Intelligence architectonics methodology: international language training of students

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Abstract. The intelligence architectonics methodology refers to personification principles model focused on creating the conditions for widening boundaries of language potential of a student in terms of intercultural communication based on emotional balance and comfort as well as intellectual capacity and ability development via varied activities in all stages of the human speech communication process within the “chain” of educational programs – at school, university, and at in-service institutions for specialists based on recurrent education. Given the intricacy of the dynamic communication process and its fundamental importance in human intercultural communication, this survey is intended to provide a comprehensive model of speech dynamics priority for addressing the following issues – how to consider the cultural paradigm that reads “from observation to generalization and replication through cooperation”. Special emphasis is on the social significance of language and cultural mission of educational organizations in the aspect of modeling the corpus of life-based integrative communicative situations in the security education and information space. In this regard the main principles of language education via teaching intercultural communication are in need of thorough investigation of the analysis-synthesis activities within the dynamic intellect and culture development.

1 Introduction

In this opus in a broad sense, the methodology under consideration based on the personification principles that focuses on the educational challenges of the culture-creation paradigm of education and reads as from observation to generalization and replication through cooperation within the multicultural and poly-language environment of security [1], “from educators to students, and further on to educators as students”, and “participants of the human speech communication process as the Self as cultural, intelligent and critical thinking” [2].

The empirical array of the past two decades of Russian education and information flows show that instead of pragma philosophy there is coming back, by and by, to be installed the ideology of dialogue/polylogue anthropocentrism approach as a prior value dominant for realizing the main principle that reads “a human being is a goal, not a device”. There is under deep search and investigation the effects of dynamic system models of training/teaching/learning in the epoch of permanent reforms which affect the era of...
increment flows on the way to both the development of authentic Knowledge Content, Technology, and Pedagogy, Lingua Didactics within the regional education spaces, and to the Self as Cultural.

Unfortunately, due to a variety of reasons, the majority of current research activities in this area favor only incremental modifications and improvements to the existing learner-centered priority approach. In this regard one has to admit that current ideology and methodology of education reflect some contradictions and how to overcome them in the development of educational process as a whole. They cover the concept of what the actual issues of current intercultural communication process in the educational environment, what the novel ideas and models appear, why modeling educational spaces is in need of, so on, and so off.

As is the case, there are some gaps in the philosophy of Lingua Didactics to be thoroughly investigated that concern the question of contradiction in between paradigm change and education renovation principles as communicative-cognitive approach; to some extent, the contradiction between the declaration of activity-based approach, and communicative one; and the problem area of manifestation of pragma principles of language education while ignoring the difference of training and education, competencies and skills (Passov, 2013).

In the meantime, the key issues are seen in the comprehension and generalization of the obtained information materials of the approbation of a comprehensive model of personalized teaching of a student of varied educational programs—from educator to student and vice versa, from student to teacher, i.e. recurrent training/continuing education for life.

The first problem issue covers the intention to dialogue of cultures and substantial justification in theory and practice within the framework of modern standards of Russian education, the development of national, linguistic identity of the individual, based on the principles of civic responsibility and dialogue of cultures, is recognized as one of the strategic directions of the formation of architectonics and hierarchy of the humanitarian environment. It is these value components and guidelines of domestic education that are the basis for the spiritual and moral formation of a citizen of Russia.

The second problem area is the significance of moral development and pragma goals. In the value context of the authors’ micro-research, multicultural competencies—intercultural and cross-cultural ones—are recognized as important in the formation of a multicultural picture of the world of the personality of students. In the school space, as never before, such personality qualities as the ability to live in harmony with oneself and the world around, the ability to adapt in any sphere of life are valued. In turn, authentic Communication, Creativity and Co-creation, Sensitive Touch through Verbalization and Non-Verbal context/subtext to the soul, to the personality of any ethnicity, Understanding and Mutual Understanding become the basis of modern life.

The third problem issue refers to importance of novel results and preservation of traditional educational devices. Moreover, the key task of a modern school in this regard is to create an educational environment where actual issues of friendly relationship of different cultures and different countries would be resolved. In other words, the systematic cultivation of the principles of humane pedagogy as the value horizons of the cultural paradigm of education for the authors of this article becomes a priority, a methodologically conceptual start-up for solving practical aspects of the formation of a multicultural picture of students [3-4].

The last but not the least problem zone reflects the formalization of a student as a subject and no personal motivation. We emphasize that for the development of the desired environment of personal existence in the aspect of the formation of a multicultural picture of the world, a specially organized process of interaction with different representatives of ethnic groups is necessary. At the same time, the existence “on the edge, at the intersection of cultures”, the focus on cross-cultural element is socially significant. The basis of such education is a “virtual case” in which its participants store both valuable experience of culture...
as a whole and tools for how to interact with it. In this “case”, a carrier of national identity/self-
n identity is born, and at the same time a person who is able to understand and respect different cultures.

Thus, the priority goal of this research is to investigate for the clarification of the possibilities and the conditions for widening boundaries of the human speech communication potential of a student in terms of intercultural communication as a process. And the main tasks for solving the problem of improving the quality of intercultural communication in terms of international language training at Region Destination general educational institutions are presented in need of substantiating the system of conditions for tutoring support of the activities of regional education associations and centers if it is based on emotional balance and comfort as well as intellectual capacity and ability development via varied activities in all stages of the human speech communication process within the chain of educational programs – at school, university, and at in-service institutions for specialists.

2 Methodology

Speech dynamics “chain” starts with the formation of a linguistic message in a speaker’s brain and ends with the arrival of the message in a listener’s brain. Given the intricacy of the dynamic speech process and its fundamental importance in human communication, this statement is intended to be included into a comprehensive material on educational programs and to address the following issues to students. The compelling reasons for carrying out this information are to answer in two related aspects. First, scientific inquiry into the human speech code has been relentlessly pursued for several decades. As an essential carrier of human intelligence and knowledge, speech is the most natural form of human communication. Embedded in the speech code are linguistic (as well as para-linguistic) messages, which are conveyed through four levels of the speech chain. Underlying the robust encoding and transmission of the linguistic messages are the speech dynamics at all the four levels. Second, advancement of human language technology, especially, that in automatic recognition of natural-style human speech is also expected to benefit from comprehensive computational modeling of speech dynamics. The limitations of current speech recognition technology are serious and are well known. A commonly acknowledged and frequently discussed weakness of the statistical model underlying current speech recognition technology is the lack of adequate dynamic modeling schemes to provide correlation structure across the temporal speech observation sequence (Li Deng, 2006.)

2. Cubic model of the structure of intelligence.

The largest number of characteristics underlying individual differences in the intellectual sphere was named by J. Guilford. According to Guilford’s theoretical concepts, the performance of any intellectual task depends on three components – operations, content and results. Operations represent the skills that a person must show when solving an intellectual problem. He may be required to understand the information that is presented to him, memorize it, search for the right answer (convergent products), find not one, but many answers that equally correspond to the...
The content is determined by the form of information submission. Information can be presented in visual and auditory form, it can contain symbolic material, semantic (i.e. presented in verbal form) and behavioral (i.e. detected when communicating with other people, when it is necessary to understand from the behavior of other people how to react correctly to the actions of others). The results—what a person who solves an intellectual problem eventually comes to, can be presented in the form of single answers, in the form of classes or groups of answers. Solving a problem, a person can also find a relationship between different objects or understand their structure (the system underlying them). He can also transform the final result of his intellectual activity and express it in a completely different form than the one in which the source material was given. Finally, he can go beyond the information given to him in the test material and find the meaning or hidden meaning underlying this information, which will lead him to the correct answer. The combination of these three components of intellectual activity—operations, content and results—forms 150 characteristics of intelligence (5 types of operations multiplied by 5 forms of content and multiplied by 6 types of results, i.e. 5x5x6 = 150). For clarity, Guilford presented his model of the structure of intelligence in the form of a cube, which gave the name of the model itself. Each face in this cube is one of three components, and the whole cube consists of 150 small cubes corresponding to different intellectual characteristics. For each cube (each intellectual characteristic), according to Guilford, tests can be created that will allow this characteristic to be diagnosed. For example, solving verbal analogies requires understanding verbal (semantic) material and establishing logical connections (relationships) between objects, and requires a systematic analysis of the material presented in visual form and its evaluation. Having conducted factor-analytical research for almost 40 years, Guilford created tests to diagnose two-thirds of the intellectual characteristics theoretically determined by him and showed that at least 105 independent factors can be identified (Guilford J.P., 1982).

3. The humanization concept of the poly-language educational environment that indicates the main features of the integration approach to varied languages of the information and educational spaces—verbal and non-verbal symbols/signs/languages—to help in providing the system of conditions for the Self as cultural and intellectual of all the participants of the human speech intercultural communication process (Bulankina, N.E., 2022).

Of special interest are the following methodology lines that concern a common division of the direct information transfer stages of the speech process, which is as follows (Table 1):

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<tr>
<th>LEVEL</th>
<th>POST EFFECTS</th>
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<td><strong>Linguistic Level</strong></td>
<td>The highest level of speech communication, where the speaker forms the linguistic concept or message to be conveyed to the listener; i.e. the speaker decides to say something linguistically meaningful.</td>
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<td><strong>Effect One</strong></td>
<td>This process takes place in the language center(s) of speaker’s brain. The basic form of the linguistic message is words, which are organized into sentences according to syntactic constraints, then composed of syllables constructed from phonemes or segments, further composed of phonological features. So, language represented in a discrete or symbolic form.</td>
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<tr>
<td><strong>Physiological Level</strong></td>
<td>Motor program and articulatory muscle movement takes the instructions, specified by the segments and features formed at the linguistic level that concerns how the transformation is accomplished from the discrete linguistic representation to the continuous articulators’ movement or dynamics. This is sometimes referred to as the problem of the interface between phonology and phonetics.</td>
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the speech sounds to be produced by the articulatory muscle (i.e., articulators) movement over time.

**Acoustic Level**

Acoustic air stream emerges from the lungs, and passes through the vocal cords where a phonation type is developed.

**Auditory and Perceptual Level**

The speech sound generated above impinges upon the eardrums of a listener. Firstly converted to mechanical motion via the ossicles of the middle ear, then to fluid pressure waves in the medium bathing the basilar membrane of the inner ear invoking traveling waves.

The integration characteristics of intercultural communication at the national and international levels initiated many innovations in the system of national education in the third millennium, based on which topical aspects of multilingualism and multiculturalism occupy priority positions due to their cognitive, developmental and educational functions. Along with positive trends in recent decades, there have been systemic negative phenomena accompanying foreign language education at various levels and requiring close attention of both the university pedagogical community and teachers of general educational organizations. The priority functions of the linguistic component of the human mentality are necessarily reflected in state documents on education, and in the organizational and content of scientific and methodological support of educational programs of language education in general, making up the methodology and axiology of modern program research of the Russian foreign language.

In philosophical, scientific, pedagogical and methodological discourse, the culture-created function as an important value aspect of education is widely used. The appeal to advanced pedagogical practices within the framework of the design activities allows us to state some of the most striking positive phenomena occurring in the space of intercultural communication and motivating to the mastery of languages, the development of international language culture as a whole.

### Table 2. The two-fold program strategy

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<th>FRAME ONE</th>
<th>EFFECTS</th>
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<td>1. Preserving the traditions of schools with in-depth study of foreign languages to maintain interest in multilingual/bilingual education, and the emergence of linguistic classes / schools/centers in the all-Russian and regional space, and the creation of schools with a national cultural component, including expanding the range of languages studied,</td>
<td>1. The design activities of scientific and methodological support for foreign language educators – teachers, students of linguistic and non-linguistic universities is possibly provided that the strategic line of teaching creativity is promoted by creativity from the Heads to the educators – practitioners – to the Heads.</td>
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<tr>
<td>2. Testing integrated courses based on the variability of curricula and teaching aids and materials, and early learning/teaching of foreign languages; cultural exchange of teachers and school teams of educators; the enrichment of educational and methodological literature on foreign languages for general education</td>
<td>2. Literature review on the target activity; A series of webinars/seminars for teachers to be conducted; Strategy and tactic sessions on the target activity with the authors of the textbooks and manuals to be conducted; Teaching materials to be collected; online classes with students to be organized; task analysis to be provided.</td>
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organizations and universities with a culture-oriented and culture-centered component in the perspective of the principle of continuity.

1. The results of the analysis of FINAL TEST WORKS 2022, as well as the results of previous years according to the criterion of "Achievement of planned results":
   The lexis-grammatical and phonetic skills of students, i.e. language and compensatory competencies, are insufficiently formed; receptive skills are somewhat better formed, allowing students to perform tasks on "Listening with understanding of the requested information" and on "Reading with understanding of the main content of the read text". A productive task on "Speaking: a monologue statement based on a plan and visual information" is performed worse than receptive tasks by most students. The task of describing the photo is a significant difficulty for students with poor language training.

2. The corpus of meta-subject skills designed in the Federal State Educational Standards are of great importance within the framework of "Foreign Languages". This is semantic reading (search, processing and interpretation of information in the process of reading). And the ability to evaluate and to interpret the information from various sources, logically reflect the viewpoint of a student, the choice of effective strategies in various communication situations, the ability to draw conclusions, etc. This is actually the intellectual corpus of personality/the intellectual component of communication and generalization (after A.A.Leontyev).

3. The reason lies in studying the grammatical structure of a language, more attention is paid to the formal aspect, namely, to the formation of grammatical forms, and not to the substantive, functional, i.e. their use depending on the meaning in different contexts. Basically, tasks are offered on the example of unified/separate sentences, and students do not learn to pay attention to the context. Often, in foreign language lessons, the teacher and students often communicate not in the foreign language being studied, but in their native language. Speaking tasks are replaced by memorizing "thematic texts/topics". Poor vocabulary and grammar skills in foreign languages lead to inability of a student to participate in the speech intercultural communication, and to express the Self as cultural and intelligent.

Accordingly, the following methodological concept follows - language practices correctly built on the basis of modern approaches could make up a significant contribution to the formation and development of functional literacy as a component of a unified system for assessing the quality of students' results in mastering academic subjects within the framework of the introduction of updated federal standards.

3 Results and their discussion

Two-fold strategy program reflects the causes of deficits in the educational preparation of students identified during the analysis - insufficient attention to the analysis of educational strategies for working with texts of various kinds; ignoring the semantic, functional side when studying grammatical material and lexical units – are voiced at the meetings of the Regional Methodical Associations, participants are recommended to use the method of synthetic reading and its individual techniques. Below we offer for understanding the following concept in three boxes of texts that can be used as a learning strategy during the next sessions of the methodological association.

Synthetic reading is reading in which the reader's attention is completely or mainly focused on the content, and this content is perceived holistically. Synthetic reading teaches the understanding of simple texts, without the use of analysis and translation. In synthetic reading, one has to consciously pay attention to complex words, internationalisms, since to a large extent they help the development of reading without a dictionary without hindering the
holistic perception and understanding of the text. Texts for synthetic reading are based on vocabulary familiar to students, they include up to 5–7% of unfamiliar words that can be independently understood by students without reference to the dictionary--relying on the disclosure of meaning by word formation, logical context and language guess.

Taking into account the peculiarities of the "clip" thinking of modern students, we immediately make the installation that the educational material should be interesting, small in volume and with a constant change of activities. Another feature of "clip" thinking is the preference for visual information processing strategies. This feature involves the use of a wide illustrative series, tables, diagrams, videos, etc. For example, do not neglect such an exercise as composing a story based on pictures. You can also include a simple search task in the number of tasks: match a word and an image.

Tasks to search for meaningful words develop visual attention, contribute to the expansion of vocabulary. For example, for any text related to the description of attractions, you can offer the following number of lexical units: sight, tour, uemsum, monument, dgebir, square, terow, etc., from them students need to choose words that make sense.

It is important to teach how to highlight the reference words in the text. Auxiliary words are written out, based on them, the text is retold. To develop visual attention, you can close the text when retelling, and if it is difficult to open the text for a few seconds, so that students pay attention to the highlighted word and reproduce the text. Such work is offered both for home performance and as a type of work in the classroom to eliminate meaningless memorization of the text.

For the development of visual-motor coordination and the skill of switching off from one to another information, the introduction of two or more texts combined into one is proposed. It can be alternating through a sentence or through a paragraph, but highlighted in color.

This type of work does not cause any particular difficulties for students, but the ability to separate information and retell it separately from each other already requires additional work. It is recommended to diversify the task of drawing up a text plan by drawing up various types of a plan (quotation, question, scheme, keyword, etc.), as well as various tables and mental maps. The selection of texts is recommended based on the following criteria:

- the entertaining plot;
- the relevance of the content;
- the topical proximity of the subject matter to the life experience and interests of students;
- the possibility of a clash of points of view and judgments that give rise to discussion;
- the possibility of various situational, lexical and grammatical transformations;
- the educational effect in axiology of training – intellect, culture, dominant values as security of a student and a teacher.

The basis of authentic intercultural communication as a process is the correlation of all types of speech activity, and this determines the search for means of combining learning how to read, speak, write and listen. The actual issues of interconnected learning is due to the fact that an "unusual" text has often been used as a teaching material in the learning process, because the text has changed its structure, form and transmission channel. That is, not only a solid and incomplete printed text, but an also media text, video text (both proposed by the teacher and created by the students themselves) began to be used as didactic material.

When working with media and video texts all types of speech activity are activated, since simultaneous (synthetic) work on the formation of listening, speaking, reading, and writing skills is assumed.

Along with audio-visual means specially developed for educational purposes, teachers also use authentic ones—documentaries, feature and animated films.

Educational films created for specific purposes correspond to the Knowledge Content of the level of education, and documentaries, feature films, animated films, Internet content are those educational materials analyzed by the teacher and adapted to the goals and content of educational activities.
Another type of educational material is videos created by students with the support and assignment of the teacher. The use of video materials helps to create a favorable and secure atmosphere in the classroom, contributing to the active, creative and productive activity of students, stimulates the human speech intercultural communication as an intellectual activity. Along with traditional devices, teachers use new methods and techniques of working with modern texts, allowing them to teach in a new way to present information in the process of communication. One of these methods is the "mobile video" method. "Mobile video" is a method that allows using modern technologies in the learning process and forming stable speaking, listening, reading and writing skills, as well as making the learning process interactive, exciting and fascinating.

So, at levels A1 (elementary) and A2 (basic), you can use a video monologue (description, report, address, greetings) and a video dialogue (request, advice, conflict, discussion, interviewing). A video monologue involves a student's statement on a certain topic, for example, it can be a story about oneself, about the phenomenon of reality, about surrounding objects, professions, about a book he has read, etc. A monologue can consist of a certain number of sentences (depending on the level of training), can be built on the basis of the model of utterance proposed by the teacher, based on reference words and phrases, etc. The author can be both in the frame and behind the frame. A video dialog is an imitation of a conversation in a certain situation (dialogues at school, in a cafe, in a canteen, in a store, on a bus, on the street, etc.). The number of replicas and the level of complexity depend on the requirements for the results of possession of this type of speech activity in accordance with the Federal State Educational Standard. Already at the A1 level, the student has enough vocabulary to record a video monologue about himself, about his family, about his room, about his city, etc. or a video dialogue in a cafe, in a store, at the post office, in a hospital. At the elementary and basic levels, the teacher offers educational material for each topic (words, phrases, important phrases, questions, etc.), and in the future this work will be carried out by the student himself: to highlight keywords, and to formulate the main thoughts, etc.

Creative projects and models of students created independently outside the classroom are information material for listening, discussion, as well as a form of control. The teacher can check whether the vocabulary, grammatical constructions of previous classes have been assimilated in a new context, check the formation of speaking, listening, and writing skills (if the student wrote the script himself), reading (if the video is subtitled). After watching the video designed by the students problem tasks are offered in the lesson. Tasks are given in stages. At the first stage, standard questions are asked to be suitable for the initial discussion of any type of "mobile video". The questions of the second stage depend on the goals and the topic of "mobile video". These may be questions for understanding vocabulary, for checking up the understanding of the content of the text, questions involving reasoning, etc. The tasks of the second stage are performed after the second viewing of the "mobile video". The third stage of working on the video involves telling the student about what he saw on the screen.

The application of the model of teaching synthetic types of speech activity allows to use new forms of work with media or video text to organize the formation of several competencies necessary for students to demonstrate the achievement of educational results when performing tasks of external evaluation procedures, in particular the All-Russian verification work, and at the same time to neutralize the difficulties of the technical component of the work.

In sum, we state that the teacher is an important subject of the educational process, the process of teaching foreign languages, but his main activity, a very significant activity is carried out before the lesson, in the space of designing / creating a lesson project / lesson system. The teacher makes decisions about what tasks to set for students, the solution of which will lead them to achieve the goal; what types of activities to offer to students to support their motivation, what materials and how to present to students with different
4 Conclusion

This study initiated as a conceptual approach to the intellectual/intelligence architectonics of international language training of students of various educational programs/projects, focuses, first and foremost, on learning to live together, on developing knowledge about others—their history, traditions and ways of thinking; learning how to acquire knowledge by studying via life; learning to work improving one’s professionalism and acquiring global competencies, creativity, critical thinking in the Humanities and Sciences. Giving start-up to the prospects of foresight that greatly facilitates the group and team ship activities, currently too often ignored in pedagogical practice. That is, learning to live without leaving any of the talents unclaimed is the basic proposition of priority values of the society and human being, remains more relevant than ever before, in the third millennium, which is in a constant search of its value priorities in the space of ambiguous spirituality and morality of the mankind.

This search based on this methodological challenge is one of the attempts of the authors of this opus within the longitudinal survey to respond to the novel challenges of a constantly changing world, including linguistic, or rather, multilingual and multicultural. In turn, challenges, representing a holistic vision of problematic loci in FL teaching constantly expand the boundaries of the study of the topical issues of the Self as cultural. Regional foreign language teacher team ships have repeatedly stated at the All-Russian level, finding the support of the pedagogical community of the country. As is the case, the idea of using CLIL arose as a result of increased requirements for the level of proficiency in a foreign language with limited time to study it. This approach allows teaching two subjects at a time, although the main focus may be on either a language or a non-linguistic subject. Language learning becomes more purposeful, as the language is used to solve specific communicative tasks. By the same token, students have the opportunity to better learn and understand the culture of the language being studied, contributing to the formation of socio-cultural competence of students. The student passes through a sufficiently large volume of language material, providing a full immersion in the natural language environment. It should also be noted that working on various topicality situations allows one to master specific terms, certain language constructions. Such a training format contributes to the implementation of the thesaurus for specific purposes.
tasks/patterns) for each of the activities in the native language/foreign language (recommended for managers and teachers as an independent practical work). While teaching listening, it is recommended to teach students the use of various listening strategies: to use authentic recordings of different genres in the educational process without relying on written text; to extract detailed information from the text, develop the following skills: identify important arguments, details, keywords, examples, as well as specific dates, numbers, proper names, geographical names; carry out reflection: comment on the answers and explain the difficulties encountered during the task. While learning to read aloud, it is recommended to regularly repeat the basic rules of reading words; constantly work on pronunciation, conduct phonetic exercises at each lesson. When teaching reading with understanding of what has been read, it is recommended to abandon the practice of reading and translating what has been read, since this outdated approach is not focused on understanding based on the semantic and structural type of reading; to form students' skills to determine the topic, highlight the main idea, select the main facts from the text, predict the content by text elements, highlight semantic supports. When learning to operate with grammatical and lexical material, it is recommended to pay attention to grammatical tasks based on coherent texts, to seek an understanding of their general content and functions of the grammatical forms being studied, as well as to focus on grammar when teaching listening, reading, writing and speaking; to introduce and train lexical and grammatical structures using contextual tasks. When teaching speaking, it is recommended to teach how to compose a consistent and logical utterance according to a plan based on visual support (photo, picture, etc.); pay attention to the correctness of the linguistic and semantic construction of the utterance; teach how to use linguistic means of logical communication to ensure the coherence of the oral utterance; compose monologues/dialogues on different supports: by analogy with the sample, by keywords, plan, speech situation, picture, problematic issues.

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