International Confederation of Midwives'

Model Curriculum Outlines for

Professional Midwifery Education

ICM Resource Packet #4

Teaching and Learning in a Competency-Based Curriculum

Introduction

This resource packet includes a discussion of teaching and learning strategies that promote competency-based learning in midwifery education. It begins with an overview of various adult learning theories and how they might be used to facilitate both the acquisition and demonstration of midwifery competencies needed by learners. The second section includes an overview of competency-based education and the specific attributes of teachers and learners needed to make this type of education successful. A brief discussion of teaching methods and learning activities that contribute to competency development is also included. Finally, the last part of this packet provides some of the key qualifications and responsibilities of midwifery teachers and learners in a competency-based programme.

Prior modules have focused on use of ICM core documents in curriculum design and programme planning along with examples of a curriculum plan and sample modules. This packet is directed at teachers who are new to teaching or who have not had experience in competency-based teaching and learning strategies. New teachers may wish to review this resource packet prior to exploring the curriculum outline and content plan for basic midwifery education. Experienced midwifery teachers may find this review helpful as well.

Throughout the following discussion, it is important to recognize that teaching and learning in whatever type of curriculum require common goals, shared responsibility and accountability between teachers and learners, and supportive or enabling environments to maximize success in learning. "Effective learning is learning which is lasting and capable of being put to use in new and differing situations."[1] The partnership between learners and teachers as adults in a competency-based programme is based on mutual trust and respect along with a shared commitment to providing the highest quality, evidenced-based midwifery care.

1 How do adults learn?

Overview of Learning Theories

There are many theories that attempt to describe how individuals (child/adult) learn, both formally and informally.[2] The primary reason behind learning theories is an attempt to understanding the processes and complexities involved in learning; that is, how does one gain knowledge, move to understanding the meaning of that knowledge, and then acquire needed skills in order to demonstrate their learning? The most common learning theories include behaviorism and constructivist/cognitivist learning. Others include the humanistic and social learning theories. Each of these learning theories has specific characteristics that further define how individuals learn that have implications for how teachers can facilitate learning. Refer to Appendix A: Learning and Teaching: A Dynamic Partnership for a graphic representation of these learning theories and their key strategies for learning. This diagram also reinforces that understanding how people learn creates expectations of both teachers and learning based on mutual respect.

Behaviourism or behaviorist learning requires some type of stimulus for the learner to learn (respond).[3] One of the interesting characteristics of this learning theory is the belief that all behaviour can be explained without the need to consider internal mental states (thinking) – it is conditioned by a stimulus. That stimulus is usually some type of reward such as teacher positive reinforcement or a positive grade/mark. This form of learning is quite valuable in a competency-based curriculum for skill development, especially in a practical laboratory setting. This form of learning is described as teacher-centred in that

the teacher is interested in the changes they can see in observable behaviour, such as demonstration of specific midwifery skills.

Constructivism and cognitivist learning requires that the learner become active in determining how they will learn to think critically.[4] The teacher cannot 'see' the thinking, but can use such activities as requesting that the learner give their plan of action with rationale before proceeding to care for a pregnant woman. Cognitivist learning is described as learner-centred in that the learner is using internal thought processes to discover new ways of using past knowledge and new knowledge to provide midwifery care. When something learned in the past does not fit with the current situation, the learner experiences 'cognitive dissonance' and must resolve this before continuing to learn. Teachers build upon their understanding of how learners learn in order to create/select effective learning activities.

Humanistic theory suggests that learning occurs because the learner has a specific goal to learn and to fulfill one's potential in life; e.g., becoming a qualified midwife.[5] The learner has set a goal for learning and is supported in meeting that goal (self-actualization) by teachers who are facilitators or coaches rather than austere, wise or sage givers of knowledge. Humanism focuses on human freedom, dignity and potential and believes that people act intentionally based on their personal values. This belief is in contrast to the behaviourism belief that learning occurs only in response to external environmental stimuli or the cognitivist belief that discovering knowledge and constructing meaning from this discovery is central to learning.

Social learning theory is based on beliefs that people learn from one another via observation, imitation, and modeling requiring attention, memory and motivation.[6] In many ways it is a combination of behaviourism, cognitivism/constructivism, and humanism. It is not in common use in midwifery education at this time.

Adult Learning

Knowles[7] and others[8] have attempted to define how adults learn and whether this learning is different from their learning as children. Educationalists and psychologists theorized many years ago that adults are internally motivated to learn as they have a life goal

(humanistic learning theory). They build upon prior life experiences that they bring to the learning environment, and need support as they examine prior experiences and change their thinking when needed to fit the midwifery role. Adults also need to be encouraged and supported to take responsibility for their own learning. However, in order for adults to become active participants in their own learning, they need to know what it is that they are expected to learn and demonstrate at the end of the educational encounter. Therefore, adults need clearly defined expectations for learning (outcomes), suggested learning activities, and repeated opportunities to think critically, reason morally, and make good decisions in their midwifery practice. Refer to the following text box for a summary of characteristics of adult learners based on work of Knowles and Lieb[9].

Taking responsibility for one's own learning as an adult may be difficult for younger students if they have not yet reached a mature understanding that they are responsible for their own learning. This also implies that teachers need to encourage learners to take on such responsibility and give them ample experiences to demonstrate their ability to do so.

Summary

Most teachers will teach others how they have been taught unless they reflect on whether that approach is fitting for today's world of fast-paced knowledge development and the competence expected of midwives. Generally speaking, teachers use a range of learning theories in their teaching efforts, depending on the domain of learning (cognitive, affective, psychomotor), the level of the student (novice, advanced beginner) and the learning style of the learner. It is expected that teachers will know and understand all types of learning theory and learning styles in order to be effective in their teaching efforts.

When working with highly motivated adult learners, the teacher becomes more of a guide or facilitator of learning rather than one who tells the adult what to do. Facilitation of learning can be compared to the approach to developing leadership; that is, the teacher directs, coaches, supports learning, depending on the learner's level of knowledge and confidence.[10] The final step in teaching adults is delegating direct care of women to the adult learner who is both competent and confident in their abilities to provide such care.

2 What is competency-based education?

Competency-based education with its teaching and learning approaches has received a good deal of attention and support within the health professions in recent years.[11] However, as with any newly emerging concept, there is no common definition being used but there are some common elements. The most important of these elements is that the learner must be engaged and active in all aspects of acquiring the knowledge, skills and professional behaviors needed to demonstrate practice in a specific discipline. In other words, competency-based education uses teaching and learning strategies that facilitate the development and demonstration of competency.[12] Other common elements include the need to have a clear, evidence-based definition of the learning outcomes to be demonstrated for performance of the professional role (i.e., the specific competencies).[13] This clarity is vital to both teachers and students as it defines the expected outcomes of learning without any 'hidden' agendas.[14] Writing learning outcomes takes lots of practice but is well worth the effort to learners and teachers.

The definition of competency-based education for the preparation of a fully qualified midwife is a curriculum or programme of study that has as its primary learning outcomes the acquisition and demonstration of all of the ICM Essential Competencies for Basic Midwifery Practice.[15] That is, competency-based education in midwifery uses the ICM competency domains and their associated knowledge, skills, and behaviours (KSBs) as the direct link between curriculum content and the expected outcome of learning - the preparation of a fully qualified midwife ready for practice. These competencies also allow for criterion-referenced assessment throughout the programme, eliminating potential assessment bias from teachers or preceptors. The midwifery competency-based curriculum is framed within the ICM Definition of a Midwife, Philosophy and Model of Care, and the International Code of Ethics for Midwives.

Other aspects of competency-based education include attention to the learning needs and patterns of adults, providing the time needed for the learner to acquire and repeatedly perform or demonstrate the expected competencies (knowledge, skills, professional behaviours) and creating a supportive/enabling environment for learning. All health professions have a societal mandate to provide needed services to the public and

therefore need to include social accountability in the educational process (relevance, cost-effectiveness, equity, and quality).[16] Competency-based education can be pursued through various approaches to curricular design. Whatever the design, however, all curricula need to be evidence-based and outcome focused and all teaching strategies need to be matched to their learning domain (psychomotor, cognitive and affective).

In summary, competency-based education in midwifery, by definition, requires that teachers as expert midwifery clinicians define in the competencies needed to practice as a fully qualified midwife based on the ICM Essential Competencies for Basic Midwifery Practice 2012. Competency-based education thus implies that learners have limited choice in what competencies need to be demonstrated. Learners do, however, have choices in how they learn the required knowledge, skills, and professional behaviours (KSBs).

3 What is competency-based teaching?

Competency-based education requires competency-based teaching. Defining attributes of competency-based teaching are included in the following text box and come from a variety of sources.[17] These teacher characteristics and expectations contribute to learner success. They also demonstrate the shared responsibility of teachers and learners to reach the goal of a competent, fully qualified midwife.

Attributes of Competency-based Teaching

- Understand how adults learn
- Match principles of learning and teaching (Appendix B)
- Facilitate, rather than control learning
- Model humility, critical thinking, respect, competency & caring at all times
- Support acquisition of knowledge, skills & professional behaviors in all learning domains (cognitive, psychomotor, affective)
- Promote & expect learner accountability for learning
- Provide timely, specific feedback on learner progress beginning with learner self-assessment
- Individualize learning experiences according to needs
- Expect increasing complexity of performance as the learner progresses throughout the programme

4 What teaching strategies are effective in facilitating competency development?

Teaching strategies need to be matched to the domain of learning, as with any type of curriculum. Some of the effective teaching strategies within a competency-based curriculum, based on the attributes of competency-based teaching, include the following:

Psychomotor domain: Demonstrate the expected way to perform a given skill. Allow the learner to practice for a while, and then ask for a return demonstration of that skill. Set up models or create a simulation exercise in the practical laboratory where learners can have repeated practice of skills with peers and/or teacher supervision. Arrange for sufficient practical experiences requiring skill performance with childbearing women under direct supervision. Create a valid and reliable assessment tool for use in determining competency in skill demonstration.

Affective domain: Create values clarification exercises for personal values. Provide a framework for a written analysis of a midwifery code of ethics or a comparison of health professions' codes of ethics. Structure opportunities for role play requiring recognition of differing values and beliefs, with time for discussion of how these differences may affect one's ability to provide midwifery care. Arrange for women of different races, ethnicity, or socio-economic status to join with learner group to discuss different values and beliefs, especially those related to health beliefs and practices. Create a valid and reliable assessment tool for use in determining ethical midwifery practice, including integrity, respect for all, maintaining confidentiality.

Cognitive domain: Develop case studies from actual midwifery practice requiring discovery or problem-based learning to determine the most appropriate, evidenced-based approach to midwifery care. Focus early case studies on normal pregnancy or birth, and later case studies on common complications of pregnancy or birth. Support learner-led seminars, structure debates to address complex practical situations. Always require that the learner provide their reasons (rationale) for their responses to knowledge questions or care plans. Avoid the temptation to answer every learner question, especially when the learner knows or should know the answer.

Other strategies include self-study modules with suggested learning activities that the learners can complete on their own prior to interaction with fellow learners and teachers. It is important that teachers provide ample time for discussion/dialogue and clarification of concepts to be learned. They also need to encourage/help the learner use their own knowledge and ideas to find possible solutions to clinical situations. One of the most effective teacher strategies for guiding the learner to discover how to proceed or act is called Socratic questioning.[18] The primary purpose of Socratic or higher order questioning is to encourage the learner to challenge how they are thinking, what they are thinking, and what revision of their thinking will lead towards their goal of becoming a competent midwife.

All learning domains during midwifery practice: Select appropriate practical sites that match learner needs and level of performance at the time. Use the midwifery care process as the framework for clinical teaching and assessment, beginning with data collection and moving through each of the steps of the process. In this way, the learner is 'guided' toward complete data collection before making a decision, and then basing a plan of care on that decision and the woman's needs, carrying out the plan and finally determining if the results obtained were those that were wanted/needed.

Each of these teaching strategies are aimed at helping the learner develop new ways of thinking about what they are learning, encouraging them in their discovery of new knowledge and skills using critical thinking, and supporting their efforts to integrate this new learning into their practice as a beginning midwife. The teacher becomes a coach or facilitator of learning, rather than an all-knowing sage telling the learner what to learn, how to learn it, and what to do with the new learning.

5 What is competency-based learning?

Competency-based learning is a way of structuring learning activities so that the individual learner can meet a predetermined set of competencies. Given that adult learners have a variety of ways of learning or learning styles,[19] it is important for them to recognize that competency-based learning will require that they actually perform or do, rather than learn by observing. Observation, reflection and listening are important

learning activities, but competency demonstration is the expected outcome for midwifery education. The following text box summarizes the key attributes of competency-based learning.

Defining Attributes of Competency-Based Learning

- ✓ Understand how one learns best (style)
- ✓ Understand exactly what is expected outcome(s) of learning
- ✓ Take responsibility for one's learning
- ✓ Motivated to learn – goal oriented
- ✓ Ethical person and practitioner
- ✓ Critical thinker
- ✓ Self-assess learning & performance
- ✓ Commitment to ongoing learning

6 What learning activities are effective in developing competency?

There are several learning activities common to health professional education that is competency-based. Examples of some of these activities follow by domain of learning.

Psychomotor domain: Review written description of a particular skill (text, handouts). Take time for repeated practice of skills in the safety of a practical laboratory setting using plastic models, simulation if available, or peers as patients supervised by teachers until mastery of the skill is demonstrated. With permission of the childbearing woman, repeatedly perform the skill under direct supervision in the practice setting, obtaining accurate results and with minimum discomfort for the woman. Some have found it helpful to mentally repeat common procedures daily, such as steps needed to overcome shoulder dystocia or perform an abdominal examination. Seek out practical experiences that allow one to increase confidence as well as competence in the skills required for midwifery practice.

Affective domain: Review text for content on definition of values. Participate in selected values clarification exercises for personal values provided by teachers (self-study or group work). Write up an analysis of a code of ethics for midwives (local or international)

and share with peers and teachers. Reflect on how one's personal values affect their ability to provide midwifery care for women from different cultures or races or those who are not caring for their own health. For many learners, becoming a competent midwife begins with observing positive role models of midwifery practice to reflect on: This is who a midwife is. This is what a midwife does.

Cognitive domain: Competency-based learning requires high levels of critical thinking and reflection (metacognition – thinking about thinking). Such skills are learned best with some form of discovery-based learning[20], a term preferred by midwifery educators in contrast to 'problem-based' learning.[21] The goals of discovery or problem-based learning include helping learners become active participants in and take responsibility for their own learning, encouraging the development of critical thinking by supporting learners' efforts to retrieve and retain knowledge and apply it in practice (rather than telling them what to think or do), and creating learners who develop the habit of life-long learning in order to stay current in practice. Teamwork is an essential component of this type of learning as many learning activities are structured for groups of learners working together to discover the best solution to a given need or problem in both theoretical and practical work.

Other cognitive learning activities creating and following an individualized learning plan,[22] self-directed reading and completion of suggested activities that will add to one's knowledge and experience base, and self-directed use (browsing) of the world wide web or internet and intranet (if available) for resources related to topics being learned. Prepare for and lead seminar discussions. Keep a journal or log of progress in learning.

7 Caveats for Competency-Based Education

An important caveat to competency-based education is that practice-based learning requires direct supervision and multiple opportunities for the learners to demonstrate their competency in practice over a period of time. Often midwifery programmes will have a set minimum number of practical experiences mandated by the regulatory authority in the country in order to graduate/complete the educational offering.[23] Completing this minimum number of experiences is not, however, a guarantee of competent practice.

Adults learn at different rates and in different ways[24], so 20 attended births may be sufficient for one learner to demonstrate a safe beginning level of performance of this skill while another will require 50 births to meet the same learning outcome. This is the primary reason why competency-based education must include direct observation of competency demonstration over time. There is also value in observing learner's provision of midwifery care in a variety of settings and types of clients to move the learner's critical thinking and reasons skills beyond a single approach to midwifery care.

Other caveats related to teaching and learning apply to any type of professional education, competency-based or otherwise. For example, a learner without the capability to learn and/or demonstrate competence cannot complete a midwifery programme. Likewise, it is impossible to force any person to learn, so lack of motivation to learn most often results in learners dropping out of midwifery programmes, especially if they fear the responsibilities of being a practicing midwife. In addition, sometimes those learners without confidence in their own abilities do not make good midwives (they often leave the profession within a short period of time).[25]

8 Qualifications & Responsibilities Of Midwifery Teachers

The ICM has defined the basic qualifications of midwifery teachers in two documents to date. The first document is the 2008 Position Statement, Qualifications and competencies of midwifery teachers.[26] The second ICM document that defines the qualifications and responsibilities of midwifery teachers is the Global Standards for Midwifery Education (2010), Standard II.2 for the midwife teacher and Standard II.3 for the midwife clinical preceptor/clinical teacher.[27]

Essential Qualifications

The majority of teachers within a midwifery programme should be midwives. These midwives primarily teach midwifery content and supervise students in practical settings. In order to do this, it is expected that the midwifery teachers will:

- Be competent in all areas of midwifery practice, and specifically up-to-date in areas they are teaching

- Be legally recognized to practice as a midwife in the country
- Have formal preparation for teaching[28]
- Demonstrate a commitment to life-long learning and maintaining their midwifery theoretical and practical competence

Core Responsibilities

The core responsibilities of midwife teachers and preceptors include:

- Teaching and practicing in accord with professional ethics and standards, and the unique needs of women and childbearing families in the country
- Promoting evidence-based midwifery practice at all times
- Understanding ones' own values and beliefs related to teaching and learning
- Providing a safe, supportive environment for learning based on mutual trust and respect and maintaining confidentiality of student concerns and records
- Using a variety of teaching methods that promote critical thinking and active participation of the students in their learning and self-assessment of progress in learning.
- Directly supervising students in practical settings in order to continue their teaching and assessment responsibilities.
- Being open to conflicting ideas and opinions
- Assisting learner to connect current information to broader concepts
- Collaborating with other professionals a members of the health care team
- Making learning fun!

Midwife teachers may also take on responsibility for non-midwifery courses in the curriculum, such as basic human anatomy and physiology, pharmacology or research. In addition, non-midwife teachers may provide essential content in the midwifery programme, such as basic science, public health, or communication content. Each teacher responsible for content in a midwifery programme must be prepared to teach

such content and up-to-date (competent) in the theoretical foundations of the content. Non-midwife teachers also need to be guided by programme personnel to understand how what they are teaching fits in the curriculum and what midwifery students need to know to enhance their learning to be competent midwives.

Summary

This resource packet was designed as a reference document for new teachers and those who may not be familiar with competency based teaching and learning. Comments are welcomed by the ICM Education Standing Committee on its usefulness and edits are welcomed. These comments can be sent directly to the International Confederation to Midwives at the following address: d.byrne@internationalmidwives.org

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[2] Pritchard A. Ways of learning: learning theories and learning styles in the classroom 2nd Edition. London: Routledge, 2009. Innovative Learning. Learning theories. Retrieved 3-30-2010 from: http://www.innovativelearning.com/teaching/learning_theories.html
Billings DM, Halstead JA. Teaching in nursing: A guide for faculty 3rd Ed. St. Louis, MO: Saunders, 2009. Chapter 12 by M. Vandeveer, From teaching to learning: Theoretical foundations, pp. 189-226.
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[4] Cognitivism and Constructivism. Retrieved April 19, 2012, from www.learning-theories.com Originators of Cognitivism include Merrill-Component Display Theory, Reigeluth, Gagne, Briggs, Wager & Bruner, Schank and Scandura. Originators of Constructivism include Vygotsky, Piaget, Dewey, Vico, Rorty, and Bruner.
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[9] Lieb S. Principles of adult learning, 1991. Retrieved April 19, 2012 from the world wide web under "adult learning."
[10] Hersey P, Blanchard K. The Hersey-Blanchard Situational Leadership Theory. Retrieved April 19, 2012 from www.mindtools.com/pages/article/newLDR_444.htm This model of leadership development has been used in some midwifery education programmes to help clinical teachers understand how their

teaching style (directive, coaching, supporting or delegating) needs to match learner maturity (new learner with little knowledge or confidence, increased confidence but still lack some KSBs, have KSBs by lack confidence, have KSBs and confidence) for continued success in demonstrating competency.
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[13] Op cit. Fullerton, et al., p. 6-7.
[14] Op cit., du Toit et al, p. 5.
[15] ICM. Essential competencies for basic midwifery practice 2010. The Hague: ICM
[16] Op cit. de Toit et al., pp. 3-4.The authors described relevance as the way training (education) can be structured to address needed competencies, cost-effectiveness as the way resources can best be employed to make biggest impact on individual needs for professional care, equity as the best way to structure the educational offering to ensure access, and quality as the way the program is structured, using evidence-based data and appropriate technology that allows practitioners to meet the population's expectations, social and cultural needs for a given service
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Parker PJ. The courage to teach. San Francisco: Jossey-Bass, 1998. Chapter 1: The heart of a teacher: identity and integrity in teaching, pp. 9-33.
Paul R. Critical thinking, moral integrity, and citizenship: Teaching for the intellectual virtues, 1993. http://www.criticalthinking.org/resources/articles/ct-moral-integrity.shtml
[18] http://changingminds.org/techniques/questioning/socratic_questions.htm This website provides concrete examples of the types of questions that can be used to 1) clarify concepts, 2) probe assumptions, 3) probe rational and evidence, 4) question viewpoints and perspectives, 5) probe implications and consequences, and 6) question the questions.
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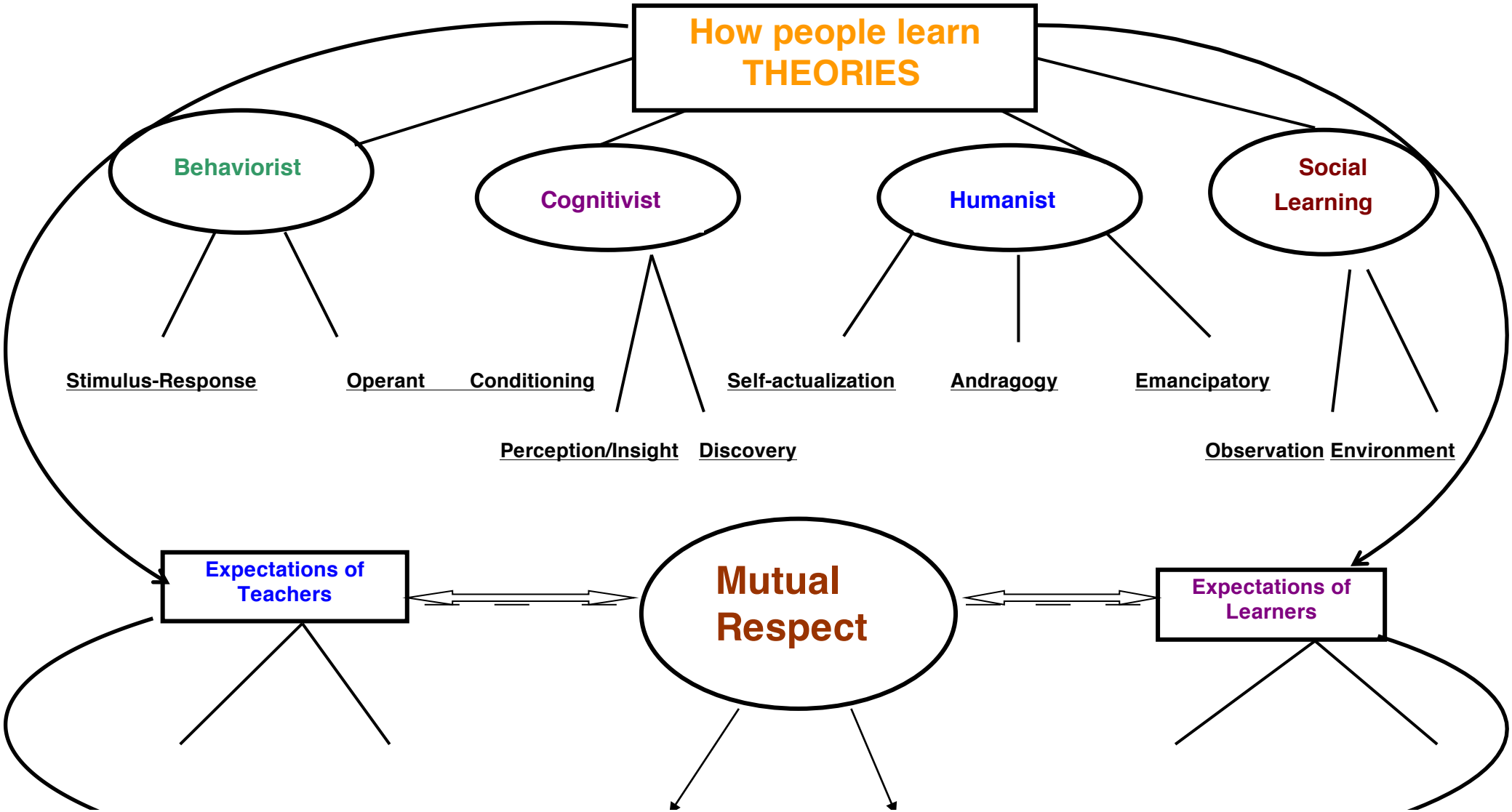
Appendix A

Learning & Teaching: A Dynamic Partnership*



Teacher behavior/roles **Teaching Methods** **Learner behavior/roles** **Learning Styles**

Successful Learning
Successful Teaching

*JET 10/10
JET rev. 4/12

ICM Resource Packet #4: Appendix B

Appendix B

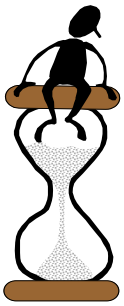
THE 'MATCH' OF PRINCIPLES OF LEARNING & TEACHING[i]

1. Learning requires active participation of the learner: ***The teacher must engage the learner as an active participant (avoid the 'telling' mode)***

2. Learning is more effective when it occurs in response to perceived needs of learner: ***The teacher guides, supports, coaches the learner to an increased level of self-direction, pointing out connections between what is being learned and the learner's goal of becoming a professional midwife***

3. Learning requires understanding: ***The teacher must be an effective communicator, present ideas and concepts clearly, offering alternative explanations and checking for understanding frequently***

4. Learning takes time: ***The teacher needs patience and highly developed skills of listening, watching, & waiting along with knowledge of 'normal' progression from novice to advanced clinician***



5. Learning is enhanced when one moves from familiar to unfamiliar, the simple to the complex: ***The teacher selects learning experiences that build upon prior learning and experience, gradually assigning more complex content/clinical experiences based on progress of individual learner***

6. Learning proceeds at different rates, in different ways, and with different patterns, including periodic plateaus: ***The teacher uses appropriate teaching methods that fit learner needs, patterns of learning, progress and expected learning outcomes***

7. Learning is retained longer when it is put to immediate use: ***The teacher offers frequent and timely exposure to learning situations that reinforce what is being learned***

8. Learning is enhanced by repetition: ***The teacher provides multiple opportunities to apply knowledge, perform psychomotor skills, and demonstrate professional behaviors***

9. Learning must be reinforced: ***The teacher encourages self-evaluation of learning with validation of positive outcomes and correction of errors***

10. Learning requires known performance outcomes: ***The teacher set boundaries of safe practice, defines and reviews expected outcomes of learning, and supports learner achievement of these outcomes***

11. Learning is affected by emotions, physical and mental health: ***The teacher understands the variety of human responses to anxiety and stress associated with learning and creates an environment for learning that is calm, respectful, and tolerant of differences.***

12. Learning is easier when the learner sees progress and is successful: ***The teacher assists each learner to evaluate own progress, validates the self-assessment, and celebrates progress with the learner***

13. Learning is facilitated by ideas more than facts: ***The teacher encourages critical thinking, reflection, principled action, and alternative approaches for midwifery care supported by sound rationale***

14. Self-directed learning and accountability are learned behaviors: ***The teacher knows when to step in, step back, and step out, offering multiple opportunities for learner to be accountable for own learning and self-directed in his/her approach to midwifery care***

15. Learning must be satisfying to the learner to maintain motivation: ***The teacher's primary responsibility is to teach others how to learn, modeling and reinforcing continued learning and enthusiasm "to know" more***

[i] Prepared by Joyce E. Thompson, DrPH, RN, CNM, FAAN, FACNM in 2012 based on ongoing teaching and publication: Thompson, Kershbaumer, & Krisman-Scott (2001). Educating Advanced Practice Nurses and Midwives. New York: Springer Publishing Company.