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A Framework for Online Teaching and Learning: The S-CARE Pedagogical Model

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Abstract

Student satisfaction and retention is a key feature of any good educational programme. Deden (2005) reports a 7.7 % improvement in student retention after one year through a number of measures including the quality of instructor's online interaction. When measuring the success of an online programme a number of learning permutations have to be considered, namely: the learning activities, tools, resources and interactions or communication which makes up a pedagogical scenario/landscape. Daniel (2004), states that when designing and executing a pedagogical scenario the teacher has to respect a harmonic equilibrium between the freedom for intellectual development and motivation on one hand and certain guiding principles on the other. Putting all the above contentions together, this paper aims to present an analysis of the different pedagogical permutations exhibited by 7 different online facilitators in the Master of Instructional Design & Technology programme at the Open University Malaysia based on feedback from students, the facilitators and analysis of online interactions. This paper will present findings to the main research question that guided the study, namely, what are the main characteristics of an optimal pedagogical scenario employed by MIDT facilitators, and can these be translated into an online learning model? Findings showed that 4 major characteristics of an optimal online pedagogy were planning, interaction, feedback and focus. These 4 characteristics were further checked and analyzed with MIDT students and facilitators and as such a framework for online learning was developed into the S-CARE model. What is the S-CARE? It is a new online pedagogical model proposed in this work and it stands for S=Strategic, C=Consistent, A=Adaptive, R=Realistic and E=Effective. Initial results show that most facilitators exhibited some form of S-CARE, however the model will need further testing to ensure the suggested pedagogical permutations are applicable for most pure online courses. The success of the S-CARE portends well for the future in that it provides a structure to teaching and learning within the framework of chaos of the online environment. The combined experience of about 2 years of work shows both the potential and the way forward for the future and S-CARE is a step forward in helping online teaching and learning achieve its promise.

1. Introduction

Experience shows that one of the fundamental challenges of online teaching is to provide a structured mechanism within which online instructors are free to express themselves. The solution lies in the construction of a framework for teaching and learning where clear definitions of what the instructors can do are outlined. Online instructors/facilitators employ different pedagogical styles and their own unique signature best practices. A pressing need is to create a pedagogical scenario-based model where the best methods for resources, tools and learner centered strategies are combined to mitigate the challenges in online learning. According to Dabbagh (2005), a pedagogical construct is the link between theory and practice. Pedagogical scenarios can also be defined as ways of presenting content using tools for specific learning goals (Ullrich & Mellis, 2010). The benefits of using pedagogical scenarios are that the focus is put on the learning activities to achieve the learning outcomes. A comparable model of online teaching was presented by Jara and Mohammed (2007), which categorized online learning in terms of content, learning activities, communication, resources, feedback and administration. Literature states that deeper methods for online teaching and learning are needed to bring about diverse approaches which are suited for various courses. In this context, Lee (2009) advocated the CAP (Concept Application Practice) framework for designing online education platforms based on experience and scaffolding whereas Hathaway (2009) advocated the formation of portraits from questionnaires. Also, Dabbagh & Kitsantas (2009) studied the best practices of experienced online instructors and found that integrative learning technologies were subconsciously used to simulate self-learning among learners. These approaches are used as a guideline in our research.

The purpose of this research thus is to analyze the pedagogical scenarios used by facilitators of a postgraduate programme, that is the Master of Instructional Design and Technology (MIDT) offered by the Open University Malaysia. The facilitators are highly respected professionals from across the world and enjoy a high degree of success in both academic and student satisfaction indices. The MIDT has been studied by 28 students from 14 different countries, 7 distinct time zones and a time frame of around 3 years. The truly international nature of the process means that a unique learning experience is available as the basis for the model. The courses are diverse, ranging from fundamental, application oriented concepts to advanced research in online learning. Hence the course delivery methods of these 13 facilitators were taken as the basis. The challenge was to condense the pedagogical framework of learning and to achieve the purpose the following research question was used as a starting point, namely, what are the main characteristics of an optimal pedagogical scenario employed by MIDT facilitators, and can these be translated into an online learning model?

The ultimate aim was to achieve a conceptual framework of online teaching (Figure 1).

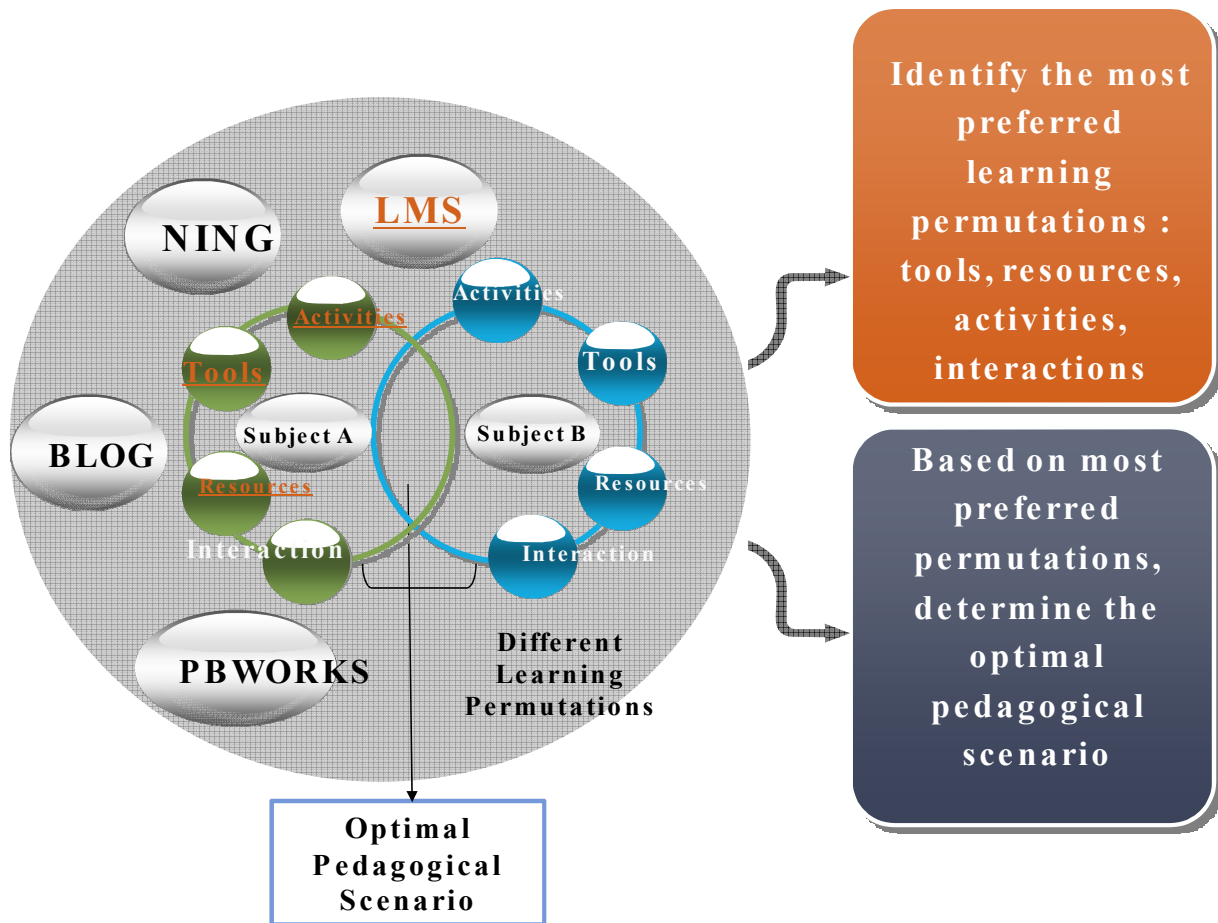


Figure 1: Conceptual Framework of Online Learning

2.0 Methodology

Data on the pedagogical context of 7 different facilitators was collected from 28 students of the MIDT programme in the form of two distinct surveys. The first survey (in June 2011) focused on the generic teaching and learning practices in MIDT. The survey contained demographic information (such as gender, educational qualifications), experience in online education, factors that determine the success of online programmes, impact of technology and impact of people. In total, 11 students responded to this survey.

The second survey (in July 2011) focused on the specific pedagogical practices of the 7 facilitators and 40 responses were received from students. The survey contained demographic information (such as gender, previous online learning experience), learning management system

details and preferences, resources, communication (forum, mail, Skype, etc.), interaction paradigms, activities, importance of course outline, learning outcomes, adaptability in the course, etc. In addition to this, 13 facilitators were sent a questionnaire which requested them to input their pedagogical styles. Seven responded to the survey. The survey was a mirror of the students' survey and focused on demographic information (such as gender, previous online teaching experience), opinions on the role of the environment, communication methods, interaction paradigm, activities, course outlines/learning outcomes and the adaptability in the courses. The two views were reconciled and a composite framework of learning for online education was formed.

3.0 Results

This section will discuss the major findings of the study and then the specific results that best illustrate the pedagogical scenarios.

3.1 Factors important for success of online courses

A number of factors can make an online course successful. A majority of the respondents focused on four major elements in the order of importance.

1. People: dynamism, patience, subject knowledge, clear communication by facilitators, fellow students and supporting staff
2. Structure: clear delineation and comprehensiveness of activities
3. Environment: accessibility, ease of navigation, support
4. Resources : varied, well selected and suited to different learning styles

These results match very well with the existing literature in the domain. The interesting aspect here is the order of importance attached.

3.2 Factors important for the success of online learning environments

The learning environment (LMS, PbWorks, Ning, Blog) used determines the level of interest of the students and the initial impression. The study compared the factors such as stability, instant access, usability, look and feel and data loss. It was found that users felt that usability was the first and foremost important factor in the use of learning environments. Usability was followed by stability, instant access and instant notifications. The look and feel and the loss of data were the least important factors according to the users.

The parallel survey of the facilitators found a similar result. The facilitators felt that the ease of use, instant access and usability as the key factors which have an impact on the success or failure of any course.

3.3 Qualities students look for in facilitators

While there are a lot of qualities of facilitators that are important, the respondents of the study were uniform in the following as the major attributes in the order of importance:

1. Patience, open mindedness, positive attitude and tolerance
2. Knowledge in the subject area
3. Availability and communication
4. Feedback
5. Good preparation (keeping in mind distance education students)
6. Reliability (students must be able to rely on the facilitator)
7. Ability to differentiate and apply different teaching methods (keeping in mind that students differ)

Based on the above results, four major qualities needed for successful online teaching and learning were formed as below:

1. Planning:
 1. Strategic: preparing all the scenarios of the course in advance like assignments, additional material, timelines, exam questions, books needed, etc.
 2. Adaptable: plan with provision to adapt the flow based on the needs of the students
2. Interaction:
 1. Group based: predominantly forum and mass mailer based, emphasizing information dissemination as a team
 2. One on One: primarily individual focus with common information being shared
1. Feedback:
 1. Just in time: allowing the group to flow and intervening whenever needed
 2. Hands on: responding to group interactions continuously and steering the discussion clearly
 3. Strategic: responding at clear, defined intervals
2. Focus
 1. Outcomes and targets: the emphasis is on the deliverables
 2. Quality: the emphasis on the overall learning signified by the deliverables
 3. Consistency: the key is the learning over a period of time

4. Period assessment: the key is the methods which measure the learning at clear defined periods of time

Each of these factors was taken as the parameters in the second survey. The significant results are discussed next. The aim was to assess the pedagogical scenario of each course through the eyes of the learners and the instructors.

3.4 Planning

The students used the course outline and the learning outcomes as the basis for the course. The students felt that the activities must be adequate (not too many or too little), adaptable (based on the student's present state and capabilities), thought provoking, flow from the learning outcomes and are effective. The students felt that the entire structure of activities must be planned well in advance, but adapted based on the specific needs of the students. According to the students, the key factor for the success of a course lies in the overall plan. How balanced is it? How are the assignments and assessments planned? How adaptive is the plan?

According to the facilitators, planning and curriculum development that could engage the students through effective activities were the most important factors in the success of a course. The activities need to be adapted based on the students' needs and speed of learning. A successful course outline must have sections which are critical to the course (which must be achieved definitely) and supplementary set which can be adapted. The course outline gives the student an idea of what is expected to be achieved, what they must do to achieve it, what the facilitator can do and the strategy for the learning. The basic factor that the facilitators looked for was the content and the activities that could suit the content best.

3.5 Interaction

Interaction is the backbone of any online programme. The learners favored multiple modes of interaction like mail and Skype apart from the forum discussions. The interaction in forum discussion is for knowledge understanding and exposure to case studies. The major emphasis that the students placed on was that the interaction must be continuous and timely. One of the key results that came out was that the learners didn't have a unified view of the interaction pattern. Meaning there was no unanimity in the communication tool used. Mail, Skype, LMS and other tools were equally patronized. Some users felt comfortable with a continuous stream of communication and felt put off by continuous stream of communication. There was also no unanimity in the use of the forums. Some user's used it purely because they had to while others loved it.

From the facilitators' perspective, the interaction was to clarify doubts, keep morale up, encourage students and give feedback. A successful course will have a high proportion of student-student interaction. The facilitators need to simulate these dynamics quickly as interaction is the soul of the course. The interaction can make the course come to life. The instructors felt that every opportunity for communication must be used to enhance the learning. The key was to be transparent about the communication paradigms upfront and ensure that every student felt a part of the team. Stimulation of the forum discussions was considered a must by the

instructors who felt that students had to look upon the forums as a mechanism for communication rather than an assessment tool.

3.6 Feedback and Resources

The users preferred a guided learning strategy in the courses with the instructor stepping in whenever needed. One of the key needs of the students was the instant assessment of the assignments, forum discussions and other activities. The students preferred that some key resources be accessible from the course environment with the selection of other content left to the students themselves.

The facilitators' felt that the feedback was to inform the students about their status and contribute to their overall learning. It acts as a positive encouragement measure boosting the morale of the students if the work is great and preventing the students from making any more mistakes in case the work is poor. The role of the facilitator is not just to give the resources, but also encourage the students to search on their own and share the knowledge with the rest of the class. The feedback must be in the nature of a scaffold and not a rigid template to bind the students by.

3.7 Focus

The major focus from students' perspective was on the effectiveness of the tools (not efficiency), adaptability of environment according to needs of the students, adaptability of facilitators based on the situations faced by the students, responsiveness of the facilitators, adaptability of activities and their effectiveness.

The major focus from the facilitators' perspective was the planning before the course, consistency and the adaptability once the course started. Another major factor was the relationships among the course participants – facilitators and students. The focus is on a systematic plan as even the smallest aspect of the course can contribute to the overall development.

4.0 Discussion

There is a remarkable symmetry and significant points of divergence in the students' and facilitators' views. One interesting point of symmetry was in the pedagogical style adopted by the facilitator among which there was universal agreement. The students' views on the facilitators' approaches matched clearly with what the facilitators viewed as their model. The students and facilitators agreed on the factors important for an online learning environment, planning, feedback and resources. The differences were subtle. The students' viewed the learning outcomes and course outline as the vision document whereas the facilitators' viewed them as guidelines. The students viewed interactions in the prism of course structure as an activity, whereas the facilitators viewed the interaction as a communication paradigm. The role of feedback was also similarly nuanced. The facilitators preferred a scaffolded approach whereas the students viewed feedback as a score card.

5.0 The Framework for Online Learning: S-CARE Model

Based on the comments and results above, it was felt that a framework of online learning can be developed combining the best practices of the different online facilitators into a model called the S-CARE (Figure 2) as described below:

1. Strategic: a **strategic plan** for the course which consisted of a clear plan what needs to be taught, how to do it and the knowledge of the environment.
2. C- Consistent: show **consistency** in the approach. Consistency can help the learners understand the pedagogy better
3. Adaptive: **adapt** to the demands of the three elements that facilitators cannot control: students, environment and time
4. R- Realistic: **responsively** react to the situations
5. E- Effective : ensure the overall learning is **effective** by designing and selecting learning activities, resources, tools and interactions which are consistent with core outcomes

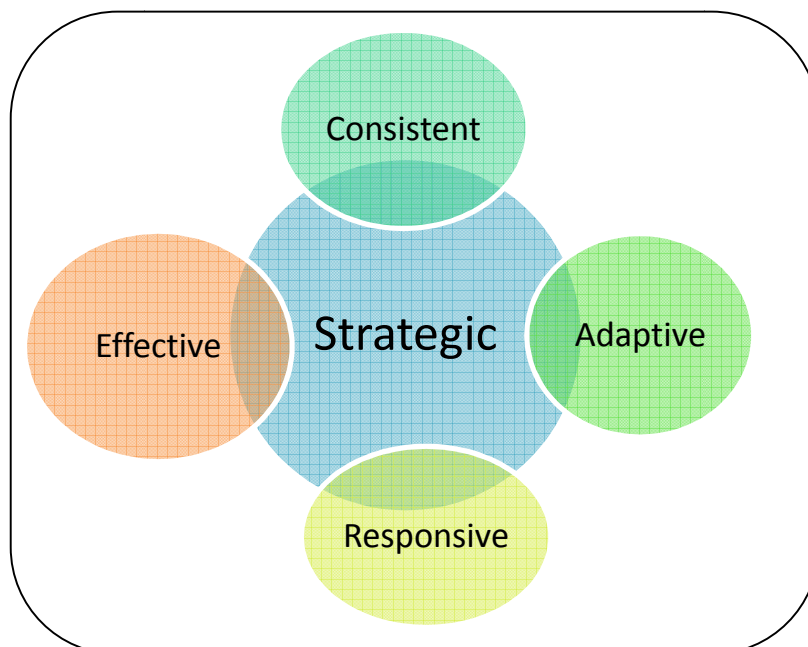


Figure 2: The S-CARE model

The S-CARE model in action (Figure 3) is developed as a framework for online interaction in the MIDT programme and can be applied universally in online education as well.

The base for the course lies in the strategic planning. Why *strategic* planning? The course must contain a small core set of outlines which are the overall focus. These objectives must be met by the actions of the course. In addition, a supplementary set of activities can be planned. These activities can be undertaken in tandem with the core plan. Strategic planning will help the facilitator in focusing on all the set of outcomes that can be faced and on the measures to overcome the problems. The course outline must be structured in terms of clear learning objectives (core and supplementary), activities (core and supplementary) and flow. The activities must be planned to accommodate the students and get them interested in the course, be based on the needs of the course and be adaptable during the course. The environment used must reflect the soul of the course and well researched before the start of the course.

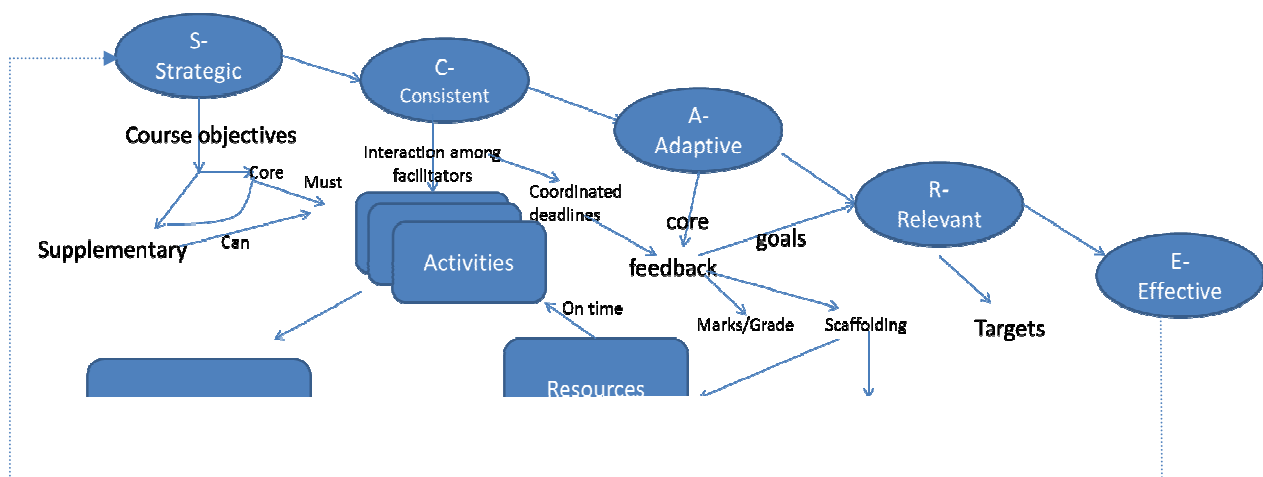


Figure 3: The S-CARE model in action

Consistency starts not just in the interaction with the students, but in the attitude towards the course as a whole. The facilitators must ensure practice of consistent activities and interaction which take the students forward in the search of their goal. Consistency ensures feedback at clear defined intervals and is of both qualitative and quantitative types. Consistency mandates clear demarcation of the expectations of the learner.

Adaptability is the key tenet and is applicable in all aspects of the course. Adaptability helps overcome bias and cultural diversity in all forms. The facilitators and students must have a realistic approach towards learning.

Overall the focus is on effective methods for learning. Online learners face severe constraints on the time and efforts that can be spent. Hence the pedagogical scenario must depict a balance to achieve overall effectiveness.

One of the key results we found was that each MIDT facilitator had some level of variation of the principles within the S-CARE model. The table below (Table 1) illustrates each the pedagogical term descriptors of the facilitators.

Table 1

Pedagogical term descriptors of MIDT facilitators

Facilitator	Key Pedagogical Terms
1.	Planning, continuous group based interaction, feedback and adaptability, and a focus on quality
2.	Strategic plan, just in time interaction and feedback, decisive intervention, and a focus on consistency
3.	Strategic planning, high level of interaction, emphasis on outcomes and targets and a focus on consistency
4.	One-on-one interaction, continuous and constant hands on work, emphasis on periodic assessment
5.	Adaptable plan, just in time interaction, strategic feedback, and focus on consistency
6.	Planning, group-based interaction, feedback, and consistency
7.	Group based interaction, emphasis on outcomes and targets

The above shows that the basic pedagogical framework of learning is suitable for adoption among the facilitators. Thus a systematic approach to learning could be accomplished and at the same time maintaining the expressiveness of the individual members. The S-CARE model is a pedagogical scenario-based framework revolving around a set of activities, tools, resources and interactions and is based on the four tenets of online courses, namely, planning, interaction, feedback and focus.

6.0 Conclusion

This work has proposed a pedagogical model for an online pedagogical scenario. The model surfaced as a result of analysis of common factors that lead to the success of the MIDT courses. The model contains elements which if put together can provide a uniform feel for the learners and facilitators alike. The model has been validated empirically and contains significant results for the future of online education.

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