



APPLICATION OF INNOVATIVE APPROACHES AND TECHNIQUES TO INCREASE THE EFFECTIVENESS OF KNOWLEDGE MANAGEMENT PROCESS IN ORGANISATIONS

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Abstract. The new recently developed economic situation in Europe requires employees to be able to acquire new skills quickly and adapt to the changing environment.

Demand for the highly skilled employees is constantly growing and learning becomes a part of the daily routine. Employees are studying after office hours, therefore, there is a high demand for the training curriculums that would help employees to acquire new knowledge within short time periods and would be highly efficient and effective.

It is critical to understand how much an employee can learn during this time, and whether it is possible to teach a person to think faster.

The effect the training courses offered by the authors is an ability to think and analyse information faster, develop and assess alternative solutions, reach plausible decisions. The research conducted by the authors is devoted to the speed memorizing and speed reading techniques. The author has developed the training program, tested it on multiple groups and introduced it in practice. The training program provides with an effective and measurable practical results.

Objective of this training program is to increase the speed of reading and memorizing for more than three times during a six day course. The authors has also developed an advanced training program to improve mental capacity, expand possibilities of memorizing data. The program develops skills of effective interoperability when working with extensive volumes of information.

This research is based on the author's study conducted in 1999 – 2012 and contains data of training results of 4,587 people.

Key words: *knowledge management, speed reading, adult education, vocational education, innovative teaching methods*

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Introduction

The new economic situation in Europe requires more effective utilisation of human capital. Private and state employers can no longer afford employing significant numbers of staff. As a result of staff

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numbers reduction, employees' indispensability and an effective use of professional skills and abilities, as well as the ability to continuously improve professional skills and be retrained according to the business needs become the key elements of success. It is also important to understand whether adults can be trained to think faster and be able to process significant volumes of information. Current research is dedicated to development of methods of improving effectiveness of information processing and thinking.

The author has launched a series of training sessions dedicated to improving memory capacity and speed reading techniques in Latvia and abroad in 1999-2012. The author has summarised all training results in the individual reports and have consolidated them in the Ph.D. thesis "Application of innovational training methods in organisations".

The results of the research conducted by the author established effectiveness and efficiency of the speed reading and speed memorizing techniques and proved they can be used in various areas, such as private business – for increase of employees' competitive advantage, universities (the author conducted similar trainings in the Stockholm School of Economics and the University of Latvia), and ordinary schools for children over 8 y.o. (author has accumulated results of over 1,500 trainings for schoolchildren).

The skill-set acquired during such trainings allows trainees not only estimate and analyse information quickly, but also do it effectively.

Actuality

Actuality of innovational training methods' use develops in companies that need to manage significant organizational changes within short time periods. For example, implementation of a new strategy, expansion into the new markets, personnel re-training within limited timeframes, significant changes in the economic environment, such as an economic crisis and staff layoffs that result in the additional responsibilities delegated to the remaining employees.

As a result of rapid organizational changes, many employees are working in the stressful conditions and need to manage additional workload.

Training methods offered by the author include speed reading and speed memorising techniques and have been used for training top managers and „C suite” executives, owners of the following companies in Kazakhstan: coal mining company “Karazhira”, “Azia Energo”, “Kazah Trans”; in Russia: “Russian Railways” (Moscow), “Rosselmash” (Voronezh), “Morozko”, “Bahetle”, “Sabantuy” (Kazan), “Linguagelink” (Samara, Sankt-Petersburg), “Metallurgical combine” (Lipeck); in Latvia: “Norvik Banka”, “Swedbank”, “Rietumu banka”, “Eiroaptieka”, “BTA” and many others, within the scope of “Open Mind” project, “Latvian Association of Logopedists”, facilitating the Latvian language course to 43 teachers from Rezekne, as well as training students under the program of speed memorising in the University of Latvia, and the speed reading program in the Stockholm School of Economics in Riga.

Description of the issue

In the period of Latvia's accession to the EU one of the main requirements of the European Community was introduction of “more innovation in education and training” and following the concept of life long learning. By that time the author had already developed, tested and put into practice the programs for the *National Program for the Latvian Language Training* for training the teachers, who taught adults. At present, the relevance of the study conducted by the author is only growing stronger. The retirement age is only shifted upwards, which means that the number of available job places is being reduced. At the same time the new economic conditions, and consequences of the economic crisis in the



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EU along with the continuing reduction of available employment drive up the demand for the increased competitiveness in the labor market. Yet, the continual development of new technologies requires constant relearning and mastering new knowledge. For example, in the present day young people, after completion of high school often speak three foreign languages fluently and with ease, which is not to say about the older generation of people who should learn. The need for proficiency in English is on the increase also. Moreover, the technology developments necessitate constant retraining. The new skills are to be acquired in a short time. To do so it is necessary to develop the technologies that will serve as a tool to help adults learn new things quickly. The author has developed the programs that can be efficiently used in training professionals in any field. On the other hand, often these kinds of training attend senior managers, executives and business owners. However, in terms of strategic development of the Latvian state, the methods developed by the author can be used successfully to teach both school and university students (albeit with implementation of certain changes in the organization of the learning processes). And, since the youth is the future of any country, its foundation for a prosperous future, in the opinion of the author, for facilitation of development of the young generation, it is advisable to introduce such training as early as at the primary school age, to prepare the future work force capital.

Novelty

For the first time in Latvia the author has introduced innovational training methods for the large scale training courses aimed at residents of the rural areas and farmers. The author used speed memorising programs with application of association and figurative thinking developed by her earlier. As a result, these methods proved to be new and unknown to majority of trainees.

Most trainees noted that they have not heard about techniques used to improve learning processes before. Trainees were not familiar with speed memorising approaches that would enable them to effectively retrieve necessary information later.

The author considers it is of paramount importance that the trainees were explained the basics of the learning techniques that would help them to acquire new information in an efficient and effective way. If a person is not able to acquire new information after a 1.5 hour training session, any teaching efforts would be useless.

In the described project it was important to facilitate trainings within relatively short time periods, as the author was asked to cover all travel and office expenses. As a result, it was necessary to organise training courses so that training hours would be delivered within a minimal number of days. Availability of trainees also represented a challenge - some of them were not able to take off a couple of days off work, especially during harvesting period.

According to the training requirements, all trainees were asked to complete a test at the end of the course with a passing rate of 75%.

The above factors motivated the author to develop new approaches to training of employed adults, use her prior experience in learning, teaching and facilitating training courses.

For the first time in Latvia innovational training methods have been tested in practice for the large scale training courses facilitated to adults who lacked learning skills necessary to acquire and retain significant amounts of information within short time periods.

Materials and Methods

Training was carried out in the form of workshop session trainings, because the purpose of the training was to master the practical skills.



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While working on this paper the authors would implement exactly the system of workshop sessions training. The author believes that such a system is most suitable for implementation of the learning process where the methods of fast memorizing and speed reading are used.

First, because the delivered instruction is of applied nature and aimed at achieving specific results. Therefore, the classes are designed in such a fashion that the workshops for memorizing comprise 80% and theory 20%, while in the speed reading classes 90% of the time is devoted to practice and 10% to the theory. The theory is directly connected with practice and it serves only to illustrate the required exercises. In general, there are two very different aspects of training, i.e., lectures and practical lessons (workshops). The training conducted by the author requires constant practicing, which cannot be replaced by lectures.

Second, in the classroom the teacher must constantly receive feedback from the students.

Such an arrangement allows implementing several principles simultaneously.

Straight away we can see the difference between how a particular individual talks the talk and walks the walk. It becomes rather obvious whether the person already uses the new techniques or keeps clinging to the old ones. Also, the group has the opportunity to learn from each other, and utilize both the positive experience (of those who got the results already) and negative (errors of others are immediately evident). This kind of feedback assessment helps make the learning process as effective as it can get.

Third, creation of a relaxed atmosphere, which author considers to be crucial since the positive mood is very important for any type of training. When students find pleasure in learning, then learning is easy and effective. Creation of such an atmosphere requires a very large emotional input from the teacher. A similar effect was described by the Bulgarian psychotherapist Georgi Lozanov in his work on suggestopedia (Lozanov, 1977).

Fourth, during training for fast memorization and speed reading, students are offered to try to practice a set of different methods and only after the practical application of a particular technique can they make a conclusion as to which of the offered methods was the most suitable for each of the students. Individuals with flexible mental capabilities can use all the proposed methods with equal efficiency, but sometimes a person may prefer only one of the offered memorizing techniques or quick reading strategies. This is where the teacher's professionalism comes into play during this kind of training, i.e. the teacher's ability to render assistance to the student who finds it hard to implement something in practice.

In addition, the particular learning style of an adult individual should be taken into account (Honey, Mumford, 1982).

All data obtained in the learning process were recorded and then processed by a computer-implemented software.

Results

During training it was found that the minimum result, achieved in the course of speed reading is an increase in speed reading by two or three times the initial speed.

The speed reading program is designed for six days of training, four academic hours a day. This format of learning is factored by both the peculiarities of the brain (i.e., due to purely physiological reasons) and other reasons.

On the average, people are able to increase their reading speed two to three times compared to their original speed of reading. The maximum result obtained during the training conducted by the author was an increase in reading speed sevenfold.

From the viewpoint of the author it does not make sense to strive for any particular result. More important is that each student can increase the reading speed compared to the speed they had at the beginning.



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In the process of the speed reading the attention is getting increased dramatically and, as a result, comprehension of the read information increases sharply.

However, it is worth mentioning that the greater the vocabulary the reader has, the faster this individual can read.

In the course of training conducted by the author the key factors affecting the speed of reading of adults have been identified.

- 1) Psychological barriers. Most of the adults before the start of training already know what to expect of themselves. What's more, when adults during training succeed in learning and get the results higher than those they expected of themselves, they may begin to doubt whether everything has been done right. We all know how to read and adults find it difficult to understand why should they need to be able to read fast.
- 2) Attention or lack thereof. Even at school we get used to read paying equal attention to the short and the long words. In fact, the short words we can just recognize without reading them through. Furthermore, there are many established myths related to the process of reading. For example, all of us have heard the myth that you need to read slowly and carefully. But a slow presentation of information invokes a decrease of concentration and the person gets distracted. Off topic /random thoughts arrive. Which are not associated with the specific text. So it's no wonder that it is the rapid reading that increases attention.
- 3) Re-reading or regression. Most often re-reading of the same part of a text takes the same time for adults as reading for the first time. However re-reading decreases the amount of paid attention. So before you re-read the incomprehensible part of the text, you are better off finishing reading the entire passage, chapter or section to the end, so that you get the general idea of the text. And only then you can re-read the points that were not understood. However re-reading makes sense only if you pose questions. That is what specific question you want answered.
- 4) Correct eye movements over the lines. In 1878 the French ophthalmologist Javal in France conducted a number of experiments on eye movements during reading. Up to this finding it was thought that in order to comprehend the text while reading the eyes must dwell to read every word. It was this discovery that triggered further researches in the field of fast reading.
- 5) The Perception of chunks. In school we are still are taught to read the syllables, one after another. This is because syllables are much smaller than words, and are easier to learn. But reading the separate syllables splits the semantic information. Children at first do not like reading exactly because they do not understand the meaning of what they read. Any adult can check out the said above, by taking an unfamiliar book and reading aloud the syllables of two pages, and then trying to retell what's been just read. It will not work because the information is so split that it simply does not add up into a single picture.
- 6) Pronunciation or vocalization. When readers pronounce internally what they're reading to themselves, they hear their own voice. This means that even though the lips are closed, the speech apparatus continues working. And since the vocal cords are composed of muscles that need the time to contract and stretch, it turns out that we cannot read faster than we speak. How many words per minute can we say? Often it depends on the peculiarities of the language. For example, if you listen to the BBC news for those for whom English is their native tongue, it has been estimated that the rate of presentation of information is over 400 words per minute.
- 7) Experience. The more one reads, the more different are the words one can recognize from the text without having to read those. In addition, people who read a lot possess a rich vocabulary on different topics. As a result, no matter how offensive it may seem, the more experienced is the reader, the more quantitative results he or she can achieve at the end of the classes. Usually experienced readers in six days pass the mark of 1,000 words per minute.
- 8) The peculiarities of operation of the brain. A person cannot read faster than he thinks, because for the process of reading it is important to comprehend what is being read.



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- 9) The purpose of reading. Reading speed is a function of the purpose of reading and by it is wholly determined. It is often said that the speed reading of complex literature is impossible. Not true. It all depends on the experience and vocabulary of the reader. But there is a difference between leisure reading, and the reading to acquire new knowledge, or reading necessary for work. The speed reading can be compared with a new sports car. While driving within the city one has to observe speed limits, traffic signals, road signs, etc but on a highway off the city limits you can drive at full speed restricted by the power of the engine. But if your car is too old, you can't go any faster than you car allows you even on a highway. This is the difference between an experienced reader and the not –so- experienced one.
- 10) Academic knowledge about the reading processes. It can help avoid many mistakes in the teaching process, since there are established erroneous and limiting beliefs that may interfere with learning, such as „one must read slowly to remember better,” „there is the diagonal reading „, „people who read fast do not remember much”, etc. It should be remembered that people who read at low speeds, even with a good understanding of the text are just unable to read large amounts of information, and therefore make conclusions on various topics.

The quantitative results obtained from the training are summarised below (see Figure 1.)

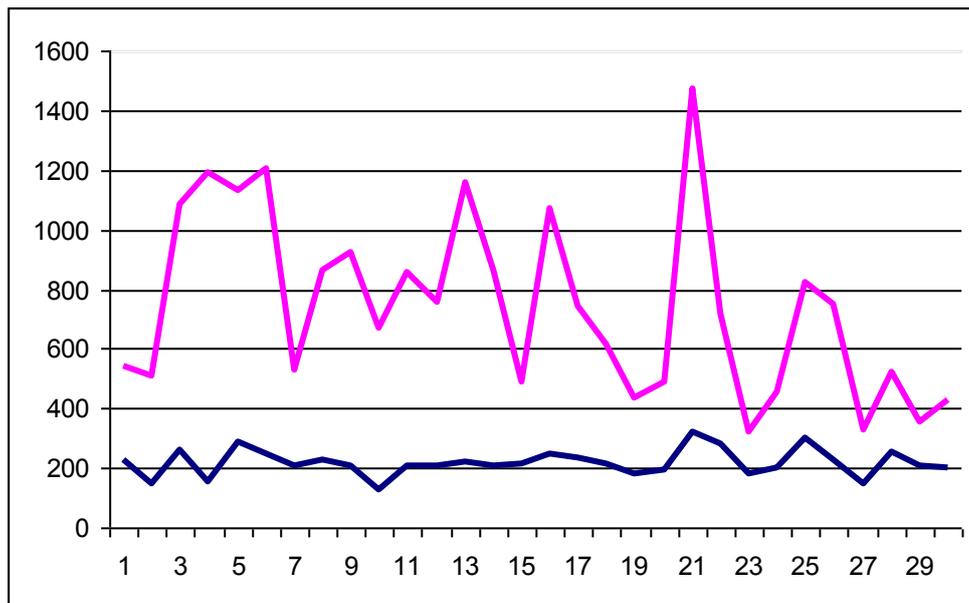


Fig. 1. Corporate training results of 31 organisations

The chart presents an average speed of reading of trained employees at the beginning and end of the training course.

During the training of top management it was established that the initial average speed of reading was 219 words per minute with understanding of the context at 50% (six questions were asked to check overall understanding of the text. Most trainees have answered three out of six questions). After completion of the training programme the average speed of reading reached an average of 823 words per minute with understanding of 100% (all six questions were answered correctly). Thus, on the average the speed of reading increases in 3.41 times (see Figure 1).



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Speed of readings of adults who are not part of top management on average increases in 2.67 times. Authors consider that the difference in the results depends on a habit of maintaining high levels of intellectual capacity on a regular basis.

As presented on the chart, the initial speed of reading does not differ significantly. Usually, adults read 180 – 250 words per minute. During the training course that provides a constant intellectual challenge and increases information load, the results can increase more than 3 times. Analysis of the training results among trainees of different organisations can explain a difference in the level of competition (the higher is the level of competition, the quicker trainees get used to respond to variations and solve more difficult intellectual and non-standard problems). This means they have higher intellectual capacity and are ready for higher intellectual load.

The end result also depends on the general level of development. During the experiment it has been established that top managers usually achieve the best results.

Discussion

Application of Speed reading techniques in the author's view may be of practical nature. In order to quickly read one must think fast. Here the author sees the possibility of using Speed reading techniques for training of staff in organizations. The working day is eight hours, but the question is, how much and what kind of work can accomplish an employee during this time.

If the employees are focused on results rather than processes, and their income depends on the results of their work, the efficiency of such employees can be improved by teaching them the Speed reading techniques. After accomplishment of the course 98% of students reported an incredible enthusiasm and desire to do something.

This is despite the fact that usually the students were adults and that the percentage includes the corporate courses trainees (i.e. courses organized by request of corporations) and that classes were conducted in the evening after work hours.

Organization of this kind of training requires a greater effort on the part of the teacher.

Since classes take place in the form of intense training, to ensure the high quality results each student should always be tested to evaluate their success via feedback and make adjustments in the learning process of each individual student to ensure effectiveness.

The teacher should be able to motivate students and encourage them to focus on achieving the best results, help eliminate the psychological barriers that may occur during training.

The author believes that it is not quite correct to try to calculate the average initial speed and the average final speed. It's more like counting the average temperature in the hospital. Much more relevant is how much each of the learners advanced in comparison with the initial test.

In addition, during an interview it is worth to determine whether the student during training managed to keep a positive attitude, because this kind of learning requires some effort from the student.

The techniques described in this article should be applied as early as primary school age to ensure that people in their adult life gain a high level of intellectual development, and consequently, a higher level of income.

The author believes that the techniques and methods of memorizing and fast reading should be introduced more widely in the territory of Latvia.

First of all, it is connected with the strategy of focusing on the future of the state.

According to an international survey of educational achievements Program for International Student Assessment (PISA) conducted in 2009 on the level of intellectual development of school students (it's economic future of the state),



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Latvia is only on 30th place among 65 countries with respect to the skills of its students to analyze information and practically apply the skills learned in school. At the same time Estonia is on 13th place in the world, while Lithuania on the 40th.

In the PISA study the children accomplish the tasks of six degrees of complexity.

If the student reaches level 2, it means s/he knows how to use this knowledge only in the simplest non-curriculum situations. The 3rd level is a little better, but still speaks of undistinguished student's abilities. The 4th level is when the student is able to use knowledge to get new knowledge.

And those who do the tasks of the 5-6th levels can be regarded as an intellectual elite.

In Latvia, 62% of all students are on the 2-3rd levels, the 4th level reached 17% of the students, and the 5th 2.8%. In Latvia the highest level 6 reached just 0.07% of the students.

Significantly more (16.8%) of the students in our country are of the lowest 1st Level. But those who even don't reach that level comprise 0.36%.

The author believes that one can make a prediction about the level of income of the adults who will grow out of these kids who don't know how to analyze information and make logical conclusions. In other words, these individuals will grow up to represent only the cheap labor.

Based on the above evidence, authors consider it necessary to develop the speed reading and storing information skills among university students in order to maintain competitiveness of the future young experts on the our market and competitiveness of the country forming the future intellectual elite.

Conclusions and offer

The methods of speed reading and memorizing have been used for decades in the developed countries. These methods can be effectively used for training personnel in various organizations.

The methods are of interest in and of themselves; methods become more effective when used for specific purposes, whichever an organization might pose and they can be successfully applied to solve practical issues related to professional requirements. The non-traditional teaching methods can be applied depending on the objectives and the specific learning environment.

The application of the methods can be affected by the number of people in a group, the overall level of education of the trainees, goals and objectives of the specific courses.

The dominant idea for implementation of speed reading and fast memorizing methods, in author's opinion should be directed to the possible practical application of these methods in various fields.

In English-speaking countries, these teaching methods are widespread. The methods are used for teaching of both the open access groups and staff of corporations.

In the U.S.A training with using methods of speed reading have been conducted for the educators from the perspective of public administration.

The increased interest in methods of speed reading and memorizing can be explained by the general demand for the need to expedite processing of information.

From the teacher, such a system involves the creation of an environment where acquisition of new methods would be done in a natural way, in the process of use of the materials necessary to perform job duties, and the course would be focused on ensuring the achievement of educational goals.

When choosing a method of teaching the primary emphasis should be the efficacy.

The author suggests a more widespread adoption of the methods proposed by the author in practice. Education of this kind is expedient to begin with school-age children to prepare a competitive workforce. Already, in Latvia, in spite of 11.6% unemployment rate (in 2011, according to the Institute of Statistics) there is a shortage of highly qualified personnel. On the other hand there is a "brain drain".



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Therefore, the methods proposed in this article might help when it is necessary to retrain the staff in the event of a sharp reduction of the number of employees in organizations. When those left are supposed to perform the duties of the fired /laid off employees.

The methods described in this article can be learnt at minimum time and immediately applied in practice to perform job duties.

The speed-reading and memorizing methods can be effectively used to educate students so that they can significantly save time and effort needed for acquiring a particular subject, and provide an opportunity to read through the whole list of literature recommended for the course.

It should be noted also that at the speed of reading below 250 words per minute a student must spend about eight hours a day just to read the relevant literature.

Arrangement of classes should take into account the factors affecting the efficiency of learning and reading speed of adults. Comprehension of these factors helps avoid many mistakes and streamline the learning process.

The main conclusion of this article is that the methods speed reading and speed memorizing can within a short term give the maximum measurable results.

Considering the factors influencing the speed of reading established during the training it is possible to introduce the speed reading at all levels, including training of professionals to maintenance skills necessary for retraining and managing high volumes of processing text information.

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