Introduction
The expression ‘you cannot teach an old dog new tricks’ is not only misleading but also inappropriate, since older people are able to do and learn new things [1-2]. Conditions should however be conducive to adult learning. Expanding our knowledge of the principles and processes by which adults learn can address this. Knowles in Jarvis [1] defines adult education (AE) or andragogy as the art and science of facilitating adult learning. It refers to adults, not because of their chronological age, but because of the responsibilities they have in society. AE is therefore a process whereby persons whose major social roles are characteristic of adult status undertake systematic and sustained learning activities for the purpose of bringing about change [2]. This is change in knowledge, attitudes, values and skills of adult learners.

The importance of adult education [AE] to radiographers
Why is AE important to radiographers? The answer is embedded in continuous professional development (CPD), because it is considered as one section of the adult education spectrum. Radiographers as the consumers of CPD are regarded by themselves, and by others, as socially mature and therefore as adult learners. Additionally, CPD in radiography, as well as in other professions, is utilised as a coping mechanism for change. It can promote change and react to change [2, 3].

In 2002 the Health Professions Council of South Africa introduced compulsory CPD for radiographers for re-registration purposes. Not surprisingly some radiographers felt threatened by this new venture as they had little, or any, input in the matter. Adding to their fears, CPD brought with it additional roles for the radiographer to fulfill, namely that of adult learner and facilitator of adult learning. With the compulsory CPD scheme, almost each radiographer had, or in future will have, the opportunity to act as a facilitator of adult learning; an aspect for which radiographers have not been formally prepared. Many radiographers come from a didactical background of teacher-centeredness where the teacher was regarded as the ‘know all’. This way of teaching continues because we tend to teach the way we were taught. To contribute to the success of CPD events, radiographers need to adjust to become facilitators. This paper examines the adult learner and provides some guidance for the facilitation of adult learning.

The adult learner
An understanding of the adult learner provides a basis for better facilitation of adult learning [2]. The andragogical viewpoint perceives adults as autonomous learners possessing great experience, capable of setting their own goals and selecting their own problem areas [1]. In the adult learner there is a change in self-concept since adults need to be more self-directed [1]. Adults have a readiness to learn if the learning addresses a problem with which they are confronted and which they regard as relevant. Therefore their orientation toward learning is problem-centred and not so much subject-centred [1]. Experiments have shown the human body physically declines with time and this may include sensory impairment, less energy and failing health. A common expression among adults is “I cannot remember like I used to” [1]. All of the above may influence the learner’s ability to assimilate information and must therefore be considered. One major way in which adult learners differ from children is that adults add the role of learner to their other roles in life such as parent, spouse, community member and worker [2]. Adult schedules and responsibilities therefore influence the learning experience.

Utilising adult learning facilitation principles in CPD events
Facilitating learning implies that the facilitator will assist rather than direct the learners [2]. A definition of facilitation is that it is a process of identifying, and providing, suitable resources which will help the learning process [4]. In AE the
A powerful tool, for designing effective, efficient, relevant and innovative learning events, is systematic planning [2]. Planning includes assessing the needs of the learner, developing event objectives, formulating an instructional and administrative plan, and, designing a program evaluation plan. The best starting point when planning a CPD event is to keep the aims of CPD in mind.

The aims of CPD are to maintain, develop and improve radiographers’ skills and knowledge so that radiographers can respond sensitively and appropriately to their patients’ needs [5-7]. This would assist in selection of the format and content of the CPD event. Moreover, the needs of learners have to be accommodated. CPD in radiography has become mandatory but this approach is not congruent with adult learning theory. The theory of adult learning is based on the assumption that adult learners are self-directed [7]. The biggest test of mandated learning is by converting a non-voluntary and sometimes resented activity into a worthwhile learning experience [2]. For this reason it is crucial that facilitators consider radiographers as adult learners when planning CPD events. Radiographers bring to the learning situation their own experience, meaning system and felt needs [1] hence facilitators should use the experience of radiographers as learning resources. They should consult radiographers to determine their needs so that they can jointly structure the learning process [4, 7]. A needs analysis would assist with this. Formulation of objectives, or statements of anticipated event results, provide concrete guidelines for development of the learning event and could also serve as a means of judging the value of the CPD event [2]. If the learning is relevant to the radiographer’s experience or need to learn, learning will be applied more successfully to the satisfaction of the radiographer.

With the objectives for the event set and content decided on, an instructional plan has to be formulated. It is necessary to restructure traditional learning methods. In doing so, facilitators should use a variety of methods and a range of materials involving as many of the adult learner senses as possible [2]. The content and format of learning events must often be revised and renewed. It is recommended that this auditing process should be a participatory activity between learners and facilitators [7]. Moreover, the language used in learning material should not create a distance between the facilitator and the learner.

Adults are more likely to retain information if it is meaningful to them and if they are able to integrate it into the store of knowledge they already have. Methods that enable radiographers to use their previous knowledge as resources should therefore be utilised so that they can integrate new knowledge with the old. An example is to add time for reflection during the learning event giving radiographers the opportunity of making the learning material their own. Al-Shehri and co-workers describe reflection as “standing back and thinking about an aspect of an experience in an attempt to break free from assumptions already made” [8].

Facilitators should (i) encourage radiographers to reflect on a particular idea and to analyse it based on their respective experiences, and (ii) implement methods to assist radiographers to see the relation between theory and practice. Unless the significance and the application of new ideas to practice are clearly understood, few radiographers will find it useful or implement it [7]. Group discussions and other participatory activities may help to foster a spirit of critical reflection. A facilitator should create an ethos in which no adult feels threatened or inhibited and where all learners are encouraged to participate to enhance the learning process [1].

The facilitator:
- should be empathetic and sensitive to the humanity of the adult learner,
- should anticipate a successful learning outcome,
- should reinforce all correct knowledge and understanding so that radiographers can maintain a high level of self-confidence and self-esteem [1],
- should provide radiographers with the opportunity to reflect upon incorrect knowledge so that they can correct it themselves, where this is possible,
- should encourage co-operation rather than competition in the learning situation [1].

Radiographers will bring to the learning situation different physical and physiological conditions, such as poor vision and hearing hence the physical environment in which teaching and learning occurs is an important consideration [1]. Additionally, factors such as social responsibilities, adult schedules and different educational backgrounds of radiographers could influence their learning speeds. Facilitators should respect these factors and should allow radiographers to learn at their own pace because if the provision of a learning event is too fast adults experience stress and anxiety leading to unsatisfactory learning [1].

Adult learners, as the consumers of learning events, in most cases choose which events they want to attend and if they want to attend. It is therefore important to consider factors that could prevent professionals from attending CPD events. Professionals often do not attend educational activities for several reasons, for example, they feel frustrated and disillusioned with activities that do not meet their learning needs. Other reasons for the constraints that they experience in attending CPD activities are the cost, venue, time of activities, and provision of childcare. Facilitators have to be sensitive and should consider ways of addressing these constraints, because considerable effort spent in designing attractive events may be fruitless due low attendance numbers [9-11]. It is thus relevant that learners should participate in the decision as to where, when and how CPD events are provided [5].

When designing an evaluation plan for a learning event facilitators must ensure that the data gathered are usable. Data should focus on measuring the outcomes of the event and also on ways of improving events [2]. It is said that if you really want to learn something, teach it to someone else [4, 12]. Those with experience should know that this is not always easy. It is essential that facilitators should work according to a plan and have a clear purpose which directs the facilitation. However, one should not expect to instantly become the perfect facilitator. Merriam [2] argues that it is not possible for any facilitator to meet all the needs of learners to their full satisfaction.

The responsibilities of radiographers as adult learners

It would be amiss of the author to not address the responsibilities of radiographers as learners. Given that there is considerable competition for adults’ time and money from other life activities, radiographers need to be aware of the need to continue learning throughout their life.

Radiographers should recognise the value of CPD events with a change in attitude such as being motivated to continue learning [5]. Also, for too long radiographers felt comfortable without actively participating in the planning of events, the actual event itself, and the evaluation of events.

As learners radiographers should get involved in the complete learning experience. This means that radiographers must know and admit their learning needs and reflect on their learning experience. They must never underestimate their power to learn. Likewise they should not doubt their abilities to act as facilitators of learning.

Radiographers should seize every opportunity in the workplace making of it a valuable learning experience, not forgetting that other radiographers and health care workers are important learning resources. With distance and time often being some of the deterrents to CPD attendance, networking and learning from one another in the health care environment are essential learning opportunities that are easily overlooked.

Radiographers should advertise what is happening in their departments and should extend an invitation to other health care professionals to participate in the events. In this regard information technology can play a valuable role in CPD provision. Radiographers should not be intimidated by information technology.

In particular those radiographers working in outlying districts and far from institutional support should appreciate the importance of electronic CPD because it brings the learning experiences to the professional in practice. Furthermore, these activities can be done at a time and pace that suit the learner and can therefore be regarded as a self-directed resource.

Concluding remarks

If facilitators aim to provide an efficient and effective service to learners they need to involve radiographers in all the stages of a well planned educational CPD event. Traditional teaching no longer maximises educational value thus learner-centered methods should be used. These
methods help in creating innovative approaches to meet consumer demands and inspire the learner to self-directedness, autonomy and lifelong learning. Radiographers, as adult learners, should not always allow facilitators to do all the work simply because they do not want to get involved. They have a right as well as a duty to participate in the whole educational cycle of CPD events. Whether you are a learner or a facilitator, one should remember: “Education is life - not a mere preparation for the unknown kind of future living ... The whole of life is learning, therefore education can have no ending.” [2].

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References