 Declaration of Helsinki, and the revised version of 1983 and in full accordance with national ethical guidelines.

on behalf of the co-author,

Mrs Mieke Embo, Midwife, MSc.

Contact details corresponding author:

Mieke Embo

Voetweg 66, 9000 Gent (Belgium)

Mobile +32 485 63 05 62

e-mail: [mieke.embo@artevelddehs.be](mailto:mieke.embo@artevelddehs.be)

To Nurse Education in Practice

Date 10 03 2015

Concerning Revision of Manuscript NEP-D-15-00037, titled: *Continuing clinical education beyond graduation: student midwives' awareness of continuous professional development.*

### **Role of Funding source statement**

The authors declare that they received no funding for this research.

on behalf of the co-author,

Mrs Mieke Embo, Midwife, MSc.

Contact details corresponding author:

Mieke Embo

Voetweg 66, 9000 Gent (Belgium)

Mobile +32 485 63 05 62

e-mail: [mieke.embo@arteveldes.be](mailto:mieke.embo@arteveldes.be)