In the 21st century science and education have become global phenomena. To join the world educational environment Russian faculty need to be fluent in English at intermediate, upper-intermediate, and advanced levels. English for scientific and educational purposes serve several purposes: to strengthen economical, political and cultural ties between the countries; to increase integration into the field of education; to increase the number of international internships; to make reports at international conferences; to publish papers in reputable journals included Scopus and Web of Science; to carry out correspondence with international partners; to develop joint educational programs; to deliver lectures in English to international students. To successfully complete the tasks enumerated above it is necessary to find the optimal mixture of approaches and work out an andragogical model aimed to form faculty foreign language competence for facilitating international cooperation with the leading scientific schools of the world.

Though the andragogical approach is widely popularized and thoroughly studied both by Russian [1, 12, 18, 20] and foreign scholars [7, 9–11, 13], it is not quite clear if it can make the educational process aimed at forming faculty foreign language competence more efficient than the traditional pedagogical means. Unfortunately, there is little research published on the subject [18], and none of the research has focused on the usage of the andragogical approach to the training of faculty as a specific type of learner possessing specific characteristics.

This paper will, therefore, aim to explore the potential and possible applications of the andragogical approach in the program of additional foreign language training “Lingva” devised to help faculty increase their fluency in English to participate in international projects and activities. The implementation of andragogical approach into the traditional educational process of foreign language teaching can be one of the possible decisions to increase the outcomes. However, andragogical approach lacks practical application in different social and cultural environments. So, the purpose of this research is to add practical value to the andragogical approach by adjusting it to the needs of the faculty and contextualizing it in terms of personal and professional characteristics of mature researchers. It can be achieved by adjusting the assumptions of andragogy to the educational process for a specific group of learners who are mature people focused on research activities. It will help to organize the language courses for the faculty more effectively in conditions of time limit and high demands of the university administration.

Andragogy assumptions, principles, practices

Although scientists still can’t agree whether andragogy is an independent branch of science...
distinct from pedagogy or one of the pedagogical methods to assist adults in study we should define its basic concepts and assertions and detect how they can be applied to the purpose of our research.

Malcolm Knowles first began naming his work in adult education as andragogy in the late 1960’s [10]. Carslon admitted that Knowles discovered through his work with adults that instructors needed to care about the actual interests of learners instead of focusing on what instructors believed were learners’ interests [2]. Based on his own observations Knowles [10, 11] developed a set of five assumptions that enveloped his concept of andragogy. The five assumptions of andragogy are that adults are self-directed learners, adult learners bring a wealth of experience to the educational setting, adults enter educational settings ready to learn, adults are problem-centered in their learning, and adults are best motivated by internal factors [10]. These five assumptions formulated were aimed to change the way the adults are treated in the educational process and to employ their possibilities to the full exploiting such features as independence in thinking, high internal motivation, self-awareness.

The assumptions of andragogy contrast sharply with the assumptions of pedagogy, which are that learners are dependent personalities who bring little or no experience to the educational activity. Heimstra and Sisco [6] asserted that mature adults become increasingly independent and responsible for their own actions. Thus, those adults are often motivated to learn by a desire to solve immediate problems in their lives, have an increasing need to be self-directing, and in many ways the pedagogical model does not account for such developmental changes on the part of adults, and thus produces tension, resentment, and resistance. Consequently, andragogy is a way to remedy this situation and help adults to learn.

Yonge contends that the distinction between pedagogy and andragogy should be kept — but based upon the phenomenological nature of the learning relationship. “A situation of pedagogy always involves an adult assisting a child to become an adult” [19, p. 162]. There is an element of involuntariness to this relationship, and its purpose is to help the child mature. The essence of an andragogical relationship, on the other hand, is an adult helping an adult, the purpose being to help that person become more actualized and fully developed.

For the educational process of adults it is essential then to delegate responsibility and treat them as equals which is quite authentic in terms of real life unlike the way the children are educated. Even if the children are treated as equals there still remains a feeling of artificiality because leaving the classrooms children are still treated as inferior to adults and ought to obey their parents. What often happens at universities is that adults are treated as children when the tutor remains the only authority in the classroom, problem-oriented tasks are given rarely, formal communication prevails over an informal one, students do not participate in curricular development and are not asked to improve its content in case they have fresh ideas. This often happens because the tutors and instructors were not taught how to teach adults.

The assumptions of andragogy seemed to be reasonable, though they got much critique from the scholars.

Schapiro challenged the notion of self-directed learning as being ignorant of issues of power and inequality within educational settings and society as a whole. As a result, he views self-directed learning as a goal that may be desired but not necessarily practical to attain [16]. Similarly, Cheren stated that while learners may express a desire to be self-directed in their learning, most lack the required understanding of learning necessary to be self-directed and thus need guidance and encouragement in the learning process. It is true in some cases as being mature physically and in terms of age, many adults are not ready to take full responsibility for their study and fulfill tasks on their own [4]. Moreover, different students have different learning styles that do not change much with age and many adult students prefer having a model to follow to devising his/her own way to do things.

Researchers are adult learners with specific needs and specific experience. Most of them have enough experience in research work where they should be self-oriented, self-directed and should define the strategy of the research on their own with little or no help from a scientific advisor. Though no research has been conducted on scientists as learners, my first-hand experience in program “Lingva” shows that scientists tend to be too self-directed and may feel reluctant to recognize any authorities but themselves. So, the assumption about self-directed learning is different for a different social situation.

Not all scholars have agreed that the impor-
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tance of having life experience is a distinctive feature of andragogy. Brookfield, for example, concedes life experience is important to learning, but he claims it cannot be the defining characteristic of adult learning as put forth in the theory of experiential learning [1]. Nevertheless, life experience and professional experience does matter when we speak about adult learners improving their language skills in English for Special Purposes. Unlike young children and teenagers, most adults are ready and want to share their experience with the other members of the group. So, appealing to the adults’ experience the tutor widens substantially the bandwidths of communication channels making communication more informal and more meaningful for participants, letting them sharing both knowledge and value systems. Otherwise, many adults feel rejected if their personal experience is not applied to.

Scholars have also stated the fact that not all learners are able to identify what they need to know. According to Tennant and Pogson facilitators should help learners critically examine and articulate their learning needs, which can then be used to develop specific learning objectives. In terms of the language it is true as most of adults have rich experience in learning English and they can formulate their purposes [14].

It is widely recognized that Knowles contributed a lot to the development of andragogy as a science, though his assumptions were purely theoretical ones lacked practical evidence and did not account for the psychological issues or the social and cultural environments of those who learn. Grace notes that, for Knowles, adults are basically isolated learners, pursuing their own selfish interests [5]. Each learner stands apart from any social, cultural or political context. Having that in mind we will develop Knowles’ assumptions into the guidelines for a design of the education process aimed at improving faculty foreign language competence by customizing it to the target audience.

Knowles’ general model of andragogy is constructed from two distinct domains of phenomena. First, it is a theory of how adults are distinctive as learners. Second, it provides a set of guidelines or prescriptions for how to best organize and carry out educational experiences for adults. In other words, it describes the techniques and methods to be used, saying nothing about the content. As a theory that promises to join these two domains, the andragogical model should identify both independent variables as well as outcome variables, and should then specify the relationships between them.

The following are the principles that Knowles formulated [11].
1. The adult learner must be able to define what they want to learn (autonomy, personal need, reasons, intrinsic motivation).
2. The plans for the learning program should be made jointly between “teacher” and “student” (autonomy, personal need, reasons).
3. The adult must be involved in the evaluation of the learning program (autonomy, intrinsic).
4. The climate of the learning program must be safe and non-threatening (experience).
5. The program should relate to and include the adult’s existing experiences and cognitive structure (experience).
6. Learning activities should be experiential and “hands on” rather than passive and pedagogical (personal needs, pragmatic, experience).
7. Learning should lead to practical solutions to experienced problems. The curriculum should be problem-based (personal needs, pragmatic).
8. The proper role of the “teacher” is one of process facilitator and co-learner rather than content expert (autonomy).

Knowles translates these principles for adult education into the following practices and procedures.

1. Learners should be prepared for the learning program. This means informing the learner of the differences between being taught and learning on one’s own, how to build learning relationships, how to identify learning resources, and the skills of self-directed learning [11].
2. A climate conducive to learning should be created. While it is important to provide a climate that is physically comfortable, the real focus must be on creating a psychological climate of safety, acceptance, trust and respect. This is a key responsibility of the facilitator.
3. A mutual planning procedure should be used that involves the learner in planning what the learning will cover. This is a “cardinal principle of andragogy” [9, p. 115].
4. Diagnosing learning needs. One basic way to include the adult in planning involves the following two-step process. First, desired learning competencies or outcomes are identified, and second, discrepancies between those desired competencies and the learner’s current abilities are noted. The result is a self-assessment of what the learner wants to learn.
5. Specifying learning objectives: The adult
should be involved in establishing learning objectives. Learner input does not have to be the sole, determinative or final basis for defining objectives, however.

6. Designing the learning program: Again, the adult should be involved in selecting and planning the sequence and nature of learning experiences and resources used in the process.

7. Operating the program: Here, the teacher acts more in the capacity of a facilitator, resource person and mutual student than as independent expert.

8. Program evaluation: The learners should evaluate how well their learning outcomes were met, the adequacy of their learning as well as their progress with the material.

A unifying technique that integrates these practices and procedures is the learning contract [11]. A contract captures learner goals and shows how those goals will be pursued and evaluated.

What seems to be most essential are those activities in which the learner is involved in identifying what he wants to learn, in making plans for the program, and in evaluating the program. In order for these conditions to occur, the role of the “teacher” must be more that of process facilitator rather than content expert. Thus, for the purpose of this paper, the practices of planning, diagnosing, specifying outcomes, designing, and evaluating are taken as the essential features of andragogy learning.

Core characteristics of a researcher

As the response to the urgent need to enhance the faculty fluency in English the senior staff of the South Ural State University initiated and supported the program “Lingva”. The program consists of modular courses where the educational process is aimed at satisfying the specific needs of the faculty involved in research and international activities in order to develop their foreign language communication competence.

To make the program “Lingva” customized to the needs of the faculty as the students of the “Lingva” program are adults and 100% of them are involved in research we will define the basic characteristics of a typical personality of a researcher. Identifying specific characteristics of the faculty is of primary importance as the faculty present a specific type of adult. Specific characteristics will provide us with a picture of a typical researcher.

Researchers of a typical personality of a scholar have shown that men of science have some similar psychological characteristics that are specific to them and distinguish them from others. Analyzing the interviews with the most prominent US researchers such specific personality traits of a typical scientist as high curiosity, enthusiasm in research, diligence in work, the desire to choose the controversial issues to explore have been identified.

Later attempts to find invariant characteristics of the individual researcher offer such options as autonomy, flexibility and openness, dedication, originality of ideas, independence of judgment, high motivation to obtain scientific knowledge, high intelligence, psychological sensitivity.

R. Cattell with the help of his 16-factor test to measure personality has revealed that scientists are characterized by introversion, they are concentrated on their inner world, they are highly intelligent people, striving for dominance and influencing others [3].

The study of the biographies of 300 scientists K. Koks concluded that to achieve success in science a researcher should have high level of intelligence plus high efficiency and grit [15].

Hans Selye made an attempt to classify the qualities of a typical scientist and put them into six important categories:

- enthusiasm and grit;
- originality: independence of thought, imagination, intuition, giftedness;
- intelligence: logic, memory, experience, ability to focus, abstraction;
- ethics: honesty with oneself;
- contact with nature: observation, technical skills;
- communication skills: contact with people: understanding ourselves and others, compatibility with others, the ability to organize groups and persuade others to listen to their arguments [17].

All attempts to define a universal set of characteristics of a typical scientist have failed because there are too many factors that influence on the development of the personality, and not much research has been done to define what factors are the key ones. Different scientists name various factors. The Table below contains the most general characteristics that most researchers agree on.

So, a typical researcher is a highly intelligent (gifted), creative person demonstrating an endless interest to the world that surrounds him. He/she puts much energy into the organization and conducting research and shows high perseverance.
to reach the purpose. He is an autonomous person, not easy to influence on or manipulate, though open to new ideas that seem rational. His/her highest priority is to honestly disseminate the results of his/her research and contribute to the development of science in a particular sphere.

Features of a typical scientist

1. Curiosity
2. High intelligence
3. Enthusiasm in research
4. Independence of thought
5. Flexibility (openness to new ideas)
6. High concentration
7. Honesty with yourself (ethics)
8. Psychological sensitivity
9. Ability to observe things and see details
10. Good communication skills

How do these characteristics agree with the assumptions of andragogy, formulated by Knowles? We suppose this is a full agreement as

– researchers are self-directed learners, as they have to be autonomous and able to take independent decisions to formulate the purpose of their research, to choose the methods to use, to organize the experimental work, to choose the literature to read and analyze, to interpret the results of their research, etc.;

– researchers bring a wealth of experience to the educational setting as most of them are well-educated people and have rich life experience, they constantly contemplate about and they have a wide knowledge not only in their narrow field of study but in other fields as well;

– researchers enter educational settings ready to learn, as they realize the importance of lifelong learning and the need to monitor the latest achievement in their field of study a great deal of which is published in English;

– researchers understand that the main task for them in terms of speaking English is to communicate their results to the world clearly and distinctly, so the educational process is problem-centered and task-oriented;

– researchers are motivated by both internal and external factors, but internal factors are the leading ones as most of them conduct research to develop science and contribute to it.

Competences to be developed for faculty international activities

We have analyzed the faculty needs by studying the participants of the program (sphere of their activity, interests, motivation to study) and surveying their international activities.

The overall number of the faculty enrolled into the program in 2014–2015 academic year is 123. The learners are post-graduates, post-doctoral students, assistant professors, professors. All of them participate in research activities in different branches of science including Maths, Physics, Chemistry, Machine-Building, Architecture, History, Pedagogy, Literature, Economics, IT, Power Engineering, etc. 84 participants of the program studying at Intermediate, Upper-Intermediate and Advanced levels were surveyed.

The survey was conducted on the basis of the administration requirements that were correlated with the indicators the university needs to reach to be included into the QS rankings of the world universities. The indicators include: citations per faculty, citations per paper and papers per faculty, calculated using data from Scopus. Other important activities critical for the faculty are: participation in international conferences, delivering lectures to international students, working as invited professors.

The target group was the faculty studying at Intermediate, Upper-Intermediate and Advanced levels of the program “Lingva”.

On the basis of activities enumerated a set of competences was defined. Under the competence we understand here the ability, readiness and experience of a person to demonstrate high fluency in English for a number of international activities. Thus, the competences are:

– ability and readiness to provide oral and written communication with international colleagues;

– ability to listen and understand lectures and conference reports;

– ability to deliver lectures in English to international students;

– ability to give reports at international conferences;

– ability to participate in professional meetings;

– ability to read research papers in the original;

– ability to write research papers in English.

These are the competences the faculty should have in foreign language needed to be developed.

Conclusions

1. Both the faculty and senior administration of the university realize the challenges of the globalization in the research activity and ready to invest time and money into professional development to get recognition at the international educational and research areas.
2. Andragogical assumptions correlate with the typical characteristics of researchers and can enhance the educational process aimed at the development of communication competence for international activities.

3. Competences identified on the basis of literature analysis and survey can be used to create the pedagogical model of academic staff training aimed at developing communication competence in foreign language for international activities.

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АНДРАГОГИЧЕСКИЙ ПОДХОД В ФОРМИРОВАНИИ ИНОЯЗЫЧНОЙ КОММУНИКАТИВНОЙ КОМПЕТЕНТНОСТИ ПРОФЕССОРСКО-ПРЕПОДАВАТЕЛЬСКОГО СОСТАВА ДЛЯ РЕАЛИЗАЦИИ МЕЖДУНАРОДНОЙ ДЕЯТЕЛЬНОСТИ

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Дается обоснование использованию андрагогического подхода в обучении иностранному языку профессорско-преподавательского состава университета, вызванное необходимостью повысить академическую мобильность и увеличить количество выступлений преподавателей вуза на международных конференциях. Посредством социологического опроса и анализа литературы в статье описаны основные положения андрагогического подхода, которые были соотнесены с целевой аудиторией – учеными университета. Это было достигнуто благодаря изучению потребностей слушателей, определением их специфических характеристик. В результате проведенного анализа были сформулированы компетенции, которые нужно освоить в области владения английским языком для выполнения профессиональных задач. В статье также показано, что основные положения андрагогического подхода согласуются с качествами ученых. Результаты исследования могут быть использованы для развития программ повышения квалификации в рамках дополнительного образования взрослых.

Ключевые слова: андрагогика, обучение взрослых, изучение языка, компетентностный подход, международное сотрудничество, академический английский.

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