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AN INNOVATIVE METHODOLOGY IN COMPILING DISTANCE LEARNING MATERIALS

Absztrakt/Abstract

Jelen cikk bemutatja, hogyan lehet növelni a tanulók motivációját, a kötelezettségvállalások fejlesztését, a pozitív hozzáállást, valamint a személyiségüket a legmodernebb interaktív tananyagok használatával. A szerző a virtuális oktatást vizsgálja a személyiség-központú pedagógia tükrében. A cikk célja bemutatni, hogy a szerző által kifejlesztett elektronikus tananyagok (e-könyvek) a hallgatók saját személyes tanulási módszerek megerősítésében, az öntudat és a pozitív gondolkodás növelésében milyen szerepet játszanak.

The article is to present how to increase the students' motivation for learning, to develop their commitments, their positive attitudes, their personalities by compiling and using state-of-the-art interactive teaching materials. The author approaches the effectiveness of virtual teaching through the mirror of personality-focused pedagogy. The article is to describe how the electronic learning materials (e-books), developed by the author, might support students for elaborating their own personal learning methods, strengthening their self-consciousness, their positive thinking.

Kulcsszavak/Keywords: *e-tanulás, e-tanár, kognitív tudás, kompetencia-motiváció, módszertan ~ e-learning, e-teacher, cognitive knowledge, competence-motivation, methodology*

INTRODUCTION

The education in virtual environment requires the transformation of the traditional teaching-learning environment, the knowledge and use of the modern information and communication devices. For the sake of the developed world's future, the socialization of the "lifelong learning" has become a primary task, i. e. a piece of the norms, part of the culture. Under these circumstances, the state-of-the-art e-learning, i. e. distance education – characterized by

the learning management, the open learning and the virtual environment of education – has received a specific role.

When highlighting the subject, the “premissa”, I have set forth, is that the key dimension of the high quality virtual education is the learning material itself, if it is able to appropriately influence and shape – through its relevant methodology – the further key elements: the student, the teacher and the teaching-learning environment.

On the basis of the above “premissa” I developed four e-books (Accounting of Subsidies, Introduction to the Accountancy, General Accounting, Taxation), available on the Moodle-portal of my home page (<http://www.lengyelpiroska.hu/elkonyv.html>). [1]

When compiling the learning materials, I have relied on my pedagogic principle: the main aim lies, to a great extent more, at forming personalities in an appropriate way and developing the abilities in an adequate way, than at increasing the quantity of the knowledge, as basically the former factors may guide the students to convertible knowledge. The methodology of the e-books are being relied on the appropriate aspects of the knowledge management, the learning management, and on the aim at assisting students in finding and developing their own learning style, in order to obtain real knowledge, through a self-relied learning activity. The prerequisite of the successful learning is that the students know “how to learn”, and for this goal the learning has to be continuously learned by them. The methodology of the e-books strives also for supporting the teachers in developing the learning environment, where all necessary conditions are provided for the continuous development of basic competences of the students.

The e-books have been available since October, 2009 and mainly used by high school student teams, as an additional learning source to the traditional ones and, despite the relatively short time elapsed, can show a considerable success achieved. The number of visitors of the homepage has exceeded 16,000, in the first eleven months.



Figure 1. Electronic books compiled by the author
<http://www.lengyelpiroska.hu/elkonyv.html>

When writing the e-books, the basic principle was that the transfer of knowledge should serve, on the one hand, for the self-reliance, the self-development, the freedom in the education, and on the other hand, for educating the sense of responsibility, the respect of others, cognition and recognition of others. The methodological structure of the modules in the e-books reflects my hypothesis, that several types/devices of learning sources should be offered to the student, and then, it is to be left on their own, without any external pressure, to choose between them.

The e-books are inducing the students to accomplish a self-organised learning, supported by the Internet, however they are obliged to follow a disciplined and linear progress in the learning material. Due to the specificities of the learning material, the students, for the sake of the successful accomplishment, have to respect the offered order of progress:

- learning on their own, using “The learning material” module which is easily readable and rich in multimedia devices,
- deepening the acquired knowledge by using the “Lectures” module,
- checking the knowledge by using the “Practices” module which offers practice-oriented examples,
- the “Stage” module, as the “level of action”, serves for trying the practical application of the knowledge.

Due to the systematic order of modules, the message, the content of the e-books will become interesting, enjoyable and effective to learn “.....The secret and basic element of the success of an e-learning system is to see the consecutive educational phases and the related modules clearly and to separate them carefully when planning the modules.” [2]

In the course of planning the single modules and the learning environment, I put major emphasis on the clear-cut structuring in order to provide an easy “look-through”, a “sense of safety” for the students, as they will be able to select the devices, modes for acquiring and practicing a given lesson, a homework. In a well-structured learning material the chance for the self-relied progress is better, the derivation of consecutive new items is simpler, the manageability of the material is better. [3]



Figure 2. The four modules of the e-book: Introduction to the Accountancy (Learning material, Lectures, Practices, Stage)

THE FIRST LEVEL OF THE LEARNING PROCESS, THE “LEARNING MATERIAL” MODULE

The “Learning material” level, i. e. the level of acquiring information, serves for a self-relied acquisition of the knowledge for the student, i. e. learning on his own. The module uses passive and active elements, supported by multimedia devices, for presenting the topics, illustrated by pictures, figures. The content, being split into information units, will form an organic whole, thus supporting the structuring of the acquired knowledge.

The built-in guiding elements and feedbacks are encouraging the students for active learning and are, at the same time, directing, optimizing the learning process, adapting to the learning styles and mental standards of the students.

When compiling the “learning materials” of the e-books, I was searching for methods, through the application of which the “closing up” of students with lower status can be solved, their participation will be more active in the learning process and their study performance improves.

“All that, in which we are progressing well, will keep our interest alive, while, on the contrary, an activity, in which we do not reach certain level of the competence, will, in general, raise our interest for a long-lasting period, rarely.” [4] Positive feedbacks, received from the partner students and the teacher will strengthen the competence, the self-confidence and, in this way, will give further motivation for continuing the activity and will induce students to meet the requirements.

In the closing section of each major chapter of the learning material, I inserted project works, which are to prefer working in teams, to get acquainted with partner students, to emphasize the importance of community-building, thus the requirements which are relevant for the e-learning, as well. It is offered to the students, every of them can measure the level of the knowledge, acquired through the self-relied learning through the solution of the project works of practical nature, working together with other partner students, in the framework of on-line sessions.

In the project work, both the teacher and the partner students are expecting an active participation. They are expecting that everybody takes responsibility for the result of himself and for that of the team, as well. Furthermore, every student will be a competent and equal participant of the learning process. In the course of the team works the students are realizing that everybody possess important intellectual abilities, even though unique ones, through which he may contribute to the successful teamwork.

The participation in the team work requests an intense, self-relied contribution from the students, it integrates the knowledge and the students are responsible for each other's work, so, in this way, a relation-net of mutual interdependence will be formed between them. [5]

The most important aspect is that for the successful solution of the team work, it is inevitable to mobilize the students' colourful abilities and through this way – in addition to the advantage that every student, irrespective from his own intellectual abilities, contributes to the successful solution of the team work – the teacher, as an observer, has a possibility for studying and “mapping” the individual capacities and capabilities of the students.

The teacher's task is to listen, from the background, “behind the curtain”, to the students' learning strategy, to control the full learning process, to encourage, to activate the students and to support, if it is needed, the lower status students' being switched on into the team work.

THE SECOND LEVEL OF THE LEARNING PROCESS, THE “LECTURES” MODULE

The “Lectures” module is the second level of the learning process, the level of deepening the knowledge, learning with interaction and learning with teacher’s cooperation. The lectures are



Figure 3. The Lecture

<http://www.lengyelpiroska.hu/szamvitele/konyv/Eloadas.html>

fundamentally being relied on an illustrative-explanatory method. The essence of this method lies in visually presenting, modelling the topic, even playing it, to the extent possible, and commenting and explaining it in a short text. The advantage of the method, that it presents the topic in one shot and in its context, at the same time, while directing the students’ attention to the message. Notwithstanding, the very key element of all learning action is the perception, the cognition. The progress made on his own, the self-relied development, is able to multiply the efficiency of the learning process. The activity and progress on his own is a real, natural learning action (it is not artificial, directed from outside, as in case of “old traditional” school learning) it is being fed by the student’s curiosity and manifested in increasing desire for learning (observing, appraising etc.). One’s knowledge, acquired in this way, can be recalled even in many years later. As an example, let’s take the railway models or car models collection hobby of the children: they remember the mechanical-technical data of the models even in their adult age, since the knowledge was made on their own in the course of a natural, active process.

The learning plan should, in each subject, put a weight on the active “discovery”, which is to be acquired throughout specific experiences. [6]

In the course of compiling the lectures, the fundamental idea was that the experience-like learning leads to a better than average motivation and results in a long lasting learning spirit. The simple passive reception of the learning material through eyesight and listening (visual/auditive learning styles) will not be sufficient, one can notice, in this way, the half of the content only, at most, while throughout an active, contributory participation (kinesthetic learning style) this proportion can be increased even to 80- 90 %. [7]

There is a reward, built in to the learning material, offered for the successful acquisition of the knowledge, namely a reward presentation, playing, an active relaxation during the learning process. The playing is able to increase the efficiency of the learning in a considerable measure due to the fact that in the course of studying by playing the affirmation of the knowledge acquisition process with emotional experiences is exceptionally intensive. A learning activity like this is much more enjoyable, has an entertainment-like character: the students are playing in the course of the learning, they are learning by way of playing.

The closer the playing to the reality stands, the better the intensity of the knowledge acquisition will be. The playing (reward lesson), based on a real situation, built-in to learning material (see accounting in the small enterprises' practice, as an example, in the Introduction to the Accountancy), due to its experience-like character, will, on the one hand, increase the inner motivation of the students, and has, on the other hand, a specific beneficial effect, as the participants will, in the course of playing, experience the contexts of the real practice. The students have possibilities to shape the playing and in this way a team work will be emerged which mobilizes the knowledge of every participant and creates an opportunity for learning and changing each others' thoughts and opinions.

The learning material, having been played, will better be stored in the one's brain, as if it would have been heard, only. Both the intuitive vision, the several-sided observation of the facts and the free fantasy activity will help to store the knowledge and the experiences.

The condition to take part in the reward lesson, thus accomplishing a simple, playing-like task, selected out of the "Practices" (e. g. a crossword) provides an opportunity for acknowledging the results achieved by the students and this feedback influences the inner motivation positively. If the informational aspect of the reward is dominant, it confirms the student in his competence and self-determination which maintains his further interest. [8]

THE THIRD LEVEL OF THE LEARNING PROCESS, THE "PRACTICES" MODULE

The Practices module serves to measure the level of acquisition of the knowledge. Both the teacher and the student receive a feedback on how and to what extent the latter has managed to acquire the learning material.

The assessment plays an important role in shaping the attitudes to the learning process, in framing the learning motivation. [9] In order that the assessment can be able to fulfil its motivating function, the teacher has to analyze – based on results of the students in solving the works of the Practices – the students' difficulties in learning, continuously. The serial failures shape an aversion in the student in relation either with the learning process in general, or with a given subject and, as a consequence, his intellectual abilities will be blocked [10]

The Practices module serves for strengthening self-confidence of the students. Every student may choose out of the works with different difficulty level of the Practices, in accordance with his own assessment regarding the level of knowledge acquired by himself. The position of having an opportunity of the choice increases the student's autonomy sensation in the learning process [3]

The opportunity of the choice among the works of different difficulty level increases the probability of the successful problem solving, as well, which influences the competence sensation advantageously, while the successful solution of the works strengthens the student's self-confidence, which is extremely important for both the intellectual health and the learning success, as well. A built-in program of the module evaluates the student's results promptly, thus the immediate feedback can contribute to confirm himself in his personality and to

respect himself for his result achieved. From learning efficiency's point of view, it is exceptionally important for the student to release his own negative attitudes against himself, to have a healthy self-confidence and to realize, he is a valuable man.

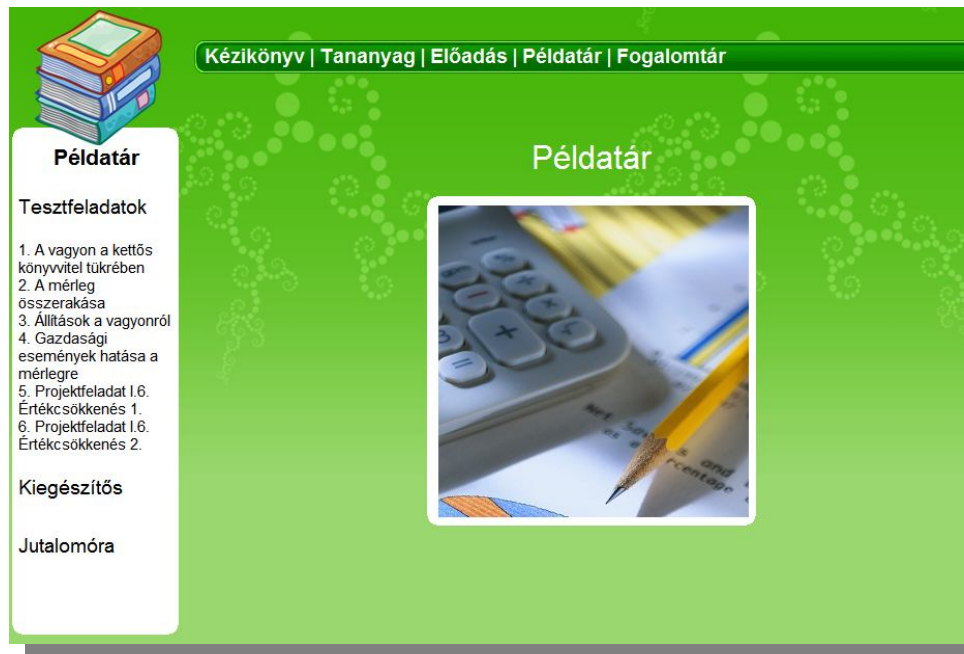


Figure 4. Practices

http://www.lengyelpiroska.hu/szamvitele/konyv/jutalom_eloadas.html

When developing the Practices module, the guiding idea of the process was that the acknowledgement of the results releases the student's inner insecurity, the success motivates him positively and he needs an intense motivation to achieve the success. The works, the tests have to possess such contents that the students can look forward to go through this "account giving" phase of the learning process, as a source of joy and, as a result, they will be more motivated regarding their self-development and study results. This goal is being served even by reward works, which is a further acknowledgement of the results achieved and at which the students can arrive through the solution of a simple task (affirmation of the acknowledgement).



Figure 5. The launch of a reward task

http://www.lengyelpiroska.hu/szamvitele/konyv/Peldatar_jutalomfeladat_start.html

The acknowledgement, the reward is a determining element of the self-relied learning process. It enhances the self-confidence and serves as basic foodstuffs for feeding the

intellectual health and the success. In the different motivation theories – work motivation theory, need theory, personality theory – the acknowledgement, the appreciation appears as the basis of the intellectual development. The acknowledgement is a motivating factor which makes certain kind of activity to start into the direction of satisfying this need.(Murray). [11] The “acceptance”, the “approaching”, the attitude of the appreciation can become one of the most efficient changeable forces (Rogers). [12] The acknowledgement produces a potential for the spiritual, intellectual development (Hertzberg). [13]

THE FOURTH LEVEL OF THE LEARNING PROCESS, THE “STAGE” MODULE

The Stage, “the acting level” emphasizes the importance of “the acting school” [14], the view that the “acting” is inevitable both for developing the thinking and for maintaining the interest. It gives an opportunity to the students to try how they can apply their knowledge in practice.

The students choose a case study out of the “Practices”, they prepare its script, then they present it, they “play the story” and show its possible solution.

The assessment of the student teams’ presentations will be carried out, under teacher’s guidance, in the framework of “a stage debate”, prepared in advance according to appropriate appraising points.

The Stage – according to my expectations – gives the experience of joyful learning, it raises the lower status students’ interest, too and increases their autonomy sensation. Its atmosphere, being characterized by cooperation, enhances the inner motivation, the long lasting maintenance of which may only be fruitful in such a learning environment, where the single elements, the “players” are strengthening and presupposing each other.



Figure 6. The Stage

<http://www.lengyelpiroska.hu/szamvitele/konyv/Pódium.html>

CONCLUSION

Educating in the virtual environment may only be fruitful, if we create high quality learning materials, following the differences in the individual cognitive styles and learning habits of the students, when relying on such learning methods, which will keep the students' interest alive, will motivate them for learning; if we, in other words, as an educator, are aware of "what are the students interesting in", "how do they study", "what are their learning styles", "how can the students' interest be raised". These basic requirements are relevant not only for civil education, but for the military one, as well.

What may specifically the methodology, presented by the present paper, for the education and training systems used by the Hungarian Defence Forces, stand for? According to Miklós Vörös [15], it is necessary to continuously introduce and disseminate the new teaching/learning methods, devices and mediums in case of the Hungarian Defence Forces, as well. The individual's competitiveness is directly depending on the full career long learning, where the continuous development of the creativity, the flexibility, the adapting-, problem-solving-, and learning skills are of basic importance. The self-relied learning and -education is going to become one of the major conditions for staying in the field and being promoted.

Joining to the above thoughts, the basic goal of electronic learning materials, developed by myself, is to pass over state-of-the-art economic knowledge both to civil and military training participants in the field of financial-, taxation-, and accounting studies, in the framework of on-line training courses, relying on "experience pedagogy", thus multimedia-based learning materials and devices.

In case of military students, the knowledge acquired in the economic sciences can efficiently complement their special military-technical education, the practical benefit of which is evident for both the individuals (increasing vocational competence, preparedness, promotion) and the whole society, as well.

Being member country of the NATO, professionals in the army are, on the one hand, obliged to acquire and possess complex, interdisciplinary type of knowledge, crossing over different fields of sciences and Hungary, on the other hand, can be equal and competitive with a high-standard skilled-stuff training and a well developed high education system and well educated intelligence, only. Though the traditional education will never be totally replaced by distance pedagogy either in civil or in military education, the methodology presented by this paper can complement it both in civil and military sectors, as well.

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