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Professional Analyst Training: Challenging Questions, Not Easy Answers

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ABSTRACT

Ponkin, I. V. Methodology of Scientific Research and Practical Analytics. A Textbook. 5th edition revised and expanded. In two volumes. Vol. 1: Practical Analytics (The Art of Analytical Thinking and Analytical Work). Consortium «Analytics. Law. Digital». Moscow, Buki Vedi publ., 2024, 720 p. (Series: «Research Methodology and Ontology»). ISBN 978-5-4465-4179-9.

The textbook of an advanced level is devoted to the thematic horizon of the theory and methodology of applied analytics. It explains the concept, essence, nature, ontology of applied analytics (as a kind of specific mental activity and as its product), its functional-specific and sectoral diversity, describes and elaborates on methods, technologies and tools of applied analytics, concepts and schemes put in the foundation of its organisation and implementation.

The textbook that has been successfully tested for different audiences and groups describes criteria for evaluating analytical processes and products.

The edition is intended for professional analysts (of various industries and directions), analytics professors, managers and employees of scientific organisations and departments, applied analytical products customers, applicants for academic degrees and their scientific consultants / supervisors, researchers and faculty of educational organisations, as well as for all those interested in this topic.

The author of the book review offers some reflections on the first volume of the fifth edition of the «Methodology of Scientific Research and Applied Analytics» by I. V. Ponkin and the illustrated appendix to it, raises challenging issues of professional analysts training.

Keywords: applied analytics, science, training of practical analysts, think tanks, advantage in analytical support.

To radically improve the quality of intellectual training (both scientific and applied analytical), to go to the operational space of high professional analytics, to overcome the huge gap between highly professional experience and total inexperience, between unknown theory and timid practices in applied analytics – these are the critically important tasks facing today the entire system of public administration, but are just as relevant for engineering training, training of lawyers, economists, managers. Alas, there is almost no teaching aids to teach intellectual work, the skill and art of analytical thinking and analytical work.

The striking and deservedly marked exception here is the textbook « Methodology of Scientific Research and Practical Analytics» by Igor V. Ponkin, LL.D, Professor (Russian Presidential Academy of National Economy and Public Administration (RANEPA), Kutafin Moscow State Law University). The work has already withstood several editions. The textbook can be safely called a tool that develops the intellect and abilities of management, intended for scientific researchers and applied analysts, heads of specialised departments.

The author of the review, to be honest, has already published his feedback [1] to the third (one-volume) edition of this textbook [5], and therefore could not miss the edition of the new first volume of the two-volume textbook «Methodology of Scientific Research and Practical Analytics» authored by I.V. Ponkin [2] (the second volume in the previously appeared 4th edition was

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co-authored with A. I. Lapteva [4]; within the fifth edition, according to the authors, the second volume is expected only in 2025) and an illustrated appendix to this two-volume edition – a kind of «zero» volume [3].

The textbook is based on the expert knowledge and reflections accumulated by many other researchers and analysts, systematised and fundamentally presented by I. V. Ponkin, but also on his own vast experience in conducting expert work, participating in scientific research and in expert support of public administration. These publications are written by a science and analytics professional for science and analytics professionals. Five Doctors of Law who defended their doctoral theses under his scientific supervision (consulting) are already quite a convincing milestone for recognition of the level of professionalism, as well as the volume of his publications – more than 900 works translated into 10 different languages.

Educational, methodical and instructive literature, which I. V. Ponkin seeks to create on the subject of the methodology of scientific research and applied analytics, is devoted to technologies, methods, tools, practices, «life hacks» of professional research, educational, analytical work, creating starting points for high-level discussions for high-class scientists, researchers and applied analysts and is filled with this kind of texts.

Such publications have already become (and the trend will only be increasingly fixed and expanded) a step towards the creation of highly professional literature on the basic doctrine and methodology, useful both for educational activities and for professional research work – both research and development, and applied analytical works.

And it must be said that Professor Ponkin's aspirations to create a comprehensive and universal, but most importantly, effective system of « wrapping one's head around it», as he likes to say, are indeed able to find and do really find a positive response not only among legal scholars and practitioners of legal analytics (which is evidenced by dozens of reviews of various editions of this extensive and ambitious work).

These aspirations are of interest to specialists in technical and economic areas in science and applied analytics, finding consistent interest and disciples in these areas, causing intellectual ferment and discussions at various levels.

The distinctive feature of all editions of the «Methodology…» of I. V. Ponkin (partly in co-authorship with A. I. Lapteva) is the focus on applied issues, although developed each time by introduction of the relevant theoretical basis, «sublimated substrates» of knowledge and instructional materials. There are absolutely no showdowns and disputes with anyone, and there is not the slightest hint of politicisation or ideologization of arguments and recommendations. There is a powerful multi-level «fragmentation» of the presented thematic areas into multi-level hierarchical rows of compact condensed blocks that set out and reveal «simple» technological issues.

Let us briefly consider the contents of the first volume.

The introduction defines the classical familiarisation with the topic, sets out the author's intention and concept, the goals of the textbook and its paradigmatic foundations, shows in which discussions the previous editions of the textbook were reflected.

The first chapter «Concept, Ontology and General Theory of Practical Analytics» contains 13 paragraphs and reveals the thematic areas: the concept, nature and ontology of applied analytics; species diversity of applied analytics; who is an analyst; a line of roles of a practitioner-analyst; what constitutes aerobatics in applied analytics; the proper scope of qualification of the chief analyst (head of the analytical department); the concept, foundations, framework and content of the general theory of applied analytics; correlation of factography and applied analytics; correlation of jurisprudence of law-making and applied analytics; a brief substrate summary of the methodology of applied analytics (§ 1.10 is the largest paragraph of the first chapter, so brevity is relative here); the concept and meaning of intuition in applied analytics; differences between the expert opinion of a practitioner-analyst and other types of writing or other presentation of considerations; the concept and meaning of visualisation of the process and results of applied analytics.

The second chapter is devoted to specific instrumental and functional segments of applied analytics and includes six paragraphs, revealing the following thematic areas: the concept and features of predictive applied analytics; prescriptive applied analytics; the concept and features of descriptive applied analytics; the concept and features of intellectualised applied analytics and pragmatic applied analytics; the concept and features of diagnostic (deviological) applied analytics, features of operating anomalies in applied analytics; the concept and features of «postmortem» applied analytics.

The third chapter is devoted to the training and qualification of practitioners-analysts, contains eight paragraphs, revealing the thematic areas: the importance and features of the training of practitioners-analysts; understanding of what is due in the purposeful formation of a professional practitioner-analyst; description of some of the most non-trivial and noteworthy training methods in applied analytics; features of training analysts in foreign special services; ways of forming the abilities and skills of critical thinking in practitioners-analysts; the concept and measure of the proper skill and art of the practitioner-analyst to ask questions; standards of good applied analytical craft, craftsmanship and art; presentation of a formalised list of relevant knowledge, skills, competencies and abilities of a practitioner-analyst.

The fourth chapter sets out the evaluation tools – criteria and parameters of applied analytics, consists of 13 paragraphs: distinctive (essential) and descriptive parameters of applied analytics; analytical accuracy; complexity in applied analytics; analytical fluency; analytical flexibility; analytical insight; brevity and simplicity in applied analytics; metacognitive distancing in applied analytics; evaluative and interpretative certainty in applied analytics; consistency of applied analytics; analytical maturity; analytical perseverance or grasp; analytical scepticisms.

The fifth chapter sets out specific technologies and techniques of applied analytical work, covering a wide variety of them in 22 paragraphs: general introduction to the topic; data search in applied analytics; analytical vision in the development of the material under study; analytical markup of the studied textual material; focusing in applied analytics; crystallisation of ideas and conclusions in applied analytics; creation of valuable ideas in applied analytics; applied analytical synthesis from small fragments; analytical enrichment of data and analytical enrichment of an applied analytical product; the key issue of the pre-final preparation of the applied analytical product about the missed essential points; the concept and techniques of applied analytical writing; the concept and meaning of the idea and ingenuity; non-linearity of the process of working on an applied analytical product; cyclicity in applied analytics; the concept, requirements and technologies for preparing an analytical report; ontology as a tool for applied analytics; the concept and features of analytical reading of a text; the operation of images in analytics; transition to the meta-level in analytics; nonlinear thinking and linear thinking in applied analytics; the first steps in the creation of a research product; the use of generative pretrained transformers of texts in natural language (*Chat GPT*) in applied analytics.

The sixth chapter sets out 32 general analytical methods and respectively includes 32 paragraphs, and among them paragraphs on intuitive analytics methods; analytical framing, folding, unfolding, contrast methods; methods of explicit-structured, implicit-structured, and descriptive-explicative theorising; methods of flow analytics; method of simplification of ontologised images of scientific or analytical constructs; method of scenario modelling; SWOT analysis method; analytical method of dissenting opinion in a group; analytical method of moving back from the final point; analytical method

of transfer; analytical method of complicating the task; dashboard method; analytical method of the «fish skeleton»; method of the tree of current reality; colour coding method; method of association mapping; tagging method; method of constructing a cause-and-effect matrix; the failure tree method; analytical listening method; methods of bibliometric analytics; analytical pyramid method; method of reference points; method of operating with competing hypotheses; Bayesian approach; method of analytical operation with core factors; methods of brainstorming and synectics; method of situational and logical analysis; method of morphological analysis.

The seventh chapter sets out in five paragraphs the theory and practice of applied analytics deviantology: a general introduction to the topic; defects in applied analytics and deviantology of applied analytics; the importance of methodology for operating defects in applied analytics; cognitive biases as a source of defects in applied analytical products; cognitive vulnerabilities of the practitioner-analyst.

The eighth chapter is devoted to collectively produced analytics, think tanks (analytical centres), and includes eight paragraphs: awareness in the subject-object domain (domain awareness) and superiority in such awareness; situational awareness and superiority in situational awareness; general operational picture in applied analytics; analytical coherence of the analytical department; analytics factories; situational and analytical centres.

The ninth chapter is devoted to the specialised subject-object areas (directions) of applied analytics, including legal analytics, engineering analytics, and business analytics.

Each paragraph in most cases is divided into subparagraphs, which, in turn, have a greater independent value. Altogether (that is in the volume), hundreds and hundreds of important and complex questions are explained.

The contents of the textbook are summarised in the conclusion.

When reviewing the work, it is impossible to ignore the aspect that this is one of the first publications in the country illustrated with the help of generative artificial intelligence technologies.

True, some of the images are human made, but there are illustrations in the work generated by a machine under the prompt control of I. V. Ponkin. The author operates with complex visual images with powerful cognitive-stimulating content, proving through his own example, among other things, the canonical position about the value of visualisation in applied analytics.

This is an especially crucial point, especially since we live in the conditions of widespread memo-clip thinking, and this should be considered when developing textbooks and programs.

Ice balls frozen in an icy transparent cube (P. 37) – as a figurative representation of a composite analytical product; an assembled wooden puzzle of a strict cube consisting of complex spatial details that figuratively reflect the importance of the organic, integrative integrity of the analytical report (P. 429), a series of illustrations using the effect of complex spatial combinations of steel balls and steel cables (pp. 35, 158, 600), complex spatial combinations of cubes (pp. 34, 72, 622, 623, 630, 655, 668); «a candle that does not give a flame, but emits a turbulent stream of water» – as «a figurative reflection of inadequacy and fantasy, obvious anomalousness of the recorded data or the obtained defective analytical result» (P. 146); «figurative representation of burning water ice (in the absence of chemical tricks)» (P. 222) and much more will certainly help the reader to visualise the main points of the textbook.

Also, with such illustrative support of the two-volume (plus the zero volume) edition, I. V. Ponkin achieves another important goal – to expand the circle of those interested in the topic far beyond the narrow circle of high-class professional analysts.

Of the obvious shortcomings of the fifth edition of the first volume (on practical analytics), one could point out the unacceptably small volume of immensely popular thematic sections – on engineering analytics (two pages), business analytics (two pages).

Another drawback of the fifth edition of the first volume (as well as of the second volume in the previous, fourth, edition) is the absence of control tasks, task books after the chapters. Although, perhaps, given the scale of the work, such a task book, a collection of tasks should be made a separate volume.

As for the illustrated introduction to practical analytics, here we would rather recommend issuing a similar illustrated introduction to research work, which would be logical, based on the idea of the two-volume work.

However, talking about «flawlessness» is not the best way to evaluate instructional work in science and applied analytics, and both publications are objectively beyond praise.

In this case, we can even talk about the emergence of a new class of highly intellectual analytical literature in the country. It is unlikely that Igor Ponkin and his co-author Alena Lapteva can be considered the founders or the central element of such literature (there are more famous and prolific authors), but the fact that the «Methodology of Scientific Research and Practical Analytics» rightfully occupies the «best shelf» in this volume is indisputable. This is a more than worthy contribution.

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