Social-Interactive Learning Concept Curve and Electronic Educational Resource "Post-Graduate Foreign Language"

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Abstract: The resource under study deals with the implications for second language learning and teaching of a sociocultural theory of mind, as originally conceived by L.S. Vygotsky. The study showed how pre- and intermediate speakers' performance collapsed in the face of a difficult narrative task and how self-regulation and control over the mediation means lost. Necessity of compiling a textbook based on the above-mentioned principles was stressed. The results showed that electronic educational resource provided the opportunity of permanent on-line contact with a teacher that evidently contributed to the development of "legitimate peripheral participation" and the students' learning curve.

1. Introduction

This paper is an extension of work originally presented in 2017 10th International Conference on Developments in E-Systems Engineering (DeSE). The development of information technologies has led to the emergence of a new form of education - e-learning comprising technology-enhanced learning. The basis of e-learning is an electronic educational resource [1]. Under the electronic educational resource, we understand the course management system presented in the electronic-digital form, for the use of which computer facilities are needed. In general, the educational resource includes a structure, subject content and metadata about them. The structured and subject content used in the educational process is called educational content. The metadata of educational content is the information about that characterizes its structure and contents.

The article is squarely situated within the research tradition discussed by Luria and Bruner [7]. It means theory-guided observation and interpretation of people engaged in the activity of teaching, learning (in educational settings), and using second and foreign languages, compiling specific features of sociocultural theory. The e-learning classes given based on the English Language Textbook for Russian learners by N.A. Chernova and Z.M. Kuznetsova [2] bring to light important differences between purely instructional talk on the part of the teacher and instructional

conversations between teachers and students in which they have the opportunity to regulate the conversation in ways they cannot when teachers engage in instructional talk.

Following this scheme "Post-graduate Foreign Language" electronic educational resource includes data, information, software necessary for its development and use in the learning process [6]. Functional purposes and specific application in information and educational systems determined the structure, subject content, methods and tools for the development and application of the electronic educational resource. In e-learning the basis of the electronic educational resource is educational content. The metadata of the described resource contains standardized information necessary for post-graduates to search through the technological learning system [5].

As it turns out, only instructional conversations relate human mental functioning to positioning themselves as individuals in carrying out a task in a foreign language. Increasing independence in the use of a foreign language through activities allows moving from a focus on form to a focus on meaning and hence societal context participation. The achievement of this aim is very complicated if you take into account standard theories of language development. The authors' aim is to provide evidence of a shift away from the so-called 'acquisition' metaphor to a new 'participation' metaphor.

The "Post-graduate Foreign Language" electronic educational resource as well as its information educational services, tools, technologies created on the Moodle hardware and software platform that provides the use of electronic resources and services for educational purposes is an automated learning system, providing a socio-cultural approach to language learning. Three premises are being challenged. First of all, it is the shift to the notion of emergence. Then, alongside with information receiving, skills of various kinds are being provided. At last, it allows students not only facilitate learning, but also fulfil the process of learning in a fundamental way [3].

The study examined in this article involves an overt application of activity theory to classroom language learning. Continuing the theme of scaffolding and learning in the zone of proximal development, special attention should be drawn to four themes: 1) language, cognition, and communities; 2) language-based theories of learning and semiotic mediation; 3) private speech; 4) activity theory [10]. In analyzing the recorded interaction between the students and the teacher, it shows that instructional conversations are developmentally sensitive to the students' growing ability to use the language required to carry out a specific task. The grammatical learning is achieved as a consequence of their interactions, which is evidenced, among other things, by shifts from other-regulated to self-regulated error correction. The positive effects of learners verbalizing strategies by N.F. Talyzina [8] extend to language learning.

This computer training program can be presented as a systematic presentation of a specific educational material for studying one issue of the curriculum, including text, illustrative (including multimedia) teaching material, hyperlinks, control questions. The issue under discussion touches upon scientific aspect of the English language. Considering all modern tendencies in the field of science, investigation and research, fluent English proves to be, evidently, of great importance for any scientist or a post-graduate. The urgent necessity of presenting the achieved results in different foreign magazines and periodicals makes every candidate improve the level of English knowledge and be ready to use it in practice [6].

The study shows that overt collaborative verbalization of metacognitive strategies such as predicting, planning, and monitoring can be a more effective means of mediating learning than just instruction in learning strategies alone. All the above-mentioned was used when writing the textbook [2] in the way of communicative language teaching which is relevant to activity theory, since, as the theory maintains, different actions, linked to the same goal, can give rise to similar outcomes. The succession and number of exercises help students and teachers as well help in the process of communicative and cognitive activities in an ESL class.

2.   Background to the Problem

The "Post-graduate Foreign Language" computer training program is designed for both independent work of students and for work under the guidance of a teacher [7]. The media education, in addition to acquiring knowledge, can also provide some skills such as providing effective ways of dealing with the educational problem, active learning in natural environment, and, at last, the language reconceptualizing in profound ways in order to meet the requirements of the twenty first century. This computer-training program aimed at studying the "Scientific language" section of the Post-graduate curriculum combines into an automated training course, which follows all educational and methodological demands [4].

Referring to the private speech in his study, J. Smith (1996) operationalizes it as a 'verbal attempt of self-regulation during problem-solving tasks', which is, the result of stress that accompanies construction of the meaning in L1 or L2, the private speech is distinguishable from the interpersonal communication. Smith examines a grammar class of high intermediate ESL students and claims that private speech can arise in a discussion. When teacher assumes the status of listener, it allows students to make public their problem-solving talks [9]. Thus, this co-construction process is triggered through the externalization of the student's thinking and the tolerant and persevering responses of the teacher. The thing is that classroom discourse is usually analyzed for its social, communicative value, neglecting the cognitive function of instructional talk.

Classroom conversations depend on spontaneity, unpredictability and focus on new information. If the discussion is shaped toward a curricular goal, and teachers in their turns build or activate background knowledge in students, these conversations can also be instructional. Direct instruction or modelling are used to promote more complex language expressions, at the same time, questions help students to expand, elaborate or restate their statements and replies. Instructional conversations are relevant to language classrooms because they provide opportunities for experiencing how language is used outside of the classroom. Current models of input, output, and interaction are insufficient as a framework for analyzing classroom talk. The question of instructional conversations was explored within the frames of a PhD study, compiled by N.A. Chernova. The motivation for the study was the following observation. It turned out that instructional conversations usually arose with fairly advanced ESL learners. The question remained, was it possible to have an instructional conversation in a beginning foreign language class? Limited linguistic resources are not available for a topically coherent, extended, and meaningful conversation. The following data were received. If a teacher followed a predictable pattern a) setting up the vocabulary practice exercise; b) completing textbook exercises using the new vocabulary; and c) spontaneous questions and comments by students and teacher embedded within the practice exercise, conversational communication was out of the question [3]. The possibility of such conversation depended on management talk and extension activities, which show features of it most consistently and impressively [8].

To illustrate the given data, we would like to show the screen shots, presenting the available materials on the topic "My scientific research". Let us look at some examples of learner interaction. The two-way communication gap task can be found when fulfilling training tests. A conversational interaction between two learners is possible in chat groups. The additional advantage is the possibility of interacting with a group at the same time. The communication between a learner and a native speaker provided with the help of such an item as the Internet website ("Free communication on line" item). The considerable linguistic work is being done, in fact, in the process of fulfilling written tasks, compiling his/her statements on the topic. It should be noted that every stage is under control and the possibility to keep in contact with a teacher can be regarded the most prominent achievement of this educational technique.
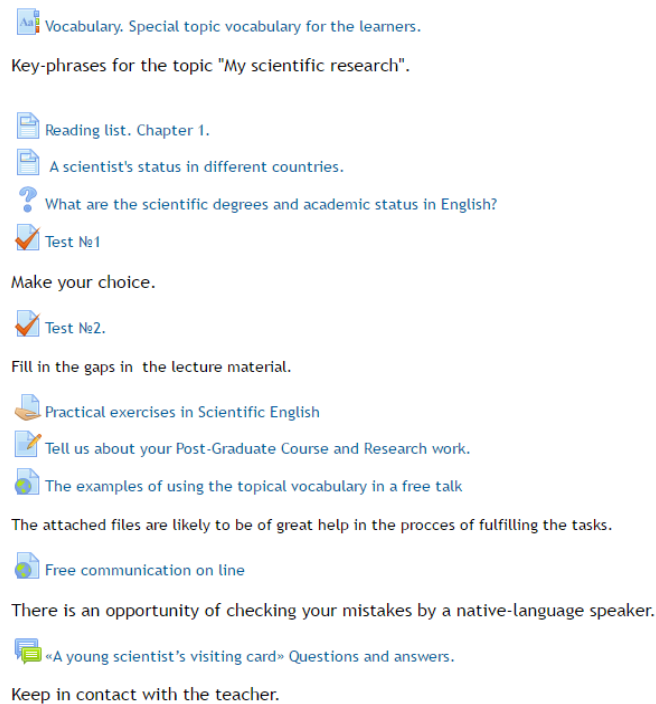
Figure 1: "My scientific research" item program.

Another important aspect of the educational resource is the possibility to estimate knowledge on the spur of the moment. It helps the teacher to save time for communication with the students.

Оценка/10,00	В. 1 /2,00	В. 2 /2,00	В. 3 /2,00	В. 4 /2,00	В. 5 /2,00
10,00	✔ 2,00	✔ 2,00	✔ 2,00	✔ 2,00	✔ 2,00
10,00	✔ 2,00	✔ 2,00	✔ 2,00	✔ 2,00	✔ 2,00
8,00	✔ 2,00	✔ 2,00	�‍✘ 0,00	✔ 2,00	✔ 2,00

Figure 2: The available marks for the fulfilled test.

3. Methods of Research

Mastering the language is another example of a social source of development. P. Zukow-Goldring and K.R. Ferko [13], as well as other researchers, showed a close relationship between the support of the pupil's and teachers' mutual attention, and the enrichment of the dictionary [9]. Two sides of the utterance - cognitive activity and its result are presented in the practical application of the studied language and in the educational dialogue. The educational dialogue is a dialogue in which the speakers are involved in solving the problem in the process of acquiring knowledge. We would like to emphasize that the educational dialogue mediates both the solution of the problem and the acquisition of knowledge.

The study was conducted with the first-course post-graduates of the Kazan Federal University in groups with a high level of language proficiency. The experiment was conducted in the second semester. By this time a student can already use the specific vocabulary on their specialty in spontaneous dialogues. The study was aimed at testing the influence of "Post-graduate Foreign Language" electronic educational resource on the correct use of special language forms in oral speech. Each group was tasked to discuss in the process of dialogue their actions and correct mistakes of each other, explaining them. The first group is called "E-learning participants". Their control results were compared with the results of the second group, which also had studied in accordance with the Post-graduate curriculum, and the students were fulfilling the same communicative tasks in pairs. We call this group "Standard learning participants". They were given opportunities for oral practice, but their training was conducted without the use of the "Post-graduate Foreign Language" electronic educational resource.

4. Results of the Study and Discussion

The study shifts the governing concept of learning away from the acquisition metaphor toward the participation one. The participation metaphor finds evidence for learning in an individual's growing and widening activity. Classroom language learning tasks are thus best seen as uniquely situated, emergent interactions based on participants 'goals. In other words, students are taking part in a collaborative dialogue. Communicative collaboration is based upon the active and purposeful agent on the part of a student. The authors offer the following model of ESL classes: 1) self-directed activity comprising self-dependence, activity, social direction, self-government, reflection → 2) reflective, problem-solving orientation in SLA class → 3) internalization of social interactive process in the zone of proximal development with the English language as a cognitive tool for the individual → 4) the second language mediated process of an agent formation in learning and professional activities.

This model allows students to be sensitive to their needs and abilities and supports the overpowering and transformative agency embodied in the learner. It has to aim at positive attitude stimulating the best possible progress and achievements. When working with e-learning, it is important to arrange the teaching process based on the strengths of the students developing their confidence and ability to work and study independently and in a team. The sociocultural context of the teaching process contributes to the development of the students' identity within the society. The diversity of sociocultural contexts used during the classes has to teach them to think critically and creatively, solve problems and recognize the advantages. These approaches applied during the teaching process provide students not only the knowledge and skills, but also emotional comfort and sufficient self-esteem.

By the end of the studying course, the main task of the lesson was the so-called linguistically unlimited task, namely, when there is no explicit grammatical task. "Free talk" technique is being practiced. Each pair of students was tasked with discussing the ways doing their research, its benefits and drawbacks. The students in this study were tested individually. Firstly, they were asked a series of individual questions in the form of interviews, and secondly, they were asked three discussion questions, responding to which students had to express their opinion, tell the story and come up with a statement. The questions were formulated in such a way that, when answering the need for compiling complex sentences with special vocabulary was arising. The correctness of their use was monitored and evaluated. The evaluation was carried out in three stages: ascertaining, control and post experimental ones. The last stage was held four weeks after the second. The data obtained were counted as four separate tests: the first 40 individual questions as one test, and each of the discussion questions as three separate tests. An initial analysis was conducted to determine

whether the significant improvements in the use of specific language forms had been obtained as a result of the "Post-graduate Foreign Language" electronic educational resource having been put into practice. The positive results of the control test could open up new avenues for research. The analysis showed that the "E-learning participants" group made notable progress in all four control tests in comparison with the ascertained. "Standard learning participants" group made unremarkable progress only in a series of individual issues. Moreover, the level of responses with the "E-learning participants" group could be considered as a lasting result after taking a post-experimental test within the period of four weeks.

After interpreting the obtained results following the well-known theoretical aspects from N.F. Talyzina's theory [8], it can be assumed that for the "E-learning participants" group the mutual active communication process of language learning helped to decide problems, foresee linguistic problems, set goals, monitor their speech and assess their overall success. The basis of the second aspect of the methodological experiment was the theory by D. Wood, J.S. Bruner and G. Ross and S. Donato [12] studying the spontaneous communication in the classroom. In the study, there was a more complicated statement of students over time in a joint contextual situation (in a group context). Observations clearly show how the interaction in the zone of proximal development changes with time (in this case in the course of one year) and if firstly the help is provided only by the teacher, then gradually it is internalized by the students, and at last it is used as an instrument of mediation [10].

All these aspects shift the concept of learning from the so-called learning to the concept of participation. The dichotomy between learning and participation, or in other words, participation in various aspects of activity, discourse, communication cannot be reduced to a simple division between the individual and the social [8]. It is clear that the social aspect is an integral part of learning and learning itself is a form of internalized social activity. Thus, face-to-face communication and conversational practice are present in the concept of participation [11]. The following scheme could help to illustrate the obtained results.

Table 1: Levels of internalization from interpsychological to intrapsychological language acquisition.

Levels of knowledge	Explanation to the language behavior in practice
Level 1	The student cannot notice or correct the error, even with the help on the part of his/her teacher.
Level 2	The student can notice an error, but cannot fix it, even with someone else's help.
Level 3	The student can notice and correct the error, but only with the help of someone. He/she understands the clues and can use them in correcting errors.
Level 4	The student notices and corrects errors with a minimal prompt, or without it at all, and begins to assume full responsibility for correcting errors. But, nevertheless, the key phrases are not yet fully internalized, and so the student often makes mistakes. The student can even refuse from help, if it is not needed.
Level 5	The student becomes more consistent in using key phrases in all contexts. The student is fully responsible for his/her mistakes and can correct them without any help.

5. Conclusion

Our research shows the mutual interdependence between the language accomplishments and active

communication, the so called "participation" on the part of the students. The urgent necessity to make use of Technology-Enhanced Learning is evident. The IT technologies setting up tasks and activities are promoting triadic and dynamic interaction rather than dyadic interaction at the same time. Indication language process is made complicated in a dyadic format. The following conclusions are drawn. Electronic educational resource has a good future ahead of him. And, it is necessary on the part of teachers to benefit from this perspective of educational process upgrading.

Acknowledgement

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