



# Evaluation of an ESP Coursebook Quality: Design-Based Research

Eva Ellederová<sup>1</sup>

Brno University of Technology, Czech Republic<sup>1</sup>

## Abstract

*This contribution deals with the research methodology and results of one phase of design-based research (hereinafter referred to as DBR) of an ESP coursebook – evaluation of the coursebook by means of a questionnaire survey. The ESP coursebook was designed for the course English for Information Technology taught at Brno University of Technology in the Czech Republic. The main objective of DBR is to establish a link between the design of the coursebook and its iterative testing for the purpose of its evaluation and re-design so that it would be the most appropriate teaching and learning tool for the target group of students. Besides the optimisation of the coursebook quality by means of the production of substantive design principles (characteristics of the coursebook design itself) and procedural design principles (characteristics of the coursebook design approach), the research results should lead to the verification and development of the existing theories of the ESP learning materials development. The first part of this contribution focuses on research methodology, the coursebook and samples characteristics and development of a research tool. The second part provides data analysis and interpretation. Besides the recommendations concerning the coursebook redesign, the research findings reveal similarities and differences in teachers' and students' opinions about the ESP coursebook quality.*

**Keywords:** *ESP coursebook, design-based research, iteration, evaluation criteria checklist, questionnaire survey, design principles*

## 1. Research Methodology

This research is divided into one preparation stage and three realization stages. The *preparation stage* focuses on gaining an insight into the state of the art of DBR of ESP learning materials. Based on the literary research and establishing the conceptual framework, a research problem and research questions were formulated, and research samples and data collection methods selected. The main aim of the preparation stage is to design data collection tools, which include: 1) identification and elaboration of a checklist for evaluating the coursebook, 2) transformation of the checklist into questionnaire items, 3) piloting and modification of the questionnaire, 4) design of didactic pre-tests and post-tests to verify knowledge and skills acquired by the students before and after using the coursebook, 5) piloting and modification of didactic pre-tests and post-tests.

The *first realization stage* involves implementation of the coursebook pilot version into lessons, and consists of the following five steps: 1) evaluation of the coursebook by teachers, 2) pre-testing of students, 3) students' evaluation of the coursebook by means of a questionnaire survey, 4) post-testing of students and 5) data analysis and interpretation.

The *second realization stage* involves redesign of the coursebook pilot version followed by the iteration, i.e. repeated implementation of the coursebook, its evaluation by teachers and students, pre-testing and post-testing of students and the second data analysis and interpretation. The *third realization stage* consists of two parts – the production of substantive and procedural design principles. The aim of this last stage is to characterize the optimal coursebook design, optimal research design and to draw up recommendations designed to improve educational practice. The following chapters focus on one part of the first realization stage, in particular on the coursebook evaluation by means of a questionnaire survey distributed among teachers and students of Brno University of Technology (hereinafter referred to as BUT).

## 2. ESP Coursebook and Research Samples Characteristics

The main subject of the research is a coursebook *English for Information Technology* (Ellederová, 2016) which will be repeatedly implemented in the course English for IT. This coursebook is aimed at the intermediate level learners who study information and communication technology at universities and wish to further their careers in this field. Its aim is to equip the university students with both receptive and productive skills in professional English language at the level B2 according to the *Common European Framework of Reference for Languages (CEFR)* and to enable them to read a wide range of texts including technical documentation, scientific articles and textbooks, write academic



assignments and research papers, listen to lectures, give presentations and participate in seminars and conferences as well as effectively communicate with teachers and colleagues. It consists of fourteen units covering a wide range of topics dealing with information and communication technology and one revision unit. Each unit consists of the main topic, vocabulary practice, reading, listening, speaking and language functions, such as predicting, giving advice and instructions, classifying, qualifying, and describing features and processes.

The research sample “Teachers” consisted of 13 respondents. The respondents who worked as assistant professors prevailed (61.54 %). The length of teaching experience varied from six to ten years (23.80 %) and eleven to fifteen years (23.08 %). Ten respondents were teachers of English language and three respondents were disciplinary teachers of information technology courses taught in English.

The research sample “Students” consisted of 92 respondents from the Faculty of Information Technology, BUT. Most respondents studied English for eleven to fifteen years (54.44 %) and they successfully passed the state school-leaving exam in English language (73.33 %). Five respondents held a Cambridge English Qualification: three of them had the First Certificate in English (FCE) and two had the Certificate in Advanced English (CAE). The research sample can be considered as homogenous because the course English for IT prerequisites are the level B1 according to the *CEFR*.

### 3. Research Tool Design

The design of the questionnaire was based on the evaluation criteria checklist that examines different aspects of the coursebook quality. The evaluation criteria checklist was developed based on the synthesis of my own design and the checklists created by Cunningsworth (1995), Sikorová (2007), Mol and Tin (2008), McDonough, Shaw and Masuhara (2013), and Danaye Tous and Haghigi (2014). Twenty-four criteria were clustered into the following six categories: 1) *General Aims* of the coursebook; 2) *Clear Arrangement*; 3) *Correctness* (correctness in language was evaluated by teachers of English language, professional content was evaluated by teachers of information technology courses); 4) *Learners’ Needs* including the subcategories a) *Adequacy*, b) *Learning Guidance* and c) *Motivational characteristics*; 5) *Language Content* and 6) *Language Skills*. The course English for IT focuses primarily on speaking, reading and listening skills, therefore, the coursebook does not cover writing skills. Students learn and develop writing skills in another course provided by the Department of Languages at BUT.

The evaluation criteria checklist (see Table 1) was transformed into the questionnaire items presenting the respondents with a five-point Likert scale (from strongly agree to strongly disagree). Each item included a box *Reasons Given* where respondents should explain why they specified the particular level of agreement or disagreement. Respondents could also add more comments on and/or objections to the coursebook itself. The questionnaire for teachers focused on all above-mentioned categories of the checklist. The questionnaire for students included twenty items focusing primarily on the category *Learners’ Needs*. Categories *General Aims*” and *Correctness* were left out because students’ evaluation of the coursebook regarding these categories might be irrelevant.

The first version of the questionnaire was piloted with teachers of English language and teachers of information technology courses taught in English at BUT and consequently modified. The final version of the questionnaire was distributed among teachers and students. All collected data was managed and analysed in *IBM SPSS Statistics 25.0*.

Category	Criterion
I General aims	1 Do the aims of the coursebook correspond closely with the course aims concerning the language use?
	2 Do the aims of the coursebook correspond closely with the course aims concerning the professional content?
II Clear arrangement	3 Is the external layout logical sequencing of chapters, topics, vocabulary) clear?
	4 Is the internal layout of texts and tasks clear?
III Correctness	5 Is the subject matter correct and accurate regarding language/professional (field of IT) content?
IV Students’ needs	
A Adequacy	6 Is the level of texts and tasks adequate to the language level of students?
	7 Is the level of texts and tasks adequate to the professional level of



		students?
B	Learning guidance	8 Are different text features for guiding attention (e.g. different typefaces for distinguishing types of subject matter, bold print for highlighting key vocabulary) used in the coursebook?
		9 Do the tasks require problem solving and creative activities?
		10 Does the coursebook contain pairwork or groupwork tasks?
		11 Does the coursebook contain individual work tasks (e.g. those including the answer key for self-monitoring)?
		12 Are the visuals used as an integral part of teaching material?
C	Motivational characteristics	13 Does the coursebook contain enough tasks for recycling and reinforcement?
		14 Are the topics in the coursebook authentic and do they correspond closely with the students' field of study (e.g. examples from real-life situations, importance of knowledge and skills for the future IT career)?
V	Language content	15 Are texts and tasks interesting for students?
		16 Is the range of professional vocabulary in the coursebook adequate?
		17 Does the coursebook support vocabulary learning strategies (e.g. presentation of vocabulary in the text, tasks, with visuals)?
VI	Language skills	18 Does the coursebook contain enough tasks for students to acquire linguistic means for expressing different language functions (e.g. description, classification, comparison)?
		19 Is reading material adequately covered?
		20 Is there a focus on the development of reading skills and strategies?
		21 Is listening material adequately covered?
		22 Is there a focus on the development of listening skills and strategies?
		23 Is material for speaking adequately covered?
24 Is material for speaking (dialogues, role plays, etc.) well designed to equip learners for real-life interactions?		

Table 1: Evaluation criteria checklist for evaluating the coursebook  
*English for Information Technology.*

#### 4. Results of the Questionnaire Survey

Evaluation of the coursebook was made by means of 1) a quantitative assessment of response frequencies for each point of the Likert scale and 2) a qualitative content analysis of the open-ended responses (respondents' comments) in the questionnaire. Comparing each category of the evaluation criteria checklist based on teachers' and students' evaluation of the coursebook, certain differences and similarities can be found. The charts illustrating the overall evaluation of the coursebook quality (cf. Figure 1) indicate that teachers' and students' opinions of the overall coursebook quality slightly differ.

Over 90 % of teachers strongly agreed or agreed with the overall quality of the coursebook, whereas the percentage of students who either strongly agreed or agreed was about 82 %. The following text focuses on presentation of quantitative data and respondents' comments in categories evaluated by both teachers and students.

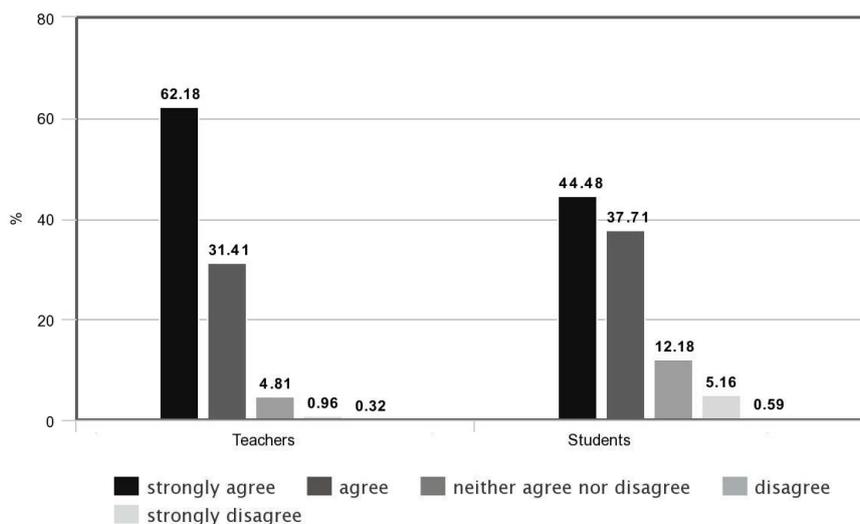


Figure 1. Teachers' and students' overall evaluation of the coursebook.

Although the category *Clear Arrangement* was evaluated by teachers more positively than by students (80.77 % teachers strongly agreed with this characteristic of the coursebook), students were also quite satisfied with the clear arrangement of the coursebook since 45.56 % of them strongly agreed and 45.56 % agreed. Teachers tended to strongly agree (65.39 %) with the *Adequacy* of the coursebook. Most students agreed (almost 47 %) with the adequacy of the coursebook texts and tasks regarding both their language and professional level, which is supported by such comments as, "If the texts and tasks in the coursebook were more specialised in IT field, we might focus on the development of our professional knowledge rather than on language skills that are more important here." or "I think the language level as well as the professional (IT) level was suitable for everybody". More than one half of teachers (56.41 % strongly agreed) positively evaluated characteristics of the coursebook related to *Learning Guidance*. Students were slightly more negative (47.48 % strongly agreed) – they required to add more self-study tasks. Both groups appreciated a large number of tasks for pair and group work and both required to include more problem-solving tasks in the coursebook.

The category of *Motivational Characteristics* was the only one where students were more positive than teachers (85 % of students either strongly agreed or agreed as opposed to 73 % of teachers). A relatively large number of teachers were undecided (23 % neither agreed nor disagreed) and they openly admitted that they were unable to decide if the texts and tasks were motivating for students. One of the reasons might be that students are more knowledgeable about their field of study and the latest trends in information technology than English language teachers who prevailed against teachers of information technology courses. Students' positive evaluation of motivational characteristics of the coursebook is supported by their comments: "I will definitely use a great deal of acquired knowledge in the future. Most things were interesting due to the fact that I chose to study IT."; "The coursebook covers enough topics from the IT field, so everybody should find 'their own cup of tea'."; "Some tasks were less interesting because I wasn't interested in the particular IT issue, but overall, all topics were interesting."; "'Interesting' might be exaggerated, but texts and tasks weren't boring."; "Regarding English coursebooks, the attractiveness of texts and tasks is above average...". The following examples illustrate slightly different teachers' opinions about the motivational characteristics: "The question whether the texts and tasks are interesting for students depends on the needs of the individual."; "Whether or not the texts and tasks are interesting varies from individual to individual."; "The attractiveness of the texts and tasks depends on the level of students' professional knowledge."

In the case of the category *Language Content*, 90 % of teachers positively evaluated this characteristic of the coursebook and students were satisfied with this aspect of the coursebook as well (about 83 % strongly agreed or agreed). Both groups commented favourably on the professional vocabulary range in the open-ended responses, as shown in the following statements by students, "The range of professional vocabulary is adequate. My vocabulary learning went smoothly with the help of the coursebook."; "I hadn't known quite a lot of words before and I learned something new."; "We will need all those professional vocabulary terms for our future jobs in the IT sector. It's easier to remember vocabulary if every key word is repeated frequently throughout the particular unit..." and teachers, "Concerning the support of vocabulary learning strategy, the combination Topic +



Vocabulary Practice + Wordlist is excellent...”; “I positively evaluate vocabulary practice in the coursebook...”. Both teachers and students shared their opinion about the need to add more tasks for acquiring linguistic means for expressing different language functions.

Somewhat bigger differences could be observed in evaluation of *Language Skills*. While over 70 % of teachers strongly agreed with this quality of the coursebook, about 50 % of students strongly agreed or agreed. Students particularly liked the large number of tasks focused on the development of speaking skills (65.22 % strongly agreed). Their comments support this finding: “The beginning of each lesson is great ‘cause it focuses on discussing...”; “I really appreciate all speaking tasks – dialogues, discussions, role plays (especially after bad experience with English lessons in the secondary school), I began to enjoy it.”; “I appreciated information on how to improve my presentation skills and the opportunity to give a persuasive presentation...”; “I’ve found out I can respond to every lead-in question and I liked sharing my ideas...”; “Questions asking if we have already solved something similar or if we solved or used something in the same way were good...” and “I loved role playing best.” On the other hand, only 35.56 % of students strongly agreed in the item concerning the listening skills and strategies where they recommended modifying the listening tasks so that they could allow them to develop listening skills.

## 5. Conclusion

The pilot version of the coursebook *English for Information Technology* enabled students to improve their professional English knowledge as well as speaking, reading and listening skills. Regarding the positive evaluation, the research results reveal that teachers appreciated its clear arrangement, self-study tasks accompanied by the answer key, the content accomplishing the course objectives and adequacy of the texts and tasks to the language level of students. Students welcomed a variety of pairwork and groupwork activities that the coursebook includes. They were also very satisfied with the number of tasks focused on the development of speaking skills, a range of professional vocabulary, graphic layout including highlighted vocabulary and a clear arrangement of units, texts and tasks.

However, the research revealed some weaknesses of the coursebook that will have to be taken into consideration and minimized during its redesign. Based on the questionnaire survey, the following modifications of the coursebook will have to be made:

- 1) add more tasks for the acquisition of linguistic means for expressing different language functions;
- 2) include more material for recycling and reinforcement focused in particular on vocabulary practice;
- 3) increase the level of difficulty of listening passages and add more tasks which will enable students to develop listening skills and strategies;
- 4) add more problem-solving tasks;
- 5) adapt (or add) some tasks that will enable students to work individually.

Students’ approaches and opinions seem to be an important part of the process of the coursebook development since they not only help improve its efficient use, but also push development toward what students and teachers envision as enhancing the language learning process. Pardo-Ballester and Rodríguez (2010, p. 551) confirm that “learner perceptions play a crucial role in helping us get a bit closer to materializing what we imagine”. Ivey (2013, p. 247) also maintains “students’ perceptions on the consequences of their engagement indicated not just growth in reading, but also social, emotional, moral, and individual growth”. Now the pre-test and post-test results must be analysed and then re-design of the coursebook will follow as well as the iteration, which will lead to the production of more design principles related to both theory and practice of ESP coursebook development.

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