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Effective andragogical strategies: What works with teachers? Reflection on practice

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Abstract

Andragogy focuses upon methods and practices of helping adults learn. Autonomy, self-direction, relevance to one's life's experience and knowledge, tapping into the cognitive, affective and psychomotor domains are all learning principles of how adults learn best. This research aimed at identifying successful strategies which facilitate effective adult learning. Several sessions were carried out with groups of professionals working within secondary education (ages 10 to 16), including: the academic team, learning area leaders, teachers, and learning support assistants. A learning process framework was developed and used as the basis of each planned session. Feedback from each group of participants was collected. The main observations denoted from the study reiterated that the learning process framework adopted enhanced the teachers' grasp of theories and their application to the classroom. Feedback received highlighted the importance of frequent, short, professional learning sessions. Further research is needed to determine the long-term effectiveness of professional training.

Keywords: Andragogy; reflective practice; action research; teacher education; learning process framework.

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1. Introduction

Adult learning has only been given its due importance in recent years (Peterson & Ray, 2013). Knowles (1968) began to distinguish andragogy (the teaching of adults) from pedagogy (the teaching of children) and highlighted that andragogy is “a new label and a new technology” (p. 351). Knowles (1970) defined andragogy as “the art and science of helping adults learn” (p. 43). Although it was originally debated whether adults can actually learn (Merriam, 2001) nowadays adult learning is considered to be at par with the learning which children undergo due to an increased awareness of the fundamental principle of lifelong learning.

In the school setting, it is essential for staff members to follow professional learning development. Thus, andragogy is tightly intertwined to the development of enriching professional learning opportunities for teachers and other members to keep abreast with appropriate and applicable principles and methods of teaching. As teacher trainers and professional training developers this field of research caught our attention since we believe that "continuing professional development is becoming more integrated into the collective life and needs of the school" (Hargreaves & Fullan, 2012, p. 81). Thus, the importance of developing the right teacher-training programmes and being sensitive to training needs is imperative. Hence, the main aim of this study was to identify effective strategies that enhance adult learning. The processes involved in adult learning should be considered as crucial in the planning and development of professional learning, to ensure that this is profound and is applied to every day teaching practices.

2. Literature Review

Knowles (1973) highlighted that four crucial assumptions underpin the difference between adult learners and child learners. These are: self-concept, experience, readiness to learn and orientation to learning. Knowles (1984) later added yet another characteristic to the list. This was the motivation to learn. Albeit these differences have been criticized by various authors (Davenport & Davenport, 1985; Tennant, 1996) they should be considered when designing teacher training since an adult's maturity level has a greater impact on one's perspective towards learning. Knowles (1975) also developed a five-step model through which he promoted the idea of self-direction. This model involved the following steps: diagnosing learning needs, formulating learning needs, identifying human material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes. These steps were all considered during our training.

2.1. *Constructive Alignment, Multiple Intelligences (Gardner, 1983) and Bloom's Taxonomy (Bloom, 1956)*

Biggs (2003) believed that when curriculum, instruction, and assessment are aligned to support authentic learning, participants are empowered to become lifelong learners who can attain deep understanding and self-awareness. He referred to this alignment as constructive alignment. This has been explained by Hyland, Declan and McCarthy (2015) as, the “alignment between teaching methods, assessment techniques, assessment criteria and learning outcomes” (p. 33).

The theory of Multiple Intelligences (MIs) (Gardner, 1983) challenges the idea of the existence of only one form of intelligence, usually measured by IQ testing. The theory suggests that each individual has a combination of intelligences that is formed out of the eight forms of intelligences specified by Gardner (1983). These are: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal and naturalist. This perception of the ability of humans provides a wider perspective of how adults and children learn; implying that there are eight different potential ways in which learning can take place.

Bloom (1956) brought forward the idea that learning occurs within three domain: the cognitive, affective and psychomotor. Within each domain Bloom's taxonomy illustrates that there are multiple depth levels of engaging with the learning process. For example within the cognitive domain, the

taxonomy shows that learning tasks should vary from targeting the shallow levels of knowledge, comprehension and application to the more complex processes of analysis, evaluation and synthesis.

2.2. Creating a Reflective Professional Learning Community

For professional learning to bear its fruit, the school community needs to transform itself into a professional learning community (PLC). A PLC resonates Dewey's belief that "educational practices provide the data, the subject matter, which forms the problems of inquiry" (Dewey, 1929). This means that all the staff within the school should engage in having professional learning conversations to create the right atmosphere for learning. Administrators and teachers can seek, share learning and act on their learning thereby creating a community of "continuous inquiry and improvement" (Stoll et al., 2006, p. 223). The culture of reflective practice needs to be created within the school so that staff members can share and critically interrogate "their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way..." (Stoll et al., 2006, p. 223). In this way, professional training will encompass self-development and work-based learning and the training becomes an opportunity of experiential learning (Kolb, 1984) and reflective practice (Schon, 1983). Gibbs (1988) believed that when planning training, elements of reflection and evaluation need to be included. In fact, his *Reflective Cycle* (RC) focuses upon six steps: description, feelings, evaluation, analysis, conclusion and action plan. Gibbs' (ibid.) RC encourages one to think systematically about the phases of an experience or activity, and to make of all the headings to structure one's reflection.

3. Research Design

The aim of the study was to identify effective andragogical strategies which would enhance adult learning. The interest derived from a need to provide better learning opportunities for the leaders and teachers at our school since evaluation of previous training strongly indicated that trainer-led sessions were not as effective as hoped for. This situation enticed us to develop a training programme underpinned by a specific learning process framework as outlined hereunder. A total of ten sessions were delivered – each of approximately two hours in duration. Three of the sessions were held with ten academic team (ACT) members. Another three sessions were delivered to 13 Learning Area Leaders (LALs) whilst four sessions were delivered to the 72 teaching staff and learning support assistants (LSAs). This process was undertaken since "having on board key players such as teaching personnel and school management teams is crucial for the success of any educational reform, anywhere" (Borg and Giordmaina, 2012, pp. 4 -5). Feedback was collected from every group of professionals following their sessions.

A mixed method approach was deemed most suitable to gain quantitative and qualitative feedback from the participants. When preparing the evaluation sheets, which were distributed at the end of the sessions, one part was quantitative, asking the participants to fill in a Likert scale, from 1 to 5, one rating the indicated aspect as poor whilst five indicated excellent. This scale was followed by various open-ended questions so that rich qualitative data could help us to understand why the participants had rated an aspect in the way they had done.

Prior to developing the training sessions, a training needs analysis (TNA) was carried out to identify the needs of the staff. A meeting was held with the leaders within the school to analyze the training and development needs that the educators and other stakeholders within the educational institution required. Subsequently, training was then geared towards the actual needs of the school rather than a one-size-fits-all plan. As suggested by Furze and Pearcy (1999) a TNA is the first step in a cyclical process (see Figure 1) which contributes to the training and educational strategy of an organization. It reviewed and considered the knowledge, skills, behaviours, attitudes and competences that all stakeholders wished to develop. Moreover, the TNA provided a comprehensive outline of how these needs could be

developed effectively. As Figure 2 illustrates, an initial meeting was held with the school's leaders and training needs were identified.

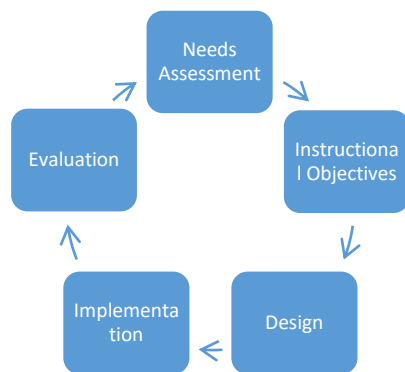


Figure 1. Training Needs Analysis Cycle (Furze & Pearcey, 1999)

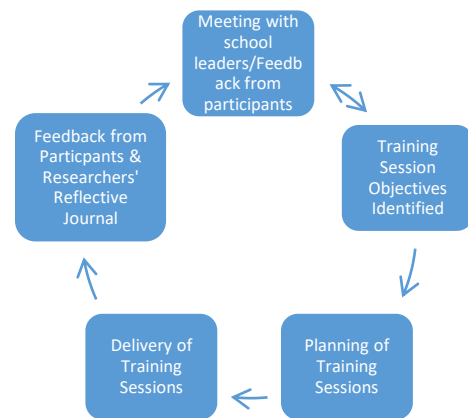


Figure 2. Training Needs Analysis Cycle (as adapted for the study)

Objectives were then identified and a plan was designed based on the identified needs. Feedback was collected from the leaders and training session materials were planned accordingly. Delivery of the sessions was carried out and feedback was once again obtained from all participants. As researchers, keeping a reflective journal was deemed essential for our reflections to be more valid and reliable.

3.1. Sessions' content

The content delivered through the sessions focused on key educational theories and their implications for effective teaching and learning. These theories included Bloom's Taxonomy (Bloom, 1956) and Multiple Intelligences (Gardner, 1983). Both these theories have been briefly explained in our literature review. Teachers were exposed to both the theories themselves as well as ways of how they could apply them to their everyday teaching. Part of the sessions also focused on equipping teachers with the skills to write appropriate learning outcomes through the right choice of verbs as per Bloom's Taxonomy of learning (Bloom, 1956). Teachers were asked to reflect about their practices and to evaluate whether the multiple intelligences of their learners were being used effectively as potential pathways to learning. The principle of constructive alignment was also tapped into since this is a main element of effective planning for outstanding and enriching learning opportunities for all learners.

3.2. Strategies employed during session delivery

Each session was developed using constructive alignment. During the planning phase, we constantly reflected upon how the learning outcomes set for the sessions were aligned to the activities which would be carried out as well as the assessment which would follow. We kept in mind that evaluating and reflecting each activity would allow the participants to reach the targeted learning outcome. This was also accompanied by a reflection of how the assessment procedures would assess the learning outcomes. Our focus on the Multiple Intelligences theory was two-fold. The theory of Multiple Intelligences was part of the content conveyed during the sessions. Moreover, it was also taken into consideration when designing the training sessions so that the tasks organized would target and engage professionals/teachers having different Multiple Intelligences. When preparing the presentations and activities we made use of icons to symbolize the eight different intelligences (such as standing for Logical/Mathematical). This helped us to ensure that tasks were varied and engaged the learning modalities of the participants. Bloom's taxonomy was also considered when planning the sessions. We

made use of letters to distinguish which categories, in every learning domain, was being referred to (such as K standing for Knowledge).

Sessions also took the following aspects into consideration. A balance was kept between individual and group work. Whilst acknowledging that group work was important in allowing staff to obtain a deeper understanding of the topics covered in relation to their area of expertise, individual work was considered crucial in giving the participants the opportunity, time and space, to reflect and evaluate their own practices. Sessions were mostly practical so that the teachers could see the link with their everyday classroom practices.

One recurring strategy which was used for the latter-mentioned process was asking the participants to jot down any ideas or thoughts which they wanted to develop following the sessions. An effective assessment technique, developed by Angelo and Cross (1993), which we put into practice was the one-minute Classroom Assessment Technique (CAT) which enticed participants to jot down a point which needed clarification and which we collated and developed further in subsequent sessions.

4. Data Analysis

All the feedback collected was analysed quantitatively and qualitatively. The analysis process was multi-fold as we primarily analysed the evaluation forms collected from ACT. Following this analysis, the data from the LALs was analysed and laid the foundations for the training carried out with the teaching staff and LSAs. Both the ACT and the LALs were given a Likert scale, from 1 to 5 as per legend. The average scores obtained from this feedback is illustrated in Table 1.

Table 1. Average Scores from ACT and LALs

	Average Score ACT	Average Score LALs
Gaining overview of LOF	4.5	4.8
Understanding Bloom's Taxonomy	4.3	4.3
Learning about MIs	4.2	4.0
Applying Constructive Alignment	4.0	3.9
Writing Learning Outcomes	4.0	4.1
Presentation of Material	4.3	4.5
Trainers' replies to Questions	4.7	4.6

1 = Poor / 2 = Not very good / 3 = Good / 4 = Very Good / 5 = Excellent

The average scores obtained were between 4 and 5 indicating that all the participants received the training very positively. This encouraged us to use the same strategies during the subsequent training with the rest of the staff. Although quantitatively the results were very positive we made use of the qualitative feedback to gain a deeper understanding of what really worked and what needed tweaking. The qualitative feedback complimented the quantitative results with very positive comments such as *"I feel the sessions were of benefit to my role in the school...in all ways – a great start to a long process!"*, *"I can now answer and guide teachers who ask for help"* and *"I feel more confident and better informed about learning outcomes and therefore I have a clearer picture of the way forward."* A common theme that emerged from the qualitative feedback was the participants' appreciation towards the use of hands-on activities, trainees' engagement and practical suggestions related to their role. Conversely, a mutual area for improvement was the need for more time allotted to discussion and for trainees to apply what they learnt to practical classroom situations. This was an important aspect to keep in mind when planning the sessions for the rest of the staff.

Following the delivery of the training sessions with the teaching staff and LSAs, quantitative and qualitative feedback was collected. The average scores obtained for each of the aspects mentioned are illustrated in Table 2.

Table 2. Average Scores from Teaching Staff and LSAs

Evaluate the following:	Average Scores
The theoretical part	3.9
The practical part	3.6
Discussions	3.5
During the sessions, we had time to reflect on our practices	3.4
During the sessions, we had time to share our thoughts	3.2
During the sessions, we had time to discuss with colleagues in our department	3.0
Sessions were linked to our daily work and practice	3.8

1 = Poor / 2 = Not very good / 3 = Good / 4 = Very Good / 5 = Excellent

As evident in Table 2, the scores obtained indicate that the training was overall deemed either good or very good. Nonetheless, one can immediately notice that the average scores are below those obtained by the ACT and the LALs. As reflective practitioners, we can conjecture that possible reasons for these results are the underlying need for teachers to have practical suggestions which they can use in class since a general observation was that teachers find it harder to relate theoretical perspectives to their everyday practicum. Another possible reason might have been that the training was done in a much larger group, hence the lack of a more personalised approach. The importance of analysing the qualitative data collected was essential in allowing us to get a clearer picture of the andragogical strategies which teachers found to be effective and recommendations to improve our training. In Table 3 we summarise this feedback which clearly indicate the preferred andragogical strategies and why our training seemed to be more effective than previous training which the teachers underwent.

Table 3. Summary of Qualitative Feedback

Questions Asked	Summary of Feedback
What do you like about the training sessions? If you had to compare the training, we have delivered, with training by other trainers, what... made it better?	I understood better the difference between teaching objectives and learning outcomes; The information is very relevant and linked to our daily practice Trainer's passion and interest; Related to one's work; Time for discussion but also time to write and be concrete; Knowledge of trainer helped; in-house trainer; Hands-on activities, practical activities, interactive; Group work; An opportunity for new seeds and thoughts to be planted, new ideas and innovations.
did you not enjoy?	Too much information/theoretical part; Lack of time to cover all that was prepared; Repetition of content; Not enough time to listen to others and to discuss; Little time to assimilate and implement the different ideas we would have discussed.
would make it better?	More time and more activities in groups; more time to be heard and to discuss ideas in our departments; Given more time to process, evaluate and explain how things can be done and changed throughout the year; More time would be allocated to these learning sessions; More sharing of best practices; Time for feedback; More practical exercises.

It was encouraging to observe that the main reasons why the andragogical strategies employed were effective included the fact that the researchers were seen as colleagues who were more sensitive to

their needs. Furthermore the learning process framework underpinning the training programme seemed to be successful since participants pointed out that hands-on activities, the variety of activities incorporating MIs, collaborative tasks and the emphasis on knowledge as well as the other areas of Bloom's taxonomy were the determining, successful factors when compared to other training. The key area for improvement was the time factor as participants continuously pointed out the need for more time to internalize, accommodate and reflect on the content of the training sessions.

5. Conclusions and Recommendations

Overall the andragogical strategies employed, underpinned by the learning process framework developed, seemed to have been effective with most participants as evidenced by the qualitative and quantitative feedback received. The main strengths pointed out were the hands-on and practical approach adopted as well as the relevance of the activities to everyday classroom practices. Identified areas of improvement were: the wish to be trained in smaller groups and ideally within one's department, the opportunity to share good practice and an additional end-of-year training session for the collective planning of the way forward. It would be beneficial for further research to be carried out in order to evaluate the effectiveness of the andragogical strategies employed. A further addend would be to evaluate the impact on teaching and learning either by observing the implementation of the strategies discussed or through peer observation which could lead to reflective peer conversations. Both strategies could ultimately lead to a more effective professional learning community.

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