

教師電子報: what do people think about hybrid-PBL in the Asia Pacific region?

◎ 教師培育暨發展中心, CFD 關超然教授兼主任 2010-01-18

The Center for Faculty Development (CDF), after its 4-year establishment in our university, has recently taken an initiative of launching a new line of service, that is, to provide a platform for our faculty members to publish their ideas on issues of their interests and concerns regarding their career development and professional activities. We have already accepted two articles written by our faculty members in Chinese. As the Director of CFD, I am writing the following article for a number of reasons. First of all, I wish to write it in English so that our website would be more accessible for international scholars and to attract their interest in academic arena in our university and in Taiwan. Secondly, I wish to write it on a subject that is of both local and international concerns and interests in medical education. Thirdly, I wish to clarify on a number of issues of the popular hybrid PBL which is now so widely employed worldwide and especially in the Asia Pacific region. Fourthly, I would like to use this opportunity to encourage our faculty to raise topics on academic issues to express, inform, discuss, debate, critique and to share with other members in the academic community, domestic or international.

I personally have felt over my 4-year stay at China Medical University that our faculty members seemed to be minding their own businesses without engaging in much dialogue and communication with our fellow teachers. We rarely make our voices known and willingly remain submissive. Some are making a lot of complaints, but are reluctant to help solve problems. Some do not bother polishing our communication in Chinese, leave alone expression in English. In the following, I present to you a series of dialogues amongst university teachers in the Asia Pacific region who expressed their opinions over an e-mail group ([pblaspac] group) on PBL in medical education. This international e-mail group was organized several years ago by an Indonesian scholar, Professor Adrianta, who wishes to use this e-mail group as a dialogue platform for information and idea exchange for many university teachers in many countries of Asia Pacific region who may not be fortunate to have the funding or opportunity to travel abroad for international meetings on PBL. I have been associated with this group for many years since its inception and enjoyed the academic discussion. Beside PBL topics, we have recently discussed issues on avoiding the pitfalls in the use of "MCQ as an assessment method". Some members asked for clarification on "outcome-based learning" and some were interested in knowing a clearer definition of "formative evaluations". This group also can catalyze international research in medical education. I particularly enjoyed meeting and talking to old acquaintances and new friends over the e-mail and to be able to contribute in an academically meaningful manner during my spare time.

The following boxes represent a series of e-mail messages sent by individual teachers from many different countries in Asia Pacific countries in the order of the time being sent out as an e-mail message, on a specific topic raised by Professor Adrianta. The enthusiasm on this discussion had been overwhelming.

Dear members :

I like to get more information about the advantages and disadvantages of a hybrid curriculum for medical students. With hybrid, I mean that there is still the traditional lectures (discipline based like anatomy, physiology biochemistry etc) but there are one , two or three sessions per week where there are small groups in which a case is presented like the PBL way and the students go for three weeks. Could you help, with some references about the advantages and disadvantages of this hybrid curriculum?

Thanks for the help

Best regards

Adrianta

Widya Mandala University

Surabaya, **Indonesia**

Dear Adrianta and members,

As I mentioned earlier in this e-group, UKM started using PBL since 1983. At that time there were only about 4-5 PBL sessions/semester. Since 2005 we started the PBL hybrid curriculum. Looking at students we could clearly see the different between the old and new curriculum particularly the willingness to share ideas, communication skills and active participation in group performance.

In the old curriculum challenges faced by facilitators in conducting the PBL were to get the students to talk. In contrast, now we need to ensure that the discussion is on tract because sometimes students may get carried away with ideas that are not related to faculty objectives.

The other problem when you increased the number of PBL, it will definitely increase teachers' workload.

I am sure others can add in terms of administration and coordination as well as mechanism to ensure all students that are exposed to different facilitators acquired the stated learning outcomes.

Dr Nabishah Mohamad

Universiti Kebangsaan Malaysia

Kuala Lumpur, **Malaysia**

Dear Adrianta

The advantage of a hybrid curriculum is that the students get the benefit of plenary (passive learning) as well as the PBL (active learning). But when developing the curriculum it should be decided that what content areas should be covered with plenary and what should be covered with PBL (to minimize the overlap.). Assessment should be planned in such a way to test the knowledge component gained from both delivery methods (which is at time difficult or normal tendency is to base the assessment' on the content areas covered with plenary)

Also it is better to assess the PBL process as students learn a variety of "softer skills" (communication, leadership, professionalism, team work etc) through PBL which is difficult to learn from the lecture based curriculum. Also hybrid curriculum is an advantage for the students who enter the universities after secondary school education as opposed to graduate entries as it exposes the students to 'lectures' with which they are more familiar with. The disadvantage of hybrid curriculum is repetition of contents (unless planned). But one can argue that repetition too is good to a certain extent.

Faculty has to be trained to play the dual role of an information provider (in lecture based) and a facilitator of student learning (in PBL). The efficiency of the hybrid curriculum depends to a greater extent on the ability of the Faculty to shift between these different roles.

A/P Dr. Joachim Perera

Center for Medical Education
International Medical University
Kuala Lumpur, **Malaysia**

Dear Professor Adrianta,

Thank you for your interesting question.

Hawaii was fortunate. We have small class of 60 students. We converted to "full" PBL. Yes, we also have hybrid curriculum, but we removed all basic science courses and retained only about 25% of former lectures and labs (1,400 hrs reduced to 350 hrs in the pre-clinical years). The hours of basic science lectures is even smaller than 350, because many of the lectures are given by clinicians on clinical topics.

I am guessing, but I think a little PBL in the midst of a lot of conventional courses and lectures can be troublesome and possibly set-up for failure. Students may be confused. Why should we think and learn on our own when we have all these lectures and tests to deal with?

An experienced PBL tutor once said, poor lectures is not what we want, but poor PBL is even worse! Especially in medical schools with large class sizes, good PBL may be difficult to implement and sustain.

Have you considered a small PBL track? With a small number of highly motivated students and a small number of experienced tutors, you may see and sustain the full potential of "excellent" PBL quickly. After some years, you may be able to implement more and more PBL, using PBL-raised senior students as tutors. You will then be implementing a proven curriculum and have a model of excellent PBL, which can be seen by all (faculty and students).

If your curriculum has a lot of lectures and a little bit of PBL, then the PBL model should be a little different. The tutorial may /should have more clinical applications and clinical reasoning sessions, since much of the knowledge is already conveyed through lectures. Perhaps there is only need for PBL step 1 and no need for PBL step 2 and step 3. Then students may be eager to attend tutorials - to see if they can figure out cases using knowledge conveyed through faculty lectures.

Good luck!

Leslie Tam
Emeritus Professor
University of Hawaii, **USA**

Dear Adrianta

Great to hear from you! I have been away for a few days, and am catching up on e-mails. I will throw out a few ideas, and please get back to me for a continuing conversation.

I doubt that there are any really "pure" historical PBL curricula any more; even McMaster has changed to some extent. I think Harvard may have been the earliest to use the "hybrid" terminology, and I did a sabbatical there some years ago. I will give you an "off the top of my head" set of ideas. That is, the McMaster and New Mexico, Maastricht and Newcastle programs always regarded themselves as "pure" PBL. Reading the old literature nevertheless suggests that most schools used a combination of supporting materials, large group sessions (i.e. lectures) and regular practical classes. If you want my view, it is that PBL means using a discussion group based on a clinical problem to open up issues relating to basic physiology, anatomy, biochemistry, pathology etc. Formal information comes later when a context has been established. Students are stimulated to think and to work out amongst themselves what are the key issues, and what do they need to know to advance the problem. Most programs now are "hybrid", that is, some lectures, some practical classes, dissection, microscopy etc etc are introduced, but only AFTER the students have identified the key issues and see the need to know that stuff. The Internet has been powerful in introducing the problem and offering supporting materials. (I think we in Sydney were pretty much the first to take that route.)

Some PBL schools made a big noise about NOT doing lectures, but most schools indeed used lectures, but called them something else - like "fixed resource sessions". I was quite horrified at the recent conference in Malaysia to hear that in some Indian schools, PBL seems to be used as a punishment! That is, students are marked for every comment they make, and humiliated if they are "wrong". I have always seen PBL as an open, shared, collaborative activity, facilitated by good supportive but not directive staff. In some other schools, there are formal lectures, and then a so-called "PBL" case is introduced to illuminate the basic science. That is the wrong way around; losing the value of stimulating thinking and generating ideas. This is a very complex subject, and one of my aims is to get people to use a common terminology. Can we continue a dialogue?

Regards
Ann Sefton

Emeritus Professor
Department of Physiology
The University of Sydney
Sydney, **Australia**

Dear Adrianta,

What are the advantages and disadvantages of hybrid-PBL? So what advantages or disadvantages are you referring to? financial advantage? (cost-effectiveness?) students' professional competency? Students' knowledge and skills? Teachers' workload? or teachers' personal enhancement and satisfaction? I think we need to ask the right question and ask answerable question. We are teaching our students this principle in evidence-based medicine, which derives itself from the main PBL spirit, i.e., evidence-based self-directed learning...making a wise decision out of many factual contents.

The query you have posted over this group discussion is a question that has been asked many times and somehow answered many times. In order to truly answer this question, one must first ask "what is the purpose for doing PBL? Or what PBL really stands for in medical education or any discipline of higher education". So far, the answers I saw have been based primarily on knowledge acquisition...centered on the traditional educational philosophy...but this is not the main spirit in PBL education and PBL philosophy. If one looks at PBL as just another METHOD IN TEACHING, his/her answers to this question would be very much different from those who treat PBL as an ATTITUDE IN LEARNING. So, what is the nature of the "advantages and disadvantages" are you referring to? Hybrid PBL, on the other hand, can be classified into at least four different forms with varying effectiveness in promoting students' professional competency and learning attitudes on the basis of pedagogic rationalization in the relative distribution and mixing **student-centered, problem-based and small group learning** with **teacher-centered, knowledge-based and large class teaching**. One form of hybrid-PBL (type I) is primarily **cosmetic with 2-3 problems per academic year, being decorative under the conventional curriculum driven by teaching via didactic lectures**.

Often, this hybrid-PBL adopts a “me too” approach to chase after the pedagogic fashion. It is relatively easier to implement and faces less resistance. Students or teachers will unlikely take this type of PBL seriously, because in this type of hybrid PBL, PBL is regarded merely as another method of knowledge deliberation. It can cause demoralizing damage and bring in zero advantage for teacher and students. Some one once said, “Poor teaching is bad, but poor PBL is even worse.”

Another form of hybrid-PBL (Type II) is to use PBL problems to enhance students’ understanding of the lecture content materials. In type II PBL tutorials, focus is placed on knowledge content or factual materials to complement lectures and content experts as tutors are preferred. This PBL type is fundamentally traditional and conservative with minimal effectiveness to change student’ s learning attitude from passive to active. This type of PBL is often discipline-based for basic science learning and analogues to case-based teaching as in clinical teaching. In fact, case-based teaching has often been mistakenly regarded as PBL.

A third form of hybrid-PBL (type III) is to use lectures to enhance PBL performance amongst students. Teachers in this type of hybrid PBL hold the belief that students need to be taught the “basics” prior to doing PBL. The general premise of this form is that the students need some basic knowledge via lectures prior to PBL tutorial. In this hybrid form, learning new knowledge from unknown is minimal; rather, repetition and application of learned existing knowledge becomes the main purpose.

The fourth form of "hybrid-PBL" (type IV) is to use of PBL as the main learning platform and add some "unconventional lectures" for the purpose of enrichment and betterment of the students’ motivation for self-directed learning. In this format, the entire curriculum is laid out as a series of sets of PBL problems with student-centered group activities. The assessment is focused on PBL tutorial and other group functional activities, but not on conventional lectures. This form of PBL has been originally adopted by McMaster University. Since it indeed contains lectures, I classify it as one form of hybrid PBL’

There are also four other forms of PBL curriculum deviating from the PBL philosophy in some aspects due to its content deliberation. For example, **discipline-based PBL, symptom-based PBL, disease-based PBL and organ system based PBL**. For one example, discipline-based PBL is based on the traditionally compartmentalized disciplines (as in Anatomy, physiology, biochemistry, pharmacology, microbiology, etc). It lacks integration amongst essential disciplines for the holism of medicine as a profession and will likely end up with propensity on specific disciplinary knowledge content and requires content experts to be tutors. As such, the adequate source of tutors and the effective design of PBL triggers tend to be a serious limiting factor.

Depending on the format of the PBL curriculum and tutorial process, it may lead to different advantage and disadvantages in students’ leaning attitude and establishment of competency.

Professor Ann Sefton of the University of Sydney said in her personal communication on this topic: “I doubt that there are any really "pure" historical PBL curricula any more···.” . Indeed, many people have a deep-rooted misconception thinking that McMaster University represents a place using only pure PBL and offering no lectures. This perception is incorrect. At McMaster University there are 5-6 hours of lectures per week. (3-hour large group and 2-3 hour small group lectures) compared to 6 hours of PBL tutorials. The lectures employed to support PBL at McMaster’ s are of “unconventional” nature being as student-centered and interactive as possible. They are not compulsory and the contents will not be examined. The lectures are not discipline-based and open to all students who wish to learn. In this regard, McMaster’s PBL fits the description of type IV hybrid-PBL. Having said that, we can conclude that there is no “pure PBL” curriculum. And, there are many hybrid-PBL curricula of varying qualities. It follows that in writing, discussing, assessing or reviewing issues or studies on PBL, we need to pay special attention to the hybrid nature of the PBL curriculum and examine its operational details in order to place a fair judgment, make the discussion constructive and render the assessment more meaningful.

David Kwan
China Medical University
Taichung, Taiwan

Dear All,

I have followed our present thread of discussion in the last week with special interest and it has helped me reaffirm my belief in the potency of this discussion forum. I am grateful to all those who have contributed so far; you all have enriched my knowledge.

I have always thought that this forum can only be effective and sustainable if things are allowed to take a more natural course. By this I mean our discussion topics come as and when they arise (i.e., someone comes up- as my dear Adrianta has just done- with an issue/ question that worries his/her mind); we discuss same and then go into quiescence until the next issue/question arises. Not a structured time-table /discussion, which does not seem to fit properly with Adult style of learning. That brings me to the current issue, which has to do with Adult learning (andragogy).

I have deliberately plugged into this discussion using Prof David Kwan's reply template (see below) because I consider his contribution one of the best in answering Adrianta's question. Before I go further can I ask each of us to introspect by doing the following simple exercise.

Complete the following sentences:

1. From my perspective, the purpose of education is -----.
2. From my perspective, the role of a teacher is to-----.

Why this exercise? Your answers to these questions will strongly reveal / correlate with the attitudes you bring into discussion on teaching/learning. They will reveal which of the metaphilosophies of education guide your mental processing and contributions to educational discourse - the type we have on this forum. Each of us is naturally predominantly inclined to one of these: Existentialist philosophy: upholds the belief that knowledge or capacity for it exists in the individual and all the teacher does is facilitate/trigger/stimulate/motivate.

Those with this bend, tend to favor and appreciate the PBL philosophy- Essentialist philosophy: believes that the individual is empty (knowledge-wise) and must be given knowledge (i.e. knowledge from the outside, not from within). Those with this inclination tend to favor lectures and find it difficult to go with the existentialist attitudes that drive the PBL paradigm.

There are other metaphilosophies, including the Experimentalist philosophy. Go back to your answer to the 2 questions above and determine which of these philosophies tends to drive your thinking/ position. This way you understand yourself and others better as we all contribute in this forum. Your predominant philosophy affects a lot of things you do in the teaching/learning domain including how you deliver lectures.

I believe in the Existentialist (derived from the Constructivist) philosophy and so the PBL philosophy which essentially empowers the individual (not the teacher) to take charge of his/her learning. I cannot emphasize more than Prof David Kwan has, that the PBL is an attitude- a philosophy; not just another delivery tool as sometimes erroneously portrayed. It is a total package and to achieve its goals of self-directed / life-long learning, team spirit, communication skills and holism, among others, the learning environment must be predominantly existentialist- i.e. strong belief that the individual (definitely so with adult medical student- graduate or undergraduate entry programs) is capable of driving his/ her own learning, needing minimal guidance. All we need is to create the enabling (motivating- a big topic on its own) environment.

In the early days of the introduction of the concept of 'hybrid PBL,' the often-asked question was, 'what percentage of lectures versus PBL?' The reason for this was the gut feeling/common sense that if you had more lectures than PBL, you would probably not achieve the goals/objectives of PBL. This is basically what Prof David Kwan has said with his Hybrid-PBL classes 1 through 3 (see below). These categories of hybrid PBL would most unlikely achieve the soul purpose (the essence) of PBL- the attitude, the attitude, the attitude!!! It cannot be over-emphasized. In my opinion, the concept of hybrid-PBL is a welcome development in Medical education, promoting a mixed economy of learning as it were, but whatever mix is chosen, the principles described above must be well understood and applied. As in Alice In Wonderland, whatever mix you choose, will land you somewhere. But that somewhere may not be the intended. The danger has always been the tendency to kill the PBL philosophy while hiding under the cloak of a 'hybrid-PBL curriculum' in what is essentially a me-too PBL curriculum or better still a traditional (teacher-centered) curriculum in borrowed robes.

Professor David Kwan, thank you very much for your contribution and Dear Adrianta, thank you for bringing this topic up.

Regards.

Francis I. Achike

Clinical Sciences Section

International Medical University

Kuala Lumpur, **MALAYSIA**

Dear Adrianta,

The problem with type 1 hybrid PBL is that students see that it is an "add-on". They will be reluctant to generate learning of their own because they already have been inundated with so much as in the "traditional" curriculum. You can of course use it, in an attempt to try and evaluate student understanding, but then that is a totally different aim for the Problem Case.

I feel we often forget that PBL is the using of a problem to generate learning. Students when they are dealing with the case find that there are gaps in their knowledge and they cannot progress without filling in these gaps in the knowledge. This really is one of the most powerful aspects of PBL. Student led learning and in context of them working towards understanding and maybe solving a problem.

Another practical problem with attaching a PBL activity to a traditional curriculum is that the traditional curriculum suffers from "overload" already and the PBL activity is resented by students because it creates even more overload and it actually feels worse for them if the learning outcomes are perceived to be "soft" and not "substantial" by the students.

To this day, we still insist on allowing at least a free afternoon if not more between PBL sessions to allow students time to "search for their answers".

There is no doubt that PBL is resource intensive but that is the price we have to pay if we truly believe that we need to train better doctors.

Recently, Prof. Liz Farmer showed us how she managed to do large class PBL tutorial which may be an alternative for resource-stretched schools. I will be trying that out soon on an elective module that I am currently doing this summer.

Philip Beh

Faculty of Medicine

The University of Hong Kong, **Hong Kong**

Dear all,

The discussion regarding hybrid PBL curriculum has become interesting and stimulating. I am joining the discussion for this reason. I am currently connected with the UERMMMC College of Medicine in Manila, Philippines, a proponent of the PBL curriculum in this area. From 1997 to 2006, our medical school implemented PBL as a strategy alongside lectures. However, since 2006, we have reverted to the traditional lecture-centered curriculum. A remnant of the PBL is a small group activity now labeled as integrated case session.

I have the opportunity to observe and facilitate PBL in several US schools and in these schools, the lecture still played a part in the teaching-learning process. Based on these observations, I believe that the implementation of a pure PBL curriculum is challenging and demands administrative mandate. As a strategy, PBL serves an important function where learners develop skills not acquired in a lecture. I appreciate the confidence and clinical skills among our students who have been exposed to this strategy.

The educational philosophy of PBL has a strong impact on student learning.

Marivic

College of Medicine, UERMMMC

Manila, **The Philippines**

Dear all,

Following up on the unfortunate fate of the hybrid-PBL at UERMMMC in Manila, some of you may be aware of the fact that in 2004 the Rector of University of Santo Tomas (UST) in the Philippines declared reverting-back to the traditional lecture-based curriculum from its hybrid PBL, which was established by Dean Angeles Tan Alora of the Faculty of Medicine and Surgery. The headline of the university student newspaper printed "PBL dumped". I was commissioned by WHO (the Western Pacific head-office in Manila) to spend two weeks at UST to investigate over this problem. To make a long story short, the UST curriculum seem to be quite reasonable, I interviewed many teachers involved in PBL. They seemed to be very devoted. I also talked to the student group separately in the absence of UST teachers and the students found PBL intellectually challenging and mind-stimulating. However, they felt that some of the teachers were not very devoted and the curriculum was too congested. The few faculty members who had demonstrated strong resistance against PBL and hostility towards WHO and PBL consultant were loud, noisy and politically powerful and the high ranking education administrators including the Rector had little understanding of PBL. The PBL at UST was a very unfortunate case defeated by academic politics that contained little academic relevance. It was an academic power struggle, lack of effective administrative communication and a shortfall in expertise in faculty development. The PBL at UERMMMC College of Medicine in Manila was dumped perhaps for the similar reasons. Indeed, PBL program is a very high-maintenance commodity. It needs to be sustained with regular and multiple supportive and training workshops and a core group of highly devoted and experienced faculty members, including top administrators because one must realize that PBL philosophy is so anti-traditional and bad habit is hard to break.

Resistance to change is inevitably always there and ready to prey on its victims. Whether a PBL is to get accepted, survive and excel is not in its format, whether pure or hybrid, but certainly in the attitude and the process by which PBL is implemented, developed and maintained.

Along the earlier discussion on this topic, someone refers to students as low-performer and high-performer. Again, the traditional demarcation of low versus high performers is based on knowledge content and examination results. I must emphasize again that the reason for doing PBL is to get away from the traditional teacher-centered spoon-feeding of knowledge like in didactic lectures which have long been known to be ineffective and encourages passive attitudes. This will get worse, as the domain of knowledge is expanding with time in explosive speed. Therefore, the traditional way of education is doomed to fail with time. It is a matter of sooner or later. On the other hand, whatever we do, whether in the conservative “evolution” or in the aggressive “revolution”, some will succeed and some will fail, just like some students are fit for being a medical doctor and some are not. This is a fair competitive world after all. The failure in implementing or sustaining PBL bears no meaningful implication on the quality of this educational philosophy, it only reflects the inability and/or incapability of the very institutes that manage PBL. Whichever the PBL model you select to adopt must be weighed against your motivation, resources, expertise, preparedness and most importantly, your realization of the limitations in each of the models. Otherwise, the price you pay can be very high.

Sincerely,

David Kwan
China Medical University
Taichung, **Taiwan**

【相關圖片】

資料來源：http://www.cmu.edu.tw/news_detail.php?id=694