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Conference Paper

Professional Thinking and Types of Professionals

Sergei Gilmanov

Yugra State University, Khanty-Mansiysk, Russia

Abstract

We believe that main parameters of professional thinking are: the conceptual development of professional reality (as a separate socio-cultural area of activities and relationships embodied in the objectives, actions, functions of profession) and the adequacy of planning and regulation of actions in professional situations. The parameters of the professional thinking specify types of professionals. We investigated the parameters of professional thinking and the types of professionals through analysis of speech (dialogues, descriptions of professional activities, etc.) of people of different professions (n = 224) based on the ideas of A. R. Luria: (1) 'The real use of the word <...> is always the process of selecting the desired meaning from the pop-up alternatives, with the allocation of some actual system ties and inhibition of other systems of relations, not relevant to this problem'; (2) the meaning of the word depends on the specific task facing the subject and situation in which the word is used. The units of meaning were: understanding of structural and dynamic sides of the professional reality; way of substantiation actions in professional situations. The data allowed to determine three types of professionals. (1) 'Expert': there is a complete and profound reflection of professional reality in the speech combined with the exact description of planned actions. (2) 'Inept maven': understands the professional activity and its components, but may not accurately describe the actions. (3) 'Empirical practician': can describe the correct actions, but descriptions are based on experience and stereotypes.

Keywords: professional speech, professional thinking, professional reality, types of professionals

Corresponding Author:
Sergei Gilmanov
gilmanovsa1109@gmail.com

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1. Introduction

Today the questions of research of professional thinking and types of professionals are rather actual for occupational psychology. This is due to the increased requirements for the competence of employees in connection with the rapidly changing working conditions. The existing research mainly considers the components of professional

thinking in their connection with the goals and content of professional activity. The connection of professional thinking of a specialist with his speech by researchers is practically unaffected.

We believe that in studies of professional thinking and types of professionals it is possible to use the psycholinguistic ideas of A. R. Luria, in whose works the problems of correlation between language and thinking occupied an important place. He noted that understanding the psychological structure and brain mechanisms of speech communication 'is the key to the analysis of the organization of the most complex forms of conscious activity»' [1, p. 393].

In our opinion, at least two ideas of A. R. Luria related to the analysis of language means used by specialists in professional activity as a complex form of conscious activity can be constructive in the study of problems of professional thinking and types of professionals.

This is, firstly, the idea of A. R. Luria that inner speech, which occurs from external speech, when solving a certain task begins to control the thinking process and to regulate external speech. He wrote:

the origin of the internal speech from the external, apparently, and allows it to carry out the reverse process, to generate a grammatical scheme of the expanded statement, leads to the appearance of those logical and grammatical matrices that allow you to further carry out the external expanded speech. Active fragments of internal speech arise at every difficulty and disappear when the process of thinking is automated and deprived of an active creative character, and this indicates the importance that internal speech has for the processes of speech thinking. [2, p. 279]

Secondly, it is the idea that when choosing a word, a person chooses their desired meaning depending on the task and situation, and the psychological structure of speech activity reflects any form of activity: 'Real use of the word <...> is always the process of selecting the desired meaning from the pop-up alternatives, with the allocation of some needed systems of ties and inhibition of others, not relevant to this problem systems of relations' [2, p. 251]. Luria emphasized that speech is a complex form of speech activity and speech activity itself 'has fundamentally the same psychological structure as every other form of mental activity' [1, p. 253].

Based on these ideas, we believe that the analysis of monologues and dialogues, written essays of professionals allow, firstly, to determine the main characteristics of

professional thinking, and secondly, to identify some typological features of professionals.

Let us explain our point of view. The speech of a professional is determined by his professional thinking, and professional thinking reflects the professional reality as a socio-cultural separate area of activity and relations embodied in the goals, methods of action, functions of the profession. Therefore, professional speech must contain an accurate description of professional reality. Professional reality as an objective phenomenon is set by the purpose of the profession and includes: existing social institutions; standard methods, means, methods of monitoring and evaluating the results of activities; relationships in the professional community. The image of professional reality always has some 'dimensionality' in spatial and temporal relations, there always exist moral and aesthetic orientations and concepts of professional duty, conditioned by culture. Although for each profession the content of professional reality is different, its main structural components are preserved in all professions. The subjective image of professional reality is formed as a result of the person's performance of professional actions and inclusions in communications with colleagues. Therefore, the content of professional speech includes: the general meanings of the words of natural language; Terms reflecting the structural components and the system of connections of professional reality; grammatical structures of speech reflecting the connection of the components of reality with a particular situation and with the actions in it. According to the characteristics of speech, two main parameters of professional thinking can be identified: the level of adequacy of ideas about actions in certain professional situations (the nature of the justification of decisions) and the level of mastery of professional reality (completeness and accuracy of images about professional reality). The first parameter is expressed in the ways of inclusion in grammatical structures when describing the nature and order of actions of both their own and other people (you can identify how the grammatical scheme of the expanded statement is generated and how the process of 'popping up logical-grammatical matrices'). The second parameter is manifested in the accuracy of the choice of words and terms that reflect the necessary components of the situation of professional reality and their relationship (you can determine how the process of selecting the desired value from the pop-up alternatives). Comparison of these parameters in the speech of representatives of different professions can help to identify some common characteristics and create some common typology of professionals. It is possible to assume that the more in the speech of professionals the completeness of representation of professional reality is shown, the more precisely words and terms are chosen, and, therefore, the professional will be

more competent. Thus, observing the lexical composition of speech and the process of birth of the external speech from the internal speech, we can, in our opinion, determine the important characteristics of professional thinking and with a certain reliability to identify some typological features of professionals.

2. Methodology

For a number of years, we have been conducting a study of oral and written texts in which experts have described their actions in the course of their professional activities. As research methods used: a narrative analysis of the essay 'What tasks do I have to solve in my professional activities'; research interview; a qualitative analysis of the written solution of the proposed professional situation; expert opinion survey of the respondents' colleagues about their competence. The study was conducted for 6 years (2010–2015). Respondents ($n = 224$) were entrepreneurs ($n = 38$), civil servants ($n = 59$), high and higher school teachers ($n = 118$). For each type of profession, the analysis of the results set the leading parameters of professional reality. For example, for teachers, the boundaries of professional reality were established on the basis of such a goal as to support the educational activities of students and care for their personal growth; introduced set pedagogical theory and practice methods and means of training and education; also included fixed in practice methods of monitoring and evaluating the results of the activities of the teacher. For entrepreneurs as goals was introduced: the achievement of profit-making benefits; the methods, means, methods for monitoring and evaluating the results of activities included legal and moral measurements. Units of account were terms, metaphorical expressions ('individual terms'), grammatical structures, the nature of utterances, the characteristics of the flow of speech (pauses, reformulation, reasoning aloud, etc.). Units of meaning were representations of the structural and dynamic aspects of professional reality, ways to justify actions in certain situations. Units of counting were terms, metaphorical expressions ('individual terms'), grammatical structures, the nature of statements, characteristics of the speech flow (pauses, reformulations, reasoning aloud, etc.). The units of analysis were ideas about the structural and dynamic aspects of professional reality, ways to justify actions in certain situations.

The final synthesis of data for respondents of all professions was carried out on the following five parameters:

Competency: expert peer review of respondent's competence level (high, medium, low);

TABLE 1: Correlations between the parameters, summarizing data for respondents of all professions (Pearson, $p < 0.01$).

	Prof. Reality	Decision-making	Correctness	Accuracy
Competency	0.54	0.37	0.54	0.38
Prof. Reality		0.34	0.75	0.60
Decision-making			0.23	0.21
Correctness				0.60

Professional reality: the completeness of the reflection of professional reality (the researcher defined on the basis of the analysis of respondents' narratives: complete, fragmented, absent);

Decision-making: character of decision-making (the researcher determined on the basis of the analysis of the solution of professional situations offered to respondents: independent, based on personal experience, stereotyped);

Correctness: correctness of the decision (the researcher determined on the basis of the analysis of the decision of professional situations offered to respondents: true, doubtful, incorrect);

Accuracy: accuracy and unfolding of the presentation (the researcher determined on the basis of the analysis of respondents' narratives: high, medium, low).

3. Results

3.1. Characteristics of professional thinking

It can be noted that the higher the degree of involvement in the goal of professional activity, the more clearly reflected in the speech the need to influence other people (the more pronounced the communicative component), the more these links are stronger. It can be said that the more fully and objectively reflects the professional reality in the professional's thinking, the more it determines the nature of decision-making as some integrity, and the more it is reflected in speech. In speech formulations, it is possible to identify those units of thinking that are conditioned by the properties of professional reality. Speech formulations, the more accurately, the more fully in the structural-content relation in thought is reflected professional reality as a holistic phenomenon.

The weakest links are expressed between the completeness of the reflection of the professional reality with the nature of the solution of problems, independence in

decision-making and with the accuracy and detail of the presentation. The qualitative analysis of materials allowed to reveal on the basis of induction that most brightly it is expressed at those professionals who have either little personal experience of activity, or poorly developed speech, or there is no desire to offer resolute actions. At the same time, there is a certain gap between the level of development of speech itself and the degree of structuring and integrity of the image of professional reality in professional thinking. Speech can be smooth and coherent, but rather meaningless, if it does not reflect the systemic properties of professional reality. By itself, the low level of literacy of speech design is not yet an indicator of the low level of development of professional thinking. It may be true that with a good development of the professional reality and undeveloped speech, the person competent enough and uses his scarce language means. It is also important to understand your own professional position in solving a certain production problem. If a person does not have the appropriate motivation and will to act independently according to the goals of the activity, even with a good understanding and ability to describe the situation and its solution, it still does not ensure the effectiveness of the actions themselves. In 11 cases, we observed a situation where, with high assessments of the professional reality, detailed and accuracy of speech, colleagues did not appreciate the respondent's competence because they knew that in the course of real activity he was evading responsibility, feared taking decisive action, feared conviction on the part of the authorities.

During the interview, it was possible to observe how the selection of words occurs, the search for the most accurate formulations, that is, to review the process of birth of external speech from the internal. Definitely, inner speech, in the presence of a way of thinking reality and ideas about the ways of action in solving certain problems controls the process of thinking and regulates external speech. For example, for those who show independence in decision-making, we found such a phenomenon as the presence of their own terms denoting a certain component of professional reality or characteristics of action. For example, the following terms were revealed: 'juicy and dry' (teacher, about the educational material); 'multi-tiered' (entrepreneur about the system of actions to expand the company); 'transit' (civil servant about one of the ways of coordinating the document in government structures), etc.

3.2. Typology of professionals

In general, the analysis showed that all possible combinations of the level of mastery of professional reality and the level of adequacy of actions are encountered in the

TABLE 2: Relationship between profession and type of professionals (as a percentage of the number of respondents in each profession).

	Expert	Inept Maven	Empirical Practician
High and higher school teachers	44.1	25.4	30.5
Entrepreneurs	34.2	18.4	47.4
Civil servants	40.7	35.6	23.7

subjects. However, in terms of the completeness of reflection in the speech of professional reality and autonomy, the description of what decisions should be taken in a given situation, regardless of profession, you can accurately identify the three leading sets of professionals.

The first of its (89 people) is characterized by a full and deep reflection in the speech of professional reality in its integrity, which is combined with an accurate description of independently planned actions (for fairness it should be noted that a man from them peer colleagues was assessed as experts of an average level of competence). The speech of these different respondents was quite different – laconic, verbose, fast, with pauses. However, all their statements on important moments were preceded by a pause, when they mentally 'examined' the situation. We named the type of representatives of this group 'Expert'.

Representatives of the other group, clearly different from the others (38 people), were characterized by quite complete and profound notions of professional reality, but could not accurately describe and justify the actions in any given situation. They often deviated from the targets in the course of reasoning, analyzed the side effects, and discussed common themes. We called this type 'Inept maven'.

Finally, a fairly large group (68 people) was a group whose representatives accurately described the correct actions, but referred to examples from past experience, stereotypes, authoritative opinions. They practically lacked descriptions of the structural and dynamic properties of professional reality. Among the representatives of this group were the most people, whose speech was not preceded by reflections. When they were asked to explain how they came to the expressed judgments, the most common answer was 'I just know it'. We named this type of professional 'Empirical practician'.

It is interesting to note that the percentage of 'Experts' among the teachers, and empirical 'Entrepreneurs'. Less than all of 'Empirical practicians' – civil servants (see table. 2). Apparently, these relations are explained by the peculiarities of professional reality and the nature of professional activity.

The study also identified a small group of respondents (n = 9, which is 4.0% of the number of respondents), whose lack of understanding of professional is combined with inaccurate judgments and incorrect decisions. However, one can consider them simply incompetent and not be classified as types of professionals.

4. Conclusions

Ultimately, the result of the generation of grammatical schemes of the expanded statement, expressed in dialogue, essay, description of the way of solving the professional problem, reflects the level of development of professional thinking. Studying how the transition from internal speech to external speech takes place, it is possible to reveal how much the image of professional reality is formed in the professional's thinking. Distractions into 'side' lines, inability to accurately justify a decision or describe the circumstances of professional situations, show that the image of professional reality is fragmentary and is not the basis of the logical-grammatical matrix that generates the grammatical scheme of the utterance. In thinking there are no 'matrices' that regulate the process of the transition from internal speech to the external.

With a fairly high probability, it can be assumed that professional reality becomes the basis for the formation of such a psychic phenomenon as the functional system, the existence of which was spoken by L.S. Vygotsky, P.K. Anokhin, A.R. Luria. Luria emphasized that in the formation of higher mental functions, such systems include many links and have a complex composition, including a number of afferent (tuning) and efferent (realizing) links. They are mediated by their composition, 'they include characters and tools that were formed in the course of historical development' [3, p. 116]. We believe that to some extent we can say that in professional thinking a professional develops a certain 'unit of thinking' in which the properties of professional reality, the structural and dynamic links of professional 'space' and activity are conceptualized. This unit of thinking underlies the planning and implementation of professional actions and is reflected in the statements expressing this. With competent professional speech, the conceptual 'armament' of mental operations and actions allows one to build, 'play' in the mind and describe the systems of actions, taking into account the scientifically-logically grounded laws acting in professional activity.

One of the important conclusions here, in our opinion, follows for professional education: it is necessary to take into account the special role of the need to design and analyze the structure of professional reality in speech statements. Therefore, in the educational process and during the passage of practices, one should constantly update

the thinking of students about the image of professional reality and encourage them to generate statements in which judgments and justifications of judgments are based on the image of professional reality. In addition, when resolving situations in which professional actions are reproduced, it is desirable to observe a condition such as placing the decisive task in the 'inside' the situation, presenting himself as the subject of actions, and not just a person who develops and proposes a solution. External speech should be born from the inner speech of the acting, and not an outsider for the activity of the subject.

Thus, professional speech can serve as a source of information about important characteristics of professional thinking and helps to identify typological features of professionals with certain reliability.

Acknowledgements

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