

# Comparing the Effectiveness of Student-Centred Learning (SCL) Over Teacher-Centred Learning (TCL) of Economic Subjects in a Private University in Sarawak

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The main purpose of this research is to compare the effectiveness of the Student Centred Learning (SCL) over the Teacher-Centred Learning (TCL), which has been implemented to teach the economic subjects at a private university in Sarawak. The study shows that SCL has proven to be a more effective way in students' learning, imparting knowledge and skills as well as attribute-internalisation to learners as compared to the TCL. The resources at the private university are suitable for the SCL to be implemented from the perspective of students with a mean of 2.76, although certain aspects need to be improved. The research shows that the SCL has been efficiently implemented for the economic subjects but the accessibility of internet and library arrangement systems need to be upgraded. Independent T-test shows that there were significant differences in the effectiveness of SCL over TCI in terms of students' learning, skill acquisition and internalisation of attributes respectively between the microeconomics and macroeconomics. It seems that SCL is more effective in teaching the macroeconomics than the micro-economics as the former has higher respective means than the latter. The research also indicates that all the critical success factors are significant and very significant for implementing the SCL. SCL could provide a very good pedagogy of teaching and learning, but is not the panacea to solve all problems related to pedagogical practices. Perhaps, lecturers could adopt the mixed methodology but more tilted to the student-centred teaching and learning. The extent of it depends on the needs of the topics and more importantly the learners' learning styles or needs.

**Key words:** *Effectiveness, Student-Centred Learning, Teacher-Centred Learning, Microeconomics, Macroeconomics.*

## Introduction

Student-centred learning (SCL) has been adopted as an active learning strategy in contrast with the passive learning of the Teacher-Centred Learning (TCL) according to Armstrong (2012). Hence, the SCL reverses the traditional (TCL) in understanding of the learning process and puts students at the centre of the learning process.

By tradition, teachers direct the learning process and students assume a receptive role in their education. Armstrong (2012) claimed that "traditional education ignores or suppresses learner responsibility".

SCL aims to develop learner autonomy and independence (Jones, 2007). Thus, it allows students to actively participating in the discovery learning process. Students would consume the entire class time constructing in a new understanding of the material being learned actively and proactively. A variety of hands-on activities are administered to promote successful learning. Students would be free to choose the tasks that help them to meet their objectives thereby focusing on applying what they learned (Armstrong (2012).

The teacher only acts as a facilitator in the student-centred classroom instead of giving a didactic lecturing in a theatre-type of classroom seating arrangement. The former has enabled students to take a self-directed alternative to learning. For the latter case, teachers are the primary source for knowledge whereby the focus of learning is to gain information as it is proctored to the student. Rote learning or memorisation of teacher notes or lectures was the norm.

Hence, this research is to compare the effectiveness of the SCL over the TCL which has been implemented to teach the economic subjects at a private university in Sarawak. The researcher implemented the teaching of microeconomics and macroeconomics both using the SCL and TCL in his classroom setting. For the first half of the semester, the researcher employed the TCL whereas the second half of the semester the researcher adopted the SCL. At the end of the semester, students were given the questionnaires to give opinions to compare the effectiveness for both approaches of teaching and learning.

## Research Questions

- What is the effectiveness of the Student-Centred Learning compared to the Teacher-Centred learning in terms of student-learning, skill acquisition and internalisation of attributes respectively from the perspective of students?
- What is the suitability of resources at the private university in implementing the Student-Centred Learning from the perspective of students?
- How efficient is the Student-Centred Learning has been implemented at the private university?
- How significant are the critical success factors in implementing the Student-Centred Collaborative Learning from the perspective of students?
- Is there any significant difference on the effectiveness of Student-Centred Learning over Teacher-Centred Learning in terms of students' learning, skill acquisition and internalisation of attributes respectively according to subjects?

## Literature Review

The incorporation of a few educational practices such as Bloom's Taxonomy and Howard Gardner's Theory of Multiple intelligences can be beneficial to a student-centred classroom because it promotes various modes of diverse learning styles. Therefore, the mind-set about teaching and learning is constantly evolving into new and innovative ways to reach diverse learners. When a teacher allows their students to make inquiries or even set the stage for his or her academic success, learning is more productive. Hence, SCL environments often rely on authentic experiences or realistic vignettes to facilitate interaction and learning (Hannafin, 2010).

It has been proposed that SCL is important because it strengthens student motivation; promotes peer communication; reduces disruptive behaviour; builds student-teacher relationships; promotes discovery/active learning and responsibility for one's own learning ((Hannafin, 2010).

Consequently, with the openness of a SCL environment, knowledge production is vital to provide students with the opportunity to explore their own learning styles. In that respect, successful learning also occurs when learners are fully engaged in the active learning process. In terms of curriculum practice, the student has the choice in what they want to study and how they are going to apply their newfound knowledge. Student learning processes are

greatly enhanced when they participate in deciding how they may demonstrate their competencies in a body of knowledge or the performance of skills. ([https://en.wikipedia.org/wiki/Student-centred\\_learning](https://en.wikipedia.org/wiki/Student-centred_learning)). This pedagogical implication enables the student to establish his or her unique learning objectives.

The SCL environment has been shown to be effective in higher education. This has been promoted through the following manners (Kember, 2009).

- A good practice by award-winning teachers, in all faculties, to show that they made use of active forms of student learning.
- A compulsory teacher training course for new junior teachers, which encouraged student-centred learning.
- Projects funded through teaching development grants, of which 16 were concerned with the introduction of active learning experiences.
- A programme-level quality enhancement initiative which utilised a student survey to identify strengths and potential areas for improvement.
- Development of a model of a broadly based teaching and learning environment influencing the development of generic capabilities, to provide evidence of the need for an interactive learning environment.
- The introduction of programme reviews as a quality assurance measure.

The success of this initiative was evaluated by surveying the students. After two years the mean ratings indicating the students' perception of the quality of the teaching and learning environment at the university all rose significantly (Kember, 2009).

To summarise, SCL puts the student at the centre of the learning as opposed to putting the teacher at the centre of the activity. The teacher could actively design and facilitate activities that lead to meaningful experience that put the student at the centre of the activity and learning. However, the teacher is not expected to abdicate responsibility for instructional design nor the imposition of certain expertise. Wright (2011) states that *“teacher’s roles change from the “sage on the stage” to the “guide on the side” who views the students not as empty vessels to be filled with knowledge but as seekers to be guided along their intellectual developmental journey (p93).*

### **Problem Statement**

It has been noted that graduates from many universities are lacking their effective skills (Barr and Tagg, 1995) as they enter the job market. Most of these students were trained using the traditional method of Teacher-Centred Learning which is less triumphant in instilling effective and psychomotor skills (Searle et al, 2003). In Malaysia, 34% of the fresh graduates are unemployed in 2016 (Leo, 2018 ). The main factors that contributed to unemployment of

fresh graduates in the Klang Valley of Malaysia was due to the lack of soft skills of graduates (Hossain et al 2018) and poor in English (Zahiid, 2015). Hence, a positive step needs to be taken to evaluate the learning method of students in universities, to ensure that they are well equipped with all the skills and abilities, in line with the demands of employers and stakeholderz at large (Hamdan, 2014). Research in the area of teaching-learning abroad has produced tremendous evidence that student-centred learning provides excellent opportunities in acquiring affective and psychomotor skills without compromising cognitive skills (Barr, 1995). However, hardly any research has been done in Malaysia in this area. To fill the gap, this research would compare the effectiveness of Student-Centred Learning over Teacher-Centre Learning of economic subjects in the context of a private university in Sarawak.

## **Method**

The quantitative research design was employed to carry out the research.

### ***Data Collection***

One set of questionnaire survey was administered to 38 students taking the microeconomics and 59 students taking macroeconomics. The researcher distributed questionnaires randomly to obtain samples of students who had attended the macroeconomics and microeconomics classes after employing both SCL and TCL.

### ***Validity and Reliability***

To ensure validity and reliability, the researcher taught both subjects and explained the purpose of the research at the beginning of the semester to the students. Questionnaires were then administered to students at the end of semester with some explanation of the items. Students could freely voice any doubt for clarification. Questionnaires were collected back soon after the students answered the questions.

## **Results and Discussion**

SPSS v 24 was used to analyse the data for answering the research questions. Mean and T-test Independent were employed for analysis.

### **Research Question 1**

What is the effectiveness of the Student-Centred Learning compared to the Teacher-Centred Learning in terms of Student-Learning, skill acquisition and internalisation of attributes respectively?

Data findings from Table 1– Table 3 are employed to answer the research question one.

**Table 1:** Effectiveness of Student-Centred Learning over Teacher Centred Learning in terms of students’ learning

No	Items related to effectiveness of students’ learning	Mean	SD	Mean	SD
		Microeconomics		Macroeconomics	
B1	promoting an active participation in learning	2.97	0.592	3.53	0.777
B2	promoting learning	3.11	0.648	3.58	0.726
B3	promoting acquisition of knowledge	3.00	0.657	3.48	0.863
B4	promoting a higher retention rate of what I learnt	3.00	0.519	3.35	0.828
B5	promoting self- reflection learning	3.45	3.16	3.46	0.777
B7	Encouraging collaborative learning	3.23	0.883	3.55	0.902
	<b>Average</b> Cronbach’s Alpha = 0.848	<b>3.12</b>	<b>1.07</b>	<b>3.49</b>	<b>0.812</b>

0 – 1.33 = not effective; 1.37 – 2.66 = moderately effective; 2.67 – 4.00 = effective

Related to effectiveness of students’ learning, Table 1 indicates that the SCL is both effective over TCL in the teaching and learning of Microeconomics (M = 3.12) and Macroeconomics (M = 3.49) particularly in promoting learning, self-reflection and active participation in learning.

**Table 2:** Effectiveness of Student-Centred Learning over Teacher Centred Learning in terms of students’ acquisition of Skills

No	Items related	Mean	SD	Mean	SD
		Microeconomics		Macroeconomics	
B6	enhancing my social skills	3.35	0.582	3.75	0.779
B8	enhancing my problem -solving skills	3.21	0.475	3.62	0.670
B9	enhancing my interpersonal skills	2.89	0.689	3.48	0.863
B10	enhancing my coaching skills	3.34	0.668	3.86	0.660
B13	enhancing my communication skills	3.37	0.786	3.88	0.623
B15	enhancing my skills in team- work	2.95	0.612	3.63	0.831
B16	enhancing my skills in life-long learning	3.00	0.658	3.69	0.842
B18	enhancing my creative and critical thinking skills	3.08	0.712	3.71	0.725
	<b>Average</b> Cronbach’s Alpha = 0.878	<b>3.14</b>	<b>0.647</b>	<b>3.70</b>	<b>0.749</b>

Table 2 indicates that the SCL is effective over TCL for both microeconomics and macroeconomics respectively in terms of skill acquisition from the perspectives of students with an overall mean of 3.14 and 3.70 respectively.

**Table 3:** Effectiveness of Student-Centred Learning over Teacher Centred Learning in terms of students' internalisation of Attributes

No	Items	Mean	SD	Mean	SD
		Microeconomics		Macroeconomics	
B11	promoting the spirit of accountability for my learning	2.85	0.593	3.36	0.852
B12	gaining insights into my attitudes towards learning	2.97	0.645	3.45	0.776
B14	enhancing my leadership qualities	2.94	0.566	3.22	0.798
B17	enhancing self- confidence of myself	3.07	0.818	3.55	0.773
	<b>Average</b> Cronbach's Alpha = 0.777	<b>2.95</b>	<b>0.655</b>	<b>3.40</b>	<b>0.822</b>

0 – 1.33 = not effective; 1.37 – 2.66 = moderately effective; 2.67 – 4.00 = effective

As a whole, the SCL is more effective over TCL respectively for both microeconomics (Mean = 2.95, SD = 0.655) and macroeconomics (Mean = 3.40, SD = 0.822) in terms of attribute-internalisation among the students (Mean = 3.12, SD = 0.667) particularly in enhancing communication, social and coaching skills.

## Research Question 2

What is the suitability of resources at the private university in implementing the Student-Centred Learning?

**Table 4:** Suitability of Resources to implement the Student-Centred Learning

No	Items	Mean	SD	Mean	SD
		Microeconomics		Macroeconomics	
C1	Collection of reference resources at the library	2.50	0.830	3.24	0.864
C2	Learning resources at the internet	2.89	0.894	3.72	0.854
C3	The laboratory seating arrangement	2.65	0.847	3.22	0.773
C4	The lecture room seating arrangement	2.70	0.776	3.31	0.882
C5	The workshop room seating arrangement	2.67	0.747	3.22	0.869
C6	My learning styles (e.g. my preferences)	3.15	0.754	3.41	0.929

<b>Average</b>	<b>2.76</b>	<b>0.808</b>	<b>3.35</b>	<b>0.861</b>
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Cronbach's Alpha = 0.706, 0 – 1.33 = not suitable; 1.37 – 2.66 = moderately suitable; 2.67 – 4.00 = suitable

Data in Table 4 shows that the resources available at the private university are generally suitable for implementing the SCL from the perspective of students respectively for the teaching and learning of microeconomics (Mean = 2.76, SD = 0.808) and macroeconomics (Mean = 3.35, SD = 0.861). However, certain issues need to be addressed such as the seating arrangement at the laboratory, lecture room as well as the workshop room that need to be rearranged for promoting group discussion/activities.

### Research Question 3

How efficient is the Student-Centred Collaborative Learning that has been implemented at the private university?

**Table 5:** The efficiency issues in implementing the Student-Centred Learning

No	Items	Mean	SD	Mean	SD
		Microeconomics		Macroeconomics	
D1	With Student-Centred Collaborative Learning, I could acquire maximum learning outcome	3.17	0.775	2.86	0.666
D2	The support service is efficiently managed (for example, getting the LCD, stationeries on time)	3.37	0.768	3.13	0.705
D3	The facilitation of lecturers make my learning more efficient	3.50	0.777	3.26	0.613
D4	There is an efficient collaborative learning among students	3.45	0.820	3.07	0.630
D5	The accessibility of internet is very good	3.32	0.998	2.37	0.898
D6	The library management system enables me to get references efficiently	3.29	0.878	2.71	0.717
	<b>Average</b>	<b>3.35</b>	<b>0.836</b>	<b>2.90</b>	<b>0.707</b>

Cronbach's Alpha = 0.735; 0 – 1.33 = not efficient; 1.37 – 2.66 = moderately efficient; 2.67 – 4.00 = Efficient

The SCL could generally be efficiently implemented according to the perception of students respectively for both microeconomics (Mean= 3.35, SD = 0.836) and macroeconomics (Mean = 2.90, SD = 0.707) . However, the accessibility of internet and library management system needs to be upgraded.

#### Research Question 4

How significant are the critical success factors in implementing the Student-Centred Learning?

**Table 6:** Critical Success Factors for implementing the Student – Centred Learning according to the perspective of students

No	Items	NS at all	NS	Significant	V. Significant
E1	Concerns from my lecturer	1 (1.0)	13(13.5)	75(78.1)	7 (7.3)
E2	Classroom seating arrangement	1 (1.0)	18 (18.8)	68 (70.8)	9 (9.4)
E3	Skills of my lecturer in facilitating the lesson using the SCCL method	1 (1.0)	13 (13.5)	74 (77.1)	8 (8.3)
E4	Facilities needed , for example , LCD, stationery, moveable tables and chairs	2 (2.1)	9 (9.4)	74 (77.1)	11 (11.5)
E5	Accessibility of Learning resources	0 (0.0)	8 (8.3)	80 (83.3)	8 (8.3)
E6	Learning styles of students	2 (2.1)	8 (8.3)	72 (75.0)	14 (14.6)
E7	The SCCL Lesson Module given to me	3 (3.1)	11 (11.5)	74 (77.1)	8 (8.3)
	<b>Average</b>	<b>1.5%</b>	<b>11.9%</b>	<b>77.9%</b>	<b>9.7 %</b>

**Cronbach's Alpha = 0.815**

Majority of the student respondents indicated that all the critical success factors (E1 – E7) are significant and very significant for implementing the SCL. Among them, accessibility of learning resources (91.6%) ranks at the top followed by learning styles of students, facilities needed and others are also positively ranked as shown in Table 6.

#### Research Question 5

Is there any mean significant difference on the effectiveness of Student-Centred Learning over the Teacher-Centred Learning in terms of students' learning, skill acquisition and internalisation of attributes respectively according to subjects?

An independent T-Test was employed to investigate any significant difference in the effectiveness of SCL over the TCL in terms of students' learning, skill acquisition and internalisation of attributes according to subjects taught.

**Table 7:** Effectiveness of Students' Learning according to Subjects Taught

Subjects	N	Mean	F	df	Sig. (2-tailed)	t	Variances
Microeconomics	38	18.76	0.170	94	0.004	-2.912	Equal
Macroeconomics	58	20.96		79.3	0.005	-2.913	Unequal

Table 7 indicates that there is a significant mean difference among respondents on the effectiveness of SCL over TCL on students' learning and the subjects taught,  $p = 0.004$ ,  $F [0.170, 94]$ .

**Table 8:** Effectiveness of Skill- Acquisition According to Subjects

Subjects	N	Mean	F	df	Sig. (2-tailed)	t	Variances
Microeconomics	38	25.2	0.889	94	0.000	-5.098	Equal
Macroeconomics	58	29.6		89.9	0.000	-5.332	Unequal

Table 8 indicates that there is significant mean difference among students on the effectiveness of SCL over TCL on skill-acquisition and the subjects taught,  $p = 0.000$ ,  $F [0.889, 94]$  with SCL.

**Table 9:** Effectiveness of Attribute-Internalisation according to Subjects taught

Subjects	N	Mean	F	df	Sig. (2-tailed)	t	Variances
Microeconomics	38	11.8	2.73	94	0.001	-3.477	Equal
Macroeconomics	58	13.5		91.1	0.000	-3.662	Unequal

Table 9 indicates that there is a significant mean difference among respondents (students) on the effectiveness of using SCL over TCL on attribute internalisation and the subjects taught,  $p = 0.001$ ,  $F [2.73, 94]$  with SCL over TCL.

## Conclusion

The study shows that SCL has proven to be a more effective way of students' learning, imparting knowledge and skills, as well as attribute-internalisation to learners as compared to the TCL. Perhaps the researcher should closely reflect how to use the SCL method of teaching and learning in the classroom setting to enable students to acquire skills, knowledge and internalisation of attributes in a more effective and meaningful way. Students would enjoy the lessons and engage actively in their learning, thereby enhancing the average retention rate of what they have learned.

The resources at the private university are suitable for the SCL to be implemented from the perspective of students with mean = 2.76, but certain aspects need to be improved. This implies that there is room for improvement, particularly for issues related to collection of reference resources, and seating arrangements in lecture room and workshop room.

The research shows that the SCL has been efficiently implemented for the economic subjects, however the accessibility of Internet and library arrangement systems needs to be upgraded.

The T-test Independent shows that there were significant differences in the effectiveness of SCL over TCL in terms of students' learning, skill acquisition and internalisation of attributes respectively between the microeconomics and macroeconomics. It seems that SCL is more effective in teaching the macroeconomics than the microeconomics since the former has significantly higher respective means than the latter.

The research also indicates that all the critical success factors are significant and very significant for implementing the SCL. Among them, accessibility of learning resources (91.6%) ranks at the top followed by learning styles of students, facilities needed and all others that are also positively ranked.

Though SCL could provide a very good pedagogy of teaching and learning, but is not the panacea to solve all problems related to pedagogical practices (Lau, 2014). Perhaps, lecturers could adopt the mixed methodology that is more tilted to the student-centred teaching and learning with natural learning methods (Amstrong, 2012). The extent of it depends on the needs of the topics and more importantly the learners' learning style or need.

In conclusion, using student-centred learning approaches to teaching does mean that teachers do not lecture. Perhaps cooperative learning can be adopted to contribute to the development of individual reasoning, problem-solving and learning (Gillies, 2008; Merce et al, 2004). Teachers could also mediate students' learning by engaging in dialogic teaching to resolve problems and ask questions to reflect and evaluate on outcomes achieved (Alexander, 2008,



b; Gillies, 2016). More importantly, teaching and learning should bring about a significant change in knowledge in terms of approach, conception, attitudes and behaviour (Light, G., Cox, R., Calkins, S, 2001).

### **Acknowledgement**

My deep gratitude and thanks to the University College of Technology Sarawak to provide me the research grant to make this research possible.



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