

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

الدراسات القائمة على المعايير اللغوية وغير اللغوية في تدريس اللغة الانجليزية لأغراض خاصة

Awicha BENABDALLAH ^{1*},

¹ Research Language Laboratory: FLPATP N°72, Higher School of Management of Tlemcen,(Algeria), benabdallah333@yahoo.co.uk

Received Date: 03/10/2021

Acceptance Date:07/02/2022

Abstract

Designing adequate courses in English for Specific Purposes is a challenging task; it entails a shifting role from a provider of knowledge to an ESP practitioner as a researcher. This study is an attempt to investigate the ways of managing the linguistic and the non-linguistic features in ESP settings. It also examines the role of research in promoting the teaching and learning process. Therefore, a case study has been conducted on six random ESP teachers from institutions in Tlemcen. Data collection was carried out through a semi-structured interview. Results revealed that investigations were conducted for different purposes such as the process of Needs Analysis, syllabus design, acquiring knowledge, negotiating the content of the course. It was shown that there is a positive association between research and the teaching and learning process in the sense that conclusions from those investigations may enable them to know about development in ESP, enhance their skills and quality teaching.

Keywords: ESP; responsibilities; Practitioner; Classroom-based investigations.

ملخص:

تضمن اهمية تعليم اللغة الإنجليزية في جعل المتعلمين أكفاء من خلال تدريبهم من اجل التواصل في المجتمع، الا ان تصميم الدورات التدريبية المناسبة أصبح مهمة صعبة؛ لأنه يستدعي تحويل دور الاستاد من مزود للمعرفة الى استاد باحث. يعد الهدف من هذه الورقة البحثية هو محاولة التحقيق في أهمية الدراسات اللغوية غير اللغوية في صفوف تعليمية اللغة الانجليزية لأغراض خاصة. كما تهدف الى دراسة العلاقة ما بين البحث وتعزيز عملية التعليم والتعلم. هذا ما استدعى القيام بدراسة ميدانية لعينة تتكون من (6) معلمين عشوائيين من مؤسسات مختلفة اكاديمية بتلمسان. تم تنفيذ عملية جمع البيانات من خلال اجراء مقابلات. وعليه توصلت نتائج الدراسة أن هناك ارتباطاً إيجابياً بين البحوث التطبيقية على الفصول الدراسية التطوير الذاتي للمعلم وجودة التدريس.

الكلمات المفتاحية: لغة التخصص؛ ادوار ومسؤوليات الاستاد؛ البحوث الدراسية التطبيقية

* Corresponding author.

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

1. Introduction

The globalization process has a direct impact on all the domains of human life including communication, education, finance, science, and technology. The use of English as a worldwide language, outside the inner circle, is increasingly recognized as a mass requirement and a prerequisite for international communication and interaction. As a result, academics, scientists, economists and even politicians appeal to the inclusion of specialized English courses in English that better match the real needs of our global age (Crystal, 2003).

Thus, to fit the requirements of our language learners in both academic and occupational discourse settings, an increasing interest takes place in universities and academic institutions to incorporate research in ESP classroom. This can be articulated around analyzing the learners' needs, investigating the suitable approaches to ESP course and syllabus design, making adequate and purposeful selections of materials, organizing and sequencing content as well as selecting specific genre and discourse required by the learners to function effectively in their target community. This idea has been suggested by Ibrahim (2019, p.85) "The ESP practitioner should be acquainted with his/her own learners' needs such as goals and different types of their interests, and accordingly, he/she can follow researches on the subject matter and prepare the target materials".

This teaching driven activity becomes one of the challenging roles required by the ESP teacher to develop his/her teaching competence and extend his/her understanding of the processes underlying teaching (Potocka & Sierocka, 2013). It also helps, according to Benabdallah (2018, p. 85) "... to reach a thorough understanding of the different types of research and integrate those results and conclusions in his own ESP teaching situation"

Moreover, most of the ESP teachers are appointed to teach specialized language courses with humanities biased education (ELT). This may result in negative attitudes on their teaching performance (Hutchinson & Waters, 1987). They find themselves, as a result, in a dilemma of how to manage the linguistic and the non-linguistic features in ESP setting at different stages of ESP course design. They may need, for instance, to acquire knowledge of the culture and value the students' target discipline or even disciplinary based knowledge when teaching English for General Academic Purposes (EGAP) to heterogeneous group of learners.

Therefore, this current paper aims at exploring the various ways and techniques the ESP practitioners used in their classroom-based investigations to manage the linguistic and the non-linguistic criteria in ESP settings. It also

sets out to examine the role of research in promoting the teaching and learning process.

This present work aims to find answers to the following research questions:

- Research Question 1: How can ESP teachers manage the linguistic and non-linguistic features in his ESP setting?
- Research Question 2: Do classroom-based investigations fit the ESP teaching and learning process?

In attempt to provide reliable answers to the above research enquiries, the following hypotheses have been reformulated:

- Hypothesis 1: ESP teachers are likely to manage the linguistic and the non-linguistic features in ESP setting through conducting a number of investigations at different stages of ESP course design for various reasons such as the process of Needs Analysis and Identification, understanding the content of the course, the terminology, devising their own syllabi and looking for suitable pedagogical materials
- Hypothesis 2: Classroom-based investigations may be beneficial for both ESP teachers and learners as it may open the door for them to negotiate the content of their courses, develop their own practices, and quality teaching.

2. Literature Review

2.1. ESP Teaching Situation at Tlemcen University, Algeria

Owing to the globalization as a process, Algeria, like other countries around the world, adopted an educational system known as Licence-Master-Doctorat (LMD) in its higher education "...to meet the expectations of the society, and also to be in concordance with the new guidelines and global trends in higher education" (Lamri, (2015, p.89). Moreover, an English language course is implemented in different fields of study to fit the increasing demands of the Algerians students and researchers. In EFL department, for instance, it is presented as a major subject matter where it is used as a language of instruction of the following subjects: Oral and Written Expressions, civilization, Literature, Research Methodology, etc (Benabdallah, 2017; Mebitil, 2015).

In other departments, however, different ranges of English language courses are offered, namely: English for Business and Economics (EBE), English for Social Sciences (ESS), and English for Science and Technology (EST).

In some departments in Tlemcen University such as: of Mathematics, Chemistry, Engineering, this compulsory English course is taught, most of the time, by subjects' specialists who are either post-graduated from English-speaking countries or who develop their underlying competence to use the

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

language. This is due to the lack of ESP practitioners and the inability of EFL part-time teachers to monitor language courses of a technical and scientific content who receive no training in ESP. This idea is stated by Mebitil (2015, p.06) “In practice, during their general training, they receive no guidance on ESP teaching methodology. Therefore, one may say that an ESP teacher was originally a General English teacher who was recruited to teach ESP courses”

Another type of ESP instruction is delivered in the department of psychology where an ESS course has the position of a compulsory lecture only at the master level. Students have the choice either between French or English language in their graduation. In the Higher School of Management and Applied Sciences, Tlemcen, on the other hand, and since their early establishments as Preparatory Schools, English is introduced as an obligatory course (Benabdallah, 2017).

2.2. The Linguistic and Non-Linguistic Features in ESP Classroom

Throughout the history of ESP, and since its emergence as sub-brunch in ELT in the 1960's (Hutchinson and Waters, 1987), ESP instruction has passed through various stages of development where the linguistic and the non-linguistic criteria has been always apparent and played an important role in education, research and teaching methodology.

Since the early existence of ESP, it was primarily aimed at helping learners to cope with the linguistic features of the language. In this regard, register analysis as the first stage of ESP development involved identifying and analyzing subject-specific language usage. To attain this end, the language teachers' research was mainly based on the identification of the most common grammatical features and core vocabulary for a particular target environment. This idea is expressed by Basterkmen (2006, p. 35) who states that “one early approach to ESP, Register Analysis, was concerned with identifying and teaching the grammatical structures and vocabulary seen as of central importance”

In that phase, researchers were based on the premise that each target discourse community is characterized by its distinct features, focusing on the genres in an ESP classroom requires paying much more attention to the different categories of terms at various levels. These are mainly disciplinary - based terms, sub- technical or core vocabulary and general language terms (Basterkmen, 2006; Dudley- Evans & John, 1996; Hutchinson & Waters, 1987)

To go a step further, with the development of Discourse or Rhetorical Analysis phase (Hutchinson & Waters, 1987), ESP education was viewed not only about developing the learners' linguistic competence through teaching

grammar and terminology, but focusing principally on the communicative approach as the English language is required to perform communicative assignments, or in Austin (1962) words' "how we do things with words". According to Dudley Evans & John (1998 , p. 74) the role of ESP teacher is to teach his/her learners the effective use of language therefore "the relationship between form and meaning can be taught and revised in context through analysis and explanation"

From the non-linguistic layer of analysis, the social and the psychological functions of language learning should be also taken into consideration. ESP teaching should be based on the idea of training students to become socially and psychologically integrated into their target environment (Basturkmen, 2006). In this vein, Benabdallah, (2021, p. 9) states that in "... ESP, like any other form of language, entails learning about its target culture as language is used to carry out meanings and facts in its social, economic and cultural contexts".

The psychological criteria in ESP methodology and research, according Hutchinson & Waters (1987) cover those aspects that go beyond the language level, Skill-centered approach and learners-centered approach should be the main focus. Similarly, Basturkmen (2006:97) mentions "language learning does not only occur because learners enjoy conditions favourable to learning. It occurs also as a result of learners engaging in cognitive processes and mental activities". Investigations on the psychological factors tackle a number of aspects related to the theories of Second Language Acquisition, information processing, declarative and procedural knowledge, metacognitive strategies, content-based language instruction and so on (Basturkmen, 2006)

3. Methodology

This present investigation was based on a case study research. This latter is widely acknowledged in education for its ability to retain the holistic and meaningful characteristics of real-life events (Yin, 2009). It was based on stratified random sampling where six (6) practitioners from three different academic state institutions in Tlemcen were selected as a sample population. Data collection process was carried out by means of teachers' semi structured interview which consisted of both close and open end questions to clarify the ideas and cross check the results.

3.1. The Participants

This present study was based on a probability sampling where stratified random technique was opted for. In this regard, six ESP teachers from schools and University of Tlemcen were randomly selected. The participants' age ranges between 34 and 55. They are full-time teachers who receive training in one of these three field of research namely Teaching English as Foreign

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

Language (TEFL), ESP and Sociolinguistics. They have already gained experience in ESP in different contexts at varying levels.

It should be mentioned that the investigation was initially based on twelve full-time practitioners, however because of the time constraint and the teachers' unwillingness to cooperate, the total number was reduced to six and they were sub-divided into three strata, each one is based on two teachers, they are grouped on the basis of their type of ESP they are teaching. Thus, theses sub-groups are made according to the types of ESP argued by Hutchinson & Waters (1987):

- English for Business and Economics (EBE);
- English for Science and Technology (EST);
- English for Social Sciences (ESS);

Table 1. The Sample Population.

ESP Teachers	Affiliation
2 Business English teachers	(2) Higher School of Management, Tlemcen
2 Science and Technology teachers	(1) Higher School of Applied Sciences, Tlemcen (1)Department of department of Science and Technology, university of Tlemcen
2 Social Sciences teachers	(1)department of Political Sciences, University of Tlemcen

3.2. Data Gathering Tool

In this current study, a survey method was carried out for the purpose of gathering the required data. To explore the above mentioned research enquiries, a semi-structured interview was conducted with six ESP teachers. The choice upon such as a data gathering research tool was mainly made on its possibility of using ready-made questions while providing the participants with more freedom to express themselves, add suggestions and recommendations.

To ensure the validity of this research instrument and eliminate any ambiguity or difficulty of the items, the present interview was first piloted to two teachers. In this respect, they were requested to provide any comment about the length, wording, ordering, understanding of the questions and the structure of the interview. Thus, certain items were omitted, replaced and others were rewritten before being submitted to the entire population.

In terms of data collection procedures, it is to be stated that the interviewer begun by explaining the aim of this research instrument

emphasizing the fact that it is used to improve the status of ESP instruction. The interviewees were informed in advance about the items order to establish a relaxed atmosphere. Moreover, the researcher recorded the data using two methods namely a digital audio recorder and a note-taking tools to avoid any potential drawbacks of the technological device. In this sense, writing down some facts enabled the interviewer to ask for further information and explanations.

Therefore, the central aim of this semi- structured interview is to map out the current ESP instruction and examine the role of classroom- based investigations in the teaching and learning process. As for the layout of this research tool, it is made up of three rubrics with a variety of items, which are: close ended items, Open-ended items; Rating scale items. The first part is about the teachers' feedback, whereas the second part sought out the issue of ESP teaching materials. In the third rubric, interviewees were invited to suggest some implications and recommendations to improve the teaching situation.

4. Results

Based on the purpose of the study, the research instrument and the type of the items, qualitative and quantitative analysis was opted for to process different sets of facts and make them subject to multilayer of considerations. The use of quantitative analysis, in this study, covers the presentation of the information into a numerical structure by working out the percentage of the learners' responses in closed questions and rating scale items.

Examples:

- Do you find teaching ESP a challenging task?
- Would you please classify the following processes in terms of effort devoted to classroom based research?

Moreover, qualitative analysis is used to provide an insightful understanding of a particular event e.g. teachers development, and to enable participants to give additional descriptions and explanations based on their personal opinions and experiences. E.g. As an ESP practitioner, how can you enhance yourself development and quality teaching to deal with the linguistic and the non-linguistic features?

4.1. Results of the Semi-structured interview

- Question 1: What is your teaching experience in ESP?

With reference to this first question which aims to check if ESP teachers are novice in this brunch of ELT or they have acquired specialized experience. Results revealed that their teaching experience period ranges from 2 to 10 years.

- Question 2: Which type of ESP course have you taught?

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

Results revealed that though they were recruited to teach a specific type of ESP, they gained a rich teaching experience to instruct different ranges of ESP courses all along their professional life, such as:

- English for Psychology;
 - English for Law and Political Sciences;
 - English for Business and Management for both EAP and EOP;
 - English for Science and Technology;
 - English for Engineering.
- Question 3: Have you received any training in ESP? if yes, explain the type?

With regard this third question, findings revealed that the majority of the teachers (67%) do not receive any form of ESP training, they asserted that they were general language teachers who found themselves teaching such types of courses without any prior knowledge in ESP. As for the minority (33%), they were former post-graduate students of ESP;

- Question 4: Do you find teaching ESP a challenging task? why?

There is a general agreement among all the teachers that ESP is a challenging task because of a number of reasons summarized in the points below:

- Their lack of training
- Their lack of background knowledge in the field they are teaching.
- The lack of ready- made materials
- ESP needs more creativity and innovation for course design
- It should focus on up -dated materials
- It should fit the learners with the new things they may face during their working life.
- The teacher's role is to cope with a diverse variety of learning styles
- Creating a suitable atmosphere for the teaching learning process

As an example, one of the interviewee argues, 'unlike general English teaching where the teacher plays the role of knowledge provider, the ESP teacher deals with the design of the appropriate syllabus adequate with the needs of the target situation'

- Question 5: Have you ever conducted your own research for successful ESP teaching? If yes, for what purpose?

Most of the interviewees believe that research is part of teaching. It is an ongoing process which is undertaken for various purposes such as:

- Analyzing the students' needs
- Designing suitable courses
- Developing appropriate pedagogical materials
- Understanding specialized terminology
- Question 6: Which type of research do you think is more appropriate in ESP classroom?

As for the type of research conducted in ESP classroom, a total agreement was expressed by teachers on its importance, the most common research suggested is a case study followed by an action research. To illustrate the answers, one teacher says, 'Case study is more common and action research is highly recommended among researchers in an ESP context'. Another teacher claims, 'It is better to follow an action research in order to best examine the situation of teaching.'

- Question 7: Would you please classify the following processes in terms of effort devoted to classroom based research? and justify your choice

Results revealed that 40% of the answers stands for syllabus design, followed by 30 % for both course design and materials development, whereas teaching, evaluation and assessment are in the final positions.

- Question 8: Do you need to learn about the content to teach ESP? If yes, what are the strategies do you adopt?

According to the results provided, all the informants confirmed that teachers must learn about the content to teach ESP, being a motivational aspect for the involvement and participation of the learner, the strategies used are broken down into three major elements:

- Collaboration with subject matter teachers
- Cooperation with students
- Reading content-based materials (articles, books, etc.)
- Question 9: According to you, is there any specific methodology to teach ESP?

Informants were asked to state if there is a specific methodology in ESP teaching, the majority of the respondents (83%) reported to have no specific methodology and therefore there is no miracle method to follow but a mixture of methods is better to achieve the underlined objectives of course depending

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

on the underlined aims of each course, in this, the teacher acts a strategist role to adopt an appropriate methodology and to design adaptable course and activities in an ESP classroom. An exception is made for one informant who believed that since ESP is based on the learners' requirements; it must have specific way of teaching.

- Question 10: As an ESP practitioner, how can you enhance yourself development and quality teaching to deal with the linguistic and the non-linguistic features?

Regarding how ESP teachers enhance their development and quality teaching, the following points were reported:

- Conducting different types of research to be expert in that field of research;
- Collaboration between ESP teachers and subject specialist to have an idea about the updated studies, approaches, and learn from their experience;
- Attending extensive and intensive trainings in ESP

4.2. Discussion of the Main Results

With respect to the first research question which was set out to identify the manners the ESP teachers manage their ESP classroom. In the light of the findings and conclusions drawn from a semi-structured interview, results revealed that the linguistic features were mainly related to the process of NAI, course design, syllabus design and material development. It was also found that ESP teachers who taught various forms of courses from different academic institutions (both university and schools) placed a major emphasis on different types of research such as case studies and action research. What is surprising is that other types of classroom-oriented investigations were not taken into consideration such as: experimental research. This study supports evidence from previous observations (Kennedy, 1985; Robinson, 1991; Dudley Evans and John, 1998; Hyland, 2006; Benabdallah, 2018), in this respect, Hyland (2006, p.386) asserts "...teachers have not only become researchers of the genres and communicative practices of target situations, but also of their classrooms."

Unanticipated findings were that teaching, evaluation and assessment were placed in the final positions in terms of research devoted to. A possible explanation for this might be the fact that once the syllabus and course are designed, and the teaching materials are adapted, the ESP teaching methodology is believed to be not different in kind from ELT.

Results on the non-linguistic features in ESP setting revealed that there was a general agreement among teachers that ESP practitioners are not supposed to teach specialized knowledge but rather to know about it to enhance their skills and abilities to teach in a specific context. This entails a change in responsibility from a teacher as a provider of knowledge and source of information to a teacher as an interested student of the subject matter. This idea seems to be consistent with Hutchinson and Waters' views (1987, p.163) "the ESP teacher should not become a teacher of the subject matter, but rather an interested student of the subject matter".

Results also showed that the non-linguistic criterion in ESP classroom can be managed through conducting a desk research which is based fundamentally on theoretical investigations, collaboration with the subject specialists and cooperation with the ESP learners.

The second research enquiry intended to examine whether classroom-based investigations fit the teaching/ learning process. Findings obtained from the same research tool unveiled that the majority of ESP practitioners at the Higher Schools and university lacked training in ESP, as they were general language teachers who found themselves teaching specialized courses especially those designed to Science and Technology, classroom based research enabled them to know about the latest studies in ESP, to have an idea about the systematic way of Needs Analysis and Identification, to acquire specialized knowledge and skills. Moreover, based on those results, they can assess their students' language improvement, evaluate their course objectives and to a certain extent enhance their quality teaching and self-development.

5. Conclusion

This case study was conducted on six ESP teachers in both schools and university of Tlemcen. Its main aim is to investigate the various ways for dealing with the linguistic and the non-linguistic aspects. Data gathering process was carried out by means of a survey method. The analysis of the findings in this present research paper revealed interesting results regarding the use of classroom based research in an ESP context. It was concluded that ESP teachers, at different academic institutions, undertake a number of classroom based investigations for managing the linguistic and non-linguistic features for various purposes such as the process of Needs Analysis and Identification, course design, materials development and acquiring background knowledge in the field of study they are teaching. Based on the analysis of the results, one can say that the first hypothesis is confirmed.

Findings also revealed that there is a positive association between classroom- based investigations and the development of the teaching and

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

learning process. Most teachers agreed on the idea that these types of studies helped them developing their teaching practice and professional skills by bridging the existing gap between theory and practice, attending different training sessions, and collaborating and coordinating with ESP learners and the subject-specialists. Therefore, based on the analysis of the findings, one can say that the second hypothesis is also confirmed.

This study is limited in some ways to a small number of participants which may not allow to the generalization of the results to the entire population, further studies may include larger number of teachers and students. The choice of a teacher semi-structured interview is also one of the limitations; other research instruments would elicit insightful data about the teaching learning process in ESP context such as classroom observations and students' questionnaire.

References

- Austin, J. (1962). *How we Do Things with Words*. Cambridge, MA: Harvard University Press.
- Basturkmen, H. (2006). *Ideas and Options in English for Specific Purposes*. New Jersey, London: Lawrence Erlbaum Associates, Inc.
- Benabdallah, A. (2018). ESP Practitioners: Bridging the Gap between Research and Education. *IOSR Journal of Research & Method in Education* 8 (1), 83-88 <https://doi.org/10.9790/7388-0801018388>
- Benabdallah, A. (2021). *Communicative Competence as a Sociocultural Component in ESP Teaching Methodology*. *English for Specific Purposes World*,26 (22), 1-12
- Benabdallah. A. (2017). *Raising Business Learners' Awareness through Authentic Materials in an ESP Classroom Context: Case of 2nd year Students at the Preparatory School of Economics and Commercial Sciences*, Unpublished Doctorate Thesis. Tlemcen University.
- Burns, A. (2010). *Doing Action Research on English Language Teaching*. New York: Cambridge University Press.

- Cornwell, S. (1991). Interview with Anne Burns and Graham Crookes. The Language Teacher, 23(12), 5-10. <https://jalt-publications.org/articles/24561-interview-anne-burns-and-graham-crookes>
- Crystal, D. (2003). English as a global language. Cambridge: Cambridge University Press.
- Dudley-Evans, T., & John, M. (1998). Development in English for Specific Purposes. Cambridge: Cambridge University Press.
- Hutchinson, T., & Waters, A. (1987). English for Specific Purposes: A Learner-Centered Approach. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511733031>
- Hyland, K. (2006). English for Academic Purposes: An Advanced Resource Book. 270 Madison Ave, New York, N Y 10016.
- Ibrahim, H. (2019). The Role of an Ideal ESP Practitioner. Open Journal of Modern Linguistics, 9, 76-91. <https://doi.org/10.4236/ojml.2019.92008>
- Kennedy, C. (1985). Teacher as Researcher and Evaluator: One Suggested Solution to some Recurrent Problems in ELT and ESP. Presented at the National ESP Conference, Vitoria, Brazil <https://files.eric.ed.gov/fulltext/ED267583.pdf>
- Lamri, C. (2015). Promoting the Reading Skill through Blended Learning for ELP Students: The case of Master's Students in the Faculty of Law and Political sciences at Abou-Bekr Belkaid University, Tlemcen, Unpublished Doctorate Thesis.
- Mebitil, N. (2015). Towards Enhancing the ESP Practitioners Qualifications through Implementing In Service Teacher Training Programme: an Action Research on the Newly Appointed ESP

Classroom- Based Investigations on the Linguistic and non-Linguistic Criteria in ESP Setting

Practitioner at the Physics Department of AbouBekr Belkaid University, unpublished Doctorate Thesis.

- Potocka D., & Sierocka H (2013). The ESP Teacher as Researcher. *Studies In Logic, Grammar And Rhetoric* 34 (47), 175 –188. http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.doi-10_2478_slgr-2013-0029
- Richards, J. C. (2001). *Curriculum Development in Language Teaching*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511667220>
- Robinson, P. (1991). *ESP Today: A Practitioner's Guide*. Hemel Hempstead, UK: Prentice Hall International (UK) Ltd.
- Tzoannopoulou, M. (2015). Rethinking ESP: Integrating Content and Language in the University Classroom. *Social and Behavioral Sciences* 173, 149 – 153. <https://doi.org/10.1016/j.sbspro.2015.02.045>
- Yin, R. (2009); *Case Study Research Designs and Methods* (4th ed.). Thousand Oaks, CA: Sage. <https://doi.org/10.33524/cjar.v14i1.73on>.