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Chapter 69**Specifics of Becoming a
Professional Bank
Manager**

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ABSTRACT

The need of psychological support to managers in their work is explained by ever increasing competition they have to face and elevated levels and of tension and stress associated with it. This article relies on Systemic-Structural Theory of Activity to analyze the specifics of managers' professional activities. The authors described the results of research into bank managers' professional growth that could be used as a tool of their psychological support. The research results reflect the influence produced by various external and internal conditions in the bank manager daily activities affecting their professional success as well as crucial factors of their professional development interrelated with this success. The article also comprises the formula to estimate the integral diagnostic index that can be used as the scale of bank managers' overall professional efficiency.

Keywords: Professional Development, Elements of Activity, Managers, Psychological Support

INTRODUCTION

The modern trends of the social development call for an increased level of psychological support in different areas of professional activities. It includes primarily the systematic psychological support throughout all stages of professional development, with continuous upgrade of professional qualification and efficiency accompanied by constant personal perfection. This psychological support must rely on scientifically authentic research into psychological specifics of professional activities and development that individuals undergo in a concrete professional environment. Such support will be most beneficial for occupations that are characterized by high professional pressure, permanent stresses and increased risk of professional burnout. These features apply among others to the work of bank manager whose professional development became the focus of research described in this article.

SPECIFICS OF MANAGERS' PROFESSION

In the most general sense manager can be described as a person who holds a managerial position and masters a set of knowledge and skills that are necessary to manage people and administer organizations in conditions of uncertain and permanently changing environment, in which this organization is functioning (Atwood, 2008; Hosmer, 2008).

One of the modern theories that can be used to perform in-depth analysis of professional activities performed by humans in general and managers in particular is the Systemic-Structural Theory of Activity – SSTA (Bedny, Meister, 1997; Bedny et al, 2000; Bedny, Karwowski, 2007; Bedny, Harris, 2008).

According to this theory the major elements of activity include: 1) subject of activity; 2) task; 3) conditions; 4) tools; 5) method or procedures; 6) object; 7) product or result. It should be kept in mind that activities are organized according to principles of self-regulation and feedback.

In their work managers (*subject of activity*) can pursue the following common *tasks*: tie up with other individuals inside organizations to achieve organizational objectives and economic success; study evolution of demand and supply in the market; plan organization's activities; communicate (establish and develop interrelation among personnel, other institutions and organizations); search for and use necessary means and resources to better achieve organizations' core objectives; develop business plan and control its implementation; manage, supervise and evaluate subordinates' work; control the performance of tasks assigned to subordinates; participate in recruiting and selection process, assist to other employees in their professional growth; set up negotiations, perform client outreach efforts; hold presentations etc.

Conditions that stipulate success of achieving the above tasks can be broken down in external and internal ones. The external conditions include such as: manager's place in the organization's hierarchy, range of his/her authority, other employees' qualification and experience, social and psychological climate

inside organization, objective market situation within organization's scope of activity, its financial status, image etc. Internal conditions include managers' professional experience and qualification underpinned by their core professional qualities such as: highly developed managerial and communicational skills; ability to affect the behavior of other persons, build and develop efficient task forces, solve problematic issues in reduced timeframe; the ability to forecast and predict the way things are going to develop; well-developed analytical skills; high self-control, self-assertion, confidence in own decisions; vitality, consistency, responsibility, resolution, spirit of enterprise; ability to follow organizational requirements and regulations; drive for the permanent personal improvement (Atwood, 2008; Mescon et al, 1988).

We also consider that among crucial internal conditions that manager needs to have in order to become and remain successful most important are his work efficiency and psychophysiological state (Karpoukhina, 1990; Karpoukhina, One-Jang, 2003; Karpoukhina et al, 2008; Kokun, 2004, 2006).

It should taken in account that managerial work is characterized by its high intensity, tension, frequent interference of external factors, multiple social relations of different levels, prevalence of direct personal contacts with other people. Besides, it is associated with a multitude of economic, organizational and social-psychological stresses. Subject to these stresses managers become less productive, experience sensation of permanent fatigue, headaches, insomnia, general health deterioration. In many cases they cease to feel satisfaction with their work, experience hostility; sometimes feel themselves incompetent, helpless and exposed to other symptoms of professional burnout.

In the course of their professional activities managers most frequently apply material and internal/ external functional tools. Material tools are primarily those related to various means of accepting, receiving, processing and transferring information. Internal functional tools may include perceptions of activity results, situation analysis, search for new approaches, decision taking process, self-adjustment, self-motivation etc. External tools include behavioral and linguistic expression, clothing and other attributes of exterior image.

While working with their *objects* such as subordinates, clients, customers, partners, co-workers, representatives of controlling organizations, management etc. managers can recur to such *method or procedures* as: negotiations, meetings, consultations, instructions, control, fines, information etc.

The examples of *product or result* that managers try to achieve by their work can include: received financial revenues; number of closed deals; increased reputation and better image of their organization; higher stimuli, discipline, collaboration, professional qualification exhibited by their co-workers; creation of new promising projects etc.

What makes managers' work unique is that in many cases it is difficult to evaluate how well managers accomplish any given task without taking into account the context of their overall work efficiency. Most frequently the manager's productivity is assessed by the end result of his/her professional efforts (*product or result*) that can be achieved in different manners (depending on environment, resources, available possibilities, experience, manager's individual traits etc.).

Professional development means building vocational orientation, competence, socially significant professional qualities and their integration, readiness to constant professional growth, search for better quality and creative performance of tasks in line with personal and psychological singularities (Zeer, 2007). The process of manager's professional growth is shaped by all above elements of his/her activity. Below, we will study in detail specifics of such conditioning based on bank managers' cases.

METHODS AND TARGET GROUP

Methods: questioning; expert evaluation; methods of revealing "communicative and organization abilities" (B. Fedorishin); methodology of "Studying Satisfaction Levels Associated with Profession and Work" (N.Zhurin and E.Ilyin); Maslach Burnout Inventory (MBI); Modification of The General Self-Efficacy Scale (M. Jerusalem and R. Schwarze).

The *target group* for this research was 51 managers of a Kiev bank.

SPECIFICS AND FACTORS OF BANK MANAGERS PROFESSIONAL DEVELOPMENT

Let's first review the summarized questioning and psychodiagnostics results that shed the light on external and internal *conditions* of bank managers' operation. Then we will attempt to determine how they develop such crucial components of their professional development as occupational focus and competence (internal *conditions*) as related to their professional efficiency.

QUESTIONING RESULTS

The results of questioning included in Table 1 show that the managers in the study group revealed deepest satisfaction with relation to sheer professional aspect of their activities. 94 % of all interviewees said they were happy with their occupation. As to the aspects that are of more pronounced social and professional nature such as carrier are social status the satisfaction level dropped to 68 % and 56 %, respectively. The fact that only the third of all managers said that they were happy with their salary rate can be considered as absolutely natural as most of all hired employees tend to be dissatisfied with the salary they receive.

Also the above results corroborate the conclusion that 90 % of all studied managers have high to very high interest in their professional activity, 94 % of them said they like what they do and 97 % take regular efforts to upgrade their professional level. The total picture of the studied group shows that the managers are characterized by a rather high level of their professional focus, especially motivation, presence of appropriate professional values and professional perspective.

Table 1. Level of professional and social/professional satisfaction among managers

Level of Satisfaction	Not happy	Rather unhappy	Rather happy	Totally happy
With his/her occupation	2 %	4 %	49 %	45 %
With salary rate	34 %	31 %	31 %	4 %
With his/her carrier	14 %	18 %	58 %	10 %
With his/her social status	16 %	24 %	36 %	20 %

Let's now consider summarized results of indices that represent factors capable of considerably affecting the managers' professional development and daily operations.

In our case they turned out to be predominantly favorable. The majority of all interviewees said they were on good terms with their colleagues and superiors (see Table 2). Most of them did not feel overstressed during their work and confessed to be in a rather good physical shape.

Table 2. Managers' self-evaluation of their relationships with colleagues and superiors

Relationships	Very bad	Bad	Mediocre	Good	Very good
With colleagues	–	–	6 %	63 %	31 %
With superiors	–	–	16 %	60 %	24 %

RESULTS OF PSYCHODIAGNOSTICS METHODS

Results of study performed by method of revealing "communicative and organization abilities" (Table 3) show that 50 to 60 % of all interviewees have appropriate (high to very high) level of personal qualities that are required for successful professional activity such as communicative and managerial abilities. These specialists tend to quickly adapt to complex situations and new environment, exhibit initiative in communication, act of their own accord in difficult circumstances, are persistent in their doings, aspire to broaden their social circle etc.

Table 3. Level of managers' communicative and managerial abilities

Level	Grade	Abilities	
		Communicative	Managerial
Low	0 – 4	4 %	–
Under low	5 – 8	11 %	9 %
Medium	9 – 12	24 %	41 %
High	13 – 16	31 %	37 %
Very high	17 – 20	30 %	13 %

Another third or so of all managers (24 – 41 %) have intermediate level of such abilities, which can somewhat interfere with their professional growth and success. Although they want to contact people and, in principle, can withstand their standpoint their overall potential is not stable and needs special efforts to be strengthened.

Another relatively insignificant portion of interviewees (9 – 15 %) showed too low for managers level of communicative and managerial abilities, which jeopardizes their professional aptitude. These are people who prefer to stand apart and feel most comfortable in their own company. They tend to feel uneasy among new people or employees, have trouble getting in touch with the others, do not defend their position, feel hurt if offended, rarely do something on their own and avoid personal decisions.

One of professional competence indicators that we used in our research was the professional self-efficacy index according to the General Self-Efficacy Scale (M. Jerusalem and R. Schwarze) (see Table 4) that is used to assess the person's confidence in his/her potential ability of setting up and managing his/her activities undertaken to achieve a certain objective.

Table 4. Level of managers' self-efficacy

Professional self-efficacy	Grade	Number
Low	≥ 19	–
Under low	20 - 24	–
Average	25 - 29	17 %
Above average	30 - 35	64 %
High	36 - 40	19 %

The above results demonstrate that the interviewees normally exhibited the appropriate level of professional self-efficacy: 19 % of them had high self-efficacy level, 64 % above average and only 17 % showed the average results. Remarkably, none of them went to low or below low levels.

Data that we have obtained through the "Studying Satisfaction Levels Associated with Profession and Work" methodology (Table 5) are in complete

harmony with the results of questioning we set up to measure for different aspects of managers' professional satisfaction. Only 7 % of the interviewees said they were slightly dissatisfied with their occupation and work and other 21 % exhibited the low satisfaction level. Among the rest 72 % this index ranged between average and high.

Table 5. Level of managers' satisfaction with their profession and work

Satisfaction / Dissatisfaction Level		Grade	Number
Dissatisfaction level	high	≥ -11	—
	average	-6 -- -10	—
	low	-1 -- -5	7 %
Satisfaction level	high	+1 -- +5	21 %
	average	+6 -- +10	36 %
	low	$\leq +11$	36 %

Most managers in the study group also exhibited insignificant extent of professional burnout (equivalent of "emotional depletion") and deformation (equivalent of: "depersonalization", "reduction of personal achievements"). For different components, this level was measured as average or above average only among 15 to 24 % of all managers (see Table 6).

Table 6. Level of professional "burnout" and deformation among managers

Components of professional burnout and deformation	Extent				
	low	under low	average	above average	high
Emotional depletion	36 %	49 %	9 %	6 %	—
Depersonalization	55 %	26 %	15 %	4 %	—
Reduction of personal achievements	34 %	43 %	22 %	2 %	—
Summarized value	28 %	59 %	13 %	—	—

One final comment should be made though with regard to results obtained through questioning and psychodiagnosis. In general they can be viewed as positive (which is corroborated by their rather high level of interviewees' professional qualities and level). However all methods include some single deviations from the bulk of results. Admittedly such deviations should be considered as normal and be disregarded. At the same time it should be noted that the results we have achieved could have been affected (toward their somewhat artificial improvement) by some interviewees' desire to seem in their responses better than they in fact are (i.e., lack of candor). But this phenomenon

is absolutely natural and in practical terms is unavoidable when performing similar research inside organizations.

SPECIFICS OF DEVELOPING THE PROFESSIONAL FOCUS AND COMPETENCE AMONG BANKING MANAGERS AT DIFFERENT STAGES OF THEIR PROFESSIONAL DEVELOPMENT

The spread of managers in the study group across different stages of professional development was rather uneven (detailed spread was determined by questionnaire's indicator questions and expert evaluation results). Only 3 of them were at the stage of professional adaptation. Other 13 managers were at the subsequent stage of primary professionalization, 26 at the second professionalization stage and 9 managers at the stage of professional excellence. It seems that such stratification is completely natural since 83 % of all interviewees had professional record of above 5 years and 73 % of more than 10 years (maximum length of service was 37 years).

The specifics of bank managers' professional target and competence at different stage of their professional development can be most explicitly illustrated by results of (Spearman) correlation analysis between interviewees' proven professional record (which to considerable extent reflects their life and professional experience) and results of questioning, psychodiagnosis and expert evaluation (see Table 7).

Table 7. Correlation between managers' professional record and results of questioning, psychodiagnosis and expert evaluation

№	Parameters	Age	Record
1	Satisfaction with salary rate	,33*	,32*
2	Satisfaction with carrier	,24	,28*
3	Relations with colleagues	-,47**	-,52**
4	Health	-,23	-,29*
5	Professional self-efficacy		,27*
6	Depersonalization	,23	,27*
7	Reduction of personal achievements	,29*	,28*
8	Professional independence	,38**	,31*
9	Success in improving professional skills	-,24	-,27*
10	Social and legal competence		-,25
11	Extreme professional competence		-,28*

Note: 1) ** means that correlation is valid at $p \leq 0,01$; * means that correlation is valid at $p \leq 0,05$; if no asterisk correlation is valid at $p \leq 0,1$; empty box means correlation is valid at $p > 0,1$;

2) values 1 - 4 were obtained by questionnaire; 5th by Modification of The General Self-Efficacy Scale; 6 - 7 by Maslach Burnout Inventory; 8 - 11 by expert evaluation.

The above table shows that the age and professional record positively correlate with managers' overall satisfaction with their salary and carrier. In our perspective this is totally logical since professionals tend to get paid better and climb higher the carrier ladder as their professional experience gets richer. Also natural are positive correlations between managers' age and professional record, on one hand, and expert evaluation of their professional independence and professional self-efficacy index (only record), on the other hand, since these qualities are also acquired along with work experience.

In a similar vein, results of correlation analysis truthfully reflect certain deterioration of health with age and a slight tendency of acquiring some indications of professional deformation such as depersonalization and reduction of personal achievements.

The reasons behind other correlations shown in the Table above (all of which are negative), are not in our opinion as evident and self-explanatory and therefore require a more detailed interpretation. For example, negative correlation between age/ professional record and expert evaluation of success in improving professional skills can be explained by an observation according to which the longer an employee works at the same workplace the lesser is his/her desire to improve his/her professional qualities, and the lesser objective possibilities he/she has for this (the higher is professional level the harder are the efforts to improve it). Negative correlation between professional record and expert evaluation of social/ legal and extreme professional competence can be explained by younger employees' ability to considerably easier find their bearings in fickle social and legal environment and keep abreast of headlong events. The most pronounced negative correlation between age/ professional record and managers' self-evaluation of their relations with colleagues can be explained by fastidiousness with regard to co-workers that gets stronger with time the manager spends at his/her work place, by certain professional deformations that accompany managers' carrier growth (if a manager climbs to a position where he/she has to control his/her subordinates and require from them the necessary level of workload it certainly is not a way of making new friends among them).

FACTORS OF BANK MANAGERS' PROFESSIONAL FOCUS, COMPETENCE AND EFFICIENCY

Let's first analyze the valid correlation between bank managers' professional competence that we used in our research and indices that can be considered as favorable or unfavorable to its evolution (see Table 8).

Table 8. Correlation between bank managers' professional competence indices

No	Factors	Professional competence indices					
		Self-efficacy	Expert evaluation of professional competence				
			Social and legal	Special	Personal	Self-compet.	Extreme
1	Relations with colleagues		,57**		,43**	,39**	,56**
2	Relations with superiors		,50**		,48**	,34*	,45**
3	Work fatigue	-,30*					
4	Health condition	,27*					
5	Communication abilities	,25	,25	,29*	,24		
6	Organizational abilities	,44**		,25			
7	Emotional depletion		-,24		-,33**		
8	Depersonalization	-,39**	-,37**	-,25		-,26	-,40**
9	Reduction of personal achievements	-,58**	-,37**				

Note: 1) ** means that correlation is valid at $p \leq 0,01$; * means that correlation is valid at $p \leq 0,05$; without asterisk means that correlation is valid at $p \leq 0,1$; empty box means that correlation is valid at $p > 0,1$;

2) indices of "factors" 1 - 4 were acquired by questionnaire; 5 - 6 by methods of revealing "Communicative and organization abilities"; 7 - 9 by Maslach Burnout Inventory.

From the Table above we can clearly see that four of five managers' professional competence indices (according to expert evaluation) are quite tightly correlated in a positive sense with self-evaluation of their relations with colleagues and superiors. Therefore such relations, on one hand, can be undoubtedly viewed as favorable *factors* to develop the bank managers' professional competence, and on the other hand, considered as a *consequence* and integral part of well-developed professional competence.

It allows to draw the conclusion that there exists an interrelation between the two variables. Another explanation of the link between them is the influence produced by a "third factor", in this case its role is played by such index as communication skills that are undeniably connected with three of five professional competence varieties. It is a well established fact that full-fledged communicative skills enable an individual to build positive relations with other people and also constitute an indispensable component of manager's professional competence and prerequisite of their development.

A considerable number of negative correlations between different types of managers' professional competence with indices of professional burnout and deformation such as emotional depletion, depersonalization and reduction of

personal achievements also seems to be a natural phenomenon. These qualities indisputably represent factors that interfere with successful professional development and, in particular, professional competence.

Another positive correlation that seems to be quite intuitive is that between the professional self-efficacy (which is an integral index of managers' professional competence) and communication/ organizational skills that similarly to the case above can be interpreted as both a factor and component of the managers' professional self-efficacy. On the other hand, this index is negatively correlated with depersonalization and reduction of personal achievements that naturally hamper the efficiency of managers' work.

Also we observed that managers with high self-efficacy level subjectively felt themselves less tired and correspondingly graded their health better than the others. This, in our opinion, can be explained by the fact that such managers tend to experience less fatigue at work due to better organization and efficiency of their efforts and better health and physical condition that normally result in higher work efficiency.

Let's now consider valid relations between indices of interviewees' professional focus and indices that can be construed as conditioning factors (see Table 9).

Table 9. Correlations between bank managers' professional focus indices

No	Factors	Professional focus indices				
		I	II	III	IV	IV
1	Relations with colleagues	,38**	,34*		,32*	
2	Relations with superiors	,31*			,28*	
3	Work fatigue					
4	Overall health condition			,24		
5	Communication skills		,25		,24	,35*
6	Organizational skills	,27*				
7	Emotional depletion		-,25	-,24		
8	Depersonalization		-,42**	-,33*	-,43**	-,40**
9	Reduction of personal achievements	-,27*	-,35*		-,35	-,30*
10	Satisfaction with profession and work	,47**	,31*	,38**	,46**	,49*

Note: 1) ** means that correlation is valid at $p \leq 0,01$; * means that correlation is valid at $p \leq 0,05$; without asterisk means that correlation is valid at $p \leq 0,1$; empty box means that correlation is valid at $p > 0,1$;

2) indices of "factors" 1 - 4 were acquired by questionnaire; 5 - 6 by methods of revealing "Communicative and organization abilities"; 7 - 9 by Maslach Burnout Inventory; 10 by methodology of "Studying Satisfaction Levels Associated with Profession and Work";

3) professional focus index: I means interest in own occupation; II means satisfaction with work content; III means satisfaction with carrier growth; IV means feeling

affection to one's profession; V means efforts to raise his/her professional qualification (acquired by questionnaire).

The above table shows that all professional focus indices at sufficiently high level logically correlate with the index measured by using the "Studying Satisfaction Levels Associated with Profession and Work" methodology. In a similar fashion, we can consider natural the considerable number of positive correlations between focus index and factors that favor its development in managers, including relations with colleagues and superiors and level of communication skills.

As in a previous case (of professional competence) we have established a fair number of sufficiently valid correlations between various professional focus types and indices of professional burnout and deformation such as emotional depletion, depersonalization and reduction of personal achievements, which can also be viewed as factors obstructing the managers' professional focus.

The obtained research results allowed us to calculate the integral diagnostic index of bank managers' professional efficiency. To perform these calculations we applied the procedure of the stepwise linear regression analysis. In its course we defined five of the most informative indices that we have used during research (along with corresponding coefficients), which taken together provide a rather precise characterization of managers' efficiency. It turned out that the coefficient of multiple correlation (R) for these five indices that describe internal and external *conditions* of the managers' professional activities with the expert evaluation of these activities' efficiency is rather high (R = 0,88). It enabled us to come up with a sufficiently precise regression formula to forecast efficiency of bank managers by using the procedure that we have developed and tested before (Kokun, 2004).

$$DLEA = (2,24*A + 1,22*B + 2,63*C + 0,13*D - 0,17*I + 6,3)*2,73,$$

where: DLEA is diagnostic level of bank managers' efficiency;
 A is an index of efforts taken by interviewee to raise his/her professional skills;
 B is index of interviewee's relations with colleagues;
 C is index of interviewee's relations with superiors;
 D is index of interviewee's satisfaction with profession and work;
 I is index of interviewee's personal achievements reduction;
 6,3 is a constant value.

The indices "A" to "C" were obtained by way of questionnaire (index "A" can vary between 1 and 4; indices "B" and "C" can range between 1 and 5). Index "D" was obtained by applying the "Studying Satisfaction Levels Associated with Profession and Work" methodology (can vary between -17 and +17). Index "I" was obtained by using the Maslach Burnout Inventory (can vary between 1 and 48).

The integral diagnostic index DLEA that was calculated by using the above formula is based on 1 to 100 scale and can be interpreted as follows: between 1 and 20 points means that efficiency of bank manager is low; between 21 and 40 under low; between 41 and 60 average; between 61 and 80 above average and between 81 and 100 this level is high.

This formula can be used to either rank bank managers or to take decision about their promotion, or to move them to another position or define success of professional tests etc.

CONCLUSION

The theory, its methodological premises and practical results of research into specifics of bank managers' professional development can be successfully implemented to build psychological support of their activity. The need of such support becomes evident if not urgent as the business competition gets tougher; the managers' work becomes more stressful and abundant with various symptoms of professional "burnout".

Discovering the extent of impact produced by external and internal *conditions* in managers' activity to their efficiency; studying specifics of this activity; determination of lead factors behind success of the managers' professional growth allow to develop scientifically founded psychological support of their professional activities.

REFERENCES

- Atwood, C. (2008), *Manager skills training*. ASTD Press, Alexandria.
- Bedney, G., Mester, D. (1997), *The Russian Theory of Activity: Current Application to Design and Learning*. Lawrence Erlbaum Associates, Mahwah.
- Bedney, G., Seglin, S., Mester, D. (2000), "Activity Theory: history, research and application." *Theoretical Issues in Ergonomics Science*, 1, 2, 168-206.
- Bedny, G., Karwowski, W. (2007), *A Systemic-Structural Theory of Activity: Applications to Human Performance and Work Design*. CRC Press, Boca Raton.
- Bedny, G., Harris, S. (2008), "Working sphere/engagement" and the concept of task in activity theory." *Interacting with Computers*, 20, 2, 251-255.
- Hosmer, L. (2008), *The ethics of management*. McGraw-Hill Irwin, Boston.
- Karpoukhina, A. (1990), *Psychological method of increasing efficiency of work activity*. Knowledge Publishers, Kiev (in Russian).
- Karpoukhina, A., One-Jang, J. (2003), "Systems Approach to Psychophysiological Evaluation and Regulation of the Human State during Performance." *Proceedings of the XVth Triennial Congress of the International Ergonomics Association and The 7th Joint Conference of Ergonomics Society of Korea*. Japan Ergonomics Society, 6, Korea, pp. 451-454.
- Karpoukhina, A., Kokun, O., Zeltser, M. (2008), "Monitoring of Human Psychophysiological Condition as a Method of Increasing of Activity's Efficiency." *Conference Proceedings AHFE International Conference*. USA Publishing, Las Vegas, USA.
- Kokun, O. (2004), *Optimization of person's mechanisms of adaptation: psychophysiological aspect of upholding activity*. Millenium, Kiev (in Ukrainian).

Kokun, O. (2006), *Psychophysiology*. Centre of educational literature, Kiyv (in Ukrainian).

Mescon, M., Albert, M., Khedouri, F. (1988), *Management*. Harper & Row, New York.

Zeer, E. (2007), *Psychology of trades*. Academic Project, Moscow (in Russian).

Written by an international group of authors with diverse backgrounds including ergonomics, psychology, architecture, computer science, engineering, and sociology, **Advances in Cognitive Ergonomics** provides the latest research in the emerging branch of ergonomics and human factors. With contributions from experts from five continents and countries ranging from the United States to Japan, the United Kingdom to India and points in between, including Israel, Korea and Sweden, the book explores contemporary topics in cognitive ergonomics, including:

- Biometric systems development
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- Cockpit display and decision tool design for pilots
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- Performance of inspection tasks in manufacturing operations
- Human-automation integration in future aviation systems
- Novel 3-D display technologies for enhancing information analysis
- Training methods for mental models
- Approaches to activity analysis
- New research-oriented frameworks and paradigms in training
- The use of virtual reality for skill development and assessment

The implications of all this work include design recommendations for complex systems and commercial products, new procedures for operator training and self-regulation as well as methods for accessibility to systems, and specification of ergonomic interventions at the user level. It is expected that this book will be of special value to practitioners involved in design process development, design and prototyping of systems, products and services, as well as training process design for a broad range of applications and markets throughout the world.



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