The purpose of a diagnostic English language testing is to help students to assess the level of English language skills and to provide students with effective training tools to improve their English language skills. This kind of test is usually designed and intended for students who reached lower intermediate level of communicative competence in reading, listening, speaking and writing skills and it is based on comprehensive needs analysis. However, it can also be adjusted for students who have reached intermediate, upper-intermediate and advanced knowledge of the English language. Conjointly, this paper also examines the use of qualitative data analysis to improve students’ English language performance while taking an ESP course, which gives an insight into what teacher needs for a successful English language course and lesson planning, and that means having an overlook into gray areas of the English language that largely cause problems for students. Acta Medica Medianae 2012; 51(1):31-36.

Key words: diagnostic language test, qualitative data analysis, English language learning, teacher, students

Introduction

Merriam-Webster’s Online Dictionary defines “diagnosis” as a) the art or act of identifying a disease from its signs and symptoms b) the decision reached by diagnosis c) investigation or analysis of the cause or nature of a condition, situation, or problem, and d) a statement or conclusion from such an analysis. In the light of our discussion herewith, however, applying the notion of “the decision reached by diagnosis” to the language area is perhaps not quite precise as is usually the case with the human body, but appropriate in the way that a teacher actually makes a diagnosis of the students’ English language needs.

So, in order to determine the diagnosis, one needs a diagnostic test. Generally speaking, the diagnostic test is defined as any kind of medical test performed to aid in the diagnosis or detection of disease, and it is used a) to diagnose diseases, b) to measure the progress or recovery from disease, and 3) to confirm that a person is free from disease. When applied in the language area, the diagnostic test (given at the beginning of the year) can help a teacher plan instruction, determine how much students have learned so far and what the teacher needs to re-teach (test given in a midterm), and provide an assessment of a student’s total learning for the class (test given at the end of the term, and prior to the final exam). Overall, a diagnostic test can show a teacher and a student how much the student has grown linguistically or in knowledge of a subject.

Why choose diagnostic testing

Diagnostic testing is an important tool for educators who want to know where their students are academically in order to bring those students to where they need to be, and if educators want students to move forward, they need to identify where they have started. A diagnostic test measures where a student is in terms of knowledge and skills. It will assess the abilities that student has at a particular time to solve problems or answer questions in a subject area. Thus, a teacher uses a diagnostic test to assess students’ strengths and weaknesses in the subject area. It shows the teacher how much students know about the subject and also how much more they still need to know before they leave the course.

Diagnostic tests can be especially beneficial for teachers who have multiple classes to teach within one subject which is the case in English for Specific Purposes course at the University of Niš Medical School in case of three study groups: pharmacy, registered nursing and associate nursing degree. A diagnostic test shows that pharmacy
students are comfortable with communication in English, registered nursing students are not while associate nursing degree students still need some practice in that area.

**Mapping a route for a diagnostic English language test**

To begin with, we can say that a distinction needs to be made between diagnosis in relation to the mother tongue (that students presumably should excel in) and especially diagnosis in relation to the knowledge and use of a foreign language. This means that students should understand fundamental language concepts and know the structure and conventions of the English language. Hence, the students should primarily:

a) Understand the nature of language and basic concepts of language systems (e.g., phonology, morphology, syntax, lexicon, semantics, discourse, pragmatics) and use this understanding to facilitate learning.

b) Know the functions and registers of language (e.g., social versus academic language) in English and use this knowledge to further improve English language proficiency.

c) Understand the interrelatedness of the four skills (listening, speaking, reading, and writing) and use this understanding to develop English language proficiency.

d) Know the structure of the English language (e.g., word formation, grammar, sentence structure) and the patterns and conventions of written and spoken English.

Conversely, a teacher should be aware that there are certain circumstances that surround each student (for instance, which of Gardner's eight intelligences is the most developed) (1) as well as major language problems and barriers to learning English as a foreign language, especially learning English for Specific Purposes, in our case nursing and pharmacy.

For instance, students enrolled in the registered nursing study (RNS) program at the University of Niš Medical School, attend English language classes during their junior year without high expectations of actually learning the language excepting some medical words. Throughout their studies, their knowledge of English for communicative purposes and writing is very poor with no improvements (in the conducted survey at the beginning of the winter term, 40 out of 40 students grade their communication and writing in English on the scale from 1 to 5 with 1). On the other hand, their skill of listening, silent reading and understanding medical texts is good and can be graded as improvable (40 out of 40 students grade their listening, silent reading and understanding English on the scale from 1 to 5 with 2.5).

Interestingly enough, associate nursing degree (AND) students, grade their English for presentation skills with 3 (improvable), albeit they graded their written, listening and communication skills with 1.8.

Conversely, expectations of pharmacy students are considerably higher because their performance in English language is graded very good to excellent (in the conducted survey at the beginning of the winter term, 70 out of 80 students grade their communication and writing in English on the scale from 1 to 5 with 4.8). Their skill of listening, reading and understanding texts related to pharmaceutical sciences is also very good and graded on the scale from 1 to 5 with 4.8 by 70 out of 80 students. As their weak points, students mostly indicate application of grammar rules in communication and writing (70 out of 80 students grade their use of grammar in communication and writing with 3). This is exactly the point that sets the stage for diagnostic tests.

**Diagnostic assessment procedure in English for specific purposes**

Generally speaking, anyone involved in language education today recognizes the importance of testing and assessment. As a consequence, an important part of English language teachers’ expertise includes a more thorough understanding of assessment principles and procedures. The basic requirement of any assessment procedure is that a teacher must gather a sufficiently large sample of the student’s performance to permit valid and reliable generalizations and, to this end, add to diagnostic procedures in particular the imperative to analyze data quickly and accurately and produce feedback in the form of precise qualitative statements.(2,3) To develop the latter point as a rule the teacher should identify few areas on which they feel the student could realistically work and thereby achieve a significant improvement in their English. For instance, in case of junior year RNS students, understanding, reading and translating medical texts, in case of associate nursing degree students, further improvement of communication skills for presentation purposes and in case of pharmacy students, communication practice and implementation of grammar rules in speaking and writing.

Assuming the teacher should have at her disposal both spoken and written data, students are asked to give a short ten-minute PowerPoint seminar presentations (that the teacher comments in the end) in front of their colleagues related to their undergraduate majors, for instance organic chemistry, clinical pharmacy, bio-pharmacy, diseases and conditions etc. (Examples 1. and 2.)

The aim of this procedure is to improve spoken presentation skills (this means use grammar correctly in the spoken language). The students are given a detailed feedback after delivering presentations by a teacher and fellow-students. One month later, they are offered the opportunity of doing another presentation so that they could gauge the extent of their improvement. Almost all students without exception comment in favor of doing PowerPoint presentations in this way.

Gathering written data, however, is always considerably easier: the students of pharmacy are asked to produce short analytical essays during obligatory English language classes before

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they finally produce an essay under exam conditions. This is exactly where the teacher sees all gaps in grammar and spelling (if any) because they surface from the first sentence written. When the essay is corrected, it is advisable to attach comments in form of a diagnostic sheet. For instance, instead of underlining all mistakes in the essay in red, the teacher comments areas of language to be improved (for example, verb forms referring to present perfect or definite/indefinite/Ø article) (Example 3.) This is also a way how best to approach the whole area of student error that will eventually lead to language improvement. Moreover, the idea of including essays into the final exam revolves around appreciating a language as a system of choices which are exercised and consequently developed.

Example 1. Two slides selected from students’ Power Point presentations. The first one was made by a junior year student of pharmacy titled Hippocrates - the Founding Father of Modern Medicine and the second one was made by an AND student titled Osteoporosis. The slides are displayed in the original form and not corrected by the teacher. As indicated above students are given feedback after delivering presentations.

Hippocrates wrote about treating sick people. His writings are still important to doctors today. He said many ideas that doctors still study.

An idea he wrote about is “patient confidentiality”. This means that doctors cannot tell anyone else what their patients tell them. Another idea is that the doctor cannot do anything to kill a patient. These kinds of ideas are part of medical ethics.

Example 3. Sample topics of a short analytical essay (+ 500 words) where students of pharmacy (language level intermediate, upper-intermediate and advanced) choose one of the three topics to write about. Students’ up close and personal ideas are more than welcome and therefore count the most.

1) You have just completed your 300-page autobiography. Please submit page 217.

2) Imagine you have written a short story, film, or play about your last four years. Briefly describe the one moment or scene that your audience will most remember from this autobiographical piece. What will they learn about you from that moment?

3) Reflect on these words of Dorothy Day: “No one has the right to sit down and feel hopeless. There’s too much work to do.” What is “the work to be done” for your generation, and what impact does this have on your future as a leader? Write a creative, reflective, or provocative essay.

Up to now it should be clear that regardless of the context in which English language is used, whether in a lecture hall or outside of it, mistakes are a part of the learning process, they are accepted and tolerated as part of the whole communicative experience of talking to someone performing in a language that is not a native one. Nevertheless, the responsibility for dealing with these mistakes oftentimes seems to shift - instead of suggesting an intensive course syllabus of remediation for the students making them, teachers, instead of looking for a problem, blame students for not making a greater effort to understand what they are being taught. Instead, teachers should move to a position where they will able to provide exercises for the students which will promote superior strategies for learning a foreign language. (4) This is actually the crux of a problem: teachers still use somewhat outdated placement tests that are only superficially concerned with the language performance of the individual student and the information they provide on that individual – for example, obtained 80 points out of a possible maximum of 100 points – is purely quantitative. This is an ascertained fact because practice has shown that during their English exam students merely reproduce the crammed material from their student’s book and do not answer questions with understanding and logical reasoning. As opposed, diagnostic tests are initially designed and implemented according to their own set of criteria and standards for a particular class of students. When implemented at the onset of instruction, diagnostic tests, along with classroom observation and student classroom performance, can help identify and target difficult areas for English language learners and thus, help drive initial instruction. Teachers, then, use the knowledge, demonstrated through student performance, to determine the type of intervention strategies needed. One such measure might include various reading strategies for instruction, role plays, communication practice on a given topic or writing strategies as in writing short analytical essays. Therefore, what the teacher needs for
successful course and lesson planning is not a points total for each student, but qualitative data indicating where do the students still have problems and accordingly work to improve them, that is, improve weak language areas (1,3,5-7) - in case of pharmacy students comprehensive study and implementation of grammar rules in communication and writing, in case of junior year RNS students, improving the four skills and learning vocabulary through translation exercises, and in case of AND students improvement of the four skills through presentations. To this end, Mousavi postulates:

“Diagnostic tests are the reverse side of achievement tests in the sense that while the interest of the achievement test is in success, the interest in the diagnostic test is in failure, what has gone wrong, in order to develop remedies.” (5).

Simply put diagnostic tests as opposed to standardized language tests help the teacher identify specific areas of student weakness and difficulty so that an appropriate remedial program can be made. When implemented effectively, diagnostic tests help guide instruction and areas of classroom planning in early improvements in language. (8-10). On the level of lesson planning, diagnostic tests can be tailored and adapted to help teachers work with struggling learners (in our case junior year RNS students). As a result, these students, to whom the language course means just a passing score, open their minds to something in English apparently for the first time and they like it.

Knowing what students can do has significant implications for further instruction. Teachers can diversify instruction by providing more opportunities to connect written and oral work. On the curriculum level, teachers can plan around areas of word and sound recognition that meet the needs of their mixed ability classes which is oftentimes the case. They can also plan reading and translation activities and connect these experiences with listening comprehension, translation exercises and students’ feedback (3).

Conjointly, diagnostic tests provide the teacher with early information about the students so they can plan tailored and/or task-based lessons to deal with students who might be at-risk of learning a new language. This is how diagnostic assessments can help refine areas in language instruction. This mostly depends on students’ knowledge at the moment they start attending lectures in English and especially ESP.

**Delineating a custom diagnostic test in English for specific purposes course at the University of Niš Medical school**

Contriving a proper diagnostic English language test (at the start of the term, in midterm and at the end of the term) at University of Niš Medical School is not an easy task. This means that in order to properly assess students’ knowledge and understanding of what they have been taught during the course four different tests for the beginning, pre-intermediate, intermediate or advanced language level need to be made, each focusing on a particular skill area: reading, writing, listening, grammatical structures and vocabulary. Each diagnostic test provides test instructions, explanations and advice in English and enables students to become aware of their strengths and weaknesses. It should also be noted that tests given throughout the term for practice purposes and prior to the final exam resemble reading and vocabulary tasks. More importantly, these tests are unique way of ousting cramming in favor of brain-storming and troubleshooting. As an example, the diagnostic test specially designed for pharmacy, AND, and RNS students helps those students, whose level of English is beginner to pre-intermediate, to learn the use of pharmaceutical or nursing vocabulary in English they will need for their future careers in pharmacy or nursing.

The following test is an example of a diagnostic test for students of pharmacy (language level beginner to pre-intermediate) leading to the final exam in ESP. It comprises fifteen questions and a portion of a text (selected from the student’s book) to be translated from English into Serbian. Following are few examples of the multiple choice questions:

1. Research simply defined is
   a) biomedical science.
   b) a medical problem.
   c) the conduct of investigations aimed at obtaining new knowledge and information.

2. OTC counseling means
   a) talking to patients.
   b) prescribing drugs.
   c) counseling patients about self-treatment strategies.

3. Compound is
   a) collection of atoms.
   b) a substance with a fixed ratio of chemical elements.
   c) nanotechnology.

4. Salt is
   a) a handy way to express how acidic or alkaline a water solution is.
   b) the combination of an anion (− ion) and a cation (a + ion).
   c) the neutralization of potassium hydroxide.

5. The QuEST process helps the pharmacist to
   a) prescribe medications.
   b) quickly and accurately assess the patient.
   c) Counsel patients about self-care and non-prescription drugs.

Pharmacy students, whose knowledge of English is intermediate, upper-intermediate and advanced, have a different diagnostic English language test comprising fifteen questions related to pharmaceutical sciences, a business
email to write and a short analytical essay (as indicated on page 6), specifically designed to help implementation of grammar rules in the written language. Following are few examples of exam questions:

1. How do you understand this sentence: Connecting through culture, celebrating diversity. How does it coincide with intercultural communication? Explain the importance of intercultural communication important in today's world.
2. What are the five essential areas of a pharmacist's professional responsibilities?
3. Define OTC and explain how verbal and nonverbal messages influence communication with patients in the OTC area.
4. Give short definitions of acids, bases and salts and explain their overall importance in brief.
5. What are the two marketing classes of drugs in every country in the world?

Lastly, the most important features of such tests are threefold:
1. The diagnostic feature of a diagnostic test must be to provide meaningful information to students which they can understand and upon which they can act.
2. The feedback must be given as soon as possible after the test.
3. Feedback from a diagnostic test helps to promote student's autonomy in learning a language, to give students a realistic assessment of their own abilities and how far they have already come in learning the foreign language and to raise awareness about what is involved in language learning.

Conclusions

Diagnostic tests are very important for English language learning because they are task-based and target both weak and strong language areas. More importantly, diagnostic testing gives tailor-made solutions for particular language problems to be worked on in class, since language teachers still tend to see students en masse both to be taught and tested. Being able to give at least some of the students the kind of individual diagnosis that has been dealt with in this paper would help create a whole new kind of professional relationship between a teacher and a student, similar to the one existing between a pharmacist and a patient and/or a nurse and a patient. Extending the comparison, the diagnostic test might be regarded as the equivalent of the prescription or the referral to a specialist which the GP hands to a patient or advice that the pharmacist gives to a patient in the OTC area.

Thus, the teachers should be able to offer a diagnostic and/or advisory service to at least a few students.

At present, however, most language teaching and testing around the world provide the kind of tripartite service for students: teach language courses, conduct exams and produce learning and test practice materials. The shortcomings of a diagnostic test, however, can be large groups of students (as is the case at the University of Niš Medical School) so that the kind of service advocated here could be provided for all of them which leaves options open to advanced students only, that is, those who need English for professional reasons, and approximate to native-speaker level. For instance, comparatively few of the students attending English for specific purposes go on to make presentations and take part in high-level discussions at international conferences and meetings, but then again it is precisely the selected few who probably benefit the most from this course that is the very reason why teachers should leave advanced students enough free room to conduct their own needs analysis with the help of the diagnostic tests.

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Ključne reči: dijagnostički jezički test, kvalitativna analiza podataka, učenje engleskog jezika, profesor, student