A Hybrid Facilitation Model For Inexperienced Students Via Integration of Teacher-Centred and Student-Centred Roles

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Abstract: Inadequate experience in handling Student-Centred Learning (SCL) approaches may hinder teachers from demonstrating the full spectrum of the facilitation as proposed in the Heron facilitation model. Therefore, this study was undertaken to investigate the utility of the Heron facilitation model in SCL among teachers and students of higher educational institutions who are relatively inexperienced in SCL. The participants were 177 teachers from a higher engineering educational institution, and a survey using questionnaires was carried out to gauge their experience with the SCL facilitation methods. The results obtained by using the Exploratory Factor Analysis (EFA) indicate the presence of four new dimensions instead of six, as proposed in the Heron model, namely planning, shared decision-making, flexible teamwork, and shared outcome. The first construct indicates teacher-empowered teaching, while the other three indicate students' empowered learning. The finding provides a set of new guidelines for novice teachers in planning the facilitation of SCL.

Keywords: dimension of facilitation, facilitator, heron facilitation model, higher education, mode of facilitation, student-centred learning

1. Introduction

The Malaysian higher educational institutions have recently introduced a wider range of student-centered learning (SCL) approaches or applications, which implies increased recognition for SCL as a method of deep learning and retaining long-term knowledge (Tran, 2014).

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The introduction of SCL has raised concerns among the higher-education teachers who are unfamiliar with this unconventional approach, which is very different from the traditional teaching and learning method. While the traditional approach relies heavily on teachers (teacher-controlled learning) to chart teaching directions and produce learning outcomes, the SCL approach encourages students to play an active role (student-controlled learning) in determining the contents, activities, materials, and levels of learning (Collins & O'Brien, 2003; Landoy et al., 2019; Kadam et al., 2021). Thus, in the SCL approach, students become the key players in the teaching and learning process; they are expected to participate actively in making decisions and solving problems related to learning. When SCL is properly implemented, students will have the opportunities to learn independently with some guidance from the facilitator (teacher); this is in line with the role of an educator-- to provide opportunities for students to learn independently with increased motivation, understanding, and interest towards learning (Masek, 2019).

Although students are encouraged to learn independently in the SCL setting, the facilitator plays a crucial role in guiding the students to achieve their learning goals at the end of the SCL sessions (Collins & O'Brien, 2003; Landoy et al., 2019). SCL will not work without proper guidance; the facilitator is expected to provide relevant input at appropriate times during the SCL session. In addition to the facilitator's support, students in the SCL environment must have the necessary pre-requisite skills for learning to take place. However, the majority of higher education students in Malaysia receive relatively little exposure to the SCL methods during their school years, as the country's education system is primarily examination-oriented (Malaysian Education Syndicate, 2012). It was only recently, with the introduction of the School-Based Assessment (SBA) system, that the SCL method and activities such as group work, group assignment, and group presentation were required to be implemented in primary and secondary schools

(Malaysian Education Syndicate, 2012). Thus, the Malaysian students are not well prepared for SCL. Even common SCL activities such as discussions and brainstorming do not seem to work in some observed cases (Masek et al., 2013). In their study Masek et al. (2013) found that students felt awkward at initiating a discussion, and if a discussion was started, it did not last more than 10 minutes in some groups. Furthermore, critical debates amongst students were hardly observed during the discussions. In a properly executed SCL session, it is the responsibility of the facilitator to provide suitable cues for further discussions, especially when the students are in the limbo of what to do next. However, from their observations, Masek et al., (2013) found that the absence of timely cues indicated the lack of teachers' skills in implementing the SCL methods and related activities.

In addition to providing cues, teachers (as facilitators) need to fully understand their roles in the implementation of SCL so that the session will be fruitful and productive. Previous researches suggest several principles that can guide a teacher to implement an SCL session successfully. One of the principles is that the teacher should act as a facilitator and information provider, especially when the class is engaged in the SCL activities (Brandes & Ginnes, 1986; Spratt et al., 2005; Lee, 2006; Masek, 2019). If a session is implemented among students in a higher educational institution, the teacher should be a facilitator who provides support to the students, instead of merely acting like a normal lecturer – a disseminator of knowledge (Yaşar, 2008).

Facilitators need to be skillful at guiding the students at appropriate times during the SCL sessions; as such, Higher Education (HE) teachers must learn how and when to intervene, and when to remain silent in the teaching and learning process (Lee, 2006). It is essential that HE teachers understand and master the techniques of facilitation so that the students can actively participate in their learning and in guiding their peers (Neville, 1999). Spratt et al. (2005) give a more comprehensive guideline for a teacher to become an effective facilitator; teachers should prepare their lessons early and think deeply about the subject they will be teaching. In this manner, they can provide clear information about the topics, and the teaching and learning are based on good planning and management.

They are to monitor the teaching and learning process to create an atmosphere conducive to productive interactions; they must be able to detect problems faced by the students and provide feedback and assistance when necessary. Over and above all these issues, a teacher-facilitator needs to have negotiation skills and an ability to interject remarks to resolve any problems faced by the students during the SCL sessions (Sabburg et al., 2006).

However, as SCL has only been introduced in recent years into Malaysian higher educational institutions, the teachers do not fully understand their role in the SCL process (Turan et al., 2009). The need for teachers to learn new skills requires additional time and effort, on top of their existing heavy workload; this explains why some teachers are not keen on implementing SCL (Yasar, 2008). Furthermore,

many HE teachers are reluctant to take on the new challenge of facilitating SCL as they are comfortable with their traditional role as knowledge disseminators (Dolmans et al., 2002). The role of facilitators in the SCL sessions is critical as they need to continually monitor the progress of the students, and to select as well as use strategies that are appropriate to the students' learning (Hmelo-Silver and Barrows, 2006). While trying to improve their new teaching methods, some HE teachers fail to guide their students in taking the appropriate actions during the SCL process (Bolhuis and Voeten, 2001). Facilitating is a difficult task for HE teachers who are inexperienced in SCL; they are unfamiliar with all aspects of the new teaching method like planning, implementation, and lesson assessment (Ertmer and Simons, 2000). HE teachers who are new to the facilitation techniques often fail to provide appropriate guidance to the students during the SCL process, which is critical to the success of the students' learning (Brown, 2002). These teachers have a negative mindset about SCL, and they do not make serious efforts to promote productive interactions (Das et al., 2002). Some HE teachers rightfully raise the issue of the lack of guidelines for them to follow in conducting an SCL session (Mokgele, 2006).

Thus, more research is required to formulate new guidelines and strategies so that HE teachers are confident in assuming the task of effective SCL facilitation. Current research tends to focus on the philosophy, framework, and work process of SCL, but relatively less on the dimensions and mode of workable facilitation (Thomas, 2005). As a consequence, it is a difficult job to assess the effectiveness of SCL facilitation in higher educational institutions. Facilitation techniques have been largely dependent on the skills of individual teachers.

Currently, the Heron model (Heron, 1999) of facilitation is the most widely used in the world (Galajda, 2012; Sheehan, 2000; Thomas, 2016). However, an analysis of the Heron model indicates that it may not fit well with all learning situations due to the inherent differences existing in different cultures and disciplines of study, which entail the adoption of a revised model. First and foremost, the Heron model was developed in the county with western culture, to be used by professionals for training workplace people who are familiar with and experienced in facilitating.

This model of facilitating may not work well in the Eastern culture, in which facilitation is largely influenced by collective behaviors. Furthermore, facilitation techniques in the teaching and learning context involving inexperienced players (teachers and students) are bound to be different from those in the working world (Besbeas & Morgan, 2012). In addition, according to Lun (2010), students' participation in group discussions required different facilitation techniques. A hybrid model (TCL+SCL) seems more appropriate for implementing SCL in a teaching and learning community with less experienced members. Hence, this modified model could be more suitable for the Malaysian higher educational community, as the members generally have very little or no experience at all in SCL and the related facilitation process. This study aims to evaluate the utility

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functions of the Heron model for SCL facilitation among HE teachers and students in Malaysia and to propose a revised model for future applications.

1.1. The heron model of facilitation

The Heron (1999) model proposes six dimensions and three modes of facilitation. These dimensions serve different functions and content strategies that cater to the students' learning. The first dimension is planning, which focuses on guiding the students to achieve their learning goals. The second dimension is meaning, which covers the cognitive aspect of the students' awareness of learning. The third dimension is confrontation, which handles more specific aspects of learning, including the 'dos' and 'don'ts' in the learning process. The fourth dimension is feeling, which deals with different issues, including the psychological and emotional aspects of different students. The fifth dimension focuses on structuring the students' learning, and the sixth dimension stresses the value of learning. These dimensions are interconnected and linked to one another but must be implemented differently.

In attempting to apply the six dimensions of facilitation, several questions need to be addressed. First, should the facilitator take control of the students' learning by implementing the six dimensions during the SCL sessions? Second, what level of autonomy should be given to the students? Third, what if the students are not performing well or the facilitator is not functioning effectively? The answer would be that the facilitator has to adopt the three modes during the facilitation process, namely hierarchy, autonomy, and cooperation.

The level of the facilitator's control of the students' learning varies in each model. In the hierarchy mode, the facilitator has to exert more control over the students' learning. In the autonomy mode, the facilitator plays the role of task monitoring. In the cooperative mode, the facilitator acts as a leader while the group members function with a minimal level of control. Thus, the facilitator's role can be modified and fine-tuned depending on the mode of facilitation in response to the context of the specific SCL environment. The connections between dimensions and modes are indicated in Fig. 1.

Figure 1 indicates six dimensions that determine the students' level of control of their learning by different modes, from hierarchy to autonomy. It can be observed that the teacher's level of control of the students' learning decreases from left to right.
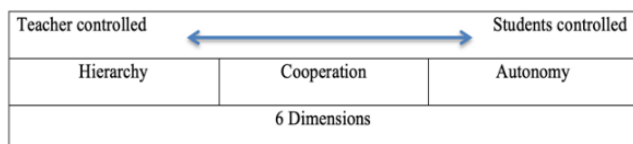

Fig.1. Students' and teachers' level of control over learning

2. Methodology

2.1. Research design, sampling technique, and procedures

This research employed a non-experimental research design to investigate and evaluate the utility of the Heron model for SCL facilitation among HE (engineering education) lecturers and students in Universiti Tun Hussein Onn Malaysia. The data were collected using a cross-sectional survey to draw inferences about the population.

A total of 248 participants were recruited for the study out of the 1220 teachers in Universiti Tun Hussein Onn Malaysia. A two-stage simple random sampling procedure was used. In the first stage, the Facilitation Questionnaire forms were distributed online (email link with cover letter); and in the second stage, face-to-face meetings were arranged to hand out Questionnaire forms. In the first stage of the sampling operation, only 25 questionnaires were returned after a lapse of two weeks. In the second stage, a total of 152 completed questionnaires were collected from the 300 rooms/offices randomly visited. The questionnaire forms were given out to the would-be participants only after obtaining the teachers' consent and the answering of the questionnaire was done voluntarily. The response rate was 71.4% (177 out of 248), which is above the acceptable return rate of 65% (Nulty, 2008).

2.2. Instrument

The instrument used for data collection is the Facilitation Questionnaire which consists of three major parts: Part A, Part B, and Part C. Part A items are designed to obtain demographic information while Part B contains items related to the six dimensions of facilitation in the context of SCL. Part C consists of items intended to probe the modes of facilitation. A total of 55 items were developed based on the Heron Facilitation Model (Heron, 1999). Items were rated by the teachers using the five-point Likert scale to capture their degrees of agreement. Here is an example of an item, "I am planning a suitable teaching and learning method before class".

The instrument reliability was measured and item analyses were performed before the actual study was conducted. The reliability index determined by using the Cronbach Alpha was 0.94, and a total of 10 items (discrimination index < 0.3) were removed under the criterion of Widhiarso (2001), who suggests that items with an index value of below 0.3 can be revised or eliminated.

2.3. Data analysis methods

Data were first analyzed using descriptive statistics to find the mean and standard deviation. Then, the Kaiser Meyer Olkin (KMO) test was performed to verify that the factor analysis was suitable for the data. According to Bandalos and Finney (2010), factor analysis is used to identify, organize, and minimize items to a certain number of constructs of a dependent variable in research. In this case, items that were developed based on the six dimensions and three modes of the Heron Facilitation Model (Heron, 1999) were reorganized into dependent variables.

3. Data Analysis and Results

3.1. Demography

There are 177 respondents comprising teachers of various disciplines and from different faculties at the Universiti Tun Hussein Onn Malaysia. The participants were evenly distributed according to gender (Table 1), with most of them having more than five years of teaching experience. Similar proportions of participants were from the engineering as well as arts and humanities disciplines (Table 1).

Table 1. Frequency of Respondent Based on Gender and Experience

Gender	Frequency	Percentage (%)
Male	93	52.5
Female	84	47.5
Working experience	**Frequency**	**Percentage (%)**
Below 5 years	44	24.8
5 to 10 years	64	36.2
Above 10 years	69	39.0

3.2. Construct identification and validation

The exploratory Factor Analysis (EFA) method was used to define a new construct of facilitation dimension based on the Heron (1999) model. The EFA method can provide evidence-based on an internal structure, when several complex constructs are measured (Mohd Salleh, 2012). Additionally, the EFA method can also be used to identify a set of unobserved factors such as latent variables that are applied to reconstruct the complexity of observed data, for example, manifest variables (Matsunaga, 2010). Several statistical assumptions such as normality, linearity, factorability, sample size, and others must be checked before the factor analysis can be deployed.

Based on the normality tests using the skewness and kurtosis, the sample distribution was found to be normal. The sampling adequacy was determined using the Kaiser-Myer-Olkin measure of sampling adequacy (KMO), and sphericity was verified using Bartlett's test. The result indicates that the KMO measure is 0.75, which is greater than 0.5 (Williams et al., 2010), while Bartlett's test of sphericity is significant (p<0.5, P = 0.00).

According to Salleh et al. (2015), if the KMO value (ranges from 0 to 1) is above 0.60 (such as in this case), the data are considered suitable for factor analysis. The sample size is also sufficiently large for conducting EFA, as n=177 is larger than the minimum requirement of a 100 sample size (Coakes & Ong, 2011; Williams et al., 2010). The sample size also meets the criteria for sample size per variable, which is five subjects per variable (Coakes & Ong, 2011).

Since the KMO measure of sampling adequacy and Bartlet's test of sphericity were fulfilled, the factorability is assumed (Coakes & Ong, 2011). Thus, EFA using the principal axis factoring with oblique rotation was conducted to assess the underlying structure of 55 items. The correlation matrix indicates that the correlation coefficients are above 0.4. In this analysis, the factor extraction method using the eigenvalue and scree plot was employed to determine the number of factors that could be retained. As a result, four factors were extracted when the eigenvalue greater than one was prefixed along with the scree plot breaking point or elbow at four factors.

The post-rotation sum of squared loading explains the comparison between the four factors, with each factor having almost the same small loading. Indeed, the commonalities after the factor extraction are acceptable. A rotated factor loading of at least .40 or greater is to be considered in the new variables. The cut-off value at .40 is perhaps the lowest acceptable threshold of the liberal-to-conservative continuum (Matsunaga, 2010) (See Fig. 2).
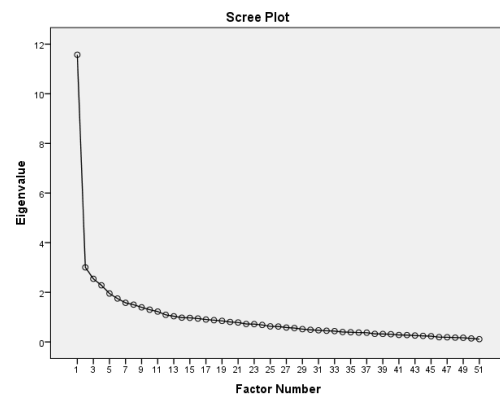

Fig. 2 Scree plot

Additionally, the Direct Oblimin rotation method with Kaiser Normalisation was performed; the factor pattern matrix shows that the four factors and 15 items could be retained in the new constructs. The Direct Oblimin is one of the oblique rotation methods, which assumes that factors are correlated. According to Costello and Osborne (2005), when an oblique rotation method such as the Direct Oblimin is used, the pattern matrix is examined for factor loadings.

The results from the pattern matrix are then used to interpret the factors. In this study, the factors reproduced 19.68% of the variance of the measured variables in Factor 1, 8.16% in Factor 2, 6.19% in Factor 3, and 4.43% in Factor 4. The total commonality coefficients for the overall factors are 38.46%. Finally, the factor saturation in EFA reveals the presence of a four-factor solution, with four loadings preferentially on Factor 1, four on Factor 2, four on Factor 3, and three on Factor 4. Table 2 shows the new factors and percentage of variance explained.

Table 2. New Factors and Percentage of Variance

Scale Items	Factor Loadings				Com
	FL 1	FL 2	FL 3	FL 4	
Preparing appropriate teaching aids to suit the topic concerned	0.876				0.744
Organizing contents according to a proper sequence	.630				0.401
Planning a suitable teaching and learning method before the class	.614				0.398
Listing out targeted learning outcomes to be achieved	.470				0.264

Scale Items	Factor Loadings				Com
	FL 1	FL 2	FL 3	FL 4	
Encourage students to give personal opinions		0.723			0.496
Sharing ideas to assist students in decision making		0.701			0.571
Joining students during group activities		0.670			0.476
Allowing students the freedom to act		0.652			0.484
Encouraging students to change group members for each different activity			.775		0.626
Encouraging students to change group leaders for different activities			.711		0.625
Encouraging outside class discussion			.563		0.399
Giving after-class assignments			.548		0.314
Ensuring students aware of their responsibility				.691	0.486
Encouraging students to share their pieces of work				.494	0.239
Ensuring students share ideas with peers				.490	0.396
Eigenvalues	4.132	1.714	1.300	.930	
% of Variance	19.675	8.162	6.191	4.428	

Note:
Loadings, .40 are omitted
FL = Factor Loading
Com = Communality

4. Findings and Discussions

SCL is relatively new to lecturers in Universiti Tun Hussein Onn Malaysia, and generally, this is also true of the teaching staff of the higher educational institutions in Universiti Tun Hussein Onn Malaysia. The implementation of SCL is voluntary, but the university management strongly supports and encourages the embracing of this unconventional teaching concept, and provides a comprehensive training program for the teachers. The University is aware of the importance of the teachers' competency in facilitating SCL, which eventually will affect the quality of the university's delivery system in disseminating knowledge. Thus, in this study, the skills of facilitating are revisited to determine the success of the SCL implementation.

The six dimensions and three modes of the Heron facilitation model (Heron, 1999) were re-examined using data from a culturally different population; this undertaking yielded four new constructs, namely planning, shared decision-making, flexible teamwork, and shared outcome, as opposed to the six dimensions from the original Heron facilitation model. The first construct is part of a competency group that indicates teacher-controlled learning (teacher-centered Learning) and the other three constructs are parts of a competency group that indicates student-controlled learning (Student-centred Learning). The new constructs are shown in Table 3.

Table 3. New Constructs (Competency Group) and Description

Teacher/Facilitator Competency Group		Description
Planning (Teacher-centred)	1	Preparing appropriate teaching aids to suit the topic concerned (teaching aids)
	2	Organizing contents according to a proper sequence (content)
	3	Planning a suitable teaching and learning method before class (teaching method)
	4	Listing out targeted learning outcomes to be achieved (learning outcomes)
Shared Decision-making (Student-centred) (*Meaning + confrontation*)	1	Encouraging students to give personal opinions (freedom of choice)
	2	Sharing ideas to assist students in decision making (vision)
	3	Joining students during group activities (activity)
	4	Allowing students the freedom to act (empowerment)
Flexible Team-work (Student Centred) (*feelings + structuring learning*)	1	Encouraging students to change group members for each different activity (team structure)
	2	Encouraging students to change leaders for each different activity (leadership)
	3	Encouraging outside class discussion (Expression of thoughts)
	4	Giving the task to complete after class (assignment)
Shared outcome (Student-centered) (*value of learning*)	1	Ensuring students aware of their responsibility (Responsibility)
	2	Encouraging students to share their piece of work (Dissemination)
	3	Ensuring students share ideas with peers (Values)

The element of control is crucial in SCL, especially in a discussion session for novice students (first year of undergraduate courses). Handling a discussion session in the SCL environment without careful attention from the facilitator (teacher) might not work as expected, which may result in not achieving the anticipated learning outcomes. This could be attributed to several factors: students lack the experience of working in a group and as a team; critical debates do not occur in a group discussion session; students do not participate actively in the discussions. Therefore, Heron (1999) proposed using the three modes (hierarchy,

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autonomy, and cooperation) to control the facilitator-students function in the SCL activities.

The keywords were identified, which constitute a meta-construct for facilitation that eases the future application. Table 4 contains the keywords extracted.

Table 4. Keywords for Meta-Constructs

Main Construct	Elements of Facilitation
Planning	Teaching aids
	Contents
	Teaching method.
	Learning outcomes
Shared Decision-making	Freedom of choice
	Vision
	Activity
	Empowerment
Flexible Team-work	Team structure
	Leadership
	Expression of thoughts
	Assignment
Shared outcome	Responsibility
	Dissemination
	Values

Different classifications of construct dimensions were found in this study in addition to the six original dimensions and three modes of facilitation from the Heron model (1999). The existence of several factors might have contributed to the above result. First, the context of the study is based on an environment quite different from that of the original Heron model; this study focuses on the SCL activities during the delivery of subject matter content, in a classroom setting. Second, having studied under the previous educational and schooling system, the participants of this study have acquired a different educational experience and background, which may not fit well with the application of the dimensions and modes of facilitation in the Heron model. Third, this study was conducted in an Asian cultural setting, which is different from those of the previous research conducted in the West and Europe; for example, the study of Heron (1999) or other similar researchers. These factors might have influenced the participants' thinking patterns, problem-solving skills, and level of communication (interaction). Therefore, the local students' participation in group discussions required different facilitation techniques, and this explains the emergence of new construct classifications of facilitation from this study.

The original Heron facilitation model has been widely used in facilitating discussions for a variety of purposes, including teaching and learning, coaching, mentoring, and consulting, especially in the field of business (Heron, 1999; Galajda, 2012). With the application of this model, facilitators are aware of the different facilitation styles, and the necessity of adopting a suitable approach according to the student's cultural and educational backgrounds. This model provides a framework for good communication between two parties involved in teaching and learning or discussions, and it can be used in the context of interactions between individuals or between members of a group (Heron, 1999). In a typical application of the Heron dimensions in

the learning environments, students are the key player of learning, while the facilitator plays his or her role utilizing the three modes of hierarchy, autonomy, and cooperation. The six dimensions are properly controlled by the three modes of facilitation. In other words, the level of control in each dimension depends on the mode applied; the facilitator has the flexibility of tailoring his or her involvement and intervention to the students' learning.

However, the new construct reveals the intervention of the teacher-centered method in the students' learning. The control elements empower the students, from the beginning, and before the facilitation/learning session takes off. The application of the new construction requires the facilitator to firmly determine the direction or learning path through proper planning. The planning includes all aspects of learning materials or teaching aids, contents, teaching methods, and intended outcomes of the study; this procedure is quite similar to the conventional approach to teaching and learning. This is in line with the opinion of Spratt et al. (2005), who stressed that planning and management are the most important task in achieving effective facilitation. In this particular setting, planning would be at risk if the students are given the autonomy to determine their learning goals. Students lack experience in planning and preparing for their learning, and some students in a group do not have a clear definition of their own learning goals. A teacher's guidance is of paramount importance since his or her planning and preparation can make a difference in the students' learning outcome (Boyd et al., 2009).

Meanwhile, shared decision-making, flexible teamwork, and shared outcomes constitute three major constructs of the student-centered function. Shared decision-making provides the elements of freedom of choice, vision, activity, and empowerment. During the facilitation process, a facilitator empowers the students with some freedom to make a choice; for example, to agree or disagree with the decision made by the members. The facilitator, however, should encourage the students to justify the decisions made. In this case, the shared decision-making element will prompt the students to hold a critical discussion within the group (Platzer et al., 2000).

Flexible teamwork provides the team with a structure, leadership, expression of thoughts, and assignment of tasks. The facilitator needs to advise each SCL group that the members should take turns to assume the role of leader for each different activity as well as change the group members for each session. Students are allowed to decide who should be the first leader of the group as well as for the next project (Kolmos et al., 2007). With this practice, all members of a group have an opportunity to be a leader and develop their leadership skills. Furthermore, the facilitator should encourage the students to independently conduct a discussion outside of the classroom. Discussion should not only happen within the classroom time but at any other time according to needs. The time flexibility for holding group discussions indicates the students' effort in gaining knowledge.

The element of Shared Outcome allows the students to take up responsibilities, disseminate information, and

inculcate good values. The main role of a facilitator is to remind the students of their responsibility in learning and searching for valuable information. Each member of the discussion group has the responsivity to fully understand the lessons so that they are ready to receive the knowledge disseminated in the next stage of the learning process. The facilitator needs to highlight the importance of disseminating valid and reliable information and encourage the students to share their findings. The students will be proud of what they have worked on during the discussion sessions and feel a sense of ownership of the knowledge they discovered.

Generally, based on the findings of this study about the facilitation approach adopted, a great extent of control was given to the students to monitor and direct their learning during the SCL sessions. In other words, the facilitator ceded more control of learning to the students, in line with Heron's autonomy mode (Heron, 1999). This finding seems to contradict the expected result, particularly in the context of this study, the subjects of which are members of the Malaysian higher education community, who by and large are lacking in SCL experience. Heron's hierarchy mode of facilitation should be in place to provide a balanced learning control between the role of the teacher and that of the students.

In this study, a hybrid model of facilitation is proposed, which highlights the contribution as well as responsibilities of the key players, teachers, and students, during the implementation of the SCL activities (Fig. 3).
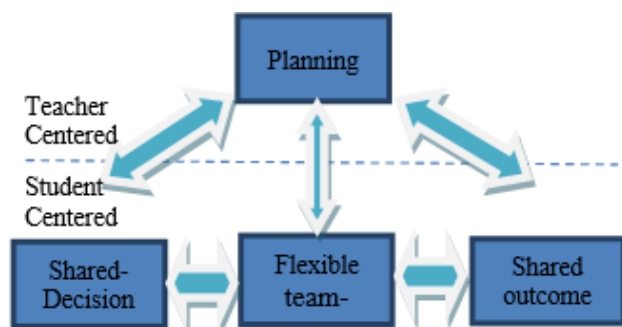

Fig. 3. Empowerment of teachers and students via integration of teacher-centered and student-centered roles

Figure 3 illustrates the interconnection between each and other constructs. The planning construct is controlled by the teacher, while the other constructs, namely shared decision-making, flexible teamwork, and shared outcomes are controlled by the students. Each construct under the students' control, however, requires very careful planning made by the teacher in the planning phase. Hence the bulk of hard work falls on the teachers in provisioning learning and reaching the learning goals. The differences between the findings of the researcher's model and those of the Heron model, the findings suggest that there is segregation between teacher-centered and student-centered learning in real-life situations. Additionally, the findings also suggest that the role of the teacher revolves primarily around planning, whereas the students are engaged in shared activities most of the time, thus promoting an ideal environment for autonomy

in learning, for a more positive impact on students' learning domains (Kulakow, 2020; Felix & Jonathan, 2020).

5. Conclusion

A re-examination of the six dimensions of the Heron (1999) facilitation model has yielded new dimensions that suit the participants of this study-- the higher education teachers and students. The new dimensions have emerged due to several factors associated with the student's background, namely lack of exposure to SCL from the very beginning since they entered the arena of informal learning. The four new dimensions that emerged cover the functions of the students as well as the facilitator (teacher). The combination of the teacher-centered and student-centered dimensions of facilitation produces a hybrid model of SCL facilitation, which can be used to guide inexperienced HE teachers in preparing and planning good practices of facilitation in the SCL environment. It is recommended that future research explore the dimensions of facilitation from the students' perspectives to provide a different set of data for validating the current research findings.

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