

ACTIVE EDUCATIONAL TECHNIQUES AND EFFECTIVE LEARNING OF HUMAN RESOURCES

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ABSTRACT: *This article attempts to explore the relationship between active educational techniques and effective learning in vocational training centres. In particular, the effect of active educational techniques on the effectiveness of the adult educational process is explored. The analysis of the findings highlights, first of all, the great need for the use of adult learning techniques, their importance and their positive educational outcomes. In addition, it is noted that the most important reasons for abandoning an adult program are inefficiency in learning and lack of respect.*

KEYWORDS: Adult Education, Adult Learners, Vocational Training Centres, Active Learning Techniques, Learning Outcomes.

INTRODUCTION

Training is a basic objective of vocational training and it is implemented through a program of activities aimed at teaching the necessary knowledge and skills that correspond to specific types of work (Kotsikis, 2012). The certificates provided to vocational training graduates are not professionally flexible, but they are characterized by increased convertibility of qualifications and their use in the labour market (Kapsalis & Papastamatis, 2002). The field of vocational training can be divided into two major pillars, Initial Vocational Training and Continuing Vocational Training (Efstratoglou, 2004). Continuing Vocational Training programs are implemented by Vocational Training Centres. The programs implemented by Vocational Training Centres, according to the criteria of the National Organization for the Certification of Qualifications and Vocational Guidance, are divided into three. In-company training programs, anti-social exclusion programs for specific socially vulnerable groups, and training programs for workers, the unemployed, self-employed in the private and public sectors.

The criteria for certification concern the organization and its operation, managerial, scientific and administrative staff, building infrastructure, equipment as well as educational staff (Yoldassi, 2012). The training staff is required to come from the Register of Trainers of the National Organization for the Certification of Qualifications and Vocational Guidance (former National Certification Centre for Lifelong Learning Structures) under a Joint Ministerial Decision (110327 / 14-2-2005 / GG 230 / B / 21-2 -2005, article 4, chapter B, par. 4.3). An initial model of education was developed for the training of adult educators of the Registry (Karalis & Kokkos, 2008). The educational material of the training program emphasizes the active participation of learners and their promotion as well as the extended role of the teacher (Karalis & Kokkos, 2008; Kokkos, 2004). In a survey conducted by Ioannou and Athanasoulas-Reppas (2008), regarding 39 trainees, it was verified that active education techniques are effective in adult learning, highlighting the importance of their use in adult training. In addition, in a Kokkos survey (2004), instructors enrolled in the Register of Trainers have shown that

they often do not use active training techniques, and some of them are confused with supervisory tools.

The objectives of Continuing Vocational Training are to strengthen the skills of the workforce in an environment characterized by rapid changes in the labour market, to enable workforce remain active employable members, and by the avoidance of possible passivity, to improve workers 'and enterprises' productivity and to reduce the unemployment through balancing supply and demand (Efstratoglou, 2004). It is therefore necessary to assess the effectiveness of the programs, focusing on the principle of respect and on the principles of adult learning, in order to provide services in accordance with modern pedagogical trends, with the aim of lifelong learning as a guiding principle for an organization's productivity and profitability.

THEORETICAL UNDERPINNING

The characteristics of adult learners and the conditions for effective learning

The successful implementation of adult education programs requires taking into account the specific characteristics of adult learners and the conditions for effective learning as defined by a number of scholars and researchers (Brookfield, 1986; Courau, 2005; Houle, 1992; Jarvis, 2004; Knowles, 1998; Rogers, 1989; Smith, 1982). Thus, the bibliography concludes with five adult and seven learning conditions (Kokkos, 2008a; Noye & Preveteau, 1999; Panagiotopoulos, 2012; Rogers, 1999). Particularly, the first characteristic of trainees is that they come into a training program with specific goals (Kokkos, 2008a; Rogers, 1999). Practically this means that adults who decide to attend an educational program have specific goals depending on the period of their life. Thus, these goals can be linked to their personal and professional development or status, and there is no shortage of cases where an adult wishes to attend a training program without having really realized the goals he / she wants to achieve (Kokkos, 2008a). These are the adults who are not sufficiently responsible and conscious and they often have a passive role in their daily lives.

On the other hand, there are also those who are forced by their employers to attend a training program or the unemployed attending training programs for the purpose of collecting the corresponding allowance provided by the program. The next characteristic of adult learners is that they have a broad and diverse range of experiences (Kokkos, 2008a; Panagiotopoulos, 2012; Rogers, 1999). In particular, adult experiences derive from professional life, social activities and responsibilities, human and family relationships, political roles and situations that he has experienced during his adult life (Kokkos, 2008a). As a result, the adult has a wide range of experiences, far wider than the minor and often very different in relation to a learner's range of experiences. In practice, there is a need to capitalize on the experiences of adults in education. What is observed is that the adult prefers the kind of learning that relates to what he already knows (pre-existing knowledge) and what he practices in his daily life. Moreover, trainees have crystallized the ways they prefer to learn and each individual prefers to learn in certain ways (Kokkos, 2008a; Panagiotopoulos, 2012; Rogers, 1999). A common trait of adult trainees is their tendency to participate actively (Kokkos, 2008a; Panagiotopoulos, 2012; Rogers, 1999). This adult characteristic is expected due to the tendency for self-determination (Rogers, 1999). Thus, they prefer open communication and they seek the objectives of the program to be in harmony with their goals, their needs and wishes. Moreover, they see the

teacher not as an authority as is customary in educational programs for minors but as an expert and a colleague (Kokkos, 2008a).

Finally, trainees face obstacles in the course of learning, they have a great influence on the effectiveness of learning and they should be taken into account when planning an educational program (Kokkos, 2008a; Panagiotopoulos, 2012; Rogers, 1999). These obstacles are mainly grouped into three categories (Rogers, 1999): obstacles derived from poor organization of the learning process, misrepresentation of targets and inappropriate infrastructure, social obstacles related to obligations and duties and internal obstacles due to the personality of the adult. These relate either to the pre-existing knowledge to which the adult participant adheres and therefore has difficulty in assimilating new knowledge or to psychological factors ie low self-esteem.

The conditions for effective learning are based on the specific characteristics of adults and they are planned to provide adult learners with opportunities for effective learning. The literature concludes with seven important conditions (Kokkos, 2008a; Noye & Preveteau, 1999; Rogers, 1999). The initial requirement is that education must be voluntary. This means that adults should not be pressured to participate in an educational program. In this case, the results would be negative. It then appears necessary for the educational objectives to be clarified, realistic, clear, linked to the needs of adult participants and to the social and professional environment (Kokkos, 2008a Rogers, 1999). In practice, this means that the training program should be well organized at all levels so that it does not show weaknesses in infrastructure, secretarial support, educational material, acceptance of allowance to participants and in learning plans. In addition, it is important for it to be directly linked to the participants' experiences and needs. This means that the examples, problems and issues discussed are linked to the situations that the learners will encounter or are experiencing, and that opportunities should always be given to exploit and process their experiences.

Continuing with the prerequisites, we need to take into account the ways adults prefer to learn, which requires individualized exploration of each participant's prerequisites (Kokkos, 2008a Rogers, 1999). Gradually it is advisable to encourage the active participation of learners in learning and, by extension, in the educational process. To this end, the use of active learning techniques in the learning process and the involvement of learners in the design of educational objectives, curriculum, method, interconnection with professional bodies are preferred. The final and of equal importance prerequisite is the need to investigate the learning obstacles the learner faces and how to deal with them (Kokkos, 2008a Rogers, 1999). It is a process that requires that the instructor should have discretion and respect for the trainee.

Active educational techniques and the role of the trainer

The trainer who is in favour of active education should use the active educational techniques and formulate the educational strategy in a way to use them throughout the program (Kokkos, 2008b).

Analytically, this means that selecting the appropriate technique that promotes active learning needs to apply certain criteria. In addition, it should avoid as much as possible the vertical transfer of knowledge and use a variety of energetic techniques. In case he/she should need to use prescription, it should be done in the best way, combining it with other energetic techniques. Lecture is the most widely used educational technique in adult education programs. It promotes the transfer of knowledge from the trainer to the learner according to the traditional model and therefore does not belong to the energetic techniques, but can be easily and flexibly combined with active educational techniques (Kokkos, 2008b). Active educational techniques

are the means to implement the participatory educational method and the main ones are questions-answers, discussion, brainstorming, exercises, demonstration, work group, case study, role play, simulation, problem solving, practical training, avalanche, self-directed learning, expert interview, educational visits (Kokkos, 1998, 2006, 2008b).

Specific criteria should be applied regarding the selection of the appropriate technique. These criteria, according to Kokkos (2008b), are the educational purpose of the program, the texture of the learning object, the educational characteristics of the learners and the learning styles, the interests and the needs of the trainees, the trainer's abilities, the learning climate, the learning climate, the time and, finally, the available resources, e.g. there may be a need for a practice lab. Moreover, in addition to the aforementioned criteria, the choice of active educational techniques can still be made on the basis of the teaching module (Giannakopoulou, 2006). According to this criterion, a combined assessment of the content of the teaching module, the available teaching time, the homogeneity or heterogeneity of the learners, and the type of the desired results according to the didactic objectives of the module (eg acquiring knowledge, skills, stops) is of great importance. When practicing active techniques, the trainer has a specific role to play. According to Kokkos (2008b), this role is to take care of creating a learning environment that is distinguished by interaction, communication and co-operation, helping learners to express and clarify their learning goals and to connect them to the learning object, familiarize trainees with participatory techniques, ensure that all trainees progressively take on more initiatives in defining learning objectives, content and value learning the learning path, helping learners' experiences and knowledge come to life, learning learners to use learning resources, and ensuring that learners learn in their own way and pace.

The reality of Vocational Training Centers

Until 2003, surveys conducted to identify the characteristics of adult educators in Greece did not specifically address the skills of trainers. However, they have resulted in some findings (Karalis & Kokkos, 2008). In particular, adult trainers have been found to have a lack of specialized qualifications, but no exact conclusions have been drawn about the skills that are missing out. More specialized studies were implemented by the European research project SAEDA, "Strategies for Improving Adult Education in Regional Frames" (Karalis & Kokkos, 2008). The results showed that only 3.8% hold a postgraduate degree in adult education or related subjects, 5.2% have attended an adult education course over 100 hours or have a related university certificate and only 0.6% have all the above. The trainers seem to have no skills for an inaugural meeting and the trainers have shortcomings in handling the dynamics of the relations of the training group. Moreover, as shown by the results, possession of a qualification does not ensure the trainer's adequacy, but needs to be matched by the trainer's continued involvement with adult education and by following training programs for trainers. As demonstrated by Goula (2006) survey of 212 trainees in various Vocational Training Centres of the prefecture of Attica, in the programs all the trainers use the lecture, about half the discussion - dialogue, while about one third use the internship in the classroom. In a survey of Kritsiotakis (2006) in nine Vocational Training Centres of Attica through the views of 122 trainees and 12 trainers on the application of the adult education principles, it was supported that use of previous experience, a link between theory and practice and a two-way relationship between trainer and trainee are important. However, there have been difficulties in using active educational techniques, while question-answers technique and the lecture were used more frequently by trainers. The Grammar School survey (2012) examined the effectiveness of Vocational Training Centres of the prefecture of Argolis regarding the absorption of the

unemployed in the labour market. It appeared that the trainees were not satisfied with the VET link provided with the labour market and their subsequent work seems to be in a different business from the one they initially practiced. It is important that the basic research proposal is to design appropriate structures and programs to increase the effectiveness of Vocational Training Centres.

Finally, in a survey by Margalia (2016), 120 adult participants in Vocational Training Centres in the prefecture of Achaia examined the use of active educational techniques in the learning process. It has been observed that participatory techniques are used less than traditional in Vocational Training Centre programs. The most commonly used participatory techniques are brainstorming, question-answers and working groups. The results also showed that although learners consider the use of active techniques to be efficient for acquiring knowledge, skills and attitudes, they have inhibitory factors limiting their active participation due to lack of previous experience, fatigue and reluctance.

METHODOLOGY

Research Aim

This article attempts to investigate the relationship and influence of active educational techniques in the effective learning of vocational training centres in the Athens area. In particular, quantitative data analysis explores how active educational techniques influence the effectiveness of the adult learning process.

Research sample

The target population of research is the trainees attending the vocational training centres programs for the year 2017-2018 in the Athens area. The sample of the survey is the trainees participating voluntarily in completing the questionnaire. Specifically, it consists of 87 adult learners in nine vocational training centres. Convenient sampling was chosen for the formation of the sample of the survey. Convenient sampling is a non-probability sampling for small-scale studies (Cohen, Manion, & Morrison, 2008). The Vocational Training Centres in Athens do not exceed 50. The survey gathers information from four Vocational Training Centres. It is worth mentioning that there are no other contemporary surveys regarding the population of the Vocational Training Centres in Athens.

Structure of the Questionnaire

The research tool for collecting quantitative research data is the questionnaire, which is particularly used by the social sciences (Cohen et al., 2008; Robson, 2010). Its choice was because its use provides data from a large number of samples in a short time (Creswell, 2011). The anonymity of the participants in combination with the defined and stable context they provide ensures a high degree of honesty (Cohen et al., 2008). The questionnaire built is of a closed type. Four axes-modules form the questionnaire. On the first axis there are nine questions regarding the demographics of the participants and some personal information. The Likert scale (Likert, 1932) is used in the following axes. The Likert scale has the form "Continuously / Frequently / Do not Know-No Answer / Rarely / Never" or "I Agree Totally / Agree / Neither Agree-I Am Not / Disagree / Disagree / Totally Disagree". All the axes except the first consist of two categories. In the first category the questions investigate attitudes,

perceptions, behaviours. In the second category the questions attempt to describe specific elements that appear in the educational process. That is, active educational techniques, obstacles and learning outcomes. The design of the questionnaire was based on the content of the topic area studied by research, its objectives and research questions. Additionally, past research relevant to the content and / or purpose of this research was studied (Athanasoulas-Reppas, 2008; Goula, 2006; Grammatikos, 2012; Kokkou, 2004; Koutsoukos, Frangoulis, & Balkanos, 2015; Kritsotakakis, 2006; Kotti, 2008; Margalia, 2016). Particularly from the pre-existing surveys, the results, the proposed dimensions for investigation, the limitations that were manifested and especially the questionnaires and the theoretical content covered by the questionnaire questions were studied.

The completion time did not exceed 10-15 minutes, with an emphasis on simple language and understandable questions. The distribution period was between February and March 2018. The questionnaires were given to participants in the Vocational Training Centres premises and they were completed during a break or they were returned at the next meeting. A total of 87 questionnaires were voluntarily supplemented and answered back. The form accompanying the questionnaire included an information note for research purposes and the full contact details of the researcher. Prior to the final distribution of the questionnaires, a pilot search on a small sample of five (N = 5) participants of previous programs was conducted in order to test the reaction and reliability of the questionnaire.

Data analysis

The questionnaires were processed by SPSS 21. Following receipt of the questionnaires, they were encoded by entering values on a computer. As regards the reliability of the scale, Cronbach's Alpha, the statistical coefficient of internal cohesion, as a whole, was 0,763, a value considered to be satisfactory (Cronbach, 1951; Nunnally & Bernstein, 1994).

Research results

Active learning techniques that appear more often are discussion, questioning, and exercises, while the case study, group work, brainstorming, demonstration and practice with rates ranging from 5-7.2% are shown follow. Role play, worksheets, educational visit, self-directed learning, simulation and problem solving are less common.

Table 1 shows the Median, Predicted Mode, and Percentiles for reasons of abandonment, where 1 = "Totally Agree," 2 = "Agree," 3 = "Neither Agree or Disagree ", 4 =" Disagree "and 5 =" Totally Disagree ".

Statistics

		The Trainee would reject an Educational Program if she/ he felt that a course was dull.	The Trainee would reject an Educational Program if she/he had problems with their team.	The Trainee would reject an Educational Program if she/he did not consider the learning process to be effective.	The Trainee would reject an Educational Program if it did not match his experience and preexisting knowledge.	The Trainee would reject an Educational Program if she/he felt lack of respect.
N	Valid	87	87	86	87	87
	Missing	0	0	1	0	0
Median		3,00	3,00	3,00	4,00	2,00
Mode		4	4	2	4	2
Percentiles	25	2,00	2,00	2,00	2,00	1,00
	50	3,00	3,00	3,00	4,00	2,00
	75	4,00	4,00	4,00	4,00	3,00

Table1. Variables of the 1st category of D-axis of the questionnaire

Table 2 below shows the statistical measures of learning outcomes where 1 = "Continuously", 2 = "Often", 3 = "Do not Know / No Answer", 4 = "Rarely" and 5 = "Never".

Statistics

		In this program learning is enjoyable / interesting.	In this program, trainees recognize / manage their feelings.	In this program, the past experience s of the trainees are revealed.	This program transforms the attitude of trainees.	In this program, trainees acquire new experiences that are utilized in work environments	This program increases self-confidence for work.
N	Valid	87	87	85	84	86	87
	Missing	0	0	2	3	1	0
Median		2,00	2,00	2,00	2,00	2,00	2,00
Mode		2	2	2	2	1 ^a	2
Percentiles	25	1,00	1,00	1,00	2,00	1,00	1,00
	50	2,00	2,00	2,00	2,00	2,00	2,00
	75	2,00	2,00	2,00	4,00	2,00	2,00

Table 2. Variables of the 2nd category of D-axis of the questionnaire

Trainees appear to be actively involved in the learning process of the programs, with 33 of them responding actively to "Continuous" and 44 participants responding actively "Frequently". In addition, participants argue (62.1%) (Valid Percent 65.1) that they often get involved with active education techniques in this program. In engaging with the techniques, 38 respondents claim they do not agree that they face obstacles (43.7%), while 39.1% respondents support that they absolutely disagree with this statement. Using the Kendall's and Spearman correlation coefficients, it appears that the more active the trainees' participation is, the more their interest in learning tends to grow. In addition, there is a weak positive correlation between the experience of a trainer/program instructor in a contemporary role and the view that the learning process of the program is interesting. The results show that there is a linear relationship between engagement with active learning techniques and learning outcomes. In particular, the increased engagement with active educational techniques increases job self-confidence and empowerment of learners and interest in learning, emotional management/recognition skills, transformation of attitudes/behaviors and the acquisition of experience that can be utilized in new work environments. Finally, as the participants' barriers to engagement with active educational techniques increase, the positive effects of active learning are reduced, and when the involvement increases, there is a slight increase in participation.

DISCUSSION

This research investigated the impact of active educational techniques on the effectiveness of the adult education process in four Vocational Training Centers in Athens on the active participation, barriers and learning outcomes of the programs. According to the role of adult educators, the trainer cultivates authentic relationships with trainees, based on mutual understanding, respect and trust (Markantonatos, 1977). According to Kokkos (2005), the right skills of the adult educator are the acceptance and interest for the trainees, the development of effective communication with them, the coordination and organization of the group, the appropriate development of teaching material and content, the contribution to the integration of the trainees, professional and social, self-knowledge, self-evaluation, and self-evolution. These assumptions are of great educational value for adult education programs. Research trainees seem to be rejecting a program if they feel they are not respectful and if learning is not effective. On the other hand, trainees would not reject programs if they experienced learning as dull, if they had problems with the team and if their prior experience was not used.

The findings are consistent with the theoretical approaches to adult education and demonstrate that engaging with active educational techniques has a positive impact on learning outcomes (Kokkos, 2008a, 2008b). Trainees perceive themselves to participate actively, tackle obstacles while they are familiar with educational techniques. In this context, they claim that when learning is enjoyable, when they manage to recognize and handle their feelings, when they feel that their previous experiences in learning are warranted, then their confidence to learn is increased and new experiences are being acquired. On the other hand, the use of active educational techniques is not systematic and organized and there is no similar degree of familiarity with all techniques. The degree of active participation and the handling of obstacles as well as the experience with trainers in a modern role of trainer show a significant deviation among trainees.

Implication for Research and Practice

On a theoretical level, the usefulness of the research lies in the fact that it provides useful bibliographic information about the training process of the training programs and their effectiveness while scientifically substantiating the theory that has been developed around participatory methods. On a practical level, the findings can be used for the assessment of the current situation and the planning of new training programs. Methodologically, however, there are some limitations. The study was based on a specific sample of trainees and in a specific time period with limited program availability. In such a context generalizing the results is not feasible. Further research is needed in a larger sample and in more training programs and centers.

CONCLUSION

The findings of the survey come from organized training programs, most of which are funded by European and state funds to strengthen the professional skills of the individual and increase the efficiency of the employees. The benefits related to the personal integration of a person who is actively involved in his/her learning and the sense of integration that his/her professional development offers are related to Continuing Vocational Training. Following the principles of adult education, programs should use participatory methods in learning and respect the characteristics of an adult learner so that their education is effective (Kokkos, 2008; Rogers, 1999). Although the educational process of the training programs appears to be effective, the training of adult learners shows some weaknesses in their active participation. The training of adult trainers can be boosted to overcome these weaknesses.

Future Research

The results of the survey could spread to other geographic areas in order to launch a wider debate on the issue. It could also explore the trainees' professional pathway and link education and training to the later professional and personal development of trainees. Quantitative methodology could also be combined with the use of quality methods, such as interviews, to address these issues in an interdisciplinary way and to obtain stronger results. Finally, future findings in an experimental, controlled, educational program using fully active methods and techniques can be compared to the findings of this research.

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