

## First Year Students' Perceptions of the Supplemental Instruction Programme

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**KEYWORDS** Academic Institution. Peer Assisted Learning. Perspectives

**ABSTRACT** This paper sought to establish the perceptions of first year students on the Supplemental Instruction (SI) programme. It argues that first year students' expectations and the facilitation methods of the Supplemental Instruction Leaders (SILs) shape students' perceptions of the SI programme. Framed within the interpretive paradigm and a case study design, the study sought to gain an understanding of first year students' perceptions of SI. A purposive sample of 15 first year students completed an open-ended questionnaire. Content analysis was employed to make sense of the data. Six themes emerged, which showed students' perceptions of Supplemental Instruction. These themes reveal underlying expectations and preferences with respect to the focus of SI, and SI leaders' facilitation methods in comparison to lectures and tutorials. Recommendations are made for bargaining for students' perceptions, and the strategies for addressing the confusion between the Supplemental Instructional programme, the tutorial system and lectures.

### INTRODUCTION

Supplemental Instruction (SI) falls in the ambit of peer facilitation which aims to assist students through close consultations with peer facilitators. It involves co-operative, collaborative and active learning. SI is intended to target at risk courses, and encompasses supplemental solutions to enhance student learning (Wonder-McDowell 2008). At the institution from which this research is conducted SI targets at risk courses rather than at risk students. Supplemental Instruction is premised on Vygotsky's notion of learning which suggests that students learn by doing and practising rather than by other people doing things for them (Daniels 2001: 35). One of the principles of SI is that students are not spoon-fed, but rather assisted in studying on their own. The benefits are that students gain vocabulary skills for public speaking and verbal comprehension to enable them be expressive academically (Bell and McCallum 2016: 52). Vygotsky also suggests that facilitation should involve students learning from one another and not only depend on their superiors such as tutors or lecturers (Daniel 2011: 68). Therefore, students should lead and also take charge of their learning in a tutorial or SI session.

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The above-mentioned pedagogies of practice are not the norm in the lectures and tutorials. First year university students find it difficult to lead in the classroom situation because many lecturers are rigid and over-bearing. Erickson et al. (2006: 1) suggest that before venturing into effective instruction of first years, the instructor needs to understand what the students expect, their experiences with education, their intellectual development and most importantly, their views about learning. These factors need to be considered by SI leaders when planning for SI sessions. This is also true for the Supplemental Instruction programme. First year students' experiences are different and that is why an instructor needs to consider 'multiple students' not just consider one student and adopt a one-size-fits-all technique of instruction (Bill 2010: 3). For this reason, SI programmes accommodate different learning and studying styles (Arendale 1994) based on the following theoretical support from multiple intelligences, constructivism, humanistic learning theory and Cognitive Development Theory.

Smith (2012) states that peer mentoring programs deploy peer learners in courses to strengthen the aspects of high quality education that require or that can especially benefit from student interaction, peer facilitation, peer leadership or peer modelling. A wide range of authors have detailed the benefits or rather the potential value-add of SI programmes (Arendale

1993; Dawson et al. 2014; Loots 2009; Narismulu and Dhunpath 2011). For example, “SI sessions provide constant feedback so that SI participants are aware of their comprehension level of the course material before major examinations” (Arendale 1993: 8) This statement is supported by a presentation by Murray (2006) where he found that students who attended SI sessions for engineering in the Queensland University of Technology (Australia) showed improvements and scored better in their final assessment in the course. SI sessions allow students to play games that make the students’ learning experiences less isolating (McQuiggan et al. 2015: 248). SI programmes and sessions allow the students to interact at student level with the SI Leader because they interact in small groups and at a more personal level (Arendale 1994; Warner 2008: 37). Like any other programme, SI has one main shortcoming, and that is on a voluntary base (Bronstein 2007). Unlike lectures, students attend SI sessions a voluntary basis, and this has been a problem in the past. Because attendance is voluntary, SI teaches the student how to be responsible, self-monitoring, and self-regulating. However, students’ attendance is inconsistent at best.

### **Objectives of the Study**

The main objective of the study was to gain an understanding of the first year students’ perceptions of the Supplemental Instruction programme.

### **Problem Statement**

The researchers observed that the pedagogies of practice of some SI leaders tend to emulate practices of lectures and tutors. The study surmised that the expectations of first year students coupled with their experiences of SI leaders’ facilitation methods, their beliefs and values, taken together, have a bearing on students’ perceptions of SI. The main focus of this study, therefore, is to explore how students’ perceptions of SI are informed, influenced and shaped by their expectations of SI, as well as by their experiences with the SI leaders’ facilitation methods. The research question that guided that study is:

*“How do students’ expectations and experiences shape their perceptions of the Supplemental Instruction programme?”*

### **Explanatory Framework**

This paper drew its explanatory framework from a number of theories and perspectives on perceptions. Perceptions are formed as people try to make sense of their world. This view situates perceptions in the realm of cognitive structures. With respect to making sense of a programme by the targeted group, Spillane et al. (2002) argue that agents’ sense-making with regard to policies and programmes is constituted and influenced by prior knowledge, expertise, values, beliefs, and experiences. They further argue that people draw analogies between new ideas and their existing understandings. By so doing, they liken the unfamiliar to the familiar. The influence of expectations on existing knowledge structures and how they help in focusing understanding may lead to the unacceptability of information that is incongruent with those expectations. Thus, participants in a programme tend to make cognitive adjustments so that the unfamiliar is congruent with their expectations. This paper argues that, the perceptions of the SI programme by first year students are shaped by their expectations, beliefs about facilitation, and experience with Supplemental Instruction leaders’ facilitation methods, which are informed by first year students’ experiences, values, and beliefs.

Perception has been defined as people seeing things differently, even when they see the same thing (Graner and Grist 2015). For example, the Gestalt Model suggests that people are able to “look for unconscious patterns of perception as well as to study the influence of conscious experience on irreversibility or reversibility of perceived shape” (Demuth 2013: 31). This theory suggests that first year students may not be aware that there is or there is not a difference between the various instructional systems; namely, lectures, tutorials and Supplemental Instruction. Because of their experience they may tend to perceive them as being the same. Another perception theory that informs this study is the Gibson Direct perception theory. The Gibson direct perception theory states that our “our cognitive apparatus was created and formed by a long evolutionary influence of the external environment which is apparent in its structure and abilities” Demuth (2013: 24). Students may use their own understanding of their surroundings and the objects that they see to decide how

they are structured in reality. This paper argues that first year students' expectations and experiences of lectures and tutorials sessions shape their perceptions of SI. They may use their first encounters with these as their reference in a bid to make sense of SI.

## RESEARCH METHODOLOGY

### Research Paradigm

This study made use of the interpretive paradigm. The reasons for the use of this paradigm is to enable the researcher understand the students' perception of the SI sessions and their explanation of these perceptions. Aligned with the interpretive paradigm, this study took a qualitative approach. A qualitative research approach usually uses qualifying words and descriptive opinions of the participants rather than numbers or subjects (Bless et al. 2006). One of the main characteristics of qualitative research is that it focuses on the whole picture (Creswell 2009). The reason for choosing a qualitative approach is for the researcher to gain an in-depth understanding of how students perceive SI sessions.

### Research Design

A case study research design was used for this paper. Case studies are defined as an exploration and investigation of contemporary real life experiences and phenomenon through detailed contextual analysis of only a limited amount of information from events and their relationships (Maree 2009). This research paper sought to understand students' perceptions of the SI programme and sessions. Case studies are used to create a case out of the participants. Case studies can also be the programmes or the issues or the individual participants, and in the current study, the researcher focused on the participants and their divergent perceptions of the SI sessions.

### Sampling

Following the research design of this paper, purposive sampling was employed. Purposive sampling is defined as the set targeted group that was selected and expected by the researchers (Venter 2006: 38). Purposive sampling was employed because the researchers sought to use the students that attended SI sessions. Purpo-

sive sampling enables the researchers aim for the targeted participants, which are the students mentioned above as those who attend the SI sessions. Thus, the researchers solicited information from the first year students who attended the SI sessions in the Peer Assisted Student Services (PASS) laboratory. Because the number of students who attend tutorials as well as the SI sessions was rather large, 15 first year students were selected to provide information for the study.

### Data Collection

An open-ended questionnaire was adopted as the data collection tool. Open-ended questionnaires allow for the expression of opinions, beliefs, values and experiences thus enabling the researchers to gain in-depth understanding of the phenomena under investigation (Yin 2011: 134). Open-ended questionnaires ensured that participants responded to the set questions on their expectations of SI, their experiences with the facilitation methods of SI leaders, and their suggestions for improving the SI programme, without pressure from the presence of the researchers.

### Data Analysis

Data were analysed through content analysis which involves the classification of textual material, and its reduction into more relevant and manageable bits of information (Bucy and Holbert 2013; Neuendorf 2002; Struwig and Stead 2013; Weber 1990). Meaning units extracted from the data were organised into themes and sub-themes that emerged from the participants' expectations of the SI sessions, experiences with the facilitation methods, and suggestions for improvement. Emerging themes were presented by means of narrations and quotes, as seen in the paragraphs below.

## FINDINGS

The themes that emerged from the analysis of responses to questions on first year students' expectations of the focus of the SI programme were the following:

### 1. Premeditation of Lectures

The responses of some of the students suggested that apriori preparation for a lecture, that

is, a run-through of the next lecture before hand, is what they expected of the SI sessions. This was expressed by the views of one of the participants in the following way: *“He tells us what we are going to focus on, [in the] next session”* (P1). An outline of the next session would help students attend the lectures in a right frame of mind and be better prepared to engage with the lecture material. This would foster and drive learning.

## 2. Strategizing Around Assessment

Some of the students expected SI sessions to provide them with hints, pointers, and strategic prompts as part of the preparations for upcoming assignments, tests or examinations. The preparations were expected to use standard question items that are likely to be featured, gleaned from or benchmarked against previous assessments. The quotes below support the above narrative.

*“I also want hints on how to tackle my assignments and how to prepare for tests”* (P2).

*“Also to let us know what kind of questions are likely to be asked”* (P3).

*“Whether it be an upcoming test, assignment or just recapping work that we have done the past week”* (P8).

The above expectations expressed in the quotes show first year students’ orientation to making use of SI sessions to study for tests and exams rather than for holistic learning.

## 3. Consolidation and Reinforcement

The students’ expectation that SI sessions identify and buttress the most cogent/salient points of the lesson/chapter was expressed in the quotes below:

*“He/she must tell us what are we supposed to study or know by heart before continuing to the next chapter. Before going through with our lesson, he had to make sure that everyone understood what he would be explaining by then”*(P1)

*“To learn more on what we learned on the class and to get clarity about what we did not understand in the lecture”* (P5).

*“...just recapping work that we have done the past week”* (P8).

The above quotes bring out that the expectation is for SI sessions to help students get

clarity on the course contents, and foster understanding of the course contents, whilst others expected SI leaders to recapitulate the work already done.

## 4. Confounding SI Leaders, Tutors and Lecturers’ Roles

Some of the expectations of the students suggested a lack of clarity in the conceptualisation of SI, tutorials, and lectures. The thought that SI sessions should take the lecture format/mode is expressed in the following sentiment: *“I thought the SI session will be just like a lecture whereby the SI leader will try to give more information to us”* (P3). This view is an indication of the first year students’ view of SI sessions as additional lectures, and an extension of the work done during lectures. The reason for this confusion is, in part, explained by the fact that in some cases the SI session agenda is set by the lecturer. This is why the students suggested that the students set the agenda for SI. For example, one of the students commented: *“[SI leaders]...should come up with more questions to do other than given by the lecturer as that will give students more excitement and encourage them to come to the sessions (P12)”*. One of the students expected an alignment and collaboration between SI sessions and tutorials. The student opined: *“My expectations were [that] the SI leaders will be working hand in hand with the tutors”* (P4). Another impression given by the students suggested that they did not see the difference between work done by the tutors and that done by the SI leaders. One of the students maintained that *“...the SI leaders were doing the jobs of the tutors”* (P4).

## 5. Assistance with Difficult Aspects of the Lesson

The need for support in content areas experienced by some students as difficult or aspects that most students struggle with in a lesson unit was echoed. This is captured in the quotations below:

*“For me an SI session is there to help us with whatever we as students seem to struggle about. Whether it be an upcoming test, assignment or just recapping work that we have done the past week”* (P8).

*“I expect the SI leader to ask the class about the difficulties they have and try to assist”* (P15).

The above sentiments show that first year students expected SI leaders to help them navigate their way around learning challenges or difficulties. Thus, SI sessions were expected to help clarify aspects of the lesson units that are unclear to students.

### **6. Fostering Independent and Self-regulated Learning**

The expectation that SI sessions would empower students to be independent and autonomous learners in terms of taking charge of their own learning is another theme that emerged from the data. This is expressed in the responses below:

*“I expect to get help so that when I leave the venue I can be able to solve the problems on my own” (P13).*

*“Provide the different strategies on how to study for understanding rather than memorizing the content” (P6).*

Thus, initiative on the part of first year students as it relates to independence and self-regulated learning was seen by some of the students as key to the realisation of the above expectation to solve problems on their own. Also, SI leaders were expected to be resourceful in terms of providing first year students with the strategies that foster independent learning.

## **DISCUSSION**

The findings of this study on the first year students' perceptions of Supplemental Instruction as fostering autonomy, independence and self-regulation reaffirm the observation by Bean (2015) and Arendale (1994) that SI instils a sense of responsibility, discipline, and independence. The voluntary nature of SI allows students the opportunity to exercise their freedom and responsibility with respect to attendance and participation in the SI sessions. Regularity and consistency in this regard is but one sign of growth towards self-regulated learning. The expectations around SI sessions assisting students with preparations for assignments, tests and examinations support Arendale's (1993) finding that SI boosts the comprehension levels of students before a major assessment task (Malm et al. 2011). The trend of using SI sessions shortly before tests and examinations is also observed by Murray (2006). It is therefore incumbent upon

SI leaders to stress the importance of booking for SI consultations consistently throughout the term rather than before a major test. This would help students consolidate work done during lectures and distribute the work load evenly throughout the term.

In his study, Bronstein (2007) found that SI provides support to students who experience academic challenges. This view is in line with the findings on the provisioning of support to students in areas that students find difficult or struggle with. It is therefore important that SI leaders proactively solicit information from the lecturers, about trouble spots in the courses that they are facilitating so that they can devise a means of enabling students to understand these areas of difficulty. The view that students' perceptions are informed, influenced and shaped by students' expectations, preferred learning styles and experiences with familiar pedagogies is supported by the findings of this study on confusing SI with lectures and tutorials (Erikson 2006). There is need for the reorientation of first year students to ways of being and acting as students, if SI is to benefit students' learning and improve throughputs and pass rates. This shift calls for SI leaders to arm themselves with 'activators' that would help them scaffold the shift from lecture and tutorial methods to the SI mode. The benefits of SI supports Latino and Unite (2012), who suggest that SI is the answer to increasing pass rates in high risk courses. It also confirms the views of Kilpatrick (2015: 206) and Warner (2008) on SI's ultimate goal as that of enhancing learning and improving students' performance including instructions for reading. However, the role of SI in the premeditation on lectures and apriori preparation for lectures seem to be an area that needs further investigation since previous research on SI has not paid attention to this issue. The finding that some lecturers insist on attendance at SI sessions by first year students may support the expectations that SI sessions take the lecture or tutorial mode, and the fact that some students view SI sessions, lectures and tutorials the same.

## **CONCLUSION**

The results of this study led the researchers to conclude that there is a lack of understanding by most first year students of the principles of Supplemental Instruction. This has resulted in

some students' likening SI sessions to lecture and tutorial modes of instruction. Also, the results indicate that some Supplemental Instruction leaders do not adhere to the principles of SI during their facilitation as reflected in students' experiences of the SI leaders' facilitation methods. The divergence of perceptions about the focus and facilitation within the SI sessions suggest a confusion between the roles of SI, tutorials and lectures. Consolidation of work done and preparation for an upcoming assessment task seems to be the most dominant reason why most first year students attend Supplemental Instruction. Therefore, this research concludes that the experiences of students with the facilitation of the SI sessions, and their expectations of the SI programme, influence and shape their perceptions of Supplemental Instruction.

### RECOMMENDATIONS

- SI leaders should make students aware of the principles on which Supplemental instruction is founded, and find ways of dealing with all the expectations of students without compromising SI principles. The study therefore recommends that there be a session for all the first year students that would induct them to the principles of SI.
- There is a need to re-orient first year students to the pedagogies of the practice of SI so that they learn what it means to work actively, collaboratively, and independently.
- Also, there is need to synchronise the university's lecturing, tutorial and Supplemental Instruction systems so that these are not seen as competing against one another, but complementing each other.
- There is need to constantly monitor and assure the quality of SI sessions so that its principles are not compromised by the interference of lecturers and by the unreasonable expectations of students.

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