# What do third-year Speech Pathology students think of student-centred learning?

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This study assessed the effectiveness and appeal of student-centred learning (SCL) from the perspective of students. It examined SCL in a third-year undergraduate unit designed to inform student speech pathologists about children's literacy development. SCL activities included (1) an invitation to contribute questions for weekly multiple-choice tests, (2) group-based presentations where students included resources of their choice such as power point delivery, internet content, and interactive games, (3) interviewing of key researchers, (4) freedom to select a topic for individual poster presentation and (5) peer-review of posters presented under conference conditions. Quantitative and qualitative data was collected via anonymous questionnaire. Results showed that SCL was perceived to be effective and appealing but that it also presented challenges for some students. Almost half of the respondents claimed to have had little exposure to SCL in their undergraduate studies and almost all of the respondents considered the SCL activities incorporated into this innovative. Key findings and the implications of these findings are discussed.

Keywords: student-centred learning, SCL, collaborative learning, peer-learning, active learning, inquiry-based learning, self-directed learning

## Introduction

It has been argued that teacher-centred pedagogy is a one-way process that encourages passivity and superficial learning in students. In contrast, student-centred pedagogy is based on constructivist notions where "knowledge is shared and learning is achieved through students' engagement with activities in which they are invested." (Kain, 2003, p.104). Student-centred learning (SCL) has been associated with terms such as collaborative learning, active learning, experiential learning, inquiry-based learning, self-directed learning, deep learning, and lifelong learning, amongst others.

Although the concept of student-centred learning (SCL) is by no means new, there is sometimes reluctance to adopt this approach on the part of students (who may be more concerned with achieving certification than learning) and instructors (who may feel more comfortable using traditional content-driven educational methods). Despite these obstacles, SCL is generally seen as having the potential to fruitfully engage a modern and diverse body of undergraduate students, more so than traditional teacher-centred learning (Biggs, 2003; Kember, 2009). There has been discussion as to whether all students are able to benefit equally from student-centred approaches (Hockings, 2006).

SCL can take many forms. Much of the time, SCL places the student in a key role in reflecting on their own learning (e.g., Wood et al., 1996), and in active engagement in assessment which is designed to be formative as well as summative (Nicol & Macfarlane-Dick, 2006). Weimer (2002) hypothesised that five general principles underpin SCL: shifting the balance of power from teacher to student, using content to build knowledge, positioning the teacher as facilitator, promoting responsibility for learning in students, and promoting learning through appropriate assessment.

The effectiveness and appeal of SCL are currently of great interest in the literature on learning and teaching, especially with regard to the wide-variety of learning and assessment techniques activities that may be incorporated. Indeed, there is a journal solely dedicated to the topic – *The Journal of Student Centred Learning* (although it is not specific to the tertiary sector). While previous studies have incorporated discussion of the topic there is a need for more empirical evidence to inform learners and teachers on the effectiveness and appeal of SCL in the tertiary education sector.

Our study follows on from recent research undertaken in a variety of disciples. An example is the study conducted by Armbruster and colleagues (2009). In their investigation of undergraduate biology students studying in the US it was confirmed that SCL can be successfully integrated with large introductory classes and can lead to positive student attitudes and increased academic performance. Some students perceived that SCL had drawbacks, for example, in terms of increased workload and variable group dynamics. This research also revealed that instructor morale was enhanced through SCL.

It is interesting to examine how students who are further along in their studies view SCL. It is also valuable to report on additional SCL methods than can be utilised in a traditionally content-driven unit. The current study examined the effectiveness and appeal of SCL activities in a third-year undergraduate unit designed to inform student speech pathologists about children's literacy development, from the perspective of students. SCL activities included (1) an invitation to contribute questions for weekly multiple-choice tests, (2) group-based presentations where students included resources of their choice such as power point delivery, internet content, and interactive games, (3) interviewing of key researchers, (4) freedom to select a topic for individual poster presentation and (5) peer-review of posters presented under conference conditions. This study was exploratory. It was difficult to put forward specific hypothesis; however, it was predicted that students might report a lack a exposure to SCL activities in their undergraduate studies. Moreover, it was expected that SCL would be perceived as being effective and having appeal but also that SCL might present some challenges for students.

**Method**

*Participants*
A total of 49 third year undergraduates form the speech pathology program at the University of Sydney, Australia, participated. These students completed an anonymous questionnaire in their unit on children's literacy development. Personal information such as gender and age of respondents were not collected; however, the vast majority of speech pathology students at the University of Sydney are females under the age of 25 years.

*Procedure*

The unit was designed to enhance student's understanding of literacy development in children. A range of SCL activities were incorporated into the unit such that almost all of the learning and teaching in the unit was student-centred. SCL included 5 main activities.

- One of these was an invitation to students to contribute questions for weekly multiple-choice tests. These tests were based on a set chapter of a required text. On the day of the test students submitted as many multiple-choice questions as they wanted to. There was no obligation to submit any questions. The lecturer collected these questions and selected some (on the basis of accuracy and difficulty level) to be included in the day's test. Student questions comprised 50% of the questions in each test.

- Another SCL activity was group-based presentations. Students were assigned to groups of 8-10 and were asked to present the content of a set chapter of their required text. Students were encouraged to include resources of their choice such as power point delivery, internet content, and interactive games. Students decided amongst themselves how to divide the labour for this task.

- Other students were assigned to an SCL activity that involved interviewing key researchers. The lecturer secured permission to interview key Australian researchers in the area of children's literacy. Students were assigned to groups to work on the interviews. Each group was presented with a journal article written by the key researcher and a set of core questions to ask during the interview. Students were required to read the article and come up with their own additional questions to ask during the interviews. Each group scheduled and then transcribed their interview and provided details for all students online.

- A large part of the assessment for this unit was dedicated to individual poster presentations. Students were given the freedom to select a topic for their individual poster presentation. They could select any topic within the area of children's literacy development. Students were shown examples of both good and bad poster design. Students were limited an A3 size poster. They were required to prepare a brief oral presentation (up to 3 minutes) to accompany their poster and were told they would be presenting their posters under conference conditions.

- Related to the above-mentioned SCL activity students were required to undertake peer-review of one poster. Discussion of marking criteria took place prior to peer-review and each student was provided with a set of 5-point Likert-type scales with which to rate the poster assigned to them. These scales pertained to: originality, scientific content, poster design and quality of the oral explanation. Prior to evaluating the poster assigned to them, students were instructed to peruse a number of posters and engage in discussion with a number of student peers about the content of their posters. Posters were presented under conference conditions. Half of the students presented their posters in the first hour while the other half undertook peer-review. These roles were reversed in the second hour. Academic staff were present during the sessions and also evaluated the posters. It was the combination of these two evaluations (one from a student peer and one from a member of academic staff) that comprised the students' final mark for this assessment item.

At the end of the unit students were given the option of filling in an anonymous questionnaire relating to their experience of the SCL activities that were incorporated in this unit. The questionnaire contained a mix of yes/no options, Likert-type scales and open-ended questions. Questionnaires were completed in class time and there was no time limit. Students were discouraged from consulting with each other while answering the questionnaire.

**Results**

*Students' understanding of SCL*
Two open-ended questions addressed this issue. The first of these was "People have different ideas about the meaning of 'student-centred learning'. Please provide your own definition of student-centred learning." On the whole, in answering the first question respondents demonstrated a solid knowledge of student-centred learning. Only one respondent included the phrase "I don't know". Indicative responses are included in Table 1.

Table 1. Example responses regarding students' definitions of SCL

| |
|---|
| When it is the students who decide which element of a topic we will study, when and how. |
| Encouraging critical thinking. Responding to feedback. Independent learning. Interaction and discussions. |
| Learning in which the student has (at least) some control over what and how they are taught. |
| When a student isn't directly told information, but rather directed to appropriate reading to analyse and learn themselves. |
| Where a lecture provides the guidelines but the student is mainly responsible for finding answers to questions and information, rather than being spoon-fed. |
| Proactive, independent learning. |
| Taught and run by students with support of a lecturer. |
| Students participate, research, discuss, engage with the material more actively. |

The second was "The opposite of student-centred learning is _____(please explain your answer)." Responses to the second question also displayed a good understanding of SCL. One particularly colourful response was "Cerebellar degeneration. Spoonfeeding, I suppose." Indicative responses are displayed in Table 2.

Table 2. Example responses regarding students' understanding of the opposite of SCL

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|---|
| Teacher-directed learning. The lecturer dictates what will be studied, when and how. |
| Teacher lectures…boring. |
| Teacher directed learning – dependence on others to learn. |
| Lecturers reciting lecture notes. |
| Structured, enforced learning. There is less flexibility – things are set out/planned the way they "should" be done. |
| Learning directed and controlled by a teacher – minimal input from students. |
| Someone else providing you with important information that you must learn. |
| Lecture centred. As in the lecturer has full control of the learning environment. |

*Students' previous experience with SCL*
One yes/no question addressed this issue: "Do you think student-centred learning has played a key role in many of the units you have studies for your degree?" Less than half of the total number of respondents (46%) answered 'yes' to this question. One other question also addressed this issue: "Do you think these particular student-centred learning activities are innovative – i.e., are they activities that are new to you, which you have not really encountered in other units? (Circle one of three choices from Very Innovative, Innovative or Not Innovative)." All but one

student responded 'Very Innovative' or 'Innovative' (equal numbers of respondents for each of these two categories).

*Students' perceptions of the SCL activities presented in this unit*
Several questions addressed this issue. There were four yes/no questions. The results for each of these questions is displayed in Table 3.

Table 3. Four yes/no questions on students' perceptions of SCL in this unit

| Questions | Percentage of 'yes' responses |
|---|---|
| These student-centred activities encouraged me to see things from others' perspectives | 76% |
| These student-centred activities gave me a sense of ownership over my learning | 79% |
| In comparison with traditional lectures, do you think these student-centred activities encouraged valuable interaction amongst students during class time? | 81% |
| Did you learn things about literacy that you did not know before? | 94% |

Two open-ended questions also addressed this issue. The first was phrased as "Please provide one word or one short phrase to describe the advantages of the kinds of student-centred activities you participated in". Around 24% of respondents mentioned the concept of interactivity. A total of 8% of responses included the word 'fun'. Examples of other words are 'independence', 'flexible', 'engaging', 'wholistic', 'stimulating', 'different', 'creative', and 'useful'. Example phrases included 'freedom of choice', 'targets your interests', 'makes you think outside the square', 'it was easy to understand', 'much easier to remember content' and 'beneficial for long-term learning'.

The second question that addressed this issue was "Please provide one word or short phrase to describe the disadvantages of the kinds of student-centred activities you participated in". A single respondent replied "NONE. I really liked it." However, there was clear indication that SCL presented challenges for some students. A total of 16% of respondents felt that SCL was time-consuming. Other responses included words/phrases such as 'stressful', 'pressure', 'ambiguity', 'vague', 'subjective', 'not enough direction', 'not suited to more introverted, theoretical learners', and 'a bit distracting at times (we're just not used to it)'. Interestingly, one respondent suggested that a disadvantage of SCL was 'Gave us control of our learning.'

*How important is the lecturer during SCL?*
One question specifically asked students about the importance of having a lecturer present to guide SCL and provide feedback. A total of 61% respondents thought this was 'Very Important' and 37% thought this was 'Important'. Only one respondent thought this was 'Not Really Important'.

**Discussion**

This study reports on a variety of activities that can be incorporated in an SCL approach. The primary aim of this study was to examine the effectiveness and appeal of SCL amongst third-year speech pathology students. The results indicated that, on the whole, students had a fairly solid understanding of SCL. Despite this, almost half of the respondents claimed that SCL had not been prominent in their undergraduate studies. Almost all students found the SCL activities reported on here to be innovative. This was predicted and indicates that while the concept of SCL has been with us for some time there has not been widespread uptake in the tertiary sector.

The majority of students appeared to find the SCL activities effective and appealing. The vast majority of respondents agreed that these activities encouraged them to see things from others' perspectives, gave them ownership of their learning, encouraged interactivity and resulted in them learning things they did not know before. However, as expected, it was also clear from student responses that SCL brings with it certain challenges. Students commented on the time-consuming nature of SCL and the potential for ambiguity and subjectivity.

Why might SCL suit some students more than others? It has been suggested that as many as 30% of students may be unable to benefit from SCL – especially without open dialogue with students about their social, economic and cultural background when implementing SCL (Hockings, 2006). Maclellan (2008) argued that instructors should consider carefully the role of student-related motivational factors such as goal orientation, volition and interest. Others have argued that SCL places a significant cognitive burden on students and that scaffolding (around seeking, organising and presenting information) is often required in order to enhance learning outcomes when SCL is adopted (Iiyoshi, Hannafin & Wang, 2005).

The results of the current study indicated very strongly that students value the presence of, and feedback provided by, the lecturer. Interestingly, it has been suggested that student-centred and teacher-centred methods are not necessarily mutually exclusive. In the minds of students, these methods may be seen as "mutually reinforcing features of high quality education." (Elen, Clarebout, Leonard, & Lowyck,, 2007, p. 105).

The findings of the current study suggest that students' have largely positive perceptions SCL. This might encourage instructors to adopt SCL activities in their units. Of course, it is important to remember that the results reported here were obtained using a purpose-designed questionnaire – not formal student evaluations. Kember, Winnie and Kwok (2004) raised the question of how innovating in the area of SCL might impact upon the results of formal student evaluations. Kember et al. divide students into two broad categories: self-determining (preference for facilitated learning) and reproductive (preference for didactic teaching); however, they also suggest that, on the whole, students tend to be conservative in their views on educational methods. Thus, teacher-centred questions in formal student evaluation instruments, combined with a substantial proportion of students who have reproductive learning preferences, and general student conservatism, can lead to lower formal evaluations when a lecturer decides to innovate their teaching by introducing SCL.

Of course, lower formal evaluations are not a given but there appears to be a risk of lower evaluations, particularly during initial implementation. Unfortunately, given the increasing

emphasis on formal student evaluations as the sole indicator of an academic's learning and teaching performance, this likely dissuades many instructors from innovating their educational methods. Consequently, this means that many students may not enjoy the benefits of SCL in the immediate future. It is hoped that increased awareness of these issues amongst managers and administrators in the tertiary education sector and open dialogue with students in the classroom might pave the way for innovation in the future.

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