Introduction

The purpose of the literature review is to provide a review of adult education principles to inform the development of educational supports for health care providers to provide adult based behavioural interventions for the Chronic Disease Prevention and Management (CDPM) Corridor for Capital Health.

Behavioral education modules and methods is one component of the CDPM corridor in Capital Health. The CDPM corridor includes community resources, self-management supports, functional health management supports, clinical information system, decision supports, deliver system design, and CDM competencies.

Through synthesis of the literature, this review aims to describe:

- Adult education
- Motivations to Learn
- Adult Learning principles
- Adult Learning styles
- Health Literacy
- Cultural and Diversity on adult education

This review includes peer-reviewed articles, systematic reviews and grey literature. A literature search was performed using the following databases: ERIC, Google, Google Scholar, CHINAL, ProQuest, and Pub Med. A combination of the following key terms was used: adult education, adult learning principles, adult learning style, andragogy, culture, diversity, adult learner, English as a Second-Language, and literacy.

Adult Education

Characteristics of Adult Learning

One main characteristics of adult learning is that it is independent learning for adults (Campbell, 1999; Inott & Kennedy, 2011). The second main characteristic of adult learning is that adults use their personal experiences as a learning...
resource (Campbell, 1999). One reason that adults may enter a class or a learning experience is to generate a change in their knowledge, attitudes, skills, or behavior (Inott, 2011; Russell, 2006). Adults want to have control over their own learning (Curran, 2014).

**Characteristics of Adult Learners**
Adults come into a learning situation with a variety of experiences through their education and work experience. These experiences play an important role in how and why they will participate in a learning opportunity (Ireland, 2014). Malcolm Knowles identified six characteristics of adult learners:

1. **Autonomous and self-directed**
2. Accumulated a foundation of experience and knowledge
3. **Goal oriented**
4. **Relevancy Oriented**
5. **Practical**
6. Need to be shown respect (Inott & Kennedy, 2011)

Ireland (2014) identified twelve characteristics of adult learners:

1. **Life Experiences**
   Adult learners have a variety of life experiences (Ireland, 2014; Lieb, 1991; Russell, 2006). They will come to an educational session with a variety of experiences and knowledge in a variety of areas. Their learning needs to be connected to their knowledge and experience (Lieb, 1999). Adults prefer learning activities that will allow them to draw upon their prior skills and knowledge (Ireland, 2014; Lieb, 1999).

2. **Opinions, Values, Beliefs**
   Adults already have established opinions, values and beliefs. These views must be respected. (Ireland, 2014).

3. **Intrinsically Motivation**
   An adult learner will increase their motivation to learn if there is a need, an interest or a desire to learn (Ireland, 2014; Russell, 2006). Adults will also be motivated by the material/topic that is being addressed. Adults will have more motivation if the topic is related to their own needs and interest (Ireland, 2014).

4. **Individual Differences**
   Adults learn at a variety of different rates according to their educational level, intellect, personality, and cognitive learning styles (Ireland, 2014). Teaching strategies must accommodate the different comprehension rates of the learners (Ireland, 2014).

5. **Environment**
   Adults will learn best in a democratic, participatory, and collaborative environment (Ireland, 2014). Adults need to be actively involved in what and how they will learn (Ireland, 2014).

6. **Mature**
   Adults are mature and do not like to be lectured, which will result in resentment and frustration (Ireland, 2014).

7. **Goal-Oriented/Relevancy Oriented**
   Adults need to know why they are learning something (Campbell, 1999; Ireland, 2014). In order for learning to be valuable, it needs to relevant to their work or to their other responsibilities (Ireland, 2014; Lieb, 1999).

8. **Autonomous and Self-Directed**
   Adults are self-reliant learners and prefer to work at their own pace (Ireland, 2014; Lieb, 1991; Russell, 2006). Adults will learn best when they are ready to learn and when they have identified their own learning needs (Ireland, 2014; Russell, 2006).

9. **Practical and Problem Solvers**
   Adults want to be able to apply what they are learning and have practical application to their learning objectives (Campbell, 1999; Ireland, 2014; Lieb, 1999).

10. **Teaching Methods**
    Adults prefer learning through a variety of teaching methods, (Ireland, 2014).

11. **Logistical Considerations**
    When an adult chooses to take a course or attend a class, they have other considerations they need to take into account. Some of these considerations are family responsibilities, social
commitments, time, money, schedules, and transportation (Ireland, 2014).

12. **Age of Adult Learner**
   Adult learners want to learn in an environment where they feel their contribution is going to be valued (Ireland, 2014).

13. **Insufficient Confidence**
   Adults will come to an education session/learning opportunity with a variety of confidence levels (Ireland, 2014).

**Motivations to Learn**

Motivation is a key factor for adults to initiate a learning opportunity (Inott & Kennedy, 2011). Personal motivation is a key reason for adult learning. The information that is being taught to the individual must have a personal meaning to them (Inott & Kennedy, 2011). “Understanding adult motives for learning enhances the ability to initiate learning activities and to apply what has been learned” (Campbell, 1999, p.32). There are six motivational factors for adults learning:

1. **Attitude**
   According to Campbell (1999) “attitudes are learned through experiences, direct instruction, identification, and role modeling behaviours” (p.32).

2. **Need**
   A second motivational factor for adults is needs, “The needs people are experiencing depend on their history of learning, the current situation, and the last need they fulfilled” (Campbell, 1999, p.33).

3. **Stimulation**
   The learning experience must be stimulating for the adult learner (Campbell, 1999). Adults seek stimulating experiences which will sustain their adult learning behavior (Campbell, 1999).

4. **Affect**
   “Affect or the emotional feelings, concerns, and passions of the adult are the major motivational factor while learning is taking place” (Campbell, 1999, p.34).

5. **Competence**
   “Adults who feel a sense of progress and accomplishment while learning are motivated to continue their efforts” (Campbell, 1999, p.34).

6. **Reinforcement**
   “Reinforcement is the process by which a response is strengthened or the possibility of its future occurrence is increased by its consequences which follow” (Campbell, 1999, p.34). Providing incentives will increase participation and help to sustain participation (Campbell, 1999).

According to Adams (2104), Lieb (1999) & Russell (2006), there are six factors that are sources of motivation for adult learning:

1. **Social Relationships** – to make new friends, meet a need for associations and friendships
2. **External Expectations** – comply with instructions from someone else. Fulfill recommendations from a formal authority
3. **Social Welfare** – improve ability to participate in community work
4. **Personal Advancement** – achieve higher job status, secure professional advancement
5. **Escape/Stimulation** – relieve boredom, provide a break in routine
6. **Cognitive Interest** – learn for the sake of learning, satisfy an inquiring mind
Motivational Strategies for Adult Learners
A key to success for adult learning is motivational strategies (Campbell, 1999). Campbell (1999) identified a list of motivational strategies that would enhance adult learning and improve the success of adult learners:

- Demonstrate empathy towards the learner
- Build a positive learning environment
- Develop positive self-concepts
- Establish expectancy for success
- Conduct a needs assessment
- Create strategies for motivating learning.
- Maintaining learner attention.
- Building learner interest
- Develop learner involvement
- Enhance emotions during learning
- Maintain an optimal learning climate
- Provide effective feedback
- Praise and rewards
- Evaluation procedure and tests

Adult barri res to Learning
Adults also face barriers to learning. Some of these barriers are lack of money, time, confidence, interest, lack of information about opportunities to learn, scheduling problems, child care issues, and transportation (Adams, 2014; Brady, 2013; Lieb, 1999; Russell, 2006). These barriers need to be acknowledged (Brady, 2013). “Opportunities for learning must provide enough information, scheduling options, and ease of entry in order to overcome any lack of motivation, problems in attendance, and reticence that learners may possess” (Brady, 2013, p.16).

Critical Elements for Learning
According to Lieb (1999), there are four critical elements of learning that need to be addressed to ensure that adults will learn. These four critical elements for learning are:

1. Motivation
   Motivation can be established by the instructor by:
   - Set a feeling or tone for the lesson
   - Set an appropriate level of concern
   - Set an appropriate level of difficulty (Lieb, 1999)

2. Reinforcement
   Positive reinforcement is an important part of the learning process (Lieb, 1999).

3. Retention
   “In order for participants to retain the information taught, they must see a meaning or purpose for that information. They must also understand and be able to interpret and apply the information” (Lieb, 1999, p.4).

4. Transference
   Tranference relates to the transferring the information that is taught and use it in a new setting (Lieb, 1999).

Adult Learning Theory
According to Freedman et al. (2012), “Adult learning theories rely on placing learning in the context of real-life situations, making learning immediate relevant, and empowering learners to take an active role in posing questions and developing solutions” (p.649).

Andragogy
Andragogy is defined as, “the art and science of helping adults learn” (The University of Queensland, 2010, p.1). Andragogy is focused on instructing adults and involving adults in the learning process (Curran, 2014; Finn, 2011; Nielsen, 1992; The University of Queensland, 2010; Wiley, 2010). A foundational basis of this theory is that adults and children learn differently (Finn, 2011; Wiley, 2010). Adults are more focused on the process and relevance of learning (Curran, 2014). “A key concept of andragogy is that adults need to know why they need to learn what they are learning; in other words, what is the relevance of the learning experience” (Finn, 2011, p.38).

Malcolm Knowles
The andragogy theory was brought forth by Malcolm Knowles (Brady, 2013; Curran, 2014; Kaufman, 2003). This theory is often referred to as learner focused theory (Curran, 2014; The University of Queensland, 2010). According to Curran (2014), Knowles assumptions about adult learners became the foundation of adult learning.
learning theory. According to Adams (2014) andragogy theory makes the following assumptions about the design for learning for adults:

- Adults need to know why they need to learn something
- Adults need to learn experientially
- Adults approach learning as problem-solving
- Adults learn best when the topic is immediate value

Knowles indicated that there a number of dimensions that differ adult education from children's education (Wiley, 2010). These dimensions include self-concept, experience, readiness to learn, orientation to learning, and motivations to learning (Wiley, 2010).

**Self-Concept** - the maturing person's self concept moves form one being a dependent personality towards one being a self-directed human being (Wiley, 2010).

**Experience** – the maturing person accumulated a growing reservoir of experience that becomes an increasing resource for learning (Wiley, 2010).

**Readiness to Learn** – the maturing person's readiness to learn becomes oriented increasingly to the developmental tasks of his social roles (Wiley, 2010).

**Orientation to Learning** – the maturing person's time perspective changes from one postponed application of knowledge of immediacy of application and accordingly the orientation toward learning shifts from one of subject centeredness to one of problems centeredness (Wiley, 2010).

**Motivations to Learn** – as a person matures, the motivation to learn is internal (Wiley, 2010).

**Self Directed Learning**

This type of learning allows for many health practitioners to stay up to date on current knowledge (Murad, Coto-Yglesisa, Varkey, Prokop, & Murad, 2010). Malcolm Knowles defined self directed as

“a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Murad et al., 2010, p.1058).

There are several important components to self-directed learning. These components are:

- educator is the facilitator of the learning
- learners should be involved in identifying their learning needs, objectives, resources
- learners should be involved in implementing the learner process
- commit to a learning contract
- evaluate the learning process (Kocaman, Dicle, & Ugur, 2009; Murad et al., 2010). In order for the learning to be considered self-directed, components in the self-directed definition need to be incorporated into the learning process (Murad et al., 2010).

According to Murad et al. (2010) self-directed learning “was more effective in the knowledge domains and likely as effective in the domains of skills and attitudes” (p.1064). “Self-directed learning has been suggested in certain settings (e.g. for adult learners and advanced learners, and in contexts in which access to academic institutions or teachers is limited) and as a supplemental method of learning when learning content is large” (Murad et al., 2010, 1065).

**Instruction Methods for Adults**

According to Finn (2011) the methods of learning that distinguish the characteristics of adults from children should be used. Instruction for adults needs to focus on the process and less on the content. Suggested strategies for adult
instruction are case studies, role playing, simulations, and self-evaluation (Adams, 2014).

Pedagogy
Pedagogy means the teaching of children (Wiley, 2010). This learning theory focuses on a teacher centered approach to learning (Curran, 2014). In this theory, the curriculum content, the method and the timing of learning are directed by the teacher (Curran, 2014). There are six assumptions that guide the pedagogy theory. The six assumptions are:

1. Learners only need to know what the teachers deem important.
2. Teachers view learners as dependent, meaning self-concepts and self-direction are neither nurtured nor developed.
3. Experience is irrelevant to learning.
4. Learners become ready to learn when teachers instruct them to do so.
5. Learning is acquired through subject-matter content.
6. Learners are motivated by external motivators alone.

(Curran, 2014, p.234)

According to Curran (2014), the pedagogy learning theory “may not work with adult learners, as adults prefer learner-centered approaches to learning” (p.235).

Adult Learning Principles

The most common adult learning principles were developed by Malcolm Knowles. These principles became the basis for adult education. These six adult learning principles are:

1. **Adults are internally motivated and self-directed**
An adult will resist learning if they feel others are imposing information or ideas on to them (University of Queensland, 2010). The adult learners internal motivation to learning must be fostered (University of Queensland, 2010).

2. **Adults bring life experiences and knowledge to learning experiences.**
Adult learners want to have the opportunity to use their previous knowledge and experience and be able to apply it their new learning experience (University of Queensland, 2010).

3. **Adults are goal oriented**
“Adult students become ready to learn when ‘they experience a need to learn it in order to cope more satisfying with real-life tasks or problems’ ” (University of Queensland, 2010, p.2).

4. **Adults are relevancy oriented**
Adult learners want to know about the relevancy of what they are learning to what they want to achieve (University of Queensland, 2010).

5. **Adults are practical**
Adult learners want to be able to apply what they are learning to their life and work experiences (University of Queensland, 2010).

6. **Adult learners are respected.**
Adult learners want their prior experiences to be respected, and their ideas, reasoning need to be encouraged (University of Queensland, 2010).

Bryan et al. (2009) identify five key adult learning principles that are components of two leading theories: andragogy and self-directed learning. The five adult learning principles identified by Bryan et al. (2009) are:

1. **Adults need to know why they are learning**
Many adults will enter a learning activity voluntarily. Some will enter the learning activity with a sense of why and some will not know why they are entering into the learning activity (Bryan et al., 2009). For adults that are entering into the learning process and do not have a clear reason of why, the facilitator needs to identify reasons for them to engage in the learning process (Bryan et al., 2009).

2. **Adults are motivated to learn by the need to solve problems**
Adults are more likely to learn if they a problem that they need to solve (Bryan et al., 2009). Problems that are identified by different adult learners will vary in their context and in the problem detail (Bryan et al., 2009). “By building learning experiences around real problems...
facing a given group, a more learner-centered environment is adapted and learners are more likely to be engaged, and participate in discussion and share person insights and experience, all factors that facilitate learning” (Bryan et al., 2009, p.560).

3. **Adults’ previous experience must be respected and built upon.**
   In learning experience, adults will bring their own personal and professional experience (Bryan et al., 2009). Knowledge will become more meaningful for adults when the new knowledge is linked with their professional practice (Bryan et al., 2009).

4. **Adults need learning approaches that match their background and diversity.**
   Adults will have preferred styles of learning (Bryan et al., 2009). There are a variety of learning styles and different ones will be used depending on the learning situation (Bryan et al., 2009). “To create effective learning experiences, adult education and training programs must develop and use multiple method, presented different perspectives, contextualize content in a variety of ways, and most important, know when each variant is appropriate for a given group of learners, even a particular subgroup or individual within a group” (Bryan et al., 2009, p.561).

5. **Adults need to be involved in the learning process.**
   Adults prefer to control their own learning and usually consider themselves self-directed learners (Bryan et al., 2009). When adults share control over the content and methods of the learning process, will result in greater motivation among the adult learners (Bryan et al., 2009).

### Adult Learning Styles

Adult learning styles are the preferred ways in which adults will engage in a learning activity in order to acquire knowledge, attitudes or skills (Campbell, 1999; Wiley, 2010). An adult learning style is influenced by personality, age, formal education, intelligence, and previous education (Campbell, 1999). Learning styles provide an indication of how learners perceive, interact and respond to the learning environment (Romanelli, Bird, & Ryan, 2009). There are a variety of adult learning styles (Brady, 2013; Russell, 2006; Wiley, 2010). Common learning styles include visual, auditory, verbal, kinesthetic, logical, social, and solitary (Brady, 2013; Russell, 2006).

#### Visual
   A visual learner prefers to see pictures when they are learning (Russell, 2006). Visual learners prefer to have illustrations or photos when receiving written or visual instructions (Inott & Kennedy, 2011; Russell, 2006). When providing verbal instruction to a verbal learner, the information should be provided to the adult learner in printed form (Inott & Kennedy, 2011). A visual learner will observe all of the physical elements in their environment (Russell, 2006).

#### Auditory
   An auditory learner prefers to hear the message (Inott & Kennedy, 2011; Russell, 2006). An auditory adult learner prefers to have someone walk them through the process (Russell, 2006). This type of learner would like to discuss ideas they may not understand (Russell, 2006). Auditory learners like group discussions (Inott & Kennedy, 2011; Russell, 2006).

#### Kinesthetic
   Kinesthetic learners prefer to learn in an environment that allows them to do something, such as a hands on activity (Inott & Kennedy, 2011; Russell, 2006). A kinesthetic learner will take notes, but not use their notes (Russell, 2006). A kinesthetic learner will have problems sitting down in one place (Russell, 2006).

   “A variety of methods and media that highlight more than one learning preference should be used whenever possible to meet the most universal needs of individuals” (Inott & Kennedy, 2011, p.319). Adults will learn more quickly when they can use their preferred learning style (Chang & Kelly, 2007; Forrest, 2004). Most effective teaching will use a variety of methods.
to enhance the understanding of the individual (Chang & Kelly, 2007; Rommanelli et al., 2009).

Logical

Social
A social learner prefers to learn in a group or class setting (Advanoxy Publishing, 2004). A social learner likes to work through issues with groups (Advanoxy Publishing, 2004). Role-playing is one technique that will work well with a social learner (Advanoxy Publishing, 2004).

Solitary
A solitary learner prefers to work alone (Advanoxy Publishing, 2004). Solitary learner prefers to use self-study (Advanoxy Publishing, 2004). When a solitary learner is changing their behaviours and habits, they need to have a strong desire to make these changes (Advanoxy Publishing 2004).

Individuals preferences for distinct ways of learning depend on how information is presented, understood, and supported in their sociocultural environment. This multi-level interaction makes learning styles, in turn, shape how individuals perceive, interact with, and respond to their learning environment and influences how one accepts and assimilates information (Carbone, Lennon, Torress, & Rosal, 2006, p.317).

Learning Domains
Bloom identified three learning domains: cognitive, affective, and psychomotor (Carbone et al., 2006; Welty, 2010). Learning domains refer to “three separate, yet interdependent components of learning outcomes achievable by human learners” (Menix, 1996, p.200). In each of these learning domains there are several categories. The cognitive domain deals with the process of gaining knowledge and thinking (Shropshire, 1981; Menix, 1996). In the cognitive domain, there are the categories of knowledge, comprehension, application, analysis, synthesis, and evaluation (Menix, 1996; Welty, 2010). The affective learning domain deals with attitudes and values (Menix, 1996; Shropshire, 1981). In the affective domain, there are categories of receiving inputs, valuing inputs, organizing values, and internalizing values (Menix, 1996; Welty, 2010). The psychomotor learning domain deals with manipulative skills (Menix, 1996; Shropshire, 1981). In the psychomotor domain, there are categories of perception, readiness to take action, guided response, and adaptation (Menix, 1996).

Experiential Learning
“Experiential learning is the process whereby knowledge is created through transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, Boyatzis, & Mainemelis, 2000, p.2). Experiential learning emphasized the important role that experience plays in the learning process (Kolb, et al., 2000; Lewis & Williams, 1994). Adult learners have a wealth of previous experience and want to bring this prior experience to their new learning (Lewis & Williams, 1994). “Models of good practice in adult education must utilize learners’ previous experiences in order to enhance their current and future learning” (Lewis & Williams, 1994, p.5). Experiential learning has been found to be a good strategy to use in the affective learning domain (Shropshire, 1981).

“Role-plays, games, case studies, critical incidents, simulations such as ‘in box’ exercises, socio-drama, and values clarification exercises are some of the many forms of experiential learning techniques currently in use” (Lewis & Williams, 1994, p.9).

In experiential learning, four learning styles have been identified: diverging, assimilating, converging, and accommodating (Kolb et al, 2000). Individuals that have a diverging learning style will view concrete situation from many
different points of view (Kolb et al., 2000). A divergent learner prefers to work in group, listens with an open mind and prefers individual feedback (Kolb et al., 2000). An assimilating learner is interested in ideas and abstract concepts (Kolb et al., 2000). An assimilating learner will prefer a lecture, or time to think things through (Kolb et al., 2000). An adult learner with a converging learning style will find practical uses for ideas and theories (Kolb et al., 2000). Individuals with this learning style prefer to experiment with new ideas, simulations, or practical applications (Kolb et al., 2000). The accommodating learning prefers to have hands on experience (Kolb et al., 2000). An accommodating learner prefers to set goals, and test different approaches to complete a project (Kolb et al., 2000).

Health Literacy

Definition of Health Literacy
Health literacy is “the degree to which individuals have the capacity to obtain, process, and understand basic information and services needed to make appropriate decisions regarding their health” (Bryan, 2008, p.232).

An individual’s literacy level or their ability to understand is related to their ability to care for themselves and others (Villaire & Mayer, 2007). Low health literacy has also been found to influence how an individual will learn (Bass, 2005). Possessing literacy skills is important in navigating the health care system (Villaire & Mayer, 2007). “Patients with low literate skills are more likely to have poor understanding of their chronic disease, worse disease self-management skills, worse self-reported health status, and a greater likelihood of hospitalization due to poor self-management skills” (Villaire & Mayer, 2007, p.214). Health literacy is a system issue not an individual issue (Bryan, 2008; Koh et al., 2013).

Low health literacy is high among elderly, individuals with low socioeconomic status (SES) or low education (Bryan, 2008; Inott & Kennedy, 2011).

“Teaching tools need to be designed with the literacy level in mind (Inott & Kennedy, 2011). Education materials should be designed at a grade 5 reading level (Inott & Kennedy, 2011). There needs to be a focus on functional health literacy skill acquisition as part of health education and behavior interventions (Freedman, Echt, Cooper, Miner, & Parker, 2012).

For adult learners with English as their second language, the learning activity must be safe, successful, interesting, personally endorsed, and personally relevant (Finn, 2011). Adult educators need to consider environment, experience and relevance when designing instruction for adults (Finn, 2011).

Chronic Care Model – Health Literacy
Incorporating health literacy themes and tools into the widely adopted Care Model (formerly known as the Chronic Care Model) can encourage engagement among health care staff and patients, as well as the families and caretakers who support patients’ prevention, decision making, and self-management activities (Koh, Brach, Harris, & Parchman, 2013, p.357).

The Health Literate Care Model incorporates health literacy principles into the Care Model (Koh et al., 2013). By integrating health literacy into the Care Model, it can reduce duplication and improve patient understanding of and engagement in health care (Koh et al., 2013).

Koh et al. (2013) indicate how health literacy can be incorporated into each aspect of the Chronic Care Model:

Health Care Organization
Health literacy can be integrated into all aspects of planning and operation (Koh et al., 2013). In the health care organization, health literacy would be addressed as part of the continuous improvement of the health care organization (Koh et al., 2013).
Self-Management Support
Literacy strategies can improve self-management support, such as using the teach-back method (Koh et al., 2013). In the teach-back method,

“providers ask patients to explain back to them what they have learned, their understanding of their own condition, the options available to them, and their intentions to act on the information provided. Based on this information, providers can then assess the match between their expectations and patients’ understanding” (Koh et al., 2013, p.361).

Delivery System Design
To address health literacy, health care professionals may take on different roles, such as facilitating education group visits and calling patients to confirm they understand the medication instructions (Koh et al., 2013).

Decision Support
This component of the model would emphasize sharing evidence based guidelines, and having patients participate in the decision making process surrounding their care (Koh et al., 2013).

Clinical Information Systems
This component would provide real time reminders services needed for patients, tracking delivery to different population groups, and assist with planning future health care (Koh et al., 2013). In order for this system to be health literate there would need to be automatic reminders for health literacy (Koh et al., 2013).

Community Partners
This would involve having partnerships with groups that address the social determinants of health (Koh et al., 2013).

Culture/Diversity

Definition of Culture
“Culture is defined as learned and transmitted values, beliefs, and practices of a particular group of people ‘that guide thinking, decisions, and actions in a patterned ways” (Chang & Kelly, 2007, p.412).

Role of Culture in Adult Education
Culture plays a role in how an individual learns (Bass, 2005). Literacy, culture and language can affect an individual’s participation in treatment decisions and their ability to manage their own chronic conditions (Andrulis & Brach, 2007). Facilitators need to ensure that they are not assuming the cultural background of clients attending educational sessions (Ziegahn, 2001). “Culturally relevant adult education is essential to helping learners from marginalized cultural backgrounds learn to take control of their lives and improve their social condition” (Guy, 1999, p.5).

When the culture of the learners and educators differ, the educators need to find a way to know who the learners are (Guy, 1999). There needs to be an understanding of the health care practices of the family and individual (Inott & Kennedy, 2011). Facilitators need to learn about the individual’s health literacy, culture, and language in order to use the information to improve communication and self-management support (Andrulis & Brach, 2007; Guy, 1999). “Culturally competent communication of the other hand, emphasizes that individuals’ concept of health may differ, affecting the way individuals receive, process, and accept (or reject) information” (Andrulis & Brach, 2007, p.S126). “Issues of power (and who has it), inclusion, and participation are important elements of culturally relevant adult classroom” (Guy, 1999, p.16).

Learning Styles
Correlations have been found between learning styles and culture (Romanelli et al., 2009). Facilitators need to be aware of the influence culture has on variety of learning styles (Rommaneilli et al., 2009). “Sociocultural norms, values, and traditions often determine the importance of different health education topics and the preference of specific learning approach” (Chang & Kelly, 2007, p. 411). “For those to
whom English is a second language, understanding may be particularly difficult and usual learning styles may be altered to accommodate language issues” (Inott & Kennedy, 2011, p.319). In order to ensure that the information or behaviour change will be implemented, the learning style must be addressed (Inott & Kennedy, 2011).

**Learning Materials**

“Individuals from diverse cultures, however, may not comprehend easy-to-read materials if Western constructs of health and health care are assumed” (Andrulis & Brach, 2007, p. S124). Educational materials being provided should be reviewed to ensure that it does not contain information that is stereotypical or material that may not encompass the experience of the learner (Guy, 1999). The developing of a teaching plan needs to understand the values of the patient and family (Change & Kelly, 2007). “Culturally appropriate health education interventions seem to show more success than do culturally-appropriate treatment efforts” (Shaw et al., 2009, p.461).

**Conclusion**

Based on this review, adult learning principles and educational techniques are very important to consider in the development of programs and services for adults. Adults have a variety of learning styles. A variety of learning styles need to be used in adult programs. Culture and literacy need to be considered in the development and delivery of the program.

**References**


