Designing Successful Executive Program on Creativity: Theoretical Approaches and Practical Challenges in Asia[1]

Gilbert Tan

Abstract

This paper traces the theoretical approaches of creative training to the 4 Ps of creativity research, namely, People, Process, Product and Press. It discusses some practical considerations that need to be taken into account to ensure success in creativity training programs. These considerations include: (a) accommodating individual differences; (b) addressing resistance; (c) demonstrating impact and results; (d) ensuring transfer-of-training; and (e) overcoming time and resource constraint. The paper concludes with the "IDEAL" tips on creativity training.

Key words: creativity training, executive training, organizational creativity.
JEL Classifications: M19, M53.

Introduction

The performance of Asian enterprises is not constrained by lack of resources but by lack of creativity and innovation. To succeed in today's business environment, Asian enterprises need to differentiate themselves from their competitors. They also need to cope with the fast speed of change driven by technology, globalization, de-regulations and other external factors. The fact that governments and businesses in Asian societies realize the importance of innovation in contributing to economic growth in the new economy is reflected in a recent article in Asian Wall Journal. This article reported that many governments in Asia want to see their universities encourage more creativity (Prystay, 2001).

The economic necessity for innovation and creativity leads to the growing demand on creativity training programs for executives in the region. Creativity training in Asian countries is not a fad. It has the support of the government. In fact, governments in Asia are striving to enhance the innovation capabilities of their countries to compete successfully in the new economy (Wolff, 2001). Likewise, business enterprises view creativity training an investment by management to ensure that employees develop the competencies to break with tradition and do things differently to thrive in today's business environment.

This paper aims to:

1. Discuss the various theoretical approaches and foundations of creativity training;
2. Identify some practical considerations that pose challenges to creativity trainers in Asian countries; and
3. Derive some helpful tips to improve the effectiveness of creativity training

Theoretical Approaches and Foundations

The proliferation of creativity training programs unfortunately leads to some confusion among HRD professionals who may not be well-versed with the diverse literature on creativity research and theories. Theoretically, approaches to creativity training can be traced to the 4 Ps of creativity research – People, Process, Product, and Press (Runco, 2004). In practice, most creativity training programs will incorporate a combination of more than one of these 4 Ps.

---

[1] This paper has been presented at the 3rd Asian Conference of the Academy of HRD, Seoul, Korea, 20-23 Nov. 2004.

 © Gilbert Tan, 2006

People

The first P focuses on the creative person. The level of analysis is on the individuals. Traditionally, this approach is dominated by the psychologists. There are two schools of thought related to the people approach to creativity: (a) Disposition Theory; and, (b) Behavioral Theory.

(a) **Disposition Theory.** This is perhaps one of the oldest schools of thought in creativity research. The dispositional theory is interested in identifying personality traits associated with creative individuals. Essentially, the research question of this school of thought is: What are the personality traits or characteristics that differentiate creative individuals from their peers? Early proponents of this school of thought are mainly from the psychology discipline. Among them are Fromm (1959), Roe (1963), and Rogers (1959). After years of research, there is some consensus that creative individuals are more likely to display the following traits: independence, need for space and freedom, openness to experience, self-reliance, persistence, willingness to take risk, tolerance for ambiguity and observance.

Since personality traits are considered to be relatively stable and believed to be in-borne, there is little that trainers can do to improve creativity. One possible application of the disposition approach is to administer instruments to measure the participants' creativity traits and use the findings to improve their self-awareness.

(b) **Cognitive and Behavioral Theory.** Though this approach also focuses on creative individuals, it is more dynamic. Instead of identifying personality traits that differentiate between creative and non-creative individuals, this approach examines how creative individuals think and behave. The assumption of this approach is based on the belief that we can improve our creativity by modeling the thinking style and behavior of creative individuals. The contemporary proponents of this approach are (i) Robert and Michele Root-Bernstein (1999); and (ii) Michael J. Gelb (1998).

Robert and Michele Root-Bernstein (1999) studied how some of the twentieth century's greatest minds think and behave. Their findings were reported in their book. They identified 13 "thinking tools" common to these geniuses – observing, imaging, abstracting, recognizing patterns, forming patterns, analogizing, body thinking, empathizing, dimensional thinking, modeling, playing, transforming, and synthesizing.

Michael J. Gelb (1998) conducted an in-depth study of Leonardo da Vinci and identified seven behavioral traits: (i) *curiosita* (curiousity); (ii) *dimostrazione* (learning from experience); (iii) *senazione* (using and refining the senses in experiencing); (iv) *sfumato* (embracing ambiguity); (v) arte/scienza (balancing between science and art); (vi) *corporalita* (cultivating grace, ambidexterity, fitness, and poise); and (vii) *connessione* (recognizing interconnectedness).

Implicitly, the authors of these two books are suggesting we can improve our creativity by emulating the behavior and habits these great thinkers and by adopting their "thinking tools". Creativity trainers associated with the cognitive and behavioral theory will design exercises and games to simulate specific thinking styles or behavior to improve creativity.

Process

Unlike the disposition theory, the process approach believes that creativity can be taught and learnt. Naturally, this approach is most popular among creativity trainers because trainers can easily design skill training programs related to the different stages of creative problem-solving process.

Wallas (1926) was the pioneer of this school of thought. He identified four stages of creativity problem solving: (a) preparation; (b) incubation; (c) illumination; and (d) verification. Since then, researchers have been building on the pioneer work of Wallas. A more up-dated process is the Osborn-Parne's Process (Parnes et al., 1977). Over the years, it has gained wide acceptance among managers. It specifies that creative problem-solving involves the following stages: (a) mess-finding; (b) fact-finding; (c) problem-finding; (d) idea-finding; (e) solution-finding; and (e) acceptance-finding.

Recently, there are many more process-oriented creativity programs in the market. Tony Buzan's mind-mapping; Edward de Bono's (1977) lateral thinking skills and six-thinking hats theory are some of the more popular programs from the west. The Think-Kit (Tan and Leong, 1997) is one example of a locally designed program. The Think-Kit approach describes a five-step process to enhance creativity in organizations:

- Step (Minus) One – Possessing the "I Can" attitude
- Step One – Overcoming fears, uncertainties, and doubts
- Step Two – Generating new ideas
- Step Three – Evaluating new ideas
- Step Four – Marketing and selling new ideas

Creative programs adopting the process approach tend to be very structured. The trainers will lead the participants systematically through each step of the creative thinking process. Usually, there will be specific techniques associated with each step of creative thinking process. Generally, participants like the hands-on practice of the various techniques and find them useful. This explains the popularity of this approach among practitioners.

Product

Another approach to understanding creativity is to focus on the creative product, i.e., the resultant outcome of creativity. The proponents of this approach are interested in identifying the characteristics of creative outcomes. The usefulness of the product approach lies in its ability to identify concrete examples of creativity. Implicitly, creativity trainers believe that participants can learn to be more creative by exposing them to examples of creativity. Presently, this school of thought is the least popular among researchers and practitioners. This is perhaps because it is the most mundane and commonsense approach. However, we foresee that this will change with the rise in emphasis on product innovation by organizations.

The Creative Product Analysis Matrix (CPAM) is a good example of the product approach to creativity (Besemer and O'Quin, 1987). This framework measures the creativity of the product according to three dimensions: (a) novelty (the extent to which the product is original in terms of concepts, processes, materials); (b) resolution (the extent to which the product is useful in solving the problem that prompt its creation); and (c) elaboration and synthesis (refers to the stylistic attributes of the product, e.g., elegance, attractiveness, well-crafted). Since the focus of this framework is on the product, it is best used in product design and innovation workshops.

Press

Unlike the previous approaches which tend to be micro in their analysis, the press approach is more macro. It is interested in examining the influence of the situation or environment on creativity. Research studies and corporate experiences suggest that creativity is a complex phenomenon resulting from interactions between people, the organization and the environment. Tan's (1998) total system approach to managing creativity in organizations is a good example of the place approach to creativity. His framework describes the interdependence of the organization's subsystems – people, structure, leadership and culture – in fostering creativity in organizations.

The contributors of this approach are management scholars and practitioners. They found that those organizations with a culture that promotes risk-taking, fun, autonomy, trust, playfulness, open-communication, and challenge tend to be more creative and innovative (Turnipseed, 1994; Perry, 1995). Creativity programs based on the press approach will typically make use of the case study method to illustrate the principles of innovative organizations. Creativity trainers may also use climate survey instruments to help participants identify organizational barriers to creativity and innovation.

Practical Considerations

There are practical considerations that creativity trainers need to be aware of to improve the chance of success in their programs. These are: (a) Individual differences; (b) Resistance to training; (c) Demonstration of results; (d) Transfer-of-training; and (e) Time and resource constraints.

Individual Differences

Participants have different learning styles, motivations to learn, prior knowledge and experience, etc. In a typical training session, we will find a good mix of participants with these differing attributes. For example, we expect to have some participants who learn best by either action or doing, thinking, feeling or by interacting with people (Dalton, 1999). Each of these learning styles has implications on the design and delivery of the training.

Likewise, there will be participants who are highly interested in creativity training (perhaps, due to its novelty), while others will be cynical about it. In addition, some participants may have much prior knowledge and experience in creativity and others having little or none. The challenge for creativity trainers is how to customize the training activities to match the diverse needs of individual participants. This can be very difficult when the class size increases to more than twenty participants and when there is great diversity in the class in terms of expectations of and experiences to creativity training.

Resistance-to-training

There are many reasons why employees resist training. It could be due to past negative experience with training, such as inexperienced trainers, irrelevant training contents and activities, boring delivery, or even bad timing of the training sessions. In Singapore's context, some participants may feel that they are 'over-trained'. When participants are well exposed to training, there is a greater danger that some of the training contents and activities may have been covered by trainers in previous training courses.

The first step to overcoming resistance-to-training is to identify the characteristics of resistance to creativity training. Experience tells us that participants will not be overt in their resistance to training. However, there will be some obvious tell-tale signs. For example, participants may arrive late for training, display unwillingness to participate in training activities, criticize the trainer or fellow participants, ask irrelevant questions, crack jokes, or conduct side-conversations. Trainers must be alert to these tell-tale signs in order to identify those participants who are negative towards the training.

Rapport is a good antidote to resistance-to-training. Participants will be more receptive and less critical once rapport is established. Also, when there is rapport between the participants and trainers, participants will be more willing to share and be open. That is the reason why experienced trainers will make it a point to find out more about the participants – their background, experience and expectations, know their names within the first two hours of the training session, talk to them during breaks, and interact with them informally.

Demonstration of Results

Unlike other training programs, many of us do not know what to expect from creativity training. One most frequently asked question is: "How do we know that the training program is effective?" Worse still, people's expectations of creativity training can be unrealistic. Quite often, organizations expect to improve creativity overnight after sending their staff for creativity training. Creativity trainers are pressurized to show results of their training programs to their clients.

There are many methods to measure results. The Kirkpatrick's (1959, 1996) four-level framework is one of the most widely used approach. The first thing that creativity trainers need to show is positive participant reactions toward the training. This is the easiest way to show result. Most organizations will do a post course survey to measure participants' reactions towards the training. In

order to have good feedback from participants, the training program must meet participants' expectations. This can be a real challenge for creativity trainers since expectations can be unrealistic.

The second level of result is to demonstrate learning. Often quizzes are used to test participants' understanding of the principles and concepts introduced in the program. The third level is to demonstrate changed behavior at work. This is more difficult and is usually not within the control of the trainer. One method the author uses is to have the participants commit to an action plan to effect changes at work at the end of the training session. The fourth level of result is to demonstrate that the creativity training leads to positive business results. This poses the most difficult challenge for creativity trainers. The methodology to measure this level of result can be very sophisticated (Phillips, 1991).

Transfer-of-Training

This is related to the third level of result. The practical challenge for creativity trainers is to ensure that participants apply what they learned from the training to their jobs. From the organization's perspective, training will be wasted if staff do not apply what they learned. Hence, it is important that creativity trainers consider this factor of transfer-of-training in their design and delivery of the program.

Some practical tips to enhance transfer-of-training are as follows:

- Use practical and concrete examples.
- Design case studies or problems that bear semblance to the participant's day-to-day experience.
- Ensure that participants have sufficient time to practice what they learned during the training.
- Ask participants to envision how they can use the principles/concepts in their jobs.
- Ask participants to set realistic goals for using the principles/concepts in their jobs.
- Ask participants to identify barriers to apply what they learned and think of ways to overcome them.

Time & Resource Constraints

Another challenge for creativity trainers is to ensure that their programs are the most cost-effective. Sometimes, this means that creativity trainers have to come up with creative ways to ensure that the training is effective and at the same time not too costly. Training cost does not only include the direct cost of training, such as trainer's fees, cost materials, etc. It also includes indirect costs like participants' salaries, management time taken to meet with the trainers and consultants, etc. In any case, the total training cost can be very expensive for organizations.

In Singapore, the trend now is to design shorter training programs. In the past, training used to be between three to five days. Nowadays, most organizations can only afford to send their staff for one to two day program. Creativity trainers are constrained by this trend. Unfortunately, creativity training relies very much on experiential learning which requires more time. Creativity trainers, therefore, need to balance between what is ideal and what is pragmatic. The choice is difficult. Still, creativity trainers have to exercise good judgment in this trade-off to enhance acceptance and affordability of their programs.

Conclusions: The I.D.E.A.L. Tips on Creativity Training

It order for creativity training programs to be credible and gain support from HRD professionals and business managers, they must be theoretically sound and at the same time respond to the above-mentioned practical considerations. This paper concludes with five practical tips to improve the chances of success in creativity training programs. These “I.D.E.A.L.” tips are distilled from experiences by the author in creativity training for the past ten years in the Asian context. I.D.E.A.L. stands for: (a) Instill mindset changes; (b) Design meaningful learning activities; (c)

Expound relevant concepts and principles, (d) Attend to participants' reactions; and (e) Link program to organization's objectives.

Instill mind-set changes

The key creativity training success is mindset changes. As early as in the 1940s, scholars discovered that the person's mindset might produce fixation and stereotyping in problem-solving and thus restrict creative thinking (Luchins, 1942). Creativity is more than just a set of techniques. Learning creativity techniques without corresponding changes in the mindset will lead to short-term changes at best. People can apply creativity techniques mechanistically to generate ideas. However, the quality of the ideas will not be good if we are still trapped by the old mindset and think within the box. We need an "open", "I-Can", and "bold" mindset to think outside the box and to sustain creativity.

An open mindset helps us to engage in divergent thinking. It helps us to look at possibilities and beyond proven ideas. Creative ideas are wild ideas. No wild idea can survive the evaluation of a "closed" mindset. A person with an open mindset takes satisfaction in making ideas work no matter how ridiculous they may appear initially. In contrast, a person with a closed mindset quickly is quick to decide that the idea will not work. Closed mindset is a barrier to creativity. It is no wonder why the inventor of brainstorming advocated the ground-rule of deferment of judgment as an aid to creativity (Osborn, 1953). Effectively, what he told us was that we need to have an open mindset to foster creativity.

Smith, Jr (1993) observes that the highest level of innovative changes is "doing things that cannot be done". This captures the essence of the "I-Can" mindset. The "I-Can" people look at possibilities and not limitations. They never take no for an answer. They are positive thinkers. Creativity trainers must challenge their participants to adopt the "I-Can" mindset. To do that effectively, they need to repeat and reinforce the message periodically throughout the training session.

Arnold (1962) identified fear, anxiety and jealousy as emotional blocks to creativity. Instilling a bold mindset will help to overcome these obstacles. Creativity involves taking the path less traveled. It involves risk-taking. To be creative, we must be bold enough to face the risk of appearing foolish, making mistakes, and being misunderstood by others. This may be emotionally costly for many people. That explains why many of us would prefer to take the safer options. Yet, creativity involves boldness. Specifically, a bold mindset helps us to resist the tendency to conform to others, look beyond the limitations of our situations, and try new, untested ideas.

Design meaningful and fun learning activities

The training industry is challenged to provide high quality and high impact programs. The expectation of creativity trainers is even higher since they are supposed to impart creativity. With knowledge explosion and increasing exposure to multi-media presentation, we experience information overload and have our attention spans shortened. This makes training more difficult. In response to this challenge, some training professionals are now introducing the idea of "edutainment" in their training programs (Ford, 2004). It means that learning activities have to be relevant, engaging, and entertaining.

We can use experiential exercises to make learning activities meaningful and fun for the participants. Experience tells us that adult learners learn better by doing and playing than by attending lectures. Experiential exercises include games, simulations, role-plays, brain-teasers, puzzles, case studies, etc. When appropriately applied, these activities are fun, high energy, and help to create lasting impact on the participants. However, it is important that experiential exercises must relate to the training objectives and content. Unrelated fun distracts rather than promote learning.

Now, there is more access to training resources than in the '70s and '80s. For example, Robert Epstein (2000) has recently published a good resource book on creativity games and exercises. However, games and exercises from published sources may not be totally relevant or fit the training objectives. Moreover, there is the risk that participants may have been exposed to these pub-

lished games and exercises in other training programs. Participants will become bored doing the same thing even though the game or exercise may be mind-blowing the first time. Hence, we need to be selective and discerning. Some experienced trainers use published games and exercises as source of inspirations to design their own learning activities.

Expound relevant concepts and principles

There are many types of creativity training programs in the market. At one extreme are programs that are *atheoretical*. Most of these programs are based on personal experiences of the trainers or some self-acclaimed gurus. These programs are typically technique-based. The problem with this type of training is the generalizability of techniques. Creativity techniques that work well for some people may not work for others. Likewise, certain techniques may be effective for certain problems but not in others. Overgeneralization of experience without understanding the theoretical underpinning of how things work can cause more harm than good in the long term.

At the other extreme are training programs that are academic or theoretical. These programs focus too much on what we know *about* creativity. Generally, participants are more interested in learning how to apply creativity techniques or principles to enhance workplace creativity. We need to strike a healthy balance between theory and application. It is always good to incorporate sound theoretical frameworks and principles in our programs. Participants will find it easier to retain what they learn when there are theoretical frameworks or general principles to anchor their learning experiences. This will also improve transfer-of-training (Baldwin and Ford, 1988). We also know that adults learn better using problem-centered approaches (Knowles, 1990). Academic discussion about creativity theories will not be well received by adult learners if there are no concrete examples of how these theories solve real-life problems. Creative trainers must be carried away by theories of creativity and forget to link the theories to practical problems. It is advisable not to overwhelm participants with too many theories and concepts. It will be more effective to focus on a few selected theories and spend more time to illustrate how to apply them using real-life problems.

Attend to participants' reactions

Although newer methods of training evaluation are proposed, in applied settings, measures of participants' reactions are the most commonly used evaluation criterion of training effectiveness (Van Buren & Erskine, 2002). Participants' reactions are the first level training outcome of training effectiveness (Kirkpatrick, 1959, 1996). Positive participants' reactions are therefore important for creativity trainers. First, trainers must ensure that their training activities are well received by their participants. If reactions of participants are adverse, it is unlikely that they will be motivated to learn and benefit from the training.

Participants' pre-conceived ideas of creativity training can influence their reactions to the program. Some participants have the pre-conceived ideas that everything in the creativity training must be mind-blowing, engaging, and exciting. The reality is that there will "high-energy" activities (e.g., games and experiential exercises), and "low-energy" activities (e.g., lectures and debriefing sessions) in any training program. This is consistent with research findings that advocate using multiple approaches and methods to improve training outcomes (Lengnick-Hall and Sanders, 1997).

Trainers must manage participants' expectations right at the beginning of the training session to ensure success. Unmet expectation will lead to dissatisfaction which in turn becomes an impediment to learning. Experienced trainers are observant of participants' reactions to pick up any signs of unmet expectations early in the program and take prompt actions to address these concerns. In any training sessions, there will be some participants who are resistant to creativity training. As mentioned earlier, there are various reasons for their resistance. The challenge for trainers is to identify tell-tale signs of resistance as expressed by participants in the way they react or respond to the training activities during the training session. Early identification of resistance gives trainers ample opportunities to address the sources of resistance and help participants to overcome this psychological barrier to learning.

Link program to organization's goals and objectives

Managers, nowadays, are bottom-line conscious. They expect return on investment (ROI) in creativity training even though, in practice, it may be difficult to measure ROI. For creative training to be credible it must be linked to the achievement of the organization's goals and objectives. If creativity training is done haphazardly, it is unlikely to achieve the desired business impact. When managers do not see the benefits of creativity training to the organizations they will not send their staff for the training. Likewise, if participants cannot see how the training benefits them in their jobs and careers, they will not attend the training.

One common reason why creativity programs are not effective in helping the organizations achieve their goals and objectives is because they are directed at the wrong level. Theoretically, creativity can be directed at different levels – individual, group, and organizational (Woodman, Sawyer and Griffin, 1993). Many creativity training programs are directed at the individual level and not at the organizational level. Trainers who fail to differentiate between the different levels of analysis make a grave mistake. Creative individuals do not necessarily lead to creative groups or organizations. For creativity training to contribute the achievement of the organization's goals and objectives, trainers must know how to link individual creativity to group creativity and from group creativity to organizational creativity. It is not enough to train individual employees to be creative in generating ideas, it must also teach them to work as a team on the ideas and translate them into applicable ideas that help to solve organizational problems and improve organizational performance.

References

1. Anold, J.E. Education for innovation in S.J. Parnes and H.F. Harding (eds), A Sourcebook for Creative Thinking, New **York, Scribner**, 1962.
2. Baldwin, T.T. and Ford, J.K. "Transfer of Training: a review and directions for future research," // Personnel Psychology, 1988. – Vol 41. – pp. 63-105.
3. Besemer, S.P. and O'Quin, K. *Creative Product Analysis: Testing a Model by Developing a Judging Instrument.* In Isaksen. S.G. (Ed), *Frontiers of Creativity Research.* **New York: Bearly Limited**, 1987.
4. Dalton, M.A. *Becoming a More Versatile Learner.* **North Carolina: Center for Creative Leadership**.
5. de Bono, E. *Lateral thinking.* **Middlesex: Pelican Books**, 1977.
6. Epstein, R. *Big Book of Creativity Games*, **New York: McGraw-Hill**. 2000.
7. Ford, M. "What's the big idea?" //Training, 2004, – Vol 41 (5). – pp 50.
8. Fromm, E. *The Creative Attitude.* In Anderson H.H. (Ed), *Creativity and its cultivation.* **New York: Harper & Brother**, 1959.
9. Gelb, M.J. *How to think like Leonardo da Vinci: Seven steps to Genius every day.* **New York: Dell Trade Paperback**, 1998.
10. Kirkpatrick, D.L. "Techniques for evaluating training programs" //Journal of the American Society of Training and Development, 1959, – Vol 13. – pp 3-9.
11. Kirkpatrick, D.L. *Evaluation.* In Craig R.L. (2nd Ed), *The ASTD Training and Development Handbook.* **New York: McGraw-Hill**, 1996.
12. Knowles, M. *The Adult Learner*, 4th Edition, **Houston: Gulf Publishing**, 1990.
13. Lengnick-Hall, C.A. and Sanders, M.M. "Designing effective learning systems for management education: student roles, requisite variety, and practicing what we teach" //Academy of Management Journal, 1997, – Vol. 40(6), – pp. 1334-1368.
14. Luchins, A.A. "Mechanization problem solving: the effect of Einstellung," Psychological Monographs, 1942, – pp. 54.
15. Osborn, A. *Applied Imagination*, New York: **Charles Scribner and Sons**, 1953.
16. Parnes, S.J., Noller, R.B., and Biondi, A.M. *Guide to a creative action.* **New York: Scribners**, 1977.

17. Perry, T.S. "How small firms innovate: designing a culture for creativity" //Research-Technology Management, 1995, – Mar.-Apr., – pp. 14-17.
18. Phillips. *Handbook of Training Evaluation and Measurement Methods, 2nd Edition.* **Houston, TX: Gulf Publishing**, 1991.
19. Prystay, C. "Asia's Future: Institutions – Crash course in creativity" //Asian Wall Street Journal, 2001. – Sep. 10, S4.
20. Roe, A. *Essays in Creativity in the Sciences.* **New York: New York University Press**, 1963.
21. Rogers, C. *Toward a theory of creativity.* In Anderson H.H. (Ed), *Creativity and its cultivation.* **New York: Harper & Brother**, 1959.
22. Root-Berstein, R. and Root-Berstein, M. *Sparks of Genius: The 13 thinking tools of the World's most creative people.* **New York: Houghton Mifflin Company**, 1999.
23. Runco, M.A. "Creativity," //Annual Review of Psychology, 2004. – Vol 55, – pp. 657-687.
24. Smith, R., Jr. Seven levels of change model: a process for linking creativity, innovation and continuous improvement, in Gryskiewicz S.S. (editor), *Discovering Creativity*, Greensboro, North Carolina: **Center for Creativity Leadership**, 1993. – pp. 27-34.
25. Tan, G. "Managing creativity in Organizations: A total system approach" //*Creativity and Innovation Management*, 1998. *Mar.* pp. 23-31.
26. Tan, G and Leong, P. "The Think-Kit Approach to Fostering Creativity in Organizations" //Productivity Digest, 1999. – Jan. – pp. 52-57.
27. Turnipseed, D. "The relationship between the social environment of organizations and the climate for innovation and creativity" //Creativity and Innovation Management, 1994. – Sep. – pp. 184-195.
28. Van Buren, M.E. & Erskine, W. *The 2002 ASTD state of the industry report.* Alexandria, VA: **American Society of Training and Development**, 2002.
29. Wallas, G. *The Art of Thought.* **New York: Harcourt Race**. 1926.
30. Wolff, M.F. "Asian Economies striving to enhance innovation capabilities," //*Research-Technology Management,* 2001. – Jan.-Feb. – pp. 2-6.
31. Woodman, R.W., Sawyer, J.E. and Griffin, R.W. "Toward a theory of organizational creativity" *//Academy of Management Review,* 1993. – Vol. 18 (2), – pp. 293-321.