



Building a No Cost Undergraduate Community Speech Clinic

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Abstract

Aim: This study aimed to explore the clinic learning models through student perspectives using that insight to explore how these students viewed a newly established speech clinic program and understand the organizational and learning benefits and limitations of the clinic and how it can be improved for future service for student learning.

Methods: This exploratory study utilized an observation analysis to understand how the student-led functioning of the clinic fits into both the learning models of Bloom's Taxonomy and Bandura's Triadic Reciprocal Model of Causality and the factors that contribute most to these learning models. These models were chosen due to the systemic and progressive nature of learning that reflects the academic mission of the university's accrediting body: the Southern Association of Colleges and Schools Commission on Colleges. A mixed closed and open-ended student questionnaire was utilized to gain insight into themes that influence the student-led learning model.

Results: The clinic was overall seen as a place of relationship building and skills development. The main contributors to this relationship-building and skills development lie in the ability of students to apply what they have been learning in the classroom to a functional situation, as well as the opportunity to serve the community and build confidence and leadership skills.

Conclusion: Student leadership roles in the clinic are leading to self-efficacy which is seen in the highest level of Bloom's Taxonomy and Bandura's Triadic Reciprocal Model of Causality.

Introduction

In the Fall of 2022, Freed-Hardeman University, located in a small community in West Tennessee, established a no-cost student-run speech clinic to serve the West Tennessee community. The university did not expect large patient service numbers in its small space; however, within six months, the program had served over 100 patients in evaluation, treatment, screenings, and consultations. The Communication Sciences and Disorders (CSD), which is the study of speech pathology and audiology, the program realized that around a quarter of a million dollars of services had been rendered to a community in a severely underserved area. The CSD program wanted to explore how these students viewed this newly established program and understand the

organizational and learning benefits and limitations of the clinic and how it can be improved for future service for student learning.

The clinic and academic program learning goals consist of vocational development and self-efficacy skills that allow individuals to bridge from student to practitioner. Self-efficacy feeds choices and behavior; therefore, individuals choose occupations in which they can implement a self-concept.¹ When students have developed strong self-efficacy, students show leadership skills in design and development to attain a course of action.^{1,2}

This qualitative program evaluation was to describe the establishment of a no-cost student-run clinic through student and patient perceptions to address perceived needs.

The educational goals of the student-run clinic

include driving holistic patient care and providing in-depth and practical learning experiences for students. The learning experiences in these clinics include a model for building leadership skills and community investment while achieving program learning outcomes.³⁻⁵ Other learning outcomes include interprofessional practice and clinical reasoning to meet core competencies of practice.^{4,6,7} Compared to the literature in the field, a positive correlation is noted between those participating in community-based services before graduation and those who continue to do so after graduation.^{5,6,8} The literature comparison even suggests that institutions that have limited resources to consider putting those resources into student-led activities due to the positive service-career outcomes.^{3,7,9,10}

The theory related to these goals includes using collaboration and accountability, as seen in Bandura's Triadic Reciprocal Model of Causality and Bloom's Taxonomy of Learning. Bandura's Triadic Reciprocal Model of Causality includes the influence of the behavior, environment, and person in learning.¹ Bloom's Taxonomy includes a tiered learning system of acquiring knowledge, comprehending information, applying skills, analyzing situations, synthesizing information, and evaluating learning.¹¹ These models are used due to the accountability structure in both models. With these models, student-run clinics are found to give care to individuals who are from vulnerable communities and teach students how to learn about working in a clinic and improve their clinical skills.^{9,10,12} Students who participate in student-run free clinics (SRFCs) are more likely to build sustainable constructs for cultural humility in their careers, including accounting for the costs of healthcare in management plans.^{5,8-10,12} Integration of the opportunity for clinical experiences is found to provide significant benefits to all stakeholders: patients, students, and faculty.¹²⁻¹⁴ When faculty stresses open communication and accountability among professional advisory boards, community advisory boards, and student advisory boards, a culture of innovative and interprofessional model of support is achieved.¹²⁻¹⁴

Informed by this theory we developed a study to ask:

1. How do students perceive how successful a student-run clinic is in training

them in speech pathology?

2. What do students consider as foreseeable growth issues that can be proactively addressed in the clinic?
3. How are the strengths and weaknesses of the clinic related to student learning satisfaction using Likert-scale questions and thematic coding?

The study further explores these questions with the framework of efficacy. Bandura's Triadic Reciprocal Model of Causality states that self-beliefs are critical in decision-making.^{1,11} Vocational formation is enveloped in the capabilities individuals think they can develop and are encouraged to develop. Personal goals are then developed from these self-beliefs and involve strategic career interventions through the form of someone setting up the context for success, such as training opportunities, beneficial culture, and networking opportunities.^{1,11}

Methods

This exploratory study utilized an observation analysis to understand how the student-led functioning of the clinic fits into both the learning models of Bloom's Taxonomy and Bandura's Triadic Reciprocal Model of Causality and the factors that contribute most to these learning models. These models were chosen due to the systemic and progressive nature of learning that reflects the academic mission of the university's accrediting body: the Southern Association of Colleges and Schools Commission on Colleges A mixed closed and open-ended student questionnaire was utilized to gain insight into themes that influence the student-led learning model.

This study aimed to explore the clinic learning models through student perspectives using the insight from student perceptions. This study's goal was to enable reflection and consider changes that might help recruit and retain students.

Sample: A total of 9 out of 9 of the inaugural student clinicians returned the questionnaires representing a 100% response rate. These clinicians were chosen at convenience due to being all the clinicians serving in the clinic within the first semester. The sample consisted of eight (89%) female and one (11%) male student, which is

Table 1. Student summary of most beneficial experiences of the clinic (N=9)

| Liked experience | 1, n (%) | 2, n (%) | 3, n (%) | 4, n (%) |
|------------------------------|----------|----------|----------|----------|
| Early clinic opportunity | 3 (33) | 1 (11) | 1 (11) | 4 (44) |
| Confidence/leadership skills | 2 (22) | 3 (33) | 3 (33) | 1 (11) |
| Serving community | 3 (33) | 1 (11) | 4 (44) | 1 (11) |
| Classroom application | 3 (33) | 4 (44) | 0 (0) | 2 (22) |

1: most; 4: least.

Table 2. Student summary perceived greatest limitations of the clinic (N=9)

| Limitations | 1, n (%) | 2, n (%) | 3, n (%) | 4, n (%) |
|-------------|----------|----------|----------|----------|
| Funding | 2 (22) | 1 (11) | 1 (11) | 5 (56) |
| Scheduling | 3 (33) | 3 (33) | 2 (22) | 1 (11) |
| No credit | 2 (22) | 3 (33) | 3 (33) | 1 (11) |
| Space | 2 (22) | 4 (44) | 2 (22) | 1 (11) |

1: most; 4: least.

consistent with the American Speech-Language-Hearing Association (ASHA) data of programs consisting of 4.5% male and 95.5% female students.¹⁵ The review utilizes the question format of both closed and open-ended response to understand what students think of program specific goals and overall experience.

The questionnaire asked the following closed-ended questions:

1. What do you like most about the clinic? (scale 1-4; 1 being most) with options:
 - a. Early opportunity to participate in clinic
 - b. Building confidence/leadership skills
 - c. Opportunity to serve the community
 - d. Basic application to classroom learning
2. What are the biggest limitations to facilitating clinic? (scale 1-4; 1 being most limiting) with options:
 - a. Funding
 - b. Scheduling due to classes
 - c. Relying on volunteers & not receiving credit hours
 - d. Small space & accessibility

*Note: A Likert scale of 4 was chosen because of the four options available to choose from. The four options were chosen based on previous

literature on the four most beneficial and limiting factors to running SRFCs.

The questionnaire asked the following open-ended question:

How do you feel that the clinic has trained you to be successful in speech pathology? Please answer with at least 1 paragraph.

Coding was performed via thematic analysis to identify important emerging concepts and patterns in the open-ended free-response section of the questionnaire. Excel (2021, Microsoft, Redmond, Washington) was used for the quantitative formulas used in this study.

The IRB approval for the study was through the Freed-Hardeman University (FHU) Institutional Review Board (IRB) Committee. The research site, the university, accepted the IRB approval of an FHU-exempt study with a review from the provost of the university.

Results

The clinic had a goal of training students to perform in a holistic environment that drove the mission of the university with academic rigor. The questionnaire's following results analyzed student perceptions of the clinic's contributions to their training and development gains as student clinicians. The summary of student experience perceptions is in Tables 1 and 2.

Table 3. Coding student comments on clinic experience

| Theme | Code | Comment |
|-----------------------|--------------|--|
| Relationship building | Patient | <p>“It has taught me how to form a strong patient and practitioner relationship and allow this relationship to be the base of speech and language therapy”</p> <p>“I enjoy growing a relationship with patients as we work together to meet goals that they have for themselves”</p> <p>“The ability to make an impact on the kids we work with is overwhelmingly rewarding”</p> |
| | Professional | <p>“Working in this clinic has prepared me to be successful by providing me with hands-on experience (planning, application, etc.) and interprofessional collaboration”</p> <p>“It has also allowed me to experience working with a clinician and doing therapy with other people in the room”</p> <p>“I like that we get to work with a professional SLP and receive feedback”</p> |
| Skill development | Application | <p>“It has also trained me in planning sessions from anywhere between 30–60-minute sessions”</p> <p>“Being in the clinic has really opened my eyes and has helped me learn in a way that a lecture setting wouldn’t”</p> <p>“We also get to use a lot of classroom applications of what we are doing in the clinic”</p> <p>“Our clinic has also trained me in taking session notes in order to gauge progress in order to see when to advance to a new goal”</p> <p>“Clinic has allowed me to grow my skills that I’m learning in the classroom while building confidence that will help carry my through grad school”</p> |
| | | Rigor |
| | Value | <p>“Just being able to put into practice the skills we are working on in classes is such a valuable experience”</p> <p>“I know that the clinic provides a safe space to do more than just what we would do in the classroom”</p> |
| | Confidence | Communication |
| Graduate School | | <p>“Having this early exposure and opportunity has given me confidence in approaching grad school and beyond”</p> <p>“I also feel that this experience will allow me to be more comfortable from the start of grad school”</p> |
| Skills | | <p>“I have really appreciated the opportunity to apply my skills and serve my school and the community”</p> <p>“Personally, clinic has boosted my confidence a great deal. Just being able to put into practice the skills we are working on in classes is such a valuable experience”</p> |

SLP: speech-language pathologist.

Student responses to the closed-ended 4-point Likert scale questions were as follows:

1. Students responded with the most beneficial experiences being classroom application and confidence and

2. Students responded with the greatest limitations being the operational space of the clinic and scheduling conflicts due to faculty and student leadership skills

time constraints.

The next set of data included commentary from the students to answer research question 3 and reiterate the concepts found in the first two research questions (Table 3).

Discussion

Three concepts that can be derived when connecting the current literature with the student-described process of learning to lead in the clinic as seen in in Figure 1

These student-described processes include the following:

Effective feedback

Effective relationships produced effective feedback.^{16,17,18,19} Student volunteer activities can run smoothly when all parties are clear and direct and seek to communicate with one another.^{16,17,19} Student growth occurs when both the faculty and students provide feedback and questions to the leadership team.^{11,16,18,19} This clinic feedback was found to often open avenues for classroom feedback, as well as provide a reliable dynamic assessment for both students and faculty.^{11,16,17,19}

It's all about relationships

Relationships were the crux of organizational growth and development. The culture of the clinic and CSD program helped build strong relationships and fill the gap in satisfaction.^{16,17,19} Organic teaching, mission orientation, and positive communication created an environment of

primarily positive relationships.^{16,17,19} Students mentioned their admiration for their experience and interactions.^{16,17,19} The SRFC's strengths were also described in relational terms and confirmed how the SRFC played a key role in relational satisfaction among students, faculty, and the university.^{16,17}

Student leadership

Lecture often leads to the first two tiers in Bloom's Taxonomy: knowledge and comprehension.^{1,11} However, application, analysis, and synthesis tend to mean more in lived experiences.^{1,2,11} Creating a program pedagogy of Bandura's Triadic Reciprocal Model of Causality that morphs student efficacy and student-led outcomes must first reach the level of application and beyond in the Bloom structure.^{1,11}

Limitations

This study was designed to provide a program evaluation of a rural, no-cost, student-run clinic in hopes of supporting programs considering implementing a similar community-based experience. Given the following limitations, generalizations should be interpreted carefully.

First, the study provided findings from a small clinic in a rural town in Tennessee. Second, the findings were based on the perceptions of a small number of rural CSD students from a particular university program. Archival data, in the form of student reflection, were used to help triangulate the data from the questionnaire and reduce the effects of the sample size.

Figure 1. Student-described process of learning to lead



This initial evaluation has helped define positive outcomes and potential needs within the clinic. The recommendations below were made for others interested in conducting similar research to determine further benefits of this clinical system.

1. It is recommended that future researchers include the perception of others, especially students. By including the perceptions of more stakeholders, the clinic and CSD program could more accurately conclude the effectiveness of its model.^{16,17,19}
2. It is recommended that the clinical outcomes be reevaluated in three years to examine actual changes implemented in conjunction with the findings of this study. This follow-up would allow the clinic to further understand the effectiveness and sustainability of the clinical teaching model.^{16,17}
3. It is recommended that the CSD program consider including the tools in this study in the student exit follow-up post-graduation. This would allow the program to have a consistent model for evaluation.^{17,19}

Disclosures

The authors have no conflicts of interest to disclose.

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