

Needs Analysis in Course Design: Converging Learners', Instructors' and Developers' Voices

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ABSTRACT: Needs analysis (NA), which is considered central to English for Academic Purposes course development, normally precedes course design. It includes the identification of potential students' motivation, needs and lacks. However, this approach has such drawbacks as present-moment orientation and distortion of results due to learners' misconceptions and set beliefs. This paper demonstrates that needs analysis can be extended to the materials evaluation stage and account for the needs identified by language learners, course developers and language teachers, thus mitigating possible distortions. The methods implemented in the needs analysis in focus involved surveys and questionnaires administered to potential learners at different stages of course design, questionnaires for teachers, and the authors' understanding of the learners' characteristics and the environment they function in. It is illustrated how the triangulation of NA sources assisted in developing new and improving existing materials in the international "English for Academics" project. Needs analysis is process-oriented and multidimensional when it penetrates the course design process, actively engaging all the parties such as course developers, potential learners and instructors. It allows course designers to introduce improvements on different levels and to meet the needs of all the participants.

Key words: triangulation, needs analysis, course design, materials evaluation, student-centeredness.

Análisis de necesidades en el diseño de los cursos de inglés: convergiendo las voces de los aprendices, los profesores y autores

RESUMEN: El análisis de necesidades (AN), que se considera fundamental para el desarrollo del curso Inglés para fines académicos, normalmente precede al diseño del curso. AN incluye la identificación de potenciales motivaciones, necesidades y carencias de los estudiantes. Sin embargo, este enfoque tiene inconvenientes como la orientación en el momento presente y la distorsión de los resultados debido a los conceptos erróneos de los alumnos y las creencias establecidas. Este documento demuestra que el análisis de necesidades puede extenderse a la etapa de evaluación de materiales y tener en cuenta las necesidades identificadas por los estudiantes de idiomas, desarrolladores de cursos y profesores de idiomas, lo que mitiga las posibles distorsiones. Los métodos implementados en el análisis de necesidades en particular incluyeron encuestas y cuestionarios administrados a aprendices potenciales en diferentes etapas del diseño del curso, cuestionarios para maestros y la comprensión de los autores de las características de los alumnos y el entorno en el que funcionan. La triangulación de las fuentes de NA ayudó en el desarrollo de nuevos y mejores materiales exis-

tentes en el proyecto internacional “English for Academics”. El análisis de necesidades está orientado a los procesos y es multidimensional cuando penetra en el proceso de diseño del curso, involucrando activamente a todas las partes, como los desarrolladores de cursos, los posibles alumnos y los instructores. Permite a los diseñadores de cursos introducir mejoras en diferentes niveles y satisfacer las necesidades de todos los participantes.

Palabras clave: triangulación, análisis de necesidades, diseño de cursos, evaluación de materiales, orientación al estudiante

1. INTRODUCTION

Russia joined the Bologna process (formation of the common environment in higher education in Europe) in 2003 and since then its tertiary education has been undergoing global changes. Internationalisation of higher education spurred the design and implementation of English for Academic Purposes (EAP) courses in Russian universities. Mostly, they were aimed at students’ academic skills development and international exams preparation. However, the concept of EAP is much broader and is defined as “the teaching of English with the specific aim of helping learners to study, conduct research or teach in that language” (Flowerdew & Peacock, 2001, p. 8). Therefore, though students’ needs were being satisfied, the needs of those involved in research or teaching at a tertiary level were largely ignored. This is one of the reasons why the “English for Academics” project was initiated, its main purpose being to develop university teachers’ and researchers’ language skills, thus making them rightful participants of the international academic dialogue.

The niche identified, it was necessary to explore the target group’s needs. Needs analysis is considered an essential step in course design as it allows course developers to provide for learner-centeredness in EAP, making an EAP course “related in content ... to particular disciplines, occupations and activities” and “language appropriate to those activities” (Flowerdew & Peacock, 2001, p. 13). Normally, needs analysis is conducted before a course is developed, as it “is likely to provide a solid foundation needed for effective ... course design and delivery” (Serafini, Lake & Long, 2015, p. 25). This article will discuss needs analysis as a process penetrating EAP course development, and suggest how it can be made more reliable and multidimensional.

2. BACKGROUND

EAP is a branch of the ESP (English for Specific Purposes) ‘family tree’ (Robinson, 1991, pp. 2-4) and has features that are usually thought of as being criterial to ESP courses. As Robinson (*ibid.*, p.3) mentions “an ESP course is based on a needs analysis, which aims to specify as closely as possible exactly what it is that students have to do through the medium of English”. It helps discover the specificity not only of tasks and discourse practices a group of learners comes across in a particular context, but also the roles the learners have to perform, their beliefs, practices and other cultural peculiarities (Long, 2005, p. 1-2). EAP seems essential in the light of the recent approaches to course design, which increasingly consider potential users as rightful participants of course development (Baek et al., 2008).

Various methods can be implemented to discover needs: non-expert and expert intuitions, unstructured and structured interviews, surveys and questionnaires, language audits, observation, diaries, analysis of corpora and discourse, etc. (Long, 2005, p. 31). There is general agreement that as much as possible of the needs analysis should be completed before any course starts (e.g. see Richards, 2001) as it is the starting point of goal and objective setting (Nunan, 2013, p. 27). However, needs analysis can be carried out during the life of a course (Holliday and Cooke, 1983). Hyland (2006, p. 74) also points out that needs analysis should be ongoing and dynamic. Normally, teachers are responsible for adjusting materials to the immediate needs of their learners. Provisioning for such kind of on-going analysis while the materials are still being developed may be the way to better cater for learners' needs.

Needs analysis is more valid when information from various sources is considered (Hyland, 2009). Triangulation, or the use of "more than two methods as a way of cross-examining results" (Drager, 2014, p. 62), can take the forms of combining ethnographic notes, interviews, discussions, discourse analysis, etc. Moreover, triangulation of both sources and methods increases predictive validity (Long, 2005, p. 12). Triangulating a number of opinions enables course designers to get multiple perspectives on learners' needs and contributes to the development of meaningful tasks (Youn, 2018).

Discussing the needs analysis in English for Academic Purposes, Serafini, Lake & Long (2015) claim that to understand which tasks the potential audience of a course needs to carry out "domain experts ... should be consulted to assess insider knowledge of what successful performance in a specific job or occupation entails" (p. 12). However, domain experts may be inaccurate in identifying the linguistic resources required to perform successfully (ibid., p. 12). Therefore, it will be the course designers' task to identify them and to create opportunities for their practice.

As English is the language of research and international publications, its knowledge has become a prerequisite of success in academia. The "English for Academics" course was developed by a group of Russian university teachers under the supervision of British expert Rod Bolitho within the British Council (Russia) project. The authoring team agreed to divide the first book in the course into four modules, each catering for the development of the appropriate microskills within each of the four major skills (Reading, Listening, Speaking, Writing). The authors of this article mostly contributed to the development of the Writing module materials, which deals with academic correspondence, summary, abstract and grant application writing.

The need for a course to teach English to professionals involved in academia in Russia, that is university lecturers, researchers and administrators, was revealed in Frumina and West's baseline study (Frumina & West, 2012). They came to the conclusion that what really hindered the internationalisation of higher education in Russia was poor English language proficiency of universities' academic staff. The situation was very similar to the one described by Coleman as "the vicious circle of language attitudes and behaviours" (Coleman, 1988, p. 166) when students enter universities with poor English, then they come across lecturers who are unsure of their English, too. Therefore, these students are not encouraged to read, listen, speak, or write in English. Later some of these students, unfamiliar with materials in their specialisation available in English and unable to communicate in the language, graduate

and are taken on as teaching staff. It becomes obvious that the insufficient level of English inhibits Russian academics' dissemination and publication of research findings and prevents them from providing and delivering courses for international students' audience. Frumina and West also highlighted the necessity for the development of a textbook which would suit academics' needs and teach them skills and knowledge crucial for effective functioning in the English-speaking academic environment (p. 57-58).

As Jolly and Bolitho (2011, p. 113) suggest, textbook development starts with identification and exploration of need, then comes the stage of contextual and pedagogical realisation of materials, and finally student use of materials and materials evaluation take place. We will outline how these stages were implemented within the "English for Academics" project, and the place of needs analysis within the course development cycle.

The need identified, it was then thoroughly explored in a survey conducted by the British Council in 2012. The survey provided the authors with a wealth of information on potential learners' needs and wants. But being teachers as well, course developers could predict some needs and features the potential audience failed to foresee. Drawing on both the results of the survey and their own insights, materials developers selected source texts (contextual realisation) and came up with the activities to develop necessary skills (pedagogical realisation).

Tomlinson (2011, p. 174) stresses that "materials need to be monitored by the author(s), by other 'experts' not involved in the writing team, and by typical users of the material". A "fresh" look allows us to identify the drawbacks which stay unnoticed by the authors as their vision is blunted by familiarity. Three methods are generally used to evaluate materials: piloting, reviewing, and focus groups (Amrani, 2011). When the "English for Academics" course was being created, the materials were evaluated by developers, students and practicing teachers. Materials developers, who worked in groups of three or four on each module of the book, regularly reviewed other groups' materials and gave substantial feedback. Piloting the materials in real classrooms, which allows teachers to use materials in genuine settings and to adapt them to better meet learners' needs, was conducted as well. To this effect, two piloting questionnaires were developed to get feedback from the participants, in which both learners and teachers could comment on various aspects of the materials. The questionnaires were analysed by the coursebook authors, allowing them to reveal potential students' and teachers' needs and encouraging them to significantly improve the materials.

This article aims to describe how triangulation was achieved when the "English for Academics" course was created and to suggest possible ways to implement triangulation in developing teaching materials. Needs analysis penetrated the process of textbook creation and can be roughly split into three phases. At first, potential students' needs were explored at the preliminary stage before actual textbook development was carried out. In addition to that, the authors relied on their own insights of what their audience needed to master. Finally, more students' needs and the needs of instructors who piloted the course were uncovered. Further on, these three phases will be described in detail and the outcomes of each will be outlined.

3. RESEARCH FINDINGS

3.1. Preliminary Needs Analysis: Phase 1

The first step is the “classical” needs analysis conducted before the design of actual materials. Deutch (2003) differentiates between global and individual needs (short-term and long-term needs). The global need being the involvement in international academic communication, the learners’ individual aims were discovered at this stage.

The online survey was aimed at exploring those needs, in which 417 university teachers and researchers participated, and was available at the British Council (Russia) website. The link was sent to tertiary education institutions (N=58) with the request for academic staff to complete it. The respondents were encouraged to fill in a closed questionnaire, and the participation was anonymous. The majority identified themselves as teachers (instructors at the tertiary level), though the possibility to choose more than one option was provided (see Table 1).

Table 1. Respondents’ positions at university.

Position	RESPONSE (%)	COUNT RESPONSE
Researcher	26.20%	127
Teacher (at tertiary level)	75.80%	367
Administrator	13.40%	65
Other	5.00%	24

According to their self-assessments, the average level of university instructors and researchers was B1 according to the CEFR (1996), with reading slightly more advanced than other skills. Writing was ranked third in difficulty, after listening and speaking, which came first and second respectively. The respondents had to use a list and select the professional language-related tasks they have to carry out. Thus, language subskills necessary for effective communication in academic environment were identified, such as the abilities to search for relevant journals online, read academic articles and calls for papers, listen to presentations and participate in discussions, socialise and present at conferences. Among others, the respondents were also asked to evaluate different writing tasks on the regularity of their fulfilment.

As Table 2 shows, some tasks are completed by academics more often than others. Form filling seemed to be done on a regular basis as well as e-mail and personal correspondence writing. Though only 11.6% of respondents reported on having to write articles regularly, on the whole two thirds of the respondents agreed on the fact that they at least sometimes have to publish such papers. According to the survey, academics appeared to write different types of applications or reviews less than often, and they are not usually asked to compile syllabuses in English.

Table 2. Writing tasks academics need to complete.

TASK	REGULARLY	OFTEN	SOMETIMES	SELDOM	NEVER
form filling	11.3%	30.0%	34.2%	16.9%	7.7%
articles	11.6%	21.0%	32.1%	22.3%	13.0%
personal correspondence	21.3%	25.3%	24.0%	18.8%	10.6%
e-mails	29.1%	31.0%	22.1%	13.0%	4.8%
applications	4.5%	11.0%	28.5%	31.4%	24.3%
reviews	6.0%	10.2%	23.4%	31.7%	28.6%
CVs	7.7%	16.5%	28.0%	32.4%	15.3%
syllabuses	5.6%	10.2%	17.3%	25.8%	41.2%

This preliminary needs analysis contributed to the choice of the course contents (contextual realisation (Jolly & Bolitho, 2011). Thus, the Writing module of “English for Academics. Book 1” includes materials on e-mail and correspondence writing, in which both the general structure and various letter types are practiced such as reference and cover letters, proposals. As the ability to summarise information is an essential component of article writing, a lesson to master this skill was also included in the first book in the series. The same holds true for abstract writing and description of visual information. These macro skills build up, and the second book in the series concentrates, among others, on writing for publication and submitting an article to an international journal.

However, the deficiency of such kind of needs analysis lies in its orientation on the moment of the analysis. As we live “in an evolving world of changing needs” (Baek et al., 2008, p. 660), the situation can be different in a year or two when the course is published or implemented. For instance, now that several years have passed since the course was actually created, the pressure on the academic staff in Russia to publish and to lecture in English has increased dramatically. Speaking in Deutch’s terms (2003), learners are not always able to determine their long-term goals. In addition, learners’ wants do not always coincide with their shortcomings (Liu et al, 2011), in other words, the gaps in knowledge and skills which need to be bridged. There can be a “tension between what users want compared to what is best for them based on scientifically proven principles, similar to the problem with what people prefer to eat vs. what is good for them” (Baek et al., 2008, p. 667). That is why the authors’ foresights based on the teaching experience and the involvement in academic practices may play a decisive role.

Moreover, although learners provide useful information about their occupational needs and preferences, they may be ineffective in “determining the language involved in functioning successfully in their discourse domains” (Long, 2005, p. 20). Therefore, it is the materials developers’ task to analyse the questionnaire results, draw conclusions about the learners’ needs and decide on the target discourse features. As target texts and communicative situations were identified, course developers analysed authentic materials representing

these situations and selected relevant functional language and structures to build activities upon. Text analysis allowed us to pinpoint the structural peculiarities and academic writing conventions our learners need to be aware of.

3.2. Needs analysis through the prism of experience: Phase 2

The authoring team consisted of language teachers and professors (N=12) from a variety of institutions in Russia, such as Siberian Federal University, Vologda State University, Samara State Aerospace University, Saint-Petersburg State University, National Research University Higher School of Economics, etc. All the authors are actively involved in teaching and research and can also be considered ‘insiders’ of the academic profession, so they could refer to their experience and draw conclusions about their peers’ needs. Their pedagogical experience allowed them to make inferences about the appropriacy of contextual and pedagogical decisions.

Though needs analysis is widely conceived as the identification of the skills and language to master and the gaps to bridge, Jolly and Bolitho go even further saying that “the most effective materials are those which are based on thorough understanding of learners’ needs, that is their language difficulties, their learning objectives, their style of learning, the stage of their conceptual development...” (Jolly & Bolitho, 2011, p. 128). Being aware of the target audience makes it possible to deduce its characteristic features. Drawing on Knowles’ (1984, 1990) insights about the peculiarities of adult learners and taking into account that the potential audience are individuals involved in university teaching and research, the authors relied on such learners’ characteristics as:

- *motivation and readiness to learn* dictated by the growing demands to publish and to participate in international events;
- *practicality*, which implies the need for the skills and knowledge which can immediately be implemented in real-life situations;
- *self-concept*, which involves understanding of one’s goals, abilities and values;
- *experience in learning* and, possibly, teaching and research, which allows us to use learners as a resource and draw upon their knowledge and skills;
- developed *autonomy* and *critical thinking skills* which can be pedagogically exploited to motivate learners and encourage them to fulfill their potential;
- *inquisitiveness* as scientific curiosity pushing researchers in their quest for new knowledge.

Adult instruction fits in the lifelong learning paradigm which presupposes that learners bring in their knowledge, skills, and learning strategies. On the other hand, adult learners may be set in their ways and resistant to novel modes of teaching. Additionally, they are rightful participants of the learning process, aware of their learning roles and social identity, “conscious of and reflective on their own learning preferences and difficulties” (Sifakis, 2003, p.204). In brief, adult learners should be “left with a feeling of fulfilment and satisfaction that they have learnt something worthwhile” and “made fully aware of the methodological principles and the learning objectives” (ibid., p. 207).

This awareness of potential learners’ characteristics and the ways they prefer to learn in made it possible to design tasks and activities to suit the learners’ needs and preferences,

that is, to carry out the pedagogical realisation of materials. For instance, each lesson in the coursebook starts with the “Lead-in” section in which learners are encouraged to share their expertise, while at the end, in the “Follow-up” section, they are asked to apply the new skills and knowledge within their area of research or in true-to-life situations. Such tasks make learning personalised and, therefore, more effective. Peer-teaching, as well as peer-assessment and self-assessment, require the implementation of critical thinking skills. Grammatical and lexical features are introduced in context and learners are prompted to notice, analyse them and deduce the meaning from it (the *language awareness* approach). The objectives of each lesson are stated at its beginning, and learners are fully aware of the direction in which they are going. In addition to that, they are encouraged to self-check using can-do statements.

Content realisation also takes these features into account. Having specialists in a number of areas as perspective learners, it was necessary to choose content that would be applicable to all these individuals. That is why the decision was made to select input texts that deal with education and research issues. Pedagogical realisation for the Writing module involved both provision of sample texts and scaffolding of the writing process. The next step was to check the effectiveness of the decisions described above.

3.3. Needs analysis through course evaluation: Phase 3

As it has been described, the learners’ essential needs, the skills they need to master to successfully function in academic settings and the tasks they have to deal with, were revealed at the first and second stages of the project implementation. However, the materials evaluation stage, piloting in our case, gave the authors an opportunity to discover more needs and to redesign the materials in accordance to the data received.

Before piloting a brochure with part of the coursebook content was published for learners’ use, as well as Teacher’s Notes for the instructors. The piloting materials included two lessons from each module: Reading (Calls for Papers; Grants), Listening (Cultural Conventions of Public speaking; Lecturing), Speaking (Presentation Skills), Writing (Abstract and Grant Proposal writing). During the piloting stage eight coursebook lessons were tested, which comes to 16-24 teaching hours.

In total, 378 learners were taught by 61 teachers at universities in Russia and former Soviet republics using the materials described above. The learners were PhD students, university lecturers and researchers who aspired to improve their English and successfully communicate in the academic environment. The cohort was rather heterogeneous as the learners came from various academic fields (Table 3). As the textbook aims at university lecturers and researchers specialising in any area, such a variety was a definite advantage.

Table 3. Number of learners representing different areas of specialism.

Areas of specialism	NUMBER OF PARTICIPANTS
Economics, management, accounting, finance	58
Linguistics, education, philology, culture studies	57
Psychology, sociology, social work	41
Physics, biophysics, radiophysics	26
Engineering, innovation, automatisaton	30
Logistics, tourism	19
Mathematics, computer science	16
Chemistry	15
IT, electronics	15
Geography, geology, ecology	14
Law	11
History, archeology	11
Political science, international relations	12
Biology, biotechnology	8
Navigation and shipbuilding	7
Other domains	22
Total	362

The learners completed two different questionnaires both before and after the instruction. The evaluation questionnaire was administered to instructors after the piloting took place. The respondents could choose not to answer some of the questions.

At the beginning of the piloting stage the learners were asked to self-assess their EAP-related communicative skills, the ability to write in a formal style among them. They were rated their own performance from very weak (1) to excellent (5). On average, the grading for writing was low ($M=2.8$), only the abilities to lecture or present in English had a lower score (see Figure 1).

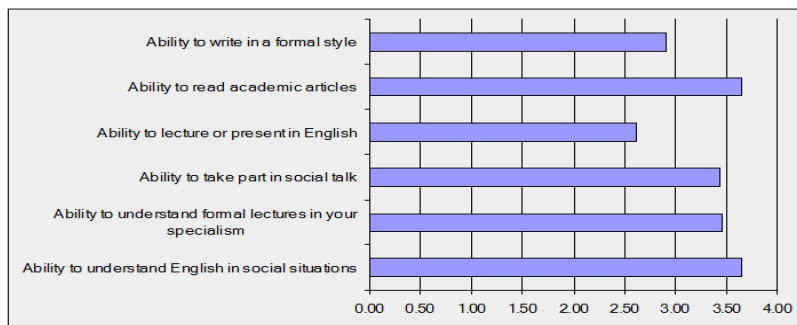


Figure 1. Learners' self-assessment of own EAP-related skills

After the instruction, both instructors and learners were encouraged to complete evaluation questionnaires and give verbal qualitative feedback on the materials and the outcomes achieved. Their responses, both qualitative and quantitative, were analysed and some conclusions were drawn about how materials should be reworked.

Overall, EAP course instructors' feedback on the whole set of materials was positive and included some of the following comments:

The students were highly motivated by the course, they participated in class work actively, and evaluated the course positively.

The materials present an opportunity for the teacher to develop the language skills using highly authentic and motivating materials.

The quality of the materials is excellent and relevant for university teachers. I appreciate a lot the use of authentic texts, modern teaching approaches and techniques, IC technology support.

The learners also provided positive comments:

The materials are varied and at an appropriate level, topical and true-to-life.

The materials were presented in a way that made learning easy, one activity smoothly flowing into another, without going too deep, the quality of the materials being very high.

The piloting materials are practically oriented.

The materials are logical, the tasks are varied and build up one on another.

The Writing module was also positively evaluated both by teachers or learners:

They [the learners] were especially motivated by the tasks connected with abstracts and grants.

The writing part is very logical and clear, it explains all the steps and stages of writing an abstract...

The Writing and Reading sections are structured in a good way and the choice of topics and functions is very good.

Writing was most useful, because in our everyday lives we need to prepare abstracts for articles.

The majority of learners (91.8%) reported they were motivated by the materials, because while piloting was carried out, their vocabulary range was extended and English improved. According to the responses, the materials were well-structured (10 responses), practically oriented (40 responses), and the skills and information acquired were essential for their professional lives (54 responses). Specifically for the Writing module, it was mentioned that tasks are highly relevant and the vocabulary is useful for academic purposes.

Approximately 95% of learners mentioned that they mastered the use of new terms, expressions and language patterns, and acquired new skills such as writing in a formal style, structuring an abstract. Almost two-thirds of the participants (73.5%) agree that the "English

for Academics” materials are more relevant to their needs than a general English course, because it develops specific skills and strategies.

Thus, we could conclude that, in general, the materials satisfied learners’ needs in terms of language, topics, activities and their sequencing. However, some inconsistencies and flaws in the materials alongside with learners’ and, what is equally important, teachers’ needs were identified. The questionnaire format made it possible to understand exactly where a difficulty or a misunderstanding lies and to redesign the materials to correct the flaws.

Both instructors and learners were asked to assess the following: the difficulty of materials, their relevance and variety. Additionally, instructors evaluated timing, the clarity of instructions (in classrooms materials and teacher’s notes), language support, visuals, sequencing of tasks, learners’ motivation. For categories “Timing”, “Difficulty of materials”, “Relevance” and “Variety” the answer options included:

- 1 Completely unsuitable for my class (for teachers) / needs (for learners).
- 2 Of limited value for my class / needs.
- 3 Suitable for my class / needs but with some reservations.
- 4 Suitable for my class / needs in most respects.
- 5 Ideal for my class / needs.

Table 4 represents the teachers’ evaluation of timing, that is the possibility to cover the given material within the given period of time.

Table 4. Timing: amount of material for the time available (instructors’ evaluation of the Writing module).

ANSWER OPTIONS	1	2	3	4	5	RESPONSE COUNT	M	σ
Instructors’ evaluation	2%	8.3%	25%	48%	15.7%	48	4	0.908

While on average the timing was evaluated as “suitable”, some instructors voiced concerns about learners’ inability to cover all the materials included in one lesson within the 90-minute period, especially with mixed-level groups. Although the learners were not required to evaluate timing, they also mentioned this deficiency in their open responses. As in the Writing module learners created the draft of their written product in class and then self- or peer-assessed it according to set criteria, it was not always possible to finish everything in class. One of the teachers, for instance, reported: “*Writing seemed to coincide with the participants’ perception of their level, however timing became an issue, as some participants required slightly more time for writing an abstract*”. There were some comments that peer-evaluation of a draft is one of the most useful and interesting tasks, although some learners and teachers requested such tasks to be set as homework. As one of the respondents wrote, “*it’s rather difficult to persuade the learners to write in class - they consider it to be a waste of time*”. To eliminate this misunderstanding, the product and process approaches to writing were explained in Teachers’ Notes. We also suggested an option that the writing

of the draft can be done as homework, while peer-assessment can take place at the lesson that follows.

In trials it was found out that, on average, a lesson which includes 14 tasks fits the 90-minute time limit best, for this reason, each lesson was restricted to no more than 14 activities. However, additional activities, which can be implemented if time allows, were afterwards added to Teacher's Notes.

The participants (both teachers and learners) were encouraged to evaluate the relevance of the materials, that is, their appropriateness for researchers from various fields of study (Table 5).

Table 5. *Relevance: content areas covered.*

ANSWER OPTIONS	1	2	3	4	5	RESPONSE COUNT	M	SD
Instructors	0	4%	10.2%	49%	36.8%	49	4	0.774
Learners	0.5%	4.3%	18%	51.4%	25.8%	352	4	0.812

Though both instructors and learners rated the materials as suitable in terms of relevance to the learners' needs, the learners whose specialism was pure science expressed the need for more input texts that would not be limited to the area of education. The instructors voiced a similar opinion, too. In their open answers, learners noted that the lack of materials in their area of expertise decreased understanding and motivation, and that wider range of topics could be interesting not only to specialists in narrow fields, but to all academics. There have been a number of studies that looked at whether a common academic core exists or not. For example, Coxhead (2000) created the Academic Word List of 570 word families that constitute specialised vocabulary with good coverage of academic texts, regardless of the subject area. Hyland (2008) studied the functions of the most frequent collocations that fell into three main categories: research-orientated (location, procedure, quantification, description, topic); text-orientated (transition, results, structure, framing); participant-oriented (stance and engagement features) coming to the conclusion that "that the best way to prepare students for their studies is not to search for universally appropriate teaching items, but to provide them with an understanding of the features of the discourses they will encounter in their particular courses" (p. 13-20). That is why, when the materials were revised after the piloting stage, the decision was made to include texts both from humanities and hard sciences but with appropriate *easification*, that is linguistic and conceptual support around them (Bhatia, 1983). It gave the coursebook authors the opportunity to highlight the difference in structure and language of texts from different disciplines. Having representatives of various disciplines in the same classroom can make it easier to bring a range of perspectives on a generic academic topic.

According to the questionnaire responses, the authors hit the target when they decided to structure the materials around the B1 level, as most of the learners and instructors identified the difficulty as suitable or ideal for them / their audience (Table 6). The learners, for instance, reported that "*the difficulty level is rather high, which is close to real life conditions*", and expressed the opinion that the Writing module was positively challenging.

Table 6. *Difficulty: level of materials.*

ANSWER OPTIONS	1	2	3	4	5	Response Count	M	SD
Instructors	2%	2%	24.5%	45%	26.5%	49	4	0.877
Learners	0.5%	4.5%	19.7%	52.3%	23%	356	4	0.803

However, there were a few students who found the materials too challenging or too easy. Such a discrepancy in their opinions may be explained by the heterogeneity of the pilot groups, as a number of teachers reported having both A2 and C1 learners in their classes.

Piloting showed that the materials evoked learners' interest and motivated them, which was mentioned both by the learners and their instructors (Table 7).

Table 7. *Variety and interest level.*

ANSWER OPTIONS	1	2	3	4	5	RESPONSE COUNT	M	SD
Instructors	0%	2%	17%	53.5%	25.5%	47	4	0.772
Learners	0%	7%	22%	48%	23%	340	4	0.845

Nevertheless, there were criticisms such as “*variety and entertainment, in my opinion, leave much to be desired*”. There were calls to diversify the materials in terms of language, texts (which is closely connected to the relevance issue), and tasks. This motivational aspect was also taken into account when revising the course, as the success of any action usually depends on the extent to which individuals strive to attain their purpose, along with their desire to do so.

On the whole, learners' and teachers' responses to the questionnaire appeared to correlate well. The Pearson coefficient for the relevance of the materials is $r=0.95$, the same ($r=0.95$) for the difficulty, and even higher, $r=0.986$ for the variety.

The concerns expressed by the learners in their open responses (Table 8) were also very similar to what the instructors pointed out. Though learners evaluated the materials as relevant and practical, some requests were made to bring more variety to materials and activities, to include texts from other fields apart from pedagogy and humanities, and to provide more activities for practicing academic vocabulary.

Table 8. Concerns and demands expressed by learners.

Concerns and demands	NUMBER OF RESPONSES
Make instructions clearer	30
Add activities on vocabulary and grammar practice	27
Add more spoken interaction (tasks on discussions, giving arguments, role plays)	16
Add materials on technical and scientific topics	16
Change colours, layout, unify fonts	16
Provide more time to complete the tasks	15
Add more pictures, graphs, make more attractive	12
Make materials less difficult	14
Make materials more varied	11
More difficult materials are needed	5

Thus, more variety and flexibility were introduced into the learning materials and Teachers' Notes which corresponds to the needs of adult learners as discussed in the previous section after the results were analysed.

There were a few items that were only included in the instructor's questionnaire. For these categories teachers could evaluate the materials as "Poor", "Not very good", "Adequate", "Good", or "Excellent". These features were assessed only by the instructors, but they were eye-openers to both learners' and instructors' needs.

On average, the evaluation of the clarity of instructions, language support and sequencing of activities was good (see Table 9), however, open answers revealed some areas for improvement.

Table 9. Instructors' evaluation of the Writing materials.

Answer Options	POOR	NOT VERY GOOD	ADEQUATE	GOOD	EXCELLENT	RESPONSE COUNT	M	SD
Clarity of instructions (in learners' materials)	0	3 (6%)	15 (30.6%)	18 (36.7%)	13 (26.7%)	49	4	0.88
Clarity of instructions (teacher's notes)	2 (4.2%)	1 (2%)	13 (27%)	18 (37.5%)	14 (29.1%)	48	4	1
Language support	0	3 (6%)	13 (26.7%)	19 (38.8%)	14 (28.5%)	49	4	0.88
Sequencing of activities	1 (2%)	3 (6%)	8 (16.3%)	21 (42.8%)	16 (32.9%)	49	4	0.95

Speaking about the clarity of instruction, issues such as sentence complexity, intricate wording and unclear reference to other activities were mentioned. Comments and recom-

recommendations such as “*go for less detail in instructions and more straight to the point of the task*” or “*it’s difficult to figure out from the wording of the task what exactly should be done*” or “*you have to read tasks very carefully to understand what is required and, for example, which of the previous tasks that one refers to*” helped the authors to make necessary corrections and avoid inconsistencies. Instructions were easified in terms of language and structural complexity and altered to follow a clear uniform pattern.

According to the instructors’ feedback, there was still some room for improvement related to language support. The target learners’ characteristics being inquisitiveness and learner autonomy, the authors introduced target grammar and vocabulary in context and then summarised the linguistic features for future reference. Overall, the instructors were positive about it; however, some respondents expressed such concerns as insufficient practice and drills.

To cater for those needs, the language support entries were considerably reworked: they were modified from being reference materials into engaging and thought-provoking activities encouraging the learners to notice and analyse the necessary information (Bolitho et al., 2003). Not only were these tasks aimed at the development of learners’ linguistic competence in terms of reception and production, but they also included strategy training and microskills development (such as using appropriate word order, or achieving cohesion and coherence in writing).

As for Teachers’ Notes, the opinions were voiced that teachers need “*more general guidelines: strategies, techniques approaches, ideas for practice activities but not very detailed step by step instruction*”. Additional motivating activities and comments, explanations of some specific academic terms, possible answers for open questions were added. For a more in-depth analysis, see (Bogolepova, 2016).

For the Writing Module in particular, a need for more activities to develop writing microskills was expressed. The necessity for a deeper focus on the formal versus informal style, on synonyms and shades in meaning was also mentioned.

4. DISCUSSION

We have demonstrated how the triangulation of various sources assisted in firstly in the design, and then in the improvement of course materials and the development of new tasks and activities. The first stage, the preliminary needs analysis, helped to discover the skills academics need to master, the texts they have to create in real life and the gaps in knowledge and skills the materials should bridge. These findings were complemented by the authors’ insights drawn from their academic and teaching experience; by the authors’ sociocultural awareness as insiders; as well as by the expertise of a British linguist (the project consultant) being an outsider in the needs analysis process.

During the second phase, before the materials were actually developed, the authoring team considered potential learners’ features and characteristics, which dictated the pedagogical and contextual realisation of materials. Relying on the andragogical theory of adult learning (Knowles, 1990) we analysed the potential difficulties and predicted possible solutions in designing materials for the development of academics’ communicative competence.

Although the materials were positively evaluated in the piloting, the evaluation stage revealed the needs which had not been foreseen at the exploration of the needs stage, which, in its turn, led to considerable amendments to learning and teaching materials. Moreover,

the requests were taken into consideration when the second book in the course was created (Bogolepova et al., 2015). Based on this process of triangulation, the coursebooks have been considerably modified:

- activities focusing on specific language skills development (such as grammar and vocabulary for B2-B2+ level) were added;
- activities to improve micro skills and strategies in academic communication were introduced in the course;
- learners' instructions in Student's books were reworded to bring in more clarity and precision;
- some texts were replaced with texts from various areas of specialism in order to highlight and practise linguistic and structural differences between texts of various genres;
- the course books were supplied with an academic word list containing vocabulary items and their academic definitions.

The Teacher's Guides were also reworked significantly as during the piloting stage the participants expressed the needs for having more advice on how to perform activities in the classroom. The main modifications introduced are the following:

- possible answers for open questions were added;
- some terms were clearly and accurately explained in the Teacher's Guides;
- some sections on language teaching methodology were included (e.g. process and product approaches to writing; the language awareness approach);
- in order to cater for the needs of mixed-level groups, differentiated tasks were developed and suggested for stronger and weaker students.

In considering the results of this study, some factors need to be taken into account that could distort the results obtained. Teachers' attitude could influence learners and their attitude to the piloting materials. For instance, two learners noted that their classes were primarily motivated by the teacher and the teacher's way of delivering the content, and materials came in the second place. Some participants mentioned it was difficult to evaluate the course having covered it only partly. Possibly, more needs or flaws could be revealed if a wider range of materials had been piloted.

5. CONCLUSION

Needs analysis reveals the *needs*, *lacks*, and *wants* potential users experience, and the designers' task is to create learning materials to satisfy these wants and needs, and to dispose of the lacks. However, when the course designers are their learners' peers and, in some cases, instructors, their pedagogical and academic experience allows them to critically analyse these findings and foresee other needs. The awareness of potential users' characteristics and peculiarities also helps authors make appropriate contextual and pedagogical decisions.

While it is widely assumed that needs analysis stage should precede the stage of materials development, our project proves that it is more effective when needs analysis penetrates the

whole course design process actively engaging all the parties (developers, potential learners and instructors). Piloting materials in the real classroom stimulates materials developers to further investigate the needs and wants of the target audience and check if they satisfy them with the designed course. This additional evaluation stage allows the authors not only to reveal any possible flaws in teaching materials but to restructure and adjust their course to meet the learners needs, even the minutest ones. In addition, this type of triangulation assists in identifying the need of potential instructors. As Hyland (2006, p. 74) mentions, we should “see needs as jointly constructed between teachers and learners”, and this is what piloting and triangulated analysis allowed us to do.

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