





**TRAINING MODULE SERIES:
STUDENT-CENTERED LEARNING (SCL)
APPROACHES FOR INNOVATIVE TEACHING**

Module 1: Introduction

Rozinah Jamaludin





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Training Module Series: Student-Centered Learning (SCL) Approaches for Innovative Teaching

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Centre for Development of Academic Excellence (CDAE)
Universiti Sains Malaysia
2nd Floor, Eureka Complex
11800, USM Pulau Pinang

MODULE 1: INTRODUCTION

Rozinah Jamaludin

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Preface

Students are expected to achieve 21st century skills, which inculcate life & career skills, learning & innovation and information & communication technology (ICT) skills. Consequently, it has become the unwavering responsibility of educators to ensure that these skills are sowed in students especially at higher education institutions (HEIs). As such new methods of teaching and learning (T&L) have been continuously identified to devise techniques which are relevant and suitable for the students of the net generation. Parallel to that perspective, Student-Centered Learning (SCL) has been promoted as a new approach in T&L to support the rapidly changing educational environment. The Centre for Development of Academic Excellence (CDAE) has published the Training Module Series: Student-Centered Learning (SCL) Approaches for Innovative Teaching which consists of Modules 1 to 6 that will provide the basis for a training programme for academic staffs to enhance their pedagogical knowledge and skills. The modules were authored by an array of experts in the area of T&L, who have provided an overview of SCL in terms of definition, methodology and application.

Module 1: Introduction serves as a foreword to the concept of SCL by: (1) introducing the vision and mission of the National Higher Education Strategic Plan 2 (NHESP 2) regarding T&L through the soft power approach at the regional and global levels; (2) describing the 21st century skills that are needed for today's society and (3) specifying the outcomes of T&L in the classroom. Module 2: Philosophy of Student-Centered Learning (SCL) provides an overview of SCL and introduces the underlying philosophies that support the student-centered approach to teaching. The content of this module also describes the key benefits of SCL for students and lecturers and student-centered pedagogy (i.e. characteristics of the learners and the nature of the learning environment in the student-centered setting).

Module 3: Learning Taxonomies revolves around the learning taxonomies used in T&L that are based on Anderson and Krathwohl's (2001) revised version of Bloom's Taxonomy and Buckwalter's Taxonomy for the Health and Medical Sciences (1981). This module illustrates the basic principles of the learning taxonomies used in education and the classification of educational objectives (i.e. three domains: cognitive, affective, and psychomotor). Module 4: The Constructivist Lecturer provides detailed methods that will assist the reader to become a constructivist lecturer via the application of constructivist approaches in T&L.

Module 5: Approaches to Student-Centered Learning (SCL) aims to offer teachers in higher education a variety of student-centered educational approaches. These learning approaches are presented in a straightforward manner, with opportunities for self-assessment and reflection to allow for the selection of the most appropriate SCL approach.

Module 6: Assessment in Student Centered Learning is a compilation of six individual units that includes the detailed description of assessment for the SCL approach which consists of definition, methodology and principles. This module also describes issues, benefits, and challenges of implementing assessment and best practices for assessing students in the in the SCL.

On the whole, the modules are projected to be beneficial to the reader in terms of T&L, upon the understanding and consequently the application of the SCL concept. Each module in this series will definitely aid in the improvement of the T&L environment in USM and thus is recommended for all the academic staff of Universiti Sains Malaysia (USM).

Professor Abd Karim Alias

Director

Centre for Development of Academic Excellence (CDAE), USM

Module Description

This chapter describes the importance of a new approach in teaching called Student-Centered Learning (SCL). This approach is in line with the vision and mission of the National Higher Education Strategic Plan 2 (NHESP 2), the theme of which is 'Malaysia's Global Reach: A New Dimension Using the Soft Power Approach.' NHESP 2 was introduced because today's higher education landscape is increasingly dynamic and mobile, and Malaysia can no longer depend on conventional strategies to continue competing at the international and global levels. Therefore, it is crucial to develop a teaching approach that will help students to grow as human capital with well-instilled lifelong learning habits. The intention of the soft power approach in higher education is to capture the hearts and minds of local and international stakeholders to collectively accept values, ideologies, and cultures of learning that can benefit communities.

Module Outcomes

At the end of this module, users should be able to:

1. Introduce the vision and mission of the NHESP 2 regarding teaching and learning through the soft power approach at the regional and global levels;
2. Identify the 21st century skills that are needed for today's society;
3. Understand the outcomes of teaching and learning in the classroom; and
4. Instil lifelong learning habits in 21st century students.

1 Introduction

The National Higher Education Strategic Plan (NHESP 2) that was launched in 2007 initiated efforts to enhance the quality of higher education (HE) in order to transform Malaysia into a centre of higher educational excellence by the year 2020. The goals of this plan are to build a HE environment that is conducive to the development of a superior centre of knowledge and to generate individuals who are competent, innovative, and of noble character to serve the needs of the nation and the world. Specifically, the goals are to:

1. Create a strategic and systematic plan for HE;
2. Reinforce the management system of HE;
3. Increase the capacity of, accessibility to, and participation in HE;
4. Enhance the quality of HE so that it is on par with international standards; and
5. Internationalise Malaysian HE.

The plan was formulated with several phases of implementation that began in 2007 and will continue until 2020. The implementation of Phase 1: Laying the Foundation (2007–2010) has succeeded in placing the larger vision of national HE in a mould that can be carried out effectively until the end of 2010. The agenda to strengthen the basis developed in Phase 1 and to formulate an effective strategy through the use of the soft power approach will continue in Phase 2: Strengthening and Enhancement (2011–2015). As such, the NHESP 2 can be used as a guide to develop the internationalisation initiative agenda at the regional, international, and global levels.

Soft power in the HE sector refers to the capabilities of institutions to capture the hearts and minds of local and international stakeholders to collectively accept values, ideologies, and cultures of learning that can benefit communities. The soft power principles called the 4As will be used to determine how successfully the value-added strategies have been achieved in the second phase of NHESP 2. These four principles are:

- **Appropriateness:** HE institutions must be aware of the cultural sensitivities and local values; the approaches used must not deviate from the values and the norms of Malaysia.
- **Affordability:** HE institutions must ensure that everything they offer can be attained by all community members from all levels of society, specifically the bottom billion.

- **Accessibility:** HE institutions must ensure that their initiatives are not exclusive in nature but instead take into account the needs of the public without excluding certain groups.
- **Availability:** HE institutions must ensure that every programme offered is always at the disposal of those who need it.

These four principles are in parallel with the goals of making Malaysian HE a hub of international and regional education that is relevant, respected, and referred to by others. Various strategic programmes and initiatives have been designed to further Malaysia's new global outreach agenda. Three stages of implementation that cover capacity building, making a difference, and giving back were planned to achieve the aims of the following programmes:

- *MySkill* for continuous education leading to acquisition of diploma, degree, and other levels of education;
- *MyAlumni* to strengthen relationships for the promotion of Malaysian HE institutions at the international level;
- *MyFellow* to develop diplomatic relationships with the ultimate objective of strengthening diplomatic ties and instilling positive feelings about Malaysia's efforts to captivate the heart and attention of preferred partner countries;
- *MyOdyssey* to showcase the uniqueness of Malaysia's collaboration with respective government agencies, such as the Ministry of Tourism; and
- *MyCommunity* to create community improvements that bring immediate improvement in living conditions.

Using the new strategies of teaching inherent in SCL, it is hoped that the vision and mission of PSPTN Phase 2 will be achieved.

2 21st Century Skills

The concept of 21st century skills involves creating a 'culture of inquiry' that inculcates the 4Cs: critical thinking, communication, collaboration, and creativity. It also is connected to the community at the local, state, national, and global levels. The concept resulted from the emergence of technology and globalization that has caused the curriculum to be interdisciplinary, integrated, project-based, and more. In his book titled *The Global Achievement Gap: Why Even Our Best Schools Don't Teach the New Survival Skills Our Children Need—And What We Can Do About It*, Tony Wagner (2009) listed the following seven survival skills that students need to have to succeed in today's information-age world:

1. Critical thinking and problem solving;
2. Collaboration across networks and leading by influence;
3. Agility and adaptability;
4. Initiative entrepreneurialism;
5. Effective oral and written communication;
6. Accessing and analyzing information; and
7. Curiosity and information

21st century skills are outcome based compared to time based. It focuses on what students 'know, can do, and are like' after all the details are forgotten rather than on just memorization of discrete facts. Learning is designed based on the upper levels of Blooms' taxonomy (i.e., synthesis, analysis, and evaluation), but it also includes lower levels of the taxonomy, as the curriculum is designed from the top down. Learning should be research driven rather than textbook driven. Learners also should work collaboratively with classmates and others around the world (i.e., the global classroom) so that active learning occurs. In this scenario, students are self-directed and work both independently and interdependently. Students have a great deal of freedom, and the teacher acts as a facilitator or coach. Teachers also have high expectations: 'If it isn't good it isn't done.' We expect, and ensure, that all students succeed in learning at high levels. For those who wish to go higher, we get out of their way to let them do that. In such a system, assessment moves from regurgitation of memorized facts and disconnected processes to demonstration of understanding through application in a variety of contexts. Real-world audiences are an important part of the assessment process, as is self-assessment.

Technology offers many opportunities in teaching the many skills. For example, the following tools can be used to help students attain the seven skills listed above:

1. Open ended questions, essential questions, and big ideas;
2. Wikis, SharePoint, cooperative learning, discussions, community member speakers;
3. Debates, presentations, open source software;
4. Teams, project-based learning;
5. Reporting, newspapers, tweets, blogging, web sites;
6. Using search engines, learning search modifiers, library research; and
7. Make teaching fun.

3 The Twelve Roles of a Good Teacher (Harden 2000)

According to Harden (2000), a good teacher plays the following six roles:

1. Information provider;
2. Role model;
3. Facilitator;
4. Assessor;
5. Planner; and
6. Resource developer.

Each of these roles can be subdivided into two roles, making a total of twelve roles (Figure 1).

Teacher's Roles

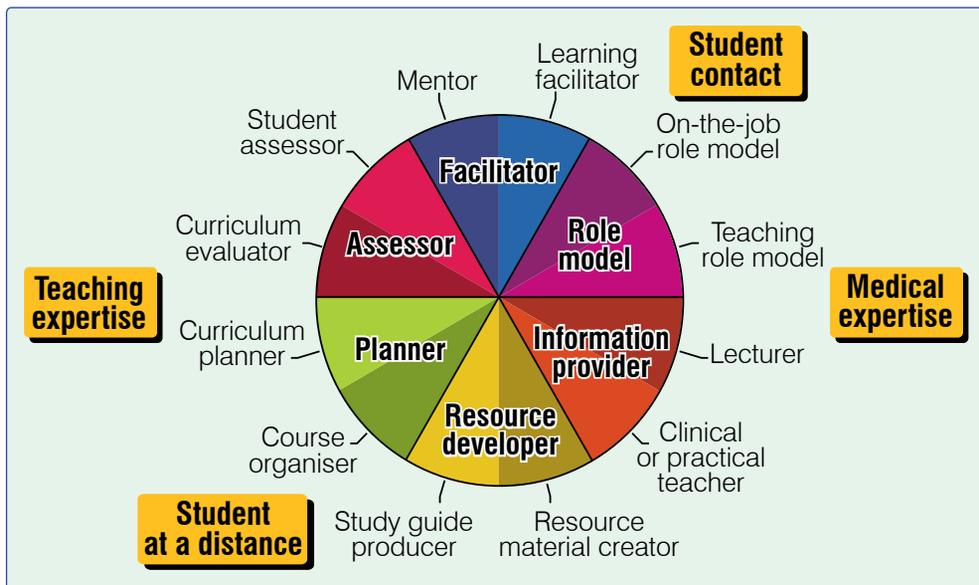


Figure 1. The 12 roles of the teacher and their place in the context of the relationships that exist between the student, the teacher and the curriculum.

4 Outcomes of Teaching and Learning

The changes in curriculum design from Program Educational Outcomes to Program Outcomes to Course Outcomes and to Learner Outcomes have to be clearly outlined in the SCL approach.

- **Program Educational Outcomes:** These outcomes must reflect the key elements of the outcomes of HE that are in line with national and global developments. They should be developed in consultation with the principal stake holders, who include academic staff members, students, alumni, and funding sources.
- **Program Outcomes:** The program must define the competencies that the student should demonstrate on the completion of the program that cover mastery of body of knowledge, practical skills, thinking and scientific skills, communication skills, leadership, social skills and teamwork, value ethics, moral and professionalism, information management and lifelong learning skills and managerial and entrepreneurial skills.
- **Course Outcomes:** Course outcomes describe what the students will learn to do, the conditions under which the students will perform the task(s), and the criteria for evaluating performance.
- **Learner Outcomes:** Learners will meet all of the criteria outlined in the program outcomes. Learners will be able to demonstrate the ability to perform high level thinking, ask questions, conduct research, make decisions, and give presentations.

5 Lifelong Learning

The SCL approach aims to instil the desire for lifelong learning, meaning learning that is practiced throughout a person's life; that is flexible, diverse, and available at different times and in different places across sectors; and that goes beyond traditional schooling and throughout adult life. According to the World Bank the lifelong learner should act autonomously in devising a life plan and be prepared to work in a multicultural workforce. The World Bank defines the knowledge and competencies needed for lifelong learning as:

"...including basic academic skills, such as literacy, foreign language, math and science skills and the ability to use information and communication technology. Workers must use these skills effectively, act autonomously and reflectively and join and function in socially heterogeneous groups."

Students will be able to follow Delor's (1996) four 'pillars' of education for the future:

- Learning to know: mastering the learning tools rather than acquiring structured knowledge;
- Learning to do: equipping people for the types of work needed now and in the future, including innovation and adaptation of learning for future work environments;
- Learning to live together and with others; resolving conflict peacefully, discovering other people and their cultures, fostering community capability, individual competence and capacity, economic resilience, and social inclusion; and
- Learning to be: education contributing to a person's complete development: mind and body, intelligence, sensitivity, and spirituality.

These pillars of education are supported by the concept of 'learning to learn', which can inspire creativity, initiative, and responsiveness in people, thereby enabling them to be adaptable in post-industrial society through enhancing skills to:

- manage uncertainty;
- communicate across and within cultures, sub-cultures, families, and communities; and
- negotiate conflicts.

6 Conclusion

This chapter discussed the importance of the SCL approach, which is integrated in Malaysia's HE strategic plans. Students are expected to achieve 21st century skills, which inculcate the 4C: critical thinking, communication, collaboration, and creativity. With the SCL approach, students will reap many educational benefits, and they will be able to effectively achieve Program Educational Outcomes, Program Outcomes, Learner Outcomes, and Course Outcomes. Attaining these outcomes will help instil lifelong learning traits in students, which in turn will help them become autonomous learners in the 21st century.

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