SERVICE LEARNING METHODOLOGY REINFORCES THE ACQUISITION OF GENERAL AND SPECIFIC SKILLS

D. Ortiz-Masià
Universitat de València (SPAIN)

Abstract

Service-learning (SL), through a process of action-reflection-action collaborates in an efficient and practical way to the consolidation of basic and specific competencies that contribute to a successful life and good social functioning. The aim of the work is to analyse how the SL methodology improves general and specific competences in the students. To this end, two experimental groups were formed: a) SL group; b) NO-SL group (control). Each of the groups was evaluated in specific competences (exploration of cranial pairs) and general competences (communication, adaptation,..). The results were compared using the t-Student test. The results showed that the SL group significantly improved, in a majority way, the competences evaluated in relation with the control group.

Keywords: speech therapy, service-learning, senior citizens, clinical propaedeutic, evaluation.

1 INTRODUCTION

The Service-Learning (SL) represents the summation resulting from learning and service in solidarity, which when united generate a new reality that intensifies the effects of each of them taken separately [1]. Learning improves service since what is learned can be transferred in the form of action and allows a quality service to be provided to the community. In the SL, pedagogical intentionality and solidarity intentionality come together to form an educational project of social utility. In addition, the SL promotes values, stimulates the search and an adequate hierarchy of values such as pro-sociability, looking at the world and solidarity with its fundamental needs [2].

On the other hand, SL, through a process of action-reflection-action collaborates in an efficient and practical way to the consolidation of basic and specific competencies that contribute to a successful life and good social functioning.

Speech therapy Degree training is regulated by ORDER CIN/726/2009, of 18 March [3], which establishes the objectives and competencies that graduates must have for the proper development of the profession. Among the objectives cited by this ORDER is the objective “To explore, evaluate, diagnose and issue prognosis of evolution of communication disorders and language from a multidisciplinary perspective, based on the ability to interpret the clinical history for which will apply the principles based on the best possible information and conditions of clinical safety. This objective is concretely implemented during the development of the course “Clinical Neurology Applied to Speech Therapy”. In order to achieve the objective, competencies related to evaluation and diagnosis must be acquired, but also basic competencies such as good communication, empathy, correct treatment, among others.

The general objective of the work is the evaluation of the impact of an SL project in the formation of generic and specific competences of 20 students of the Degree in Speech Therapy who participate in the elaboration, application and evaluation of an SL project.

As specific objectives, it is intended:

To evaluate and compare specific competences acquired by students who participate in an SL project with respect to non-participating students.

To evaluate and compare the basic competences acquired by students participating in an SL project with respect to non-participating students.

2 METHODOLOGY

The SL project consisted of carrying out a neurological exploration of elderly people in a situation of helplessness. The meeting took place at the Cruz Roja headquarters in Valencia. After the
implementation of the SL project in the academic year 2018-2019, an evaluation of specific and general competencies was carried out. To this end, the students were classified into two groups:

a) group of students who participated in the SL project (SL) (n=20);
b) group of students who did not participate in the SL project (NO SL) (n=20).

Once the groups were completed, the general and specific competencies acquired in the theoretical course and after the implementation of the SL project were compared. The evaluation of the acquisition of general and specific skills was carried out through direct observation of the exploration of cranial nerves (CN) in the classroom and/or in the Cruz Roja and subsequent completion of a rubric containing specific and general skills (see Table 1).

**Statistical analysis of the data**

Data were expressed as group mean ± SEM (n ≥ 15 in all groups) and compared using the missing Student t test (Graph-Pad Sotware 6.0). If the P-value is <0.05, the differences between null hypothesis and alternative hypothesis are considered as significant.

**Ethical Approval**

Informed consent was obtained from all students.

<table>
<thead>
<tr>
<th>Table 1. General and specific competencies used to compare the acquisition of competencies in the SL and control groups.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiently explores trigeminal (V)</td>
</tr>
<tr>
<td>Efficiently explore facial n. (VII)</td>
</tr>
<tr>
<td>Efficiently explores the n. glossopharyngeal (IX)</td>
</tr>
<tr>
<td>Efficiently explores vagus n. (X)</td>
</tr>
<tr>
<td>Efficiently explore the hypoglossus n (XII)</td>
</tr>
<tr>
<td>Works in an educated manner, specifically taking care of the forms and adapting to the level and characteristics of the patient.</td>
</tr>
<tr>
<td>Always shows exquisite respect for the patient’s treatment</td>
</tr>
<tr>
<td>Knows how to listen without interrupting</td>
</tr>
<tr>
<td>Can interpret the patient’s nonverbal language</td>
</tr>
<tr>
<td>Shows emotional self-control in interactions</td>
</tr>
<tr>
<td>Communicates his/her observations and conclusions correctly and professionally, orally and in a well-founded manner</td>
</tr>
<tr>
<td>Avoid commenting on confidential information that is not strictly necessary for the case.</td>
</tr>
</tbody>
</table>

**3 RESULTS**

**3.1 Students who participate in the SL project improve on the specific competencies reinforced during the implementation of the project**

In order to know the acquisition of specific skills related to the exploration of cranial and reinforced pairs during the SL project, the results of the evaluation were compared between students who had participated (SL) and control students (non-participants). The results showed that SL students showed a significant improvement in the way they explored cranial nerves VII, IX, X and XII. (Fig. 1). Among all the cranial pairs that showed the greatest improvement were cranial nerve IX and X, which are evaluated together and both are related to pharyngeal and laryngeal motility. However, they showed no improvement in cranial nerve V exploration, related to the sensitivity of the face. This cranial nerve requires greater patient collaboration and has a subjective component.
3.2 Students participating in the SL project improve in general skills

In order to find out whether the SL project promoted the acquisition of general competences, the results of the evaluation of some of the general competences were compared between students who had participated (SL) and control students (non-participants). The results showed that the SL students presented a significant improvement in competencies such as working in an educated manner, taking care of specific forms and adapting to the level and characteristics of the patient; showing respect in the treatment; knowing how to listen and interpret non-verbal language; communicating correctly and correctly communicating the conclusions of the exploration (Fig. 2). However, the students did not improve with respect to the control group in the emotional self-control in the interaction and in the competence related to professional secrecy. In both general competencies both control group and SL were in maximum scores.

---

**Fig 1.** Comparison of grades obtained in students who participated or not in the SL project. Evaluation of CNs V, VII, IX, X and XII. The bars represent the mean ± SEM of the group (n ≥ 15 in all groups). Significant differences vs. control group are shown as **p<0.005 vs. control; ***p<0.001 vs. control; ****p<0.0001 vs. control.

**Fig 2.** Comparison of general competencies between students who participated or not in the SL project. The bars represent the average ± SEM of the group (n ≥ 15 in all groups). Significant differences vs control group are shown as *p<0.05 vs control; ****p<0.0001 vs control.
4 CONCLUSIONS

The implementation of the SL project in Second Grade Speech Therapy students reinforced skills related to the exploration of CNs related to speech, especially CN IX and X, which are the most difficult to explore. However, in the exploration of CN V, the SL group did not show any improvement with respect to the control group. One possible explanation is that the fifth CN presents a very important subjective component that the elderly did not know how to transmit and/or the students evaluate correctly. In relation to the general competences, the SL project fostered competences as important as working in an educated way, taking care of specific forms and adapting to the level and characteristics of the patient; showing respect in the treatment; knowing how to listen and interpret the non-verbal language; communicating correctly and correctly communicating the conclusions of the exploration. All of them are competences that are acquired through experience and specifically by encouraging empathy with the patient, which is difficult to achieve in a classroom.

ACKNOWLEDGEMENTS

Innovation Project Universitat de Valencia nº UV-SFPIE_RMD18-841128.

REFERENCES

