

## Didactical Procedures and Experiential Learning Interventions in Bioethics for Nurse Students

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### ABSTRACT

**Background:** This study focuses on the presentation of a didactical suggestion regarding nurse education. It presents an experiential learning intervention in 'Bioethics', with the participation of 41 undergraduate nurse students.

**Objectives:** The learning objectives were the students' development on personal, social abilities and skills, problem solving and decision making, and the development of their self-esteem.

**Design:** A multidimensional educational context that emphasized on (a) students' active participation, (b) lesson's flexibility to changes according to team's needs and (c) support of the team has been of major importance. The followed pedagogical methodology was based on the principles of interdisciplinarity, critical thinking and creating opportunities for the development of learning activities in the classroom for 'Bioethics', while the learning process was based on the principles of team work and team dynamics, active and experiential learning methods through the use of the students' personal experiences.

**Methods:** At the end of the semester 41 students were asked to fill a "text of free writing", where they wrote about their experience, their thoughts and their emotions during lessons. These texts were put in context analysis.

**Results:** After the texts' analysis, seven categories were developed and classified. Consequently, the six categories were represented with 51 analysis units for "Cognitive skills development", 51 for "Social skills development", 34 for "Emotions-experience", 10 for "Profession development", 39 for "Assessment on the teaching methodology" and 19 for "Holistic development" experienced during and through lessons.

**Conclusion:** Concisely, it was observed that motivation (emotional preparation, interest), argumentation, (when presenting and analyzing different issues), and speculation, (while strengthening different issues during lessons) were developed through this didactical - experiential approach.

**Key words:** Bioethics, Experiential learning, Didactical approach, Active learning, Team dynamics, Nurse students

## Introduction

This study focuses on the presentation of a didactical suggestion regarding nurse education. More specifically, it presents an educational-experiential approach, regarding 'Bioethics' (Ioannidi, 2008), which is being taught to students of Nurse Department at the University of Peloponnese (during the A' semester of school year 2006-2007 41 undergraduate students attended the 2-hour weekly classes in Bioethics). Inspiration for this research study has been a similar research-experience in Environmental Education (Mpakirtzis, 2002).

In other words, this study concerns the attempt of the lesson's teacher to urge the students to participate in an experiential learning intervention, which aims at a deeper understanding of "bioethics" through motivation to express thoughts, emotions, questions, experiences, etc. That learning procedure motivates the senses, and those two modify behavior:

It is worth mentioning that Bioethics, as a new interdisciplinary approach of scientific, technological, social, political and ethical problems that occur due to the application of genetic and technological innovation and practice, provides an appropriate field for such a pedagogical

approach to the interscientific nature of this discipline, as education and culture are the most important issues at which every social matter is referred to (Alachiotis, 2004; Johnstone, 2005).

The goals of the lesson include: (a) Understanding basic bioethical issues and the concept of interdisciplinarity, as aspects of the holistic approach of health issues and their connection to the productive powers of society. (b) Acceptance, on behalf of health professionals and teachers, of the expansion of their discipline. (c) The development of the ability to communicate and cooperate between health professionals and teachers, in an interpersonal and scientific level. (d) The development of the ability to modify educational programs regarding health and health education, based on interdisciplinarity.

The learning objectives are: firstly, the development of abilities and skills such as composing, critical and creative thinking, communicating and participating in the classroom (short-term basis), and secondly, the development of self-esteem, problem solving and decision making (long-term basis).

## Team dynamics and experiential learning

Modern literature underlines that despite the fact that learning and personal development appear to be a personal achievement, they are in fact built within the community (Matsaggouras, 2003). Therefore, in the field of experiential learning, team dynamics concern teachers and educators.

The term "team dynamics" reveals the fact that relationships and interactions between its members are not static, and moreover, affect and modify the effectiveness of teaching and learning (see Lavin, Ruebling, Banks, Block, Counte, Furman, Miller, Reese, Viehmann, Holt, 2001). Determinant factors that affect team dynamics are considered to be the team's size and making up, as well as inner- and inter-personal relationships. Research has shown that as a team size grows, procedures become time-consuming, communication becomes harder, attention is more easily distracted, active participation is less and, thus, teaching is obstructed. Nonetheless, for the team size assessment the educators should take under consideration the members' age and experience and the duration of the activities they are planning (Matsaggouras, 2003).

The theory of experiential learning emphasizes on the important role of "experience" (experiences and emotions, the way someone conceives life) in the learning process, as well as the bonds between the trainee, his everyday life and social environment (Dedouli, 2002; Kolb, Boyatzis, Mainemelis, 2001).

The definition of "experiential learning" includes several concepts. Initially, it relates to the knowledge, attitude and behavior that a person has already formatted through his experiences and cognitive mechanisms- that is the way of learning- that has developed. According to Cognitive

Psychology, inner cognitive structures have important role in learning. The inner cognitive structures occur through the person's interaction with the environment. In particular, according to Piaget, knowledge is constructed upon previous knowledge and experiences and learning is the reconstruction of previous experiences and is related to things already known (Kassotakis, Flouris 2005).

The formatted cognitive base and inner learning procedures - cognitive mechanisms, that are certainly different among people, reveal the value of the subjective personal experience in learning, as undoubtedly affect someone's ability to conquer new knowledge and change of his behavior; and for that reason, they should come into consideration in every educational procedure. Thus, a learning process is experiential when it gives the student the chance to relate his new experience to his previous knowledge (Matsaggouras, 2003).

In education, according to pedagogists such as Dewey, the term "experiential learning" refers to the way a learning process is organized: the term "learning by doing" reveals the connection which Dewey attributes between education and learning (Dedouli, 2002). This theory suggests that teachers should create for their students (and trainees in general) appropriate environments, in which they could create experiences through active participation in the learning process. Active learning means participating in activities where someone has the chance to explore, observe, examine, study, construct, argue about, create, etc. In this context, experiential learning means giving the students the opportunity to experience what they are taught (Kamarinou, 2000), a fact that will help them to appropriate knowledge through understanding and active interaction with the subject.

Another aspect of experiential learning refers to the need to develop the students' personality as a whole, and not to focus only on their mental development. "The educator's role in this process is to encourage the students, through the activities, to think over their emotions, ideas, values, behaviors in a context of respect and acceptance" (Kamarinou, 2000).

Consequently and according to Dedouli (2002) the basic principles of experiential education could be summarized as follows: (a) it uses students' experiences and produces new ones, (b) encourages the student to participate actively in the process, (c) urges him/her to

explore, discover; activate his/her imagination and creativity, (d) suggests the pursue and development of subjectively understanding meanings, instead of memorizing information, (e) aims at the deconstruction of the mental and emotional process motivating the student mentally and emotionally, since it is well known that learning is based upon the relationship and the interaction between knowledge and emotional procedures, (f) helps the student to conceive the role of social, economic, historical and cultural factors to the formation of the social status, and (g) promotes the student's self-knowledge.

## Pedagogical Methodology

Based on the aforementioned statements, the relationship between the educator and the student is the most important condition for the educator's pedagogical influence and for the accomplishment of the pedagogical effect by the means of communication (Gotovos, 2002). In this context, it is considered of major importance the multidimensional educational approach for students, that emphasizes on (a) students' active participation, (b) lesson's flexibility to changes according to the team's needs, and (c) support of the team, so that it can work as a whole in an efficient way.

Therefore, believing in a constructive didactical approach we (a) set out specific objectives in connection to the basic concepts and dimensions of Bioethics, (b) used examples in the field of Nursing, (c) encouraged the analysis and strengthening of the given subjects through activities and formatted questions, (d) arrived to conclusions through information from different means, such as internet, media, discussion, etc and (e) explored the students' ability to construct alternative views and opinions and to modify those

already formatted through different interventions.

Consequently, the followed pedagogical methodology was based on similar experience- research and implementations. (see, Georgopoulos, Mpakirtzis, 1998; Mpakirtzis, 1998; Dedouli, Marmarinos, 1999; O'Shea, 2003). This was as follows: (a) The educative context of "Bioethics" was based on the principles of interdisciplinarity, critical thinking and creating opportunities for the development of learning activities in the classroom. (b) As a whole, the learning process was based on the principles of team work and team dynamics, emphasizing on active and experiential learning methods. (c) The academic way of transmitting knowledge was encircled by active learning and team work methods and through the use of the students' personal experiences. Moreover, the learning process was based on two levels. The academic, (information given related to the context and perspectives of the lesson, presentations, slides, questionnaires, tests) and the experiential (activities that encourage creativity, such as brainstorming, story telling, role playing, discussion, deliberate practice).

## The study's objectives

Consequently, with reference to the development of knowledge and the promotion of values and skills for the future health professionals, we set as the primary objective of this study the creation of a pedagogical and educative environment, where academic knowledge is attended by emotional development and the formation of attitudes and values. The educational aim followed the connection: "classify, analyze, compose, and assess knowledge" through a procedure of communication and emotiveness. Our main concern was the formation of a wide scientific and

social way of thinking, which will allow decision making without providing sterile specific answers to ethical dilemmas, as they are so complex and hide contradictions (Kushner; Thomasma, 2001). It was expected that this way of thinking will allow responsible personal and professional choices that promote public health. The research hypothesis was as follows: "Students were mentally, socially and emotionally upgraded, through an holistic approach of knowledge in experiential and academic level".

## Procedure

At the end of the semester the students were asked to fill a text of free writing, where they could write about their experience, their thoughts and their emotions during lessons. These texts were put in context analysis (Krippendorff, 2004). Context analysis is a research method

that is appropriate for short extend research and is held in order to analyze information given in written material (Graneheim, Lundman, 2004). Moreover, it can be attached and used in any kind of communication form, being this way a useful tool for education research (Verma, Mallick, 1999).

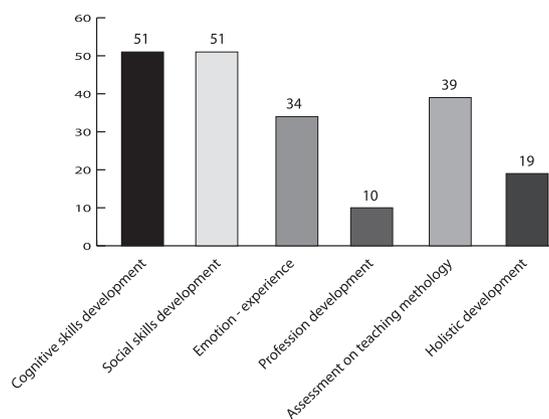
## Processing the free - writing texts – Context analysis

Context analysis was used to analyze the free-writing texts, where students wrote down their thoughts, opinions and experiences about the lesson (Vamvoukas, 1988). This research method follows certain procedures and principles (Ryan, Bernard, 2004).

Definition and selection of the analysis unit: Following the thematic analysis (Vamvoukas, 1988) we selected as analysis unit the theme. In other words, the meaning included in a group of words given in the text.

Definition and selection of measurement unit: As Vamvoukas (1988) notes, context analysis' subject is to transform qualitative data to quantitative. This principle is ensured by precisely defining the measurement unit, which we chose to be the frequency at which the themes we study appear in the text. In other words, by transforming qualitative data to quantitative we are able to count a theme as many times as it appears within the students' answers. That given, some times we had to count one theme more than once, as many times as it appeared in the free writing text of a student.

Categorization: In order to transform qualitative data to quantitative, we created a number of categories by which all analysis units were classified according to their meaning (Vamvoukas, 1988). After the texts' analysis, seven categories were developed and all units were classified. These categories were (1) Cognitive skills development, (2) Social skills development, (3) Emotions-experience, (4) Profession development, (5) Assessment on teaching methodology, (6) Holistic development, and (7) Unspecified. (This category includes themes that appeared only once through the texts and could not come under any of the above categories (2 units were counted)).



**Figure 1. Frequencies of themes for each category.**

### 1. Cognitive skills development

This category summarizes themes – (analysis units) related to the students' development on the cognitive scale, as it was experienced and expressed by them. In other words, this category refers to the impact that specific learn-

ing methodology and activities had on students' previous knowledge transformation and personal ideas' and attitudes' development. On the whole, 51 themes- units were counted under this category. It is worth mentioning that almost all texts included at least once a relevant theme and the majority of students commented that the activity helped them develop new ways of thinking on major issues regarding bioethics.

For example, themes classified under the "Cognitive skills development" category are:

*"I learnt to think of every incident of my life under different perspectives"*

*"I realized some issues that had never occurred to me before"*  
*"We had lots of information and shaped a view over concepts such as ethos, freedom, individuality"*

*"I discovered that my co-students and I were ignorant"*

*"We were taught to look through any issue that we hadn't even thought of in the past based on interacting factors"*

Under this category were also classified three answers where students had the opinion that the lesson did not have any contribution on their cognitive development:

*"I had already treated these issues, so there was nothing new to me"*

*"I had already known the information given in class"*

*"The lesson did not contribute on knowledge development"*

### 2. Social skills development

Under this category we included all themes regarding social skills development through processes such as conversation, cooperation, expressing ideas, interaction between the group members, the decisions someone is making as a member of a society. Fifty-one (51) units came under this category. It is a very important category, as it is related not only to the objectives of the specific learning activity, but also to the goals of the learning process in general. We should, furthermore, mention the large number of the answers the students gave having to do with social skills development and specifically the chance the lesson had given to them to express their opinion and emotions freely and with no fear:

For example, themes classified under the "Social skills development" category are:

*"Through this lesson I acquired skills that will affect my social life and the relationships I will develop with other people"*

*"(The lesson) has been the means to express everything I had thought about without fearing that my opinion would be infringed on"*

*"We developed discussion, democracy and team work"*

### 3. Emotion- experience

This category includes analysis units regarding emotions students experienced and felt during the lessons. We counted 34 relevant themes. The frequency students express the idea that the lesson had motivated their interest is remark-

able, while some of them thank the teacher in the end of the text.

Some of the subject themes classified in this category are as follows:

*"It was the best class I have attended"*

*"I was fascinated by the lesson and I think it is one of my favorite classes"*

*"I felt totally free during lessons"*

*"I was impressed by being taught such things"*

#### 4. Profession development

Under this category come answers in which students relate the learning activities to their profession identity and underline the benefits that had been gained through the lesson's activities regarding the change to their attitude and ideas as future health professionals.

Under this category 10 subject themes were counted, such as:

*"The issues we focused on prepare us to cope with ethical dilemmas in the future as professionals"*

*"This lesson will be a precious tool to my career"*

*"I learned about my rights as a professional"*

#### 5. Assessment on teaching methodology

This category summarizes the answers in which students express their opinion about the teaching and learning methodology as a procedure. We consider it to be a very important category, as students themselves discover and appreciate the benefits of experiential learning and pinpoint the specific learning activities that were applied (such as team work, active training, research learning). In fact, the themes coming under this category were quite a lot and the answers were given lively and with enthusiasm.

## Conclusions

In conclusion, the experiential learning intervention being presented in this study aimed at an holistic approach of the cognitive structures, emotional development and social skills, so that procedures regarding learning, cooperation and communication would be created.

Structural elements of such an educational approach were (a) the motivation of students' interests to adopt knowledge and (b) their will and active participation in the knowledge construction procedures. Furthermore, emphasis was put in developing motives and opportunities to be flexible, regarding issues that were discussed, according to the team's needs and given that members work as a team.

Concisely, through this didactical - experiential approach we observed: motivation (challenge, emotional preparation, interest), argumentation (when presenting and analysis different issues), and speculation, (while strengthening different issues during lessons).

This way, communication became more frequent, dis-

Moreover, students suggested the implementation of these methods by all lessons.

39 themes - units were classified and some of them were as follows:

*"I wish all lessons were like this one and not strict to sterile lectures"*

*"Experiential learning should be implemented in every class"*

*"The presentations by my co-students were very important"*

*"I think we were given the chance to discover knowledge by ourselves and not just accept teacher's opinion"*

*Among 39 units one commented in a negative way the learning procedure:*

*"In my opinion, the way the issues were raised had no affect on me, (...), I would prefer to have been given a certain way of dealing with such matters so that I can face them as a health professional".*

#### 6. Holistic development

Under this category come themes that place the lesson and its context to a wider scale of students' life itself and appreciate the importance of the issues being discussed to social life.

19 subject themes were counted, such as:

*"The issues we discussed play an important role in our lives and affect them"*

*"Bioethics will be a matter affecting all our lives"*

*"The lesson forced me to expand my horizons"*

*"Of course the dilemmas we are facing are quite a lot, but we were taught to go through a way that will guide us in any circumstances"*

cussion was promoted, emotional involvement was encouraged and, at the same time, knowledge was adopted, common and opposite ideas were accepted and friendships were raised. It is worth mentioning, that communication through learning, the relationship between teacher and student, the teacher as the knowledge administrator and mediator between the young person and the society, are basic matters that occur through the pedagogical relationship, seen as experience that promotes discovery, conquering and developing knowledge. As Mpakirtzis (2002) mentioned, "learning and development through this synthesis of human processes it is affirmed that they are located and processed through the person's emotional nature and function". Conclusively, the pedagogical approach - experiential learning intervention, described in this study, is a continuous strengthening procedure to our educational horizons in an effort to educate future health professional and educators.

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