Collaborative Learning in the Speech-Language Pathology Degree: SLP from day one

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Abstract

The Speech-Language Pathology (SLP) Degree at the Universitat Autònoma de Barcelona (UAB) involves a significant heterogeneity among students and professors. The objective of the present project is to explore how a collaborative learning context that takes advantage of such heterogeneity, may contribute to improve a first year basic course. Data are gathered from focus groups, interviews, questionnaires, surveys, and documents generated by the different participants in the project. It is concluded that collaborative learning facilitates teaching and learning SLP from day one, and increases the satisfaction of the involved students and professors.

Text of paper

Introduction

Traditionally uneven power relations have been established between University students and expert-teachers. However, research works on teaching and learning since the 1970's show that learning processes benefit from equitable power relations between the involved players. The learner is not a subject who passively awaits for the teacher to instruct him or her, but an active subject that integrates, interprets and acts on the received information, through an individual framework built upon his or her own life experiences (Beecham, 2005).

Collaborative learning is a learning methodology that promotes the equitable distribution of power. Collaborative learning has been successfully implemented in the training of SLP students (Baxter, 2004. Cited McAllister, 2005). Such strategies promote that the future SLP therapist establishes equitable power relationships with his/her users (Beecham, 2005) and with other health professionals with whom he or she will need to collaborate.

In our University, a significant heterogeneity of profiles is present amongst students and faculty in the SLP Degree, particularly in the Voice Therapy specialty. Faculty is made up of professors from different areas of expertise and with different professional profiles. Thus, a given faculty team may gather professors with a strictly SLP professional profile, and professors with a strictly academic profile involving a high level of expertise in a very specific area of basic scientific knowledge.

A large deal of heterogeneity is present amongst students too, with regard to age, academic background and vocal expertise. Such diversity of personal experiences implies that students have different levels of: knowledge of the vocal instrument, skills on voice production, vocal health, and motivation towards the Voice Therapy specialty. Thus, a given class may gather a student who enrolled into the SLP Degree based on her interest as a singer and singing professor, who now wishes to deepen her knowledge on normal and altered voice, or a

student unknowingly experiencing significant voice problems, unaware of the difficulties that such condition may represent for his future professional practice.

Objective

The objective of this project is to explore how a collaborative learning context, that takes advantage of the heterogeneity amongst the different agents involved in the teaching-learning processes in the SLP Degree at the UAB, may contribute to improve a first year basic course.

Development

Context

The collaborative learning context presented in this communication is part of iVEU (Intervention in Voice and University Education), an innovative project that links education and a voice therapy service. iVEU is directed from the *Voice Unit*, a vocal therapy health service in the School of Psychology of the UAB. iVEU integrates faculty and students from different courses in the SLP Degree. The project started in fall 2011, and has since been under evolution based on continued evaluation.

The iVEU project currently involves six core courses and their corresponding professors and students: first year *Acoustic Physics and Audiology*, second year *Larynx and Vocal Tract Pathology*, second year *Voice Disorders, Assessment and Intervention*, third year *Practicum II*, fourth year *Practicum IV*, and fourth year *Graduation Thesis.* The project is built on different collaborative learning experiences across the participating courses. Such activities knit a network of experiences to attract and facilitate the access of students at different academic stages to vocal SLP (Calaf, 2012).

The communication presented here reports the results of the analysis of one of such experience, which integrates the courses *Acoustic Physics and Audiology, Practicum II and Practicum IV.* The experience started during academic year 2011-12 (although that first year higher level students were recruited amongst *Graduation Thesis* students instead of *Practicum*). The results of an action research carried out to evaluate the initial results, with the objective of a continuous improvement of the experience, showed that the innovation allowed access to vocal SLP to all the participants, both students and professors (Calaf, 2012a). Another important finding was the relevant role that SLP professors may play to help professors responsible for basic courses focus on the educational needs of future SLP professionals. Thanks to his participation in the project, the *Acoustic Physics and Audiology* professor identified gaps in contents, introduced new contents during the course that same academic year 2011-12, and decided to carry out an in-depth transformation of his course, both in contents and in methodology in the next academic year 2012-13 (Calaf, 2012b).

Method

Data were collected from a focus group of *Acoustic Physics and Audiology* students, an interview with the professor of the course, a questionnaire addressed to all students enrolled in the course, the University official surveys on the students' opinions about their courses, and documents generated by the different participants in the project (laboratory classes reports, syllabus, handouts, exams, students' papers).

Discussion of the results

During academic year 2012-13 the experience started with a seminar by the iVEU director. The seminar was integrated within the *Acoustic Physics and Audiology* classes, during session 8 of the course, so that students could know of the project at the very beginning of their SLP degree studies.

Among the innovations generated by the professor, it is worth mentioning a conceptual map that places *Acoustic Physics* and *Audiology* in the context of SLP. The map is discussed during class 1, and works as a roadmap during the term and also with respect to the students' future professional activity.

Later in the term, *Acoustic Physics and Audiology* students are individually called into the *Voice Unit* for a session of voice recording, carried out by *Practicum II and IV* students, following SLP protocols for vocal sample collection. Those voice recordings are the starting material for different experiences. First, each *Acoustic Physics and Audiology* student is provided her voice recordings to be analyzed in the so-called *Practical activity 6*, which is one of the major course additions in 2012-13. In this activity the professor introduces innovative elements addressing the achievement of basic competencies in the analysis of vocal quality, both at the acoustic and perceptive levels. With *Practical activity 6* students have a chance to become aware of their own voice, discovering its acoustic and perceptive characteristics. To this respect, participants in the focus group stressed the role of *Practical activity 6* as the course activity with which they acquired more SLP competencies, as it involved analyzing their own voices.

Secondly, the same recordings, together with other data gathered in the virtual classroom by the same *Practicum* students, are used to screen for SLP students suffering, or at risk of suffering, dysphonia (because *Acoustic Physics and Audiology* is a core course, all new SLP students are screened each year). Upon detection, requests for referral to external health professionals are issued from the *Voice Unit*, so that the affected students start a healthcare process. A parallel healthcare process is also started within the SLP Degree, carried out by advanced SLP *Practicum* students, under the supervision of the *Voice Unit.*

Changes are also detected between the theory tests in 2011-12 and in 2012-13. Questions in the last exam are more clearly focused on SLP relevance. A significant increase is detected in the number of questions addressing voice quality analysis, which is an essential competency in the training of SLP pathologists, and yet, was unattended before the integration of *Acoustic Physics and Audiology* in the iVEU project. Students who pass the course now meet a satisfactory basic competency in voice quality analysis, not only at the acoustic level but also at the perceptive level.

The results of the project here presented show that thanks to the implementation of the innovation, students' perception of the value of the learnings acquired in the *Acoustic Physics and Audiology* course has very much improved. Thus, in the online survey of students' satisfaction, carried out by the University Office for Quality, highly significant changes are observed in the answers to one of the questions: *I believe that what I am learning with this course is indeed valuable for my training.* In academic year 2011-12, out of 14 students who responded the survey, 4 said to strongly agree (28%), 6 agreed, 2 were indifferent, 2 disagreed, none strongly disagreed. In the 2012-13 survey, out of 28 students who responded, 20 said to strongly agree (71%), 6 agreed, none was indifferent, 2 disagreed, and none strongly

disagreed. In total, 93% of all the students who responded the last survey either agree of strongly agree that the learnings are valuable. In the same sense, participants in the focus group at the end of the term expressed that had it not been for *Acoustic Physics and Audiology*, they would still ignore what SLP is about.

The collaborative learning context of iVEU encourages students to establish equitable power relations between them. More experienced, advanced students relate with more junior students as equals. But also the relations between professors provide students with a model of a professional relation with an equitable distribution of power. The *Acoustic Physics and Audiology* professor (who has an academic profile and an expertise in voice acoustics, which is a very specific area of scientific knowledge within SLP), and the professor responsible for the project (who has a more professional, SLP expertise) learn together. First, a better understanding of which contents of *Acoustic Physics and Audiology* are of use to SLP therapists has been achieved by the professor of the course. In addition, the professor leading the iVEU project has improved her understanding of the acoustic analysis of voice. Such professional exchange between professors has been instrumental in the development of renewed theoretical and practical contents for the *Acoustic Physics and Audiology* course, much better adapted to the needs of SLP therapists. This is actually the first time that such claim can be made since SLP studies started at the UAB in 1997-98 (the current *Acoustic Physics and Audiology* professor took over the course in 2008-9).

Conclusions

Results indicate that as a result of a collaborative learning context, that takes advantage of the heterogeneity amongst the different agents involved in the teaching-learning processes in the SLP Degree at the UAB, it is possible to better adjust a basic course to the Degree where it is given. The innovation allows teaching and learning SLP from day one, and increases the satisfaction of the involved students and professors. Such transformation is possible because in one such context all the involved agents (both students and faculty) learn in a collaborative manner.

Results encourage the need to continue working in this direction, so that SLP Degree students apperceive the value of the learnings and skills acquired in basic courses, and experience that they are learning vocal SLP from day one. The experience may likewise be useful for the rest of professional areas of expertise in the SLP Degree.

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Questions and/or considerations for discussion

The experience presented here indicates that collaborative learning involving students and professors is of help to develop basic courses and make them better adjusted to the Degree they belong to. However, the implementation of collaborative learning contexts like the one presented here is a highly demanding task, which requires a thorough coordination of the different agents involved in the design and implementation of the activities. Could the complexity of future developments of the experience be cut down? Also to facilitate broadening it to include other related areas? Which should the roles of the different agents be? Which role should the Degree Coordinator play, if any?